TAXONOMY OF SOUTH INDIAN HARPALINAE (COLEOPTERA: CARABIDAE)

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DOCTOR OF PHILOSOPHY IN ZOOLOGY

(Under the Faculty of Science)

By

NIJISHA K

Under the Guidance of

Dr. ASWATHI P



P.G. & RESEARCH DEPARTMENT OF ZOOLOGY

ST. JOSEPH'S COLLEGE (AUTONOMOUS), DEVAGIRI,

KOZHIKODE- 673 008, KERALA.

JUNE 2026

ST. JOSEPH'S COLLEGE (AUTONOMOUS)
DEVAGIRI
KOZHIKODE, 673008
Kerala, India

Dr. Aswathi P
Assistant Professor
aswathi.p88@gmail.com

Certificate

*This is to certify that the thesis entitled "**TAXONOMY OF SOUTH INDIAN HARPALINAE (COLEOPTERA: CARABIDAE)**" submitted to the University of Calicut for the award of the degree of Doctor of Philosophy in Zoology, is the record of the original work done by Ms. Nijisha K in the PG & Research Department of Zoology, St. Joseph's College (Autonomous), Devagiri, Kozhikode, under my supervision and guidance. This work has not been previously formed the basis for any award of degree or diploma.*

Ms. Nijisha K has successfully completed the preliminary qualifying examination prescribed by the University of Calicut.

Place: Kozhikode

Date: 23/06/26

Dr. ASWATHI P

Supervising teacher

ST. JOSEPH'S COLLEGE (AUTONOMOUS)
DEVAGIRI
KOZHIKODE, 673008
Kerala, India

Dr. Aswathi P
Assistant Professor
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I also certify that the adjudicators have not suggested any changes/corrections in the thesis and recommended to accept in the present form.

Place: Kozhikode

Date: 23/06/26

Dr. ASWATHI P

Supervising teacher

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NIJISHA K

Place: Kozhikode

Date: 23/06/26

DR. ASWATHI P

Supervising teacher

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NIJISHA K



Dedicated to my Family and Teachers.

TAXONOMY OF SOUTH INDIAN HARPALINAE (COLEOPTERA: CARABIDAE)

ABSTRACT

Harpalinae, one of the 24 Indian subfamilies of Carabidae, is a diverse and abundant group of ground beetles that serves as a valuable bioindicator and biocontrol agent due to its habitat preferences and adaptability to environmental conditions. Taxonomic work on Indian Carabidae was originally based on Andrewes' *Fauna of British India* volumes: Volume I (1929) on Carabinae and Volume II (1935) on Harpalinae. However, the second volume is confusing because although it is titled *Harpalinae*, it does not include the 83 Harpalinae species catalogued by Andrewes (1930). Later, with the modern classification of Carabidae by Lorenz (2005), the groups described by Andrewes (1929, 1935) were reassigned to different subfamilies. This reorganization means that Andrewes' system no longer matches the current taxonomy. As a result, Indian species and genera cannot be reliably identified today using Andrewes (1935), since the names, group boundaries, and subfamily placements have changed under modern classification.

The classic works of Andrewes laid foundational knowledge, but omissions in these works, coupled with the lack of acknowledgment of subsequent taxonomic revisions like those outlined by Lorenz in 2005, have made it difficult to achieve clarity in this area. Andrewes (1930) documented 83 Indian Harpalinae species, whereas Andrewes (1935) provided no detailed treatment of the subfamily. Lorenz (2005) presented a systematic list of species within the subfamily. However, a comprehensive taxonomic account of the genera and species was unavailable. As a result, understanding and classifying many Indian Carabidae subfamilies remained complex and uncertain. Taxonomic keys, descriptions, and a comprehensive checklist of Indian Harpalinae, based on modern classification provided in the present effort will help to streamline and clarify the taxonomy of Indian Harpalinae. Present study reported 54 Harpalinae species belonging to 20 genera within three tribes from south India which include a new species and a first report from India.

Key words: new species, first reports, taxonomic keys, pictorial key, checklist

Nijisha K
Research Scholar

Dr. Aswathi P
Research Guide

ദക്ഷിണേന്ത്യൻ ഹാർപാലിനയുടെ വർഗ്ഗീകരണം (കൊളിയോപ്റ്റെറ: കാരബിഡേ)

സംഗ്രഹം

കരാബിഡേയിലെ 24 ഇന്ത്യൻ ഉപകുടുംബങ്ങളിൽ ഒന്നായ ഹാർപാലിനെ, വൈവിധ്യമാർന്നതും സമൃദ്ധവുമായ ഒരു കൂട്ടം ഗ്രൗണ്ട് വണ്ടുകളാണ്, അവയുടെ ആവാസ വ്യവസ്ഥയും പരിസ്ഥിതി സാഹചര്യങ്ങളുമായി പൊരുത്തപ്പെടാനുള്ള കഴിവും കാരണം അവ വിലപ്പെട്ട ബയോഇൻഡിക്കേറ്ററായും ബയോകൺട്രോൾ ഏജന്റായും പ്രവർത്തിക്കുന്നു. ഇന്ത്യൻ കാരാബിഡേയെക്കുറിച്ചുള്ള വർഗ്ഗീകരണ പ്രവർത്തനങ്ങൾ ആദ്യം ആൻഡ്രൂസിന്റെ ബ്രിട്ടീഷ് ഇന്ത്യയിലെ ജന്തുജാലങ്ങളെ അടിസ്ഥാനമാക്കിയുള്ളതായിരുന്നു: കാരാബിനേയെക്കുറി ച്ചുള്ള വാല്യം I (1929), ഹാർപാലിനെയെക്കുറിച്ച് വാല്യം II (1935). എന്നിരുന്നാലും, രണ്ടാമത്തെ വാല്യം ആശയക്കുഴപ്പമുണ്ടാക്കുന്നു, കാരണം ഇതിന് ഹാർപാലിനെ എന്ന് പേരിട്ടിട്ടുണ്ടെങ്കിലും, ആൻഡ്രൂസ് (1930) പട്ടികപ്പെടുത്തിയ 83 ഹാർപാലിനെ സ്പീഷീസുകൾ ഇതിൽ ഉൾപ്പെടുന്നില്ല. പിന്നീട്, ലോറൻസ് (2005) കാരാബിഡേയുടെ ആധുനിക വർഗ്ഗീകരണത്തോടെ, ആൻഡ്രൂസ് (1929, 1935) വിവരിച്ച ഗ്രൂപ്പുകളെ വ്യത്യസ്ത ഉപകുടുംബങ്ങളിലേക്ക് പുനർവിന്യസിച്ചു. ഈ പുനഃസംഘടന അർത്ഥമാക്കുന്നത് ആൻഡ്രൂസിന്റെ സിസ്റ്റം ഇനി നിലവിലെ വർഗ്ഗീകരണവുമായി പൊരുത്തപ്പെടുന്നില്ല എന്നാണ്. തൽഫലമായി, ആധുനിക വർഗ്ഗീകരണത്തിൽ പേരുകൾ, ഗ്രൂപ്പ് അതിരുകൾ, ഉപകുടുംബ സ്ഥാനങ്ങൾ എന്നിവ മാറിയതിനാൽ, ആൻഡ്രൂസിന്റെ (1935) സഹായത്തോടെ ഇന്ത്യൻ സ്പീഷീസുകളെയും ജനുസ്സുകളെയും ഇന്ന് വിശ്വസനീയമായി തിരിച്ചറിയാൻ കഴിയില്ല.

ആൻഡ്രൂസിന്റെ ക്ലാസിക് കൃതികൾ അടിസ്ഥാനപരമായ അറിവ് നൽകിയിരുന്നു, എന്നാൽ ഈ കൃതികളിലെ ഒഴിവാക്കലുകളും 2005-ൽ ലോറൻസ് വിവരിച്ചതുപോലുള്ള തുടർന്നുള്ള വർഗീകരണ പരിഷ്കരണങ്ങളുടെ അംഗീകാരത്തിന്റെ അഭാവവും ഈ മേഖലയിൽ വ്യക്തത കൈവരിക്കാൻ ബുദ്ധിമുട്ടാക്കി. ആൻഡ്രൂസ് (1930) 83 ഇന്ത്യൻ ഹാർപാലിനെ സ്പീഷീസുകൾ രേഖപ്പെടുത്തിയിട്ടുണ്ട്, അതേസമയം ആൻഡ്രൂസ് (1935) ഉപകുടുംബത്തെക്കുറിച്ച് വിശദമായ ഒരു വിവരണം നൽകിയിട്ടില്ല. ലോറൻസ് (2005) ഉപകുടുംബത്തിലെ സ്പീഷീസുകളുടെ ഒരു വ്യവസ്ഥാപിത പട്ടിക അവതരിപ്പിച്ചു. എന്നിരുന്നാലും, ജനുസ്സുകളുടെയും സ്പീഷീസുകളുടെയും സമഗ്രമായ ഒരു വർഗീകരണ വിവരണം ലഭ്യമല്ലായിരുന്നു. തൽഫലമായി, നിരവധി ഇന്ത്യൻ കാരാബിഡേ ഉപകുടുംബങ്ങളെ മനസ്സിലാക്കുന്നതും വർഗ്ഗീകരിക്കുന്നതും സങ്കീർണ്ണവും അനിശ്ചിതത്വത്തിലുമായി തുടർന്നു. നിലവിലെ ശ്രമത്തിൽ നൽകിയിരിക്കുന്ന ആധുനിക വർഗ്ഗീകരണത്തെ അടിസ്ഥാനമാക്കിയുള്ള വർഗീകരണ കീകൾ, വിവരണങ്ങൾ, ഇന്ത്യൻ ഹാർപാലിനെയുടെ സമഗ്രമായ ഒരു ചെക്ക്‌ലിസ്റ്റ് എന്നിവ ഇന്ത്യൻ ഹാർപാലിനെയുടെ വർഗീകരണം കാര്യക്ഷമമാക്കാനും വ്യക്തമാ ക്കാനും സഹായിക്കും. ദക്ഷിണേന്ത്യയിലെ മൂന്ന് ഗോത്രങ്ങളിലെ 20 ജനുസ്സു കളിൽപ്പെട്ട 54 ഹാർപാലിന സ്പീഷീസുകൾ ഈ പഠനത്തിൽ റിപ്പോർട്ട് ചെയ്യപ്പെട്ടി ട്ടുണ്ട്, അതിൽ ഒരു പുതിയ സ്പീഷീസും ഇന്ത്യയിൽ നിന്നുള്ള ആദ്യ റിപ്പോർട്ടും ഉൾപ്പെടുന്നു.

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ഡോ. അശ്വതി പി

റിസർച്ച് ഗൈഡ്

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Chapter 1

INTRODUCTION



1. Introduction

1.1. Family Carabidae

Coleoptera (beetles and weevils) is the most successful and largest order within the class Insecta of kingdom Animalia which contributes to 38% of whole insects with approximately 392,415 species worldwide (Zhang, 2013). Carabidae, generally known as ground beetles are among the large and wide-ranging family of coleopterans of the suborder Adephaga (Insecta: Coleoptera) constituting approximately 40,000 described species across the world (Lövei & Sunderland, 1996).

Carabid beetles usually occur in habitats like sandy beaches with scattered vegetation, sandy trails and moisty banks of streams, ponds, and rivers, under the bark of trees, along forest edges, in rotten stumps and on clay soils (Pearson & Cassola, 2005). Most carabids are nocturnal and are active predators and prey on wide range of small organisms like other insects and spiders; some are diurnal and feed on plant tissue and are able to control pest insects like caterpillars (Larochelle & Larivière, 2007). As active predators preying on small insects including caterpillars, aphids, mites, snails and slugs, carabids are used to control crop pests that causes economic loss (Rodriguez et al., 1998). Carabids are referred to as useful indicators of habitat conditions and ecological changes due to their specificity in habitats selection and their dispersals are often affected by soil type, vegetative cover, and microclimate (Thiele, 1977).

There are 24 subfamilies of Carabidae in India (Akhil, 2020; Jithmon, 2020; Divya, 2022; Ashly, 2023) and subfamily Harpalinae is one among them. Members of subfamily Harpalinae are occurring on all continents except Antarctica and is found on many islands (Noonan, 1985). Harpalinae ground beetles are taxonomically

diverse and in generally abundant in the field and establish habitat preferences and a flexible set of responses to environmental factors and these features make them useful as potential bioindicators and biocontrol agents. Most of the species thrive in damp environments, residing at the surface of the soil and within leaf litter. Additionally, they can be found in caves and occasionally on plants and trees (Larochelle & Lariviére, 2005). Harpalines make their distribution wide-spread by living in the lowlands and easily cross water barriers (Erwin, 1985). Studies in USA revealed that members of Harpalinae include most conspicuously granivorous taxa (McCravy & Lundgren, 2011). Larvae of species from the Harpaline genera *Ditomus*, *Ophonus*, and *Harpalus* have been reported to be primarily granivorous (Briggs, 1965; Kirk, 1972; Zetto-Brandmayr, 1990). Granivory results in a positive effect since the most consumed seeds belong to the weeds of agricultural crops (Honěk & Martinková, 2001) and hence the granivorous members can be widely used as biocontrol agents.

1.2. Taxonomy of Family Carabidae

Based on traditional concepts of Ball (1979) and modern studies of Kryzhanovsky (1976) and Erwin (1991), family Carabidae accounts for approximately 40,000 species under 34 subfamilies world-wide (Lorenz, 2024; Anichtchenko, 2024). The initial significant efforts to classify Carabidae were made by Latreille and Bonelli early in the nineteenth century. There are three widely acclaimed general classifications of Carabidae- Jeannel (1942–1949), Erwin (1970–2018) and Lorenz (1998– 2024).

Taxonomic work on Indian Carabidae is based on *Fauna of British India, Volume I- Carabinae* (Andrewes, 1929) and *Volume II- Harpalinae* (Andrewes, 1935). Andrewes (1929 and 1935) classified Indian Carabidae under two broad subfamilies- subfamily Carabinae in *Fauna of British India, Volume I* (1929) that

deals with ten tribes (Carabini, Cychrini, Loricerini, Nebrini, Notiophilini, Omopronini, Ozaenini, Opisthiini, Scaritini, and Siagonini), and Harpalinae in *Volume II* (1935) with thirty-three tribes (Agonini, Amarini, Anthini, Apotomini, Bembidini, Brachinini, Broscini, Chlaenini, Cymbionotini, Disphaericini, Dryptini, Galeritini, Harpalini, Helluonini, Hexagonini, Idiomorphini, Lebini, Licinini, Masoreinini, Melaenini, Miscelini, Odacanthini, Oodini, Orthogonini, Panagini, Pentagonicini, Perigonini, Physocrotaphini, Platismatini, Pogonini, Tetragonoderini, Trechini and Zuphini). Ten tribes listed in *Fauna of British India, Volume I- Carabinae* (Andrewes, 1929) were revised and are placed under seven subfamilies (Carabinae, Nebrinae, Omoproninae, Loricerinae, Nebrinae, Siagoninae, Scaritinae) in the systematic list of extant ground beetles of the world (Lorenz, 2005). Thirty-three tribes listed in the *Fauna of British India, Volume II- Harpalinae* (Andrewes, 1935) were revised and are placed under 15 subfamilies namely, Anthinae (three tribes: Anthini, Physocrotaphini, Helluonini); Apotominae (Apotomini); Brachininae (Brachinini); Broscinae (Broscini); Ctenodactylinae (Hexagonini); Dryptinae (three tribes: Galeritini, Zuphini, Dryptini); Lebinae (seven tribes: Lebini, Masoreinini, Pentagonicini, Miscelini, Tetragonoderini, Perigonini, Odacanthini); Harpalinae (Harpalini); Licininae (three tribes: Oodini, Chlaenini, Licinini); Melaeninae (two tribes: Melaenini, Cymbionotini); Orthogoninae (two tribes: Idiomorphini, Orthogonini); Panaginae (two tribes: Panagini, Disphaericini); Platyninae (Agonini); Pterostichinae (Amarini) and Trechinae (four tribes: Pogonini, Bembidini, Platismatini, Trechini) in the systematic list of extant ground beetles of the world (Lorenz, 2005).

Among the thirty-three tribes discussed by Andrewes (1935), key and descriptions provided for only eight tribes (Hexagoniini, Cymbionotini, Melaenini,

Apotomini, Broscini, Trechini, Bembidiini, and Pogonini) which were now placed under five subfamilies (Apotominae, Broscinae, Ctenodactylinae, Melaeninae and Trechinae) in the systematic list of extant ground beetles of the world (Lorenz, 2005).

Remaining ten subfamilies (Anthinae, Brachininae, Dryptiinae, Harpalinae, Lebiinae, Licininae, Orthogoninae, Panageinae, Platyninae and Ptrostichinae) were not covered in *Fauna of British India, Volume II- Harpalinae* (Andrewes, 1935) and are the lesser-known subfamilies from India (Sabu, 2022) and subfamily Harpalinae is one among them.

1.3. Taxonomy of Subfamily Harpalinae

Harpalines are rather stout-bodied ground beetles with comparatively short mandibles and other appendages with a body length of 3–20 mm (Larochelle & Lariviére, 2005). Subfamily Harpalinae Bonelli, 1810 (Coleoptera: Carabidae) form a diverse group with 161 genera and 2833 species at global level within the tribes Anisodatylini Lacordaire, 1854, Harpalini Bonelli, 1810, Stenolophini Kirby, 1837 and Pelmatellini Bates, 1882 (Lorenz, 2005). Most modern authors (Kataev, 1984, 1989, 1997a, b, 2001a, b, 2002a, b, c, d, 2003, 2005a, b, 2006, 2010, 2012a, 2012b, 2013, 2014a, b, 2015a, b, 2016, 2017, 2018, 2020, 2021 and 2022; Wrase, 1991, 1995, 2005 and 2017; Schmidt, 1846; Jaeger, 1992, 1997, 1998, 1999, 2009, 2010, 2011, 2012, 2013, 2015a, b, 2016, 2017, Ito, 1985, 1991, 1992, 1993, 1994a, b, c, 1995, 1996a, b, c, d, 1997a, b, c, d, 1998, 2000, 2001, 2002, 2003a, b, c, 2004, 2005, 2008, 2009, 2013 and 2016 and Larochelle & Lariviére, 2005) handle this group as one of the tribes under subfamily Harpalinae with subtribes Amblystomina, Anisodactylina, Ditomina, Harpalina, Pelmatellina and Stenolophina. In the present effort, the widely referred classification system of Lorenz (2005) is followed in which subfamily Harpalinae includes four tribes (Anisodactylini, Harpalini, Pelmatellini and

Stenolophini) and three subtribes (Amblystomina, Ditomina and Harpalina) within the tribe Harpalini.

The members of subfamily Harpalinae are present in each of the six faunal regions (Nearctic, Neotropical, Palearctic, Ethiopian, Oriental, and Australian) discussed by Darlington (1957). The members of tribe Anisodactylini are clearly more abundant in temperate than in tropical area, that of tribe Stenolophini are most numerous in the Palaearctic, Nearctic and Ethiopian regions and much less abundant in the Oriental and Neotropical regions; Harpalini species are concentrated in the Palaearctic, Nearctic, and to a lesser degree in the Neotropic and Ethiopian regions and Pelmatellini in the Neotropical and Australian regions (Noonan, 1976).

Eighty-three Harpalinae species under 38 genera are listed from India by Andrewes (1930b) and these 83 species are currently under the tribe Anisodactylini, Harpalini and Stenolophini of the subfamily Harpalinae in the systematic list of extant ground beetles of the world (Lorenz, 2005). In the worldwide synopsis of supra-specific taxa of the tribe Harpalini (Noonan, 1976), placed the 83 Indian species and 38 genera placed in a single tribe Harpalini by Andrewes (1930b) within three subtribes Anisodactylina, Stenolophina and Harpalina of subfamily Harpalinae and these three subtribes were raised to three tribes (Anisodatylini, Harpalini, and Stenolophini) and the three generic groups (Amblystomi group, Ditomi group and Harpali group) discussed by Noonan (1976) were raised to three subtribes (Amblystomina, Ditomina and Harpalina) of tribe Harpalini under the subfamily Harpalinae by Lorenz (2005).

Seventy-seven Harpalinae species were reported from India after Andrewes (1930b) during 1930–2023 period [Andrewes (1930a, 1933b,d and 1936), Schauberger (1932b, 1934c and 1935); Jedlička (1931, 1936c, 1965 and 1966);

Kirschenhofer (1992); Ito (1985, 1994c, 1995, 1996c, 1998, 2003b and 2016); Jaeger (1997, 1998, 2009, 2012, 2013, 2015a, b, 2016 and 2017); Kataev & Schmidt (2017); Kataev & Wrase (2001, 2013, 2018 and 2023); Kataev (2001b, 2002b, 2012a, 2017, 2018, 2020, 2021 and 2022)].

The foundational studies by Andrewes (1929 and 1935) contributed significantly to the taxonomy of Indian Harpalinae, yet they left many genera unaddressed- partly due to the declining health of the author during his later years (Britten, 1951). Since then, no comprehensive revision of Indian Carabidae subfamilies has been undertaken, resulting in a persistent disconnect between Indian classifications and the modern global framework, such as that presented in systematic list of extant ground beetles of the world (Lorenz, 2005). Subsequent global revisions [Kataev (1997b, 2003, 2006, 2010, 2015b, 2017 and 2023a) and Jaeger (2012 and 2013)] have introduced substantial changes to the classification of Harpalinae, complicating efforts to resolve older Indian records with current taxonomic standards. As a result, Indian research on Harpalinae has continued to rely heavily on the outdated generic and species keys provided by Andrewes (1920 and 1933), with most studies confined to the taxa originally described by Andrewes. The absence of tribal, generic and species keys (keys to the subtribes of the tribe Harpalini, genera of the subtribe Amblystomina, Ditomina and Harpalina, species to the genera *Progonochaetus*, *Amblystomus*, *Anomostomus*, *Oosoma*, *Allosiopelus, Coleolissus*, *Meroctenus*, *Trichotichnus*, *Batoscelis*, *Bradycellus*, *Parabradycellus* and *Stenolophus*) in earlier works has further hindered identification efforts, leaving many Indian species not classified.

Taxonomic research on the subfamily Harpalinae in India has remained regionally skewed and limited in scope since the foundational work of Andrewes

(1930b and 1935). Of the 83 species documented by Andrewes in 1930, only 25 were recorded from south India, while 58 originated from other regions of the country.

Subsequent studies conducted between 1930 and 2023 have added 77 species to the national checklist. Among these, 21 species were reported from south India and 56 from other regions. This brings the total number of Harpalinae species reported from India to 160, of which only 46 (approximately 30.7%) are from south India. This persistent regional disparity underscores the urgent need for intensified and systematic exploration in south India, which remains underrepresented despite its rich biodiversity and unique biogeographic context.

Most post-Andrewes research has concentrated on North and Northeast India, resulting in 16 new species from south India, 12 from Western India, and two from Central India during the 1930–2023 period. Large portions of Western and Central India also remain critically underexplored.

This uneven coverage has led to significant gaps in the national understanding of Harpalinae diversity. These include outdated or sparse species descriptions, the absence of reliable generic and species-level taxonomic keys, and the non-availability of type specimens in Indian museums—factors that continue to hinder systematic and comparative work on this ecologically important group. Despite south India's ecological richness and distinct biogeographic features, few targeted studies have been conducted in the region, further limiting the scope of faunal documentation and taxonomic resolution.

The present study aims to address these longstanding deficiencies by conducting a comprehensive faunal inventory of south Indian Harpalinae, preparing updated taxonomic keys, and compiling a national checklist that integrates historical records with new findings.

1.4. Objectives

1. Taxonomic studies of subfamily Harpalinae from south India
2. Preparation of key including taxonomic key to Indian Harpalinae and pictorial key to the studied specimens
3. Preparation of Checklist of Indian Harpalinae

Chapter 2

REVIEW OF LITERATURE



2. Review of Literature

2.1. Taxonomy of subfamily Harpalinae from India

Chaudoir (1852) described two species, *Anoplogenius discophorus* and *Pachytrachelus cribriceps* from the north Indian state of Himachal Pradesh. Motschulsky (1864) described *Stenolophus nitens* from western India (Maharashtra). Bates (1889b) described *Harpalus idiotus* from western Indian state of Maharashtra. Bates (1891b) described seven species, *Anoplogenius nagpurensis*, *Platymetopus nagpurensis*, *Harpalus indicus*, *H. praticola*, *Platymetopus (?) major*, *Platymetopus (?) sublaevis*, *Hypolithus acutangulus* from east India (Jharkhand). Tschitschérine (1897) described *Acrogeniodon bedeli* from north Indian state of Uttar Pradesh. Tschitschérine (1899b) described *Acrogeniodon semenowi* from north east India (Sikkim). Andrewes (1920) described *Gnathaphanus rusticus* from north India (Odisha). Andrewes (1921b) described *Dioryche chinnada* from western Indian state of Maharashtra. Andrewes (1923a) described *Hypolithus lividus* from western India (Maharashtra). Andrewes (1924a) described four species, *Stenolophus bajaurae* from north India (Himachal Pradesh), *Amblystomus resectus* from east India (Odisha), *Dioryche convexa* from north east India (Assam) and, *Meroctenus dabreui* from central India (Madhya Pradesh). Andrewes (1924b) described *Coleolissus iris* from western Indian state of Maharashtra. Andrewes (1926a) described *Trichotichnus liparus* from north India (Uttarakhand). Andrewes (1930a) described a new genus *Psychristus* with species *P. discretus* from north east Indian state Sikkim and five species, *Acupalpus sikkimensis*, *Trichotichnus emarginatus*, *T. hingstoni*, *T. aquilo* and *Coleolissus noeli* from east India (West Bengal). Andrewes (1931) described *Parophonus indicus* from east India (Bihar). Schauberger (1932b) described *Chydaeus andrewesi* from north east India (Sikkim). Andrewes (1933b) described a

new genus *Panagrius* with type species *P. hystrix* and species *Pseudognathaphanus dekkanus* from western India (Maharashtra). Schauberger (1934c) described *Harpaliscus stevensi* from north east India (Sikkim). Schauberger (1935) described *Lamprophonus assamensis* and *Trichotichnus formosus* from north east Indian states of Meghalaya and Sikkim respectively. Saha & Biswas (1985) reported four species (*Dioryche torta*, *Harpalus indicus*, *Anisodactylus karennius* and *Stenolophus smaragdulus*) from north east India (Arunachal Pradesh) in "Records of Zoological Survey of India". Kirschenhofer (1992) described *Oxycentrus assamensis* from north east India (Meghalaya) and *O. sikkimensis* from east India (West Bengal). Saha (1995) reported 31 species under 18 genera from east India (West Bengal). Kataev (1997b) provided a taxonomic review of *Hemiaulax*, *Idiomelas* and *Egaploa* with key to the species of the genus *Idiomelas*. Jaeger (1997) described *Psychristus andrewesi* from east Indian state of West Bengal. Jaeger (1998) described *Bradycellus bicolor* from east India (West Bengal). Ito (1998) described two species, *Trichotichnus loebli* and *T. opacus* from east India (West Bengal). Saha & Halder (2000) reported six species from east Indian state of Meghalaya. Ito & Jaeger (2000) described *Bradycellus picipes* from east Indian state of West Bengal. Kataev (2001b) described *Harpalus meghalayensis* from north east India (Meghalaya). Kataev & Wrase (2001) provided a key for the identification of the East Asian and Oriental genera of the subtribe Anisodactylina. Kataev (2002b) provided a note on some new and little-known species of the Anisodactylina and Harpalina from East Asia and Oriental region and described new species, *Progonochaetus indicus* from north Indian state of Delhi. Kataev (2002d) provided taxonomic, faunistic and nomenclatural notes on certain Palaearctic and Oriental Harpalini. Kataev (2003) provided revision of the genus *Loxoncus* from the Palaearctic, the Oriental Region and Australia with key to

the species and subspecies. Ito (2003b) described a new genus, *Parabradycellus* with a new species, *P. indicus* from central India (Madhya Pradesh). Kataev (2006) provided a taxonomic review of the genus *Oesyperus* with redescription of all the three included species and a key for determination of the species. Kataev & Schmidt (2006) provided a contribution to the taxonomy of the genus *Chydaeus* of the Himalaya and adjacent areas, and includes the revision of the *C. obscurus*, *C. semenowi*, and *C. salvazae* species-groups. Kataev (2010) provided a taxonomic review of the subgenus *Hyparpalus* of the genus *Parophonus* of the Oriental and Australian regions with key to the species groups and species of the subgenus. Jaeger (2012) provided a revision of the immaculate species of the *Anthracus annamensis* group from the East Palaearctic and Oriental Regions with descriptions of two new species, *A. indicus* and *A. schuhi* from western India (Maharashtra). Kataev (2012a) described *Dioryche nitidula* from north west India (Rajasthan). Kataev (2012b) provided a taxonomic review of 10 species of the subgenus *Cryptophonus* of the genus *Harpalus* with key to all the species of this subgenus. Jaeger (2013) provided a revision of the East Palaearctic and Oriental species of the subgenus *Stenolophidius* of the genus *Acupalpus* with description of new species, *A. andrewesi* from western India (Maharashtra). Kataev & Wrase (2013) described *Stenolophus ovchinnikovi* from north India (Jammu and Kashmir). Kataev (2014a) provided a note on the taxonomic status of *Idiomelas himalayensis*. Kataev (2014b) designated lectotype for the Indian species, *Harpalus indicus*. Kataev (2015b) provided a taxonomic review of the genus *Kareya* and key to the eight species of the genus. Jaeger (2015b) described *Anthracus anichtchenkoi* from east India (West Bengal). Kushwaha & Hegde (2015) provided systematic list of 14 species from Uttar Pradesh. Jaeger et al., (2016) provided a note on new synonyms, and first and interesting records of certain species

of the subtribe Stenolophina from the Palaearctic, Oriental, and Afrotropical regions. Kataev (2017) provided a revision of the genus *Meroctenus* with a new status of the genus *Xenodochus*. Kataev & Schmidt (2017) described *Trichotichnus sikkimensis* from north east India (Sikkim). Kataev & Wrase (2018) described an Indian endemic genus *Indocarterus* within tribe Ditomina with only one species, *I. inexspectatus* from western India (Maharashtra). Kataev (2018) described *Ophoniscus puneensis* from western India (Maharashtra) and a key to the species and subspecies of the genus is provided. Gupta et al., (2019) reported *Siopelus tamilnadensis* and *Stenolophus ovchinnikovi* from north west Indian state of Punjab. Ghosh et al., (2020) reported *Amblystomus bivittatus* from north Indian state of Haryana. Kataev (2020) described a new subgenus *Parairidessus* of the genus *Trichotichnus* with species *T. perforatus* from western India (Maharashtra). Sruthi & Sabu (2022) provided a checklist of Carabidae in the Chinnar Wildlife Sanctuary of the southern Western Ghats, India with first report of species *Stenolophus lucidus* and *Amblystomus aenescens* from India and listed 15 Harpalinae species with their geographic range, collection techniques, and relevant literature details. Kataev (2022) described *Coleolissus monstrosipenis* from western Indian state of Maharashtra. Kataev (2023a) provided a review of Asian species of the genus *Platymetopus* with a key to all species and subspecies of the genus known from Asia. Kataev (2023b) provided classification of the genus *Harpalus* of the world based on imaginal morphology. Kataev & Wrase (2023) described *Coleolissus brevis* from north east India (Sikkim). Nijisha & Sabu (2023) provided an up-to-date checklist of 169 species of subfamily Harpalinae known from the Indian mainland, along with details of the revisions by modern workers, literatures, and distribution patterns. Nijisha et al., (2024) reported species, *Loxoncus renitens* from India for the first time.

2.2. Taxonomy of subfamily Harpalinae from south India

Andrewes (1923a) described species, *Anomostomus orientalis* from Tamil Nadu. Andrewes (1923b) described a new south Indian endemic genus, *Oesyperus* with three species, *O. planus*, *O. pygmaeus* and *O. unctulus* and species, *Harpalus meridianus* from Tamil Nadu. Andrewes (1933b) described species, *Crasodactylus indicus* from Karnataka. Andrewes (1933d) described *Dioryche solida* from Karnataka. Schauberger (1934c) described species, *Trichotichnus andrewesianus* from Tamil Nadu. Schauberger (1935) described two species, *Lamprophonus pseudolucens* and *Trichotichnus globulipennis* from Tamil Nadu. Ito (1995) introduced a new south Indian endemic genus *Allosiopelus* with species, *A. punctatipennis* from Tamil Nadu. Ito (1996c) described species, *Indiophonus nigricans* from Tamil Nadu. Kataev (2002b) described species, *Siopelus tamilnadensis* from Tamil Nadu. Kataev (2012a) described species, *Dioryche dravidana* from Tamil Nadu. Jaeger (2013) described species, *A. maculipennis* from Tamil Nadu. Jaeger (2016) described species, *Anthracus fritzhiekei* from Tamil Nadu. Ito (2016) described two species, *Allosiopelus fulvicollis* and *Coleolissus nakajimai* from Tamil Nadu. Jaeger (2017) described species, *Anthracus nathani* from Tamil Nadu. Kataev (2020) described species, *Trichotichnus saluki* from Karnataka. Kataev (2021) described species, *Coleolissus inessae* from Karnataka and provided with notes on related genera. Kataev (2022) described two species, *Coleolissus deformipenis* and *C. kejvali* from Kerala. Divya (2022) reported nine species (*Acupalpus maculipennis*, *Batoscelis oblonga*, *Idiomelas fulvipes*, *Loxoncus nagpurensis*, *Amblystomus vulneratus*, *Anomostomus orientalis*, *Meroctenus mediocris*, *Parophonus lividus*, *Platymetopus figuratus pictus*) from Kerala for the first time. Ashly (2023) reported two species, *Dioryche solida* and *Loxoncus schmidti*

from Kerala for the first time. Nijisha et al., (2023) described a new subgenus, *Tnaei* under the genus *Anomostomus* with a new species, *A. devagiriensis* from the Malabar coast region of Kerala in south India. Nijisha et al., (2024) provided additional distribution records for the subspecies *Idiomelas fulvipes indus* from the state of Kerala, Tamil Nadu, and Karnataka.

Chapter 3

MATERIALS AND METHODS



3. Materials and Methods

3.1. Study area- south India

South India, the area of study includes states of Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, and Union territories of Mahe and Pondicherry. Regionally the area drops between 8^0 and 20^0 N latitudes and 74^0 and 85 E^0 longitudes. South India extends over an area of 4,67,186 sq.km. and is outlined on the north by the states of Maharashtra, Madhya Pradesh, and Odisha, on the east by the Bay of Bengal, on the south by Indian Ocean and on the west by Arabian sea (Nampy & Madhusoodanan, 1998). Currently, south India is treated as the southern most states of peninsular India enclosing five states- Andhra Pradesh, Telangana, Karnataka, Tamil Nadu and Kerala and Union territories of Lakshadweep and Pondicherry (Mohammed, 2024).

South India can be categorized into two floral zones, the Malabar and the Deccan. Malabar is in the west of the western Ghats and is long and narrow band of land passing parallel to the Malabar coast. Deccan is the great plateau of the south Indian Peninsula extending from the Aravallis, the Malwa, the Vindhyas, the Satpura, and the Chotta Nagpur hills in the north and almost right down to Kanyakumari in south. The either side are bordered with western and eastern Ghats. The Malabar and Deccan regions together provides a wide variety of climatic and edaphic zones with mountain ranges, hillocks, swamps, rivers, valleys, marshy low lands, sandy sea-coasts, fresh water streams, ponds, and backwaters on the sea-front and supports diverse type of vegetation (Nampy & Madhusoodanan, 1998). The south India is rich with ecologically diverse areas, comprising a minimum of four biogeographical regions of India and various biotic provinces including the western Ghats, one of the eight biodiversity hotspots in the world (Mohammed, 2024).

3.2. Taxonomical Analysis

3.2.1. Specimen collections

The study mainly focuses on the unidentified Harpalinae specimen collections from various institutions in south India. Unidentified specimens collected during various surveys, random collections from various locations in Kerala and from the random collections loaned out from the institutes- Southern Regional Centre, Zoological Survey of India, Chennai, Western Ghats Regional Centre, Zoological survey of India, Kozhikode, and from Entomology Museum, University of Calicut. Unidentified specimens available in the research lab from earlier projects and various student project collections are also utilised. In addition, intensive random collections in various regions in Kannur district, Kerala were carried out during the study period (2019–2024). All these resulted in an extensive collection of Harpalinae species of south India, covering Kerala, Tamil Nadu, and Karnataka.

Following are the details about the specimen collections from various institutes, earlier projects, and random collections.

a) Southern Regional Centre, Zoological Survey of India, Chennai

Specimen collected from Agasthyamala survey, Tamil Nadu (2018), Avalanchi Survey, the western Ghats of Tamil Nadu (2016), and collections during 2013 from different regions of the western Ghats were loaned out from southern Regional Centre, ZSI, Chennai. All the loaned-out specimens were collected by using light trap.

b) Western Ghats Regional Centre, Zoological survey of India, Kozhikode

Specimen collected from Mookambika survey (2022) were loaned out from the Western Ghats Regional Centre, ZSI**,** Kozhikode. Specimens were collected using light trap and hand picking.

c) Entomology Museum, University of Calicut

Specimens collected randomly from different districts of Kerala during 2018–2022 by using pit-fall traps and handpicking were loaned-out from Entomology Museum, University of Calicut.

d) DST Project (2014–2018)

Specimens collected in the DST project titled "Taxonomy and Barcoding of south Indian Carabidae (Insecta: Coleoptera)" were sorted out. Specimens were collected from specific regions in the Western Ghats, Deccan Plateaue and the Eastern Ghats in south India. Specimens were collected by using pitfall traps, light traps and by hand picking from the forests and agricultural belts expanding over the south Indian states of Karnataka, Andhra Pradesh, Tamil Nadu, and Kerala during 2015–2017 period.

e) Earlier collections from the research lab

Specimens collected by various other research scholars from the Aralam Wildlife Sanctuary and from the paddy fields in Kannur district during the year (2020–2022) were utilised.

f) Random collections in various regions in Kannur district

Random collections were carried out in various agricultural and paddy fields in Kannur district during the study period (2019–2024). Specimens were sampled using light trap and pitfall trap.

Light traps are a relatively cheap and robust collection method used to sample a wide variety of primarily nocturnal arthropods (Liu et al., 2007). Many species of nocturnal arthropods such as moths and beetles are easily attracted by artificial light sources (Nag and Nath, 1991; Axmacher and Konrad, 2004). Light trapping refers to all methods that attracts and or capturing nocturnal insects by using lamps or artificial

light sources that usually have a strong emission in the ultraviolet range of the spectrum, whether they are connected to a trap or being operated in the forefront or other polished surfaces (Kammar et al., 2020). One of the major advantageous of light trapping include easy logistics, working from a simple or a small number of areas, and the short time required to collect a large number of samples and is specifically useful to collect carabid beetles in regions where pitfall traps are difficult to set due to high risk of flooding in wetlands, swamps and in marshes (Jocque et al., 2016). However, the information regarding the use of light traps for the collection of carabid beetles is rare (Frost, 1958; Vanhercke et al., 1981; Ishitani, 1996). Insects were attracted by light in the low- intensity portable UV light trap (SAFS Timer Insect LED light trap, Model SAFS_Itrap_01B) and fell into the salt- soap water solution which is used as preservative liquid in the collecting tray. Light traps were placed at late evening in random site for 12 hrs (18:00–06:00) during the study period (2019–2024). Traps were cleared out in the morning (about 7.30–8.30 AM), beetles were collected, washed, and stored in vials containing 70% alcohol.

Pitfall trapping is a commonly used method employed for the collection of surfaces- active soil and litter arthropods that include carabids (Greenslade, 1964; Holopainen, 1992; Lemieux & Lindgren, 1999). Pitfall collections manifest a relationship between arthropod activity and abundance (Thiele, 1977). Pitfall trapping is an established method for the collection of epigaeic invertebrates (Southwood & Henderson, 2000). For the collection of specimens, pitfall traps that consists of transparent plastic containers of 8 cm diameter and 10 cm depth were submerged in soil with its rim is in the soil surface and collect beetles that accidentally fell into the trap (Nyundo & Yaro, 2007; Skvarla et al., 2014). The trap was half-filled with a preservative liquid, a mixture of salt and soap water in 4:1 ratio. The traps are kept in

a linear path and each trap was separated by a 20 m distance to bypass the "digging in" effect (Nyundo & Yaro, 2007; Sabu & Shiju, 2010; Akhil, 2020). Pitfall traps were placed randomly in different areas in Chalode locality, Kannur district. Traps were scheduled for 24 hours in the late afternoon and the beetles trapped were collected, rinsed with fresh water, and stored into vials containing 70% alcohol as preservative.

3.2.2. Preservation and Identification by taxonomic keys

Specimens loaned out from different institutions include dried and wet preserved specimens. Carabid beetles collected from DST project, earlier collections from the research lab and random collections from the study site were sorted and stored in vials containing 70% alcohol. Tribe level identification was done by using the key modified from Habu (1973). Keys to the subtribes of the tribe Harpalini, genera of the subtribe Amblystomina, Ditomina and Harpalina, species to the genera *Progonochaetus*, *Amblystomus*, *Anomostomus*, *Oosoma*, *Allosiopelus, Coleolissus*, *Meroctenus*, *Trichotichnus*, *Batoscelis*, *Bradycellus*, *Parabradycellus* and *Stenolophus* are newly prepared. Key to the genera of tribe Anisodactylini and Stenolophini, key to the species of the genera *Acupalpus*, *Anthracus*, *Chydaeus*, *Dicheirotrichus*, *Dioryche*, *Gnathaphanus*, *Harpaliscus*, *Harpalus*, *Loxoncus*, *Ophoniscus*, *Oxycentrus*, *Parophonus*, *Pseudognathaphanus* and *Psychristus* are prepared by modifying the existing keys by including and excluding genera and species and by combining existing keys. Key to the species of the genera *Kareya* Andrewes, 1919, *Oesyperus* Andrewes, 1923 and *Platymetopus* Dejean, 1829; description of subtribe Ditomina Bonelli, 1810, genera *Indocarterus* Kataev & Wrase, 2018, *Allosiopelus* Ito, 1995, and *Parabradycellus* Ito, 2003, species *Indocarterus inexspectatus* Kataev & Wrase, 2018, *Allosiopelus punctatipennis* Ito, 1995,

Coleolissus brevis Kataev & Wrase, 2023, *C. deformipenis* Kataev, 2022, *C. kejvali* Kataev, 2022, *C. monstrosipenis* Kataev, 2022, *Ophoniscus puneensis* Kataev, 2018, *Parophonus rectangulus* Ito, 1994, *Trichotichnus loebli* Ito, 1998, *T. opacus* Ito, 1998, *T. sikkimensis* Kataev & Schmidt, 2017, and *Parabradycellus indicus* Ito, 2003; detailed redescription of genera *Kareya* Andrewes, 1919, *Platymetopus* Dejean, 1829 and *Oesyperus* Andrewes, 1923, species *Chydaeus obscurus* Chaudoir, 1854, *Chydaeus obtusicollis* Schauberger, 1932, *Chydaeus salvazae* Schauberger, 1934, *Coleolissus perlucens* (Bates, 1878), *Kareya edentata* (Bates, 1892), *K. erebia* (Bates, 1892), *K. grandiceps* (Bates, 1892), *K. major* Bates, 1891, *K. sublaevis* Bates, 1891, *Oesyperus planus* Andrewes, 1923, *O. pygmaeus* Andrewes, 1923, *O. unctulus* Andrewes, 1923, *Platymetopus flavilabris* (Fabricius, 1798), *P. rugosus* (Nietner, 1857), *Trichotichnus birmanicus* Bates, 1892, *T. hingstoni* Andrewes, 1930, *Acupalpus sikkimensis* Andrewes, 1930, subspecies *Platymetopus figuratus pictus* Andrewes, 1923 are not provided as they are available in literatures which are not openly accessible. Type specimens from various international museums such as British Museum of Natural History, London (BMNH), Natural History Museum, Paris, France (MNHN), Natural History Museum, Berlin and Zoological Museum, Moscow University, Moscow were examined for the verification of identified specimens. Verified specimens from National Forest Insect Collection, Forest Research Institute, Dehradun (NFIC, ICFRE- FRI) also used for the verification of identified specimens. Identification of specimens was done by using Leica S8 APO stereo zoom microscope with 80x magnification and Leica MC 170 HD microscope. Images were captured using Leica MC 170 HD microscope camera and the images were enhanced with the aid of Leica Application Suit (LAS) version 4.12 and by using this, all body measurements were taken and are given in millimetres. All the

identified specimens are pinned, labelled, and deposited in the National Insect Collections of Zoological Survey of India, Western Ghats Regional Centre, Kozhikode (ZSIK).

3.2.3. Checklist and Pictorial Key

Checklist of the identified specimens from south India were prepared by referring Nijisha & Sabu (2023). Pictorial key to the identified species from south India were prepared by considering the newly prepared (keys to the subtribes of the tribe Harpalini, genera of the subtribe Amblystomina, Ditomina and Harpalina, species to the genera *Progonochaetus*, *Amblystomus*, *Anomostomus*, *Oosoma*, *Allosiopelus, Coleolissus*, *Meroctenus*, *Trichotichnus*, *Batoscelis*, *Bradycellus*, *Parabradycellus* and *Stenolophus*) and modified taxonomic keys which are prepared by adding and excluding species and genera to the existing keys provided by Tschitschérine (1899a), Andrewes (1920 & 1933d), Schauberger (1932b and 1934c), Jeannel (1948), Habu (1973), Kirschenhofer (1992), Kataev (2002c, 2003, 2005b, 2010 & 2012a), Kataev & Wrase (2001 & 2016a), Kataev & Schmidt (2006), Jaeger (1997, 2009, 2012 & 2013). Images were captured using Leica MC 170 HD microscope camera and the images were enhanced with the aid of Leica Application Suit (LAS) version 4.12.

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A) 

B) 

C) 

Figure 1. A), B) Light trap Setup C) Pitfall trap Setup

Chapter 4

RESULTS

4. Results

4.1. Taxonomy

4.1.1. Harpalinae (Coleoptera: Carabidae) species recorded from south India

Fourty nine species and five subspecies within 20 genera (Table 1) were recorded from south India.

Table 1: Harpalinae species from south India

Tribe	Genus	Species
1. Anisodactylini Lacordaire, 1854	1. *Pseudognathaphanus* Schauberger, 1932	1. *$^{\nabla}$*P. punctilabris* (MacLeay, 1825)
2. Harpalini Bonelli, 1810	2. *Allosiopelus* Ito, 1995	2. *A. fulvicollis* Ito, 2016
		3. *A. punctatipennis* Ito, 1995
	3. *Amblystomus* Erichson, 1837	4. *A. fuscescens* (Motschulsky, 1858)
		5. *A. indicus* (Nietner, 1858)
		6. **A. quadriguttatus* (Motschulsky, 1858)
		7. **A. resectus* Andrewes, 1924
		8. *A. vulneratus* (Dejean, 1831)
		9. *A. punctatus* Bates, 1892
	4. *Anomostomus* LaFerté-Sénectère, 1853	10. †*A. devagiriensis* Nijisha et al., 2023

		11. *A. orientalis* Andrewes, 1923
	5. *Bradybaenus* Dejean, 1829	12. *B. festivus* Dejean, 1829
	6. *Coleolissus* Bates, 1892	13. *C. iris* Andrewes, 1924
		14. ♦*C. nakajimai* Ito, 2016
		15. @*C. perlucens* (Bates, 1878)
	7. *Dioryche* MacLeay, 1825	16. **D. convexa* Andrewes, 1924
		17. *D. cuprina* (Dejean, 1829)
		18. **D. lucidula* (Dejean, 1829)
		19. •*D. solida* Andrewes, 1933
		20. *D. torta* MacLeay, 1825
	8. *Meroctenus* Gemminger & Harold, 1868	21. *M. mediocris* (Andrewes, 1936)
	9. *Oesyperus* Andrewes, 1923	22. ♦*O. unctulus* Andrewes, 1923
	10. *Ophoniscus* Bates, 1892	*O. compositus compositus* (Walker, 1858)
		23. *O. puneensis* Kataev, 2018
	11. *Parophonus* Ganglbauer, 1891	24. *P. acutangulus* (Bates, 1891)

		25. *P. lividus* (Andrewes, 1923)
		26. **P. subtilis* (Bates, 1892)
	12. *Platymetopus* Dejean, 1829	*•*P. flavilabris flavilabris* (Fabricius, 1798)
		P. figuratus pictus Andrewes, 1923
		P. rugosus rugosus (Nietner, 1857)
	13. *Siopelus* Murray, 1859	27. **S. tamilnadensis* Kataev, 2002
	14. *Trichotichnus* Morawitz, 1863	28. **T. saluki* Kataev, 2020
3. Stenolophini Kirby, 1837	15. *Acupalpus* Latreille, 1829	29. *A. andrewesi* Jaeger, 2013
		30. **A. punctatus* (Jedlička, 1936)
		31. *A. rhombotus* Andrewes, 1936
		32. *@A. sinuellus* Bates, 1892
	16. *Anthracus* Motschulsky, 1850	33. **A. anichtchenkoi* Jaeger, 2015
		34. **A. horni* (Andrewes, 1923)
		35. **A. nathani* Jaeger, 2017
		36. *@A. skalei* Jaeger, 2015

		37. @*A. weigeli* Jaeger, 2015
	17. *Batoscelis* Dejean, 1836	38. *B. oblonga* (Dejean, 1831)
	18. *Idiomelas* Tschitschérine, 1900	**I. fulvipes indus* Kataev, 1997
	19. *Loxoncus* Schmidt-Göbel, 1846	39. @*L. discophorus* (Chaudoir, 1852)
		40. *L. microgonus* (Bates, 1886)
		41. *L. nagpurensis* (Bates, 1891)
		42. *L. schmidti* Kataev, 2002
		43. #*L. renitens* (Bates, 1886)
	20. *Stenolophus* Dejean, 1821	44. *S. bajaurae* Andrewes, 1924
		45. *S. lucidus* Dejean, 1829
		46. @*S. nitens* (Motschulsky, 1864)
		47. •▽*S. quinquepustulatus* (Wiedemann, 1823)
		48. *S. rectifrons* Bates, 1892
		49. •▽*S. smaragdulus* (Fabricius, 1798)
† New species; # First report from India; @ First report from south India; * First report from Kerala; • First report from Tamil Nadu; ▽ First report from Karnataka; ♦ Endemic to the Western Ghats		

4.1.2. Checklist of Harpalinae recorded from south India

Order : Coleoptera

Family : Carabidae Latreille, 1802

Subfamily: Harpalinae Bonelli, 1810

1. Tribe Anisodactylini Lacordaire, 1854

1.1. Genus *Gnathaphanus* MacLeay, 1825

Type Species: *Trechus vulneripennis* MacLeay, 1825.

Gnathaphanus MacLeay, 1825: 20; Lacordaire, 1854: 299; Gemminger & Harold, 1868: 286; Chaudoir, 1878: 503; Sloane, 1898: 456; Andrewes, 1920: 106; Sloane, 1920a: 131; Andrewes, 1924a: 30; id. 1930b: 170; id. 1933c: 349; Habu, 1973: 56; Noonan, 1973: 289; id. 1976: 9; Saha, 1995: 58; Saha & Halder, 2000: 16; Ito, 2003c: 362; Kataev, 2005a: 134; Lorenz, 2005: 348; Kataev & Wrase, 2017a: 507; Nijisha & Sabu, 2023: 458.

Iwosiopelus Nakane & Ishida, 1959.

Mirosarus Bates, 1878a.

Pachauchenius Macleay, 1864.

Phyrometus Basilewsky, 1946b.

1. *Gnathaphanus philippensis* (Chevrolat, 1841)

Amblygnathus philippensis †Chevrolat, 1841: 221; †Desmarest, 1841: 299 t. 2. ff. 5–10.

Gnathaphanus philippensis (†Chevrolat, 1841): Bates, 1892b: 327; Andrewes, 1919a: 207; id. 1920: 107; Sloane, 1920b: 320; Andrewes, 1930b: 171; id. 1933c: 349; Moore, 1963: 440; Lorenz, 2005: 348; Nijisha & Sabu, 2023: 458.

Pachauchenius laeviceps Macleay, 1864.

Distribution. ORR- India [Bihar: Purnea (Andrewes, 1930b: 171); Maharashtra: Mumbai, Nagpur (Andrewes, 1930b: 171); Karnataka: Belaguam, Kanara (Andrewes, 1919a: 207)]; ORR- Indonesia; Malaysia; Myanmar; Philippines; AFR- New Guinea; AUR- Australia; New Zealand; NAR- USA.

1.2. Genus *Progonochaetus* Müller, 1938

Type species: *Anisodactylus xanthopus* Dejean, 1829.

Progonochaetus Müller, 1938: 245; Noonan, 1973: 340; id. 1976: 11; Ito, 2003c: 363; Lorenz, 2005: 350; Kataev & Wrase, 2017a: 508; Serrano et al., 2017: 217; Nijisha & Sabu, 2023: 459.

1.2.1. Subgenus *Progonochaetus* Müller, 1938

Type species: *Anisodactylus xanthopus* Dejean, 1829.

Progonochaetus Müller, 1938: 245; Noonan, 1973: 342; 1976: 11; Ito, 2003c: 363; Lorenz, 2005: 350; Kataev & Wrase, 2017a: 508; Nijisha & Sabu, 2023: 459.

Dichaetochilus Basilewsky, 1946a.

Dichaetochilus Jeannel, 1948 [preocc.].

Oligoxemus Basilewsky, 1948b.

2. *Progonochaetus indicus* Kataev, 2002

Progonochaetus indicus Kataev, 2002b: 241; Lorenz, 2005: 350; Wrase, 2005: 841; Kataev, 2015a: 92; Kataev & Wrase, 2017a: 508; Nijisha & Sabu, 2023: 459.

Distribution. ORR- India [New Delhi (Kataev, 2002b: 241); Uttar Pradesh: Jhansi (Kataev, 2015a: 92); Rajasthan: Bharatpur, Kaelodeo Nature Reserve (Kataev, 2002b: 241); Madhya Pradesh: Pachmarhk, Satpura Hills (Kataev, 2015a: 92); Gujarat: Kathiawar, Mandvi (Kataev, 2015a: 92); Chhattisgarh: Bilaspur, Karidongri Forest rest house (Nijisha & Sabu, 2023: 459); Maharashtra: Nagpur, Ratnagiri (Kataev, 2002b: 241), Deccan, Mumbai; Karnataka: Bangalore, Bandipur Reserve,

Bellary; Tamil Nadu: Chennai (Kataev, 2015a: 92)]; PAR- India [Uttarakhand: Corbett Nature Park (Kataev, 2002b: 241)]; PAR- Nepal; Pakistan.

1.3. Genus *Pseudognathaphanus* Schauberger, 1932

Type species: *Harpalus punctilabris* MacLeay, 1825.

Pseudognathaphanus Schauberger, 1932b: 57; Habu, 1973: 62; Noonan, 1973: 344; id. 1976: 12; Ito, 2003c: 363; Lorenz, 2005: 351; Park et al., 2006: 96; Kataev & Wrase, 2016a: 224; Kataev & Wrase, 2017a: 508; id. 2018: 359; Sruthi & Sabu, 2022: 21622; Nijisha & Sabu, 2023: 459.

Hiekea Ito, 1997d.

Protognathus Basilewsky, 1950.

3. *Pseudognathaphanus dekkanus* Andrewes, 1933

Pseudognathaphanus dekkanus Andrewes, 1933b: 102; Lorenz, 2005: 351; Kataev & Wrase, 2016a: 233. Hiekea picipes Ito, 1997d; Nijisha & Sabu, 2023: 459.

Distribution. ORR- India [Maharashtra: Panchgani, Kasara, Satara (Andrewes, 1933b: 102), Mumbai, Khandala (Andrewes, 1933b: 102; Kataev & Wrase, 2016a: 233); Karnataka: Parleh, Kanara (Andrewes, 1933b: 102), Talewadi, Belagavi (Andrewes, 1933b: 102, Kataev & Wrase, 2016a: 233)].

4. *Pseudognathaphanus exaratus* (Bates, 1892)

Gnathaphanus exaratus Bates, 1892b: 329; Andrewes, 1920: 108; id. 1930b: 170. *Pseudognathaphanus exaratus* (Bates, 1892b); Ito, 2003c: 363; Lorenz, 2005: 351; Kataev & Wrase, 2016a: 230; id. 2017a: 508; Nijisha & Sabu, 2023: 460.

Distribution. ORR- India [Assam: Sorbhog, Golakganj (Andrewes, 1930b: 170); Nagaland: Naga Hills (Andrewes, 1930b: 170); Karnataka: Mudigere (Kataev & Wrase, 2016a: 230)]; PAR- India [Arunachal Pradesh: Dafla Hills (Andrewes, 1930b:

170); West Bengal: Darjeeling (Kataev & Wrase, 2017a: 508)]; ORR- Laos; Myanmar; Thailand.

5. *▽*Pseudognathaphanus punctilabris* (MacLeay, 1825)

Harpalus punctilabris MacLeay, 1825: 20.

Gnathaphanus punctilabris (MacLeay, 1825); Andrewes, 1919a: 150; id. 1920: 107; id. 1924a: 30; id. 1930b: 171; Saha, 1995: 58.

Pseudognathaphanus punctilabris (MacLeay, 1825); Habu, 1973: 62; Ito, 2003c: 363; Lorenz, 2005: 351; Park et al., 2006: 96; Kataev & Wrase, 2016a: 226; id. 2017a: 508; Nijisha & Sabu, 2023: 460.

Anisodactylus javanus Dejean, 1829.

Platymetopus (?) gnathaphanoides Bates, 1892b.

Specimens examined: 7 ex. 'India: Kerala: Kannur, Chambad, Light trap, 28.VIII.2019, K Shigina'; 8 ex. "India: Tamil Nadu: Kadayam, Hand picking, 18.X.2015, S. V. Akhil & V. A. Jithmon'; 3 ex. "India: Tamil Nadu: Ettimadai, Hand picking, 08.IX.2015, S. V. Akhil & V. A. Jithmon'; 2 ex. 'India: Karnataka: Kushal Nagar, Kodayu-Dakhin Kanara, 08.IX.1998, Dr. M. B. Jagannatha'; 8 ex. 'India: Kerala, Kothupara Estate, Idukki (Organic), 29.I.2023, Girish Kumar & Party; 3 ex. 'India: Kerala, Valley view point Parambiculam Range, Parambiculam T R, 31.X.2022, Dr. L Bindu & Party'.

Distribution. India [Assam: Kohara (= Kaziranga) (Kataev & Wrase, 2016a: 226); West Bengal: Murshidabad (Saha, 1995: 58); Odisha: Ganjam, Surada (Andrewes, 1924a: 30); Tamil Nadu: Karaikal, Anamalai Hills; Pondicherry (Kataev & Wrase, 2016a: 226)]; PAR- India [Himachal Pradesh: Kulu (Kataev & Wrase, 2016a: 226); West Bengal: Darjeeling (Kataev & Wrase, 2017a: 508)]; ORR-

Andaman Nicobar Islands; Indochina; Indonesia; Laos; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; PAR- China; Japan; Nepal; Spain, Taiwan.

6. *Pseudognathaphanus rusticus* (Andrewes, 1920)

Gnathaphanus rusticus Andrewes, 1920: 107; id. 1924a: 30; id. 1930b: 172; Kushwaha & Hegde, 2015: 403.

Pseudognathaphanus rusticus (Andrewes, 1920); Ito, 2003c: 363; Lorenz, 2005: 351; Kataev & Wrase, 2016a: 232; id. 2017a: 508; Sruthi & Sabu, 2022: 21622; Nijisha & Sabu, 2023: 460.

Distribution. ORR- India [Uttar Pradesh: Lucknow (Andrewes, 1930b: 172); Bihar: Pusa, Chapra, Muzaffarpur, Purnea, Patna, Samstipur (Andrewes, 1930b: 172); Madhya Pradesh: Pachmarhi (Kataev & Wrase, 2016a: 232); Gujarat: Surat (Andrewes, 1930b: 172); Chhattisgarh, Raipur, Barnwapara, Kawardha, Chilpi Rest house (Nijisha & Sabu, 2023: 460); Odisha: Ganjam, Surada (Andrewes, 1924a: 30); Maharashtra: Nagpur, Chikalda (Andrewes, 1930b: 172), Mumbai, Pune (Kataev & Wrase, 2016a: 232); Goa: Südgoa; Karnataka: Belagavi; Kanara (Kataev & Wrase, 2016a: 232); Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21622)]; PAR- India [Uttarakhand: Dehra Dun, Haridwar, Roorkee, Bhaiwar (Andrewes, 1930b: 172), Rhishikesh (Kataev & Wrase, 2016a: 232)]; ORR- Sri Lanka; PAR- Nepal; Pakistan.

2. Tribe Stenolophini Kirby, 1837

2.1. Genus *Acupalpus* Latreille, 1829

Type species: *Carabus meridianus* Linnaeus, 1760.

Acupalpus Latreille, 1829: 391; Dejean, 1829: 435; Lacordaire, 1854: 302; Motschulsky, 1864: 205; Gemminger & Harold, 1868: 287; Péringuey, 1896: 462; Tschitschérine, 1900c: 365; id. 1901: 246; Andrewes, 1930b: 9; Jeannel, 1948: 714; Basilewsky, 1956: 461; Habu, 1973: 325; Noonan, 1976: 23; Jaeger & Kataev, 2003:

397; Lorenz, 2005: 359; Jaeger & Kataev, 2017: 562; Divya, 2023: 65; Ashly, 2023: 57; Nijisha & Sabu, 2023: 461.

2.1.1. Subgenus *Stenolophidius* Jeannel, 1948

Type species: *Stenolophus terminalis* Chaudoir, 1843.

Stenolophidius Jeannel, 1948: 708; Jaeger & Kataev, 2003: 398; Jaeger, 2013: 293; Jaeger & Kataev, 2017: 565; Nijisha & Sabu, 2023: 461.

Pseudanthracus Habu, 1973.

Palcuapus Habu, 1973.

7. *Acupalpus andrewesi* Jaeger, 2013

Acupalpus andrewesi Jaeger, 2013: 315; Jaeger et al., 2016: 1261; Divya, 2023: 66; Ashly, 2023: 57; Nijisha & Sabu, 2023: 461.

Specimens examined: 7 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'; 5 ex. 'India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021, K Shigina'.

Distribution. ORR- India [Madhya Pradesh: Khawasa, Seoni (Jaeger, 2013: 315); Maharashtra: Savatvadi, Nagpur, Telinkheri (Jaeger, 2013: 315); Karnataka: Kerwadi (Jaeger et al., 2016: 1261); Kerala: Thekkady, Periyar (Jaeger, 2013: 315); Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; ORR- Sri Lanka.

8. *Acupalpus maculipennis* Jaeger, 2013

Acupalpus maculipennis Jaeger, 2013: 310; Jaeger et al., 2016: 1261; Jaeger & Ahmed, 2017: 611; Jaeger & Kataev, 2017: 565; Divya, 2023: 66; Nijisha & Sabu, 2023: 461.

Distribution. ORR- India [Rajasthan: Jaisalmer (Jaeger et al., 2016: 1261); Tamil Nadu (Jaeger, 2013: 310); Kerala: Palakkad, Pudussery Paddy field (Divya, 2023)]; PAR- Pakistan.

9. *_Acupalpus punctatus_ (Jedlička, 1936)

Anthracus punctatus Jedlička, 1936c: 135.

Acupalpus punctatus (Jedlička, 1936c); Lorenz, 2005: 360; Jaeger, 2013: 299; Jaeger et al., 2016: 1261; Nijisha & Sabu, 2023: 462.

Acupalpus sinuellus sensu Habu, 1961 (partim, nec *A. sinuellus* Bates).

Specimens examined: 3 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Karnataka: Kerwadi (Jaeger et al., 2016: 1261)]; ORR- Cambodia; Indonesia; Laos; Philippines; Sri Lanka; Thailand; Vietnam.

10. _Acupalpus rhombotus_ Andrewes, 1936

Acupalpus rhombotus Andrewes, 1936: 219; Lorenz, 2005: 360; Jaeger, 2013: 296; Jaeger et al., 2016: 1261; Divya, 2023: 66; Ashly, 2023: 58; Nijisha & Sabu, 2023: 462.

Anthracus coloratus Jedlička, 1936b.

Acupalpus (Anthracus) guttiger Schauberger, 1938.

Acupalpus sinuellus sensu Habu, 1961 (partim, nec *A. sinuellus* Bates).

Specimens examined: 2 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Meghalaya: Khasi Hills, Mawsynram (Jaeger, 2013: 296); West Bengal: Sarda (Jaeger, 2013: 296); Karnataka: Kerwadi (Jaeger et al., 2016: 1261); Palakkad: Chulanur Peafowl Sanctuary, Pudussery Paddy field

(Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; ORR- Cambodia; Indonesia; Laos; Philippines; Thailand; Vietnam.

11. @*Acupalpus sinuellus* Bates, 1892

Acupalpus sinuellus Bates, 1892b: 350; Andrewes, 1930b: 10; Habu, 1978b: 9: Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger, 2013: 304; Jaeger et al., 2016: 1261; Jaeger & Kataev, 2017: 565; Nijisha & Sabu, 2023: 462.

Specimens examined: 9 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'; 6 ex. 'India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021, K Shigina'.

Distribution. ORR- India [Uttarakhand: Jaspur (Jaeger et al., 2016: 1261); Assam (Jaeger, 2013: 304); Nagaland: Naga Hills (Jaeger, 2013: 304); Meghalaya: Khasi Hills, Mawsynram (Jaeger, 2013: 304); Rajasthan: Sarda (Jaeger, 2013: 304); West Bengal (Jaeger, 2013: 304)]; ORR- Indonesia; Laos; Myanmar; Vietnam; PAR- China.

2.1.2. Subgenus *Subacupalpus* Habu, 1978

Type species: *Acupalpus sikkimensis* Andrewes, 1930.

Subacupalpus Habu, 1978b: 9; Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger, 2010: 147; Jaeger & Kataev, 2017: 565; Nijisha & Sabu, 2023: 462.

12. *Acupalpus sikkimensis* Andrewes, 1930

Acupalpus sikkimensis Andrewes, 1930a: 20; Habu, 1978b: 8; Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger, 2010: 148; Jaeger et al., 2016: 1262; Jaeger & Kataev, 2017: 565; Nijisha & Sabu, 2023: 462.

Distribution. ORR- India [Meghalaya: Shillong (Jaeger, 2010: 148); Maharashtra: Mahabaleshwar, Panchgani (Jaeger, 2010: 148); Tamil Nadu: Nilgiri Hills (Jaeger, 2010: 148)]; PAR- India [Uttarakhand: Bhimtal, Almora, Kumaon,

Haldwani, Gumti (Jaeger, 2010: 148); Sikkim: Rongli (Andrewes, 1930a: 20); West Bengal: Darjeeling, Gopaldhara (Andrewes, 1930a: 20)]; ORR- Vietnam; PAR- Nepal.

2.2. Genus *Anthracus* Motschulsky, 1850

Type species: *Carabus consputus* Duftschmid, 1812.

Anthracus Motschulsky, 1850: Key VII and p. 21; id. 1864: 207; Andrewes, 1930b: 9; Habu, 1973: 337; Noonan, 1976: 24; Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger & Kataev, 2017: 565; Nijisha & Sabu, 2023: 462.

Balius Schiødte, 1861.

13. *_Anthracus anichtchenkoi_ Jaeger, 2015

Anthracus anichtchenkoi Jaeger, 2015b: 1367; id. 2017: 606; Jaeger & Ahmed, 2017: 611; Jaeger & Kataev, 2017: 565; Nijisha & Sabu, 2023: 462.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'; 2 ex. 'India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021, K Shigina'.

Distribution. ORR- India [West Bengal: Sarda (Jaeger, 2015b: 1367); Tamil Nadu: Coimbatore (Jaeger, 2017: 606)]; PAR- India [Uttarakhand: Jaspur (Jaeger, 2015b: 1367)]; PAR- Nepal; Pakistan.

14. *Anthracus annamensis* (Bates, 1889)

Acupalpus annamensis Bates, 1889c: 272; id. 1892b: 350; Andrewes, 1926b: 346; id. 1930b: 9; id. 1933c: 326.

Anthracus annamensis (Bates, 1889c); Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger & Kataev, 2017: 565; Nijisha & Sabu, 2023: 463.

Distribution. ORR- India [Madhya Pradesh: Korai (Seoni) (Andrewes, 1930b: 9); Chhattisgarh: Tumgaon (Raipur) (Andrewes, 1930b: 9); Tamil Nadu: Kodaikanal (Andrewes, 1930b: 9)]; PAR- India [Himachal Pradesh: Kulu (Andrewes, 1930b: 9);

Uttarakhand: Almora, Ranikhet (Andrewes, 1930b: 9)]; ORR- Indonesia; Myanmar; Philippines; Sri Lanka; Vietnam; PAR- China; Taiwan.

15. *Anthracus fritzhiekei* Jaeger, 2016

Anthracus fritzhiekei Jaeger, 2016: 216; Nijisha & Sabu, 2023: 463.

Distribution. ORR- India [Tamil Nadu: Karikal; Pondicherry (Jaeger, 2016: 216)].

16. *Anthracus horni (Andrewes, 1923)

Acupalpus horni Andrewes, 1923a: 237; id 1930b: 10.

Anthracus horni (Andrewes, 1923a); Jaeger & Kataev, 2003: 400; Lorenz, 2005: 360; Jaeger, 2016: 218; Jaeger & Kataev, 2017: 566; Nijisha & Sabu, 2023: 463.

Specimens examined: 3 ex. 'India: Kerala: Kannur, Chalode, Light trap, 18.XII.2021, K Nijisha'.

Distribution. ORR- India [Uttar Pradesh: Sitapur (Andrewes, 1923a: 237); Maharashtra: Mumbai (Andrewes, 1923a: 237); Karnataka: Belagavi (Andrewes, 1923a: 237); Tamil Nadu: Chennai (Andrewes, 1930b: 10)]; PAR- India [Uttarakhand: Dehra Dun (Andrewes, 1930b: 10)]; ORR- Malaysia; Myanmar; Sri Lanka; PAR- Japan; Nepal.

17. *Anthracus nathani Jaeger, 2017

Anthracus nathani Jaeger, 2017: 598; Nijisha & Sabu, 2023: 463.

Specimens examined: 2 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Tamil Nadu: Kurumbagaram, Karikal, Mettukuppam, Neyveli, Cudalore (Jaeger, 2017: 598)].

18. @Anthracus skalei Jaeger, 2015

Anthracus skalei Jaeger, 2015a: 341; Nijisha & Sabu, 2023: 463 .

Specimens examined: 2 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.IX.2019, K Nijisha'.

Distribution. ORR- India [Meghalaya: Cherrapunjee (Jaeger, 2015a: 341)]; PAR- India [Himachal Pradesh: Shorang (Jaeger, 2015a: 341); West Bengal: Darjeeling, Kurseong, Algarah (Jaeger, 2015a: 341)]; ORR- Bangladesh; PAR- Bhutan; Nepal; Pakistan.

19. @*Anthracus weigeli* Jaeger, 2015

Anthracus weigeli Jaeger, 2015a: 340; Nijisha & Sabu, 2023: 464.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.IX.2019, K Nijisha'.

Distribution. ORR- India [West Bengal: Sarda (Jaeger, 2015a: 340); Odisha: Similipal, Lulung (Jaeger, 2015a: 340)]; PAR- India [Uttarakhand: Almora, Kumaon, Haldwani (Jaeger, 2015a: 340)]; PAR- Nepal.

2.3. Genus *Batoscelis* Dejean, 1836

Type species: *Agonoderus oblongus* Dejean, 1831.

Batoscelis Dejean, 1836: 46; Lacordaire, 1854: 261; Gemminger & Harold, 1868: 249; Andrewes, 1930b: 256; Jeannel, 1948: 721; Noonan, 1976: 25; Jaeger & Kataev, 2003: 400; Lorenz, 2005: 361; Jaeger & Kataev, 2017: 566; Nijisha & Sabu, 2023: 464.

Leptocellus Müller, 1942.

Systenognathus Putzeys, 1863.

20. *Batoscelis oblonga* (Dejean, 1831)

Agonoderus oblongus Dejean, 1831: 813.

Batoscelis oblonga Gemminger & Harold, 1868: 249.

Pachytrachelus oblongus (Dejean, 1831); Bates, 1892b: 343; †Yuillet, 1912: 19; Heller, 1916: 276; Sloane, 1920b: 320; Andrewes, 1924a: 39; id. 1930b: 256; Moore, 1963: 440; Saha, 1995: 66.

Batoscelis oblonga (Dejean, 1831); Jaeger & Kataev, 2003: 400; Lorenz, 2005: 361; Jaeger et al., 2016: 1269; Baehr & Reid, 2017: 438; Jaeger & Kataev, 2017: 566; Divya, 2023: 67; Ashly, 2023: 59; Nijisha & Sabu, 2023: 464.

Batoscelis ceylonica Motschulsky, 1861.

Batoscelis polita Schmidt-Göbel, 1846.

Carabus angulata Fabricius, 1801.

Specimens examined: 3 ex. 'India: Kerala, Kannur: Chalode, Lightt rap, 01.V.2021, K Nijisha'; 2 ex. 'India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021, K Shigina'; 1 ex. "India: Kerala: Wayanad, Tholpetty, Light trap, 05.V.2015, S. V. Akhil & V. A. Jithmon'; 1 ex. 'India: Tamil nadu: Manimuthar River, Tirunelveli, Agastiyamalai BR, Light trap, 11.III.2021.R. Babu & Party'.

Distribution. ORR- India [West Bengal: Kharagpur, Calcutta, Murshidabad, Maldah, Purulia, Medinipur (Saha, 1995: 66); Chhattisgarh: Raipur, Barnawapara Wildlife Sanctuary (Nijisha & Sabu, 2023: 464); Odisha: Ganjam, Surada (Andrewes, 1924a: 39); Tamil Nadu: Chennai (Bates, 1892b: 343); Kerala: Palakkad: Chulanur Peafowl Sanctuary, Pudussery Paddy field (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; ORR- Indonesia; Malaysia; Myanmar; Philippines; Thailand; PAR- China; Nepal; AFR- New Guinea; AUR- Australia.

2.4. Genus *Idiomelas* Tschitschérine, 1900

Type species: *Stenolophus morio* Ménétriés, 1832.

Idiomelas Tschitschérine, 1900c: 364; Noonan, 1976: 23; Kataev, 1997b: 240; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 361; Jaeger & Kataev, 2017: 571; Divya, 2023: 68; Ashly, 2023: 61; Nijisha & Sabu, 2023: 465.

2.4.1. Subgenus *Egaploa* Alluaud, 1916

Type species: *Stenolophus crenulatus* Dejean, 1829.

Egaploa Alluaud, 1916: 64; Andrewes, 1924a: 39; id. 1930b: 162; Jeannel, 1948: 694; Noonan, 1976: 28; Saha, 1995: 70; Kataev, 1997b: 246; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 361; Jaeger & Kataev, 2017: 571; Nijisha & Sabu, 2023: 465.

21. *Idiomelas fulvipes* (Erichson, 1843)

Stenolophus fulvipes Erichson, 1843: 216; Gemminger & Harold, 1868: 291; Saha, 1995: 70.

Egaploa fulvipes †Gerst, 1862: 172; Kolbe, 1910: 18; Scott, 1912: 249; Andrewes, 1927: 102; id. 1930b: 162.

Idiomelas fulvipes (Erichson, 1843); Kataev, 1997b: 247; Lorenz, 2005: 361; Kataev, 2014a: 247; Divya, 2023: 68; Ashly, 2023: 61; Nijisha & Sabu, 2023: 466.

***ssp. *indus* Kataev, 1997b: 248**; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 361; Kataev, 2014a: 249; Jaeger & Kataev, 2017: 572; Nijisha & Sabu, 2023: 466; Nijisha et al., 2024: 2.

Specimens examined: 6 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, 26.II.2022, K Shigina'; 1 ex. 'India: Karnataka: Areshiroor, Uduppi, Mookambika Wildlife Sanctuary, Light trap, 19–22 VI.2022, V. D. Hegde & Party'; 1 ex. 'India: Tamil Nadu: Krishnan Kovil, Virudhunagar District, Light attracted, 08.VIII.2019, K. Nijisha'.

Distribution. ORR- India [New Delhi (Kataev, 2014a: 248); Rajasthan: Jodhpur (Kataev, 2014a: 248); Chhattisgarh: Jagdalpur, Forest rest house (Nijisha &

Sabu, 2023: 466); Odisha: Surada, Ganjam (Andrewes, 1924a: 39); Goa: Südgoa, Canacona Raj Baga Beach (Kataev, 2014a: 249); Karnataka: Bangalore (Kataev, 2014a: 249); Tamil Nadu: Chennai, Coimbatore (Kataev, 2014a: 249), Kodaikanal (Alluaud, 1916: 73; Jeannel, 1948: 695), Tiruchirappalli (Kataev, 2014a: 249); Kerala: Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field, Walayar Reserve Forest (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; ORR- Myanmar; PAR- Nepal; Oman; Pakistan; Saudi Arabia; AFR- Angola; Burkina Faso; Botswana; Cape Verde Is; Comoros; Djibouti; Madagascar; Mauritius; Mozambique; Seychelles; Yemen; Tanzania; Sudan.

2.5. Genus *Loxoncus* Schmidt-Göbel, 1846

Type species: *Loxoncus elevatus* Schmidt-Göbel, 1846.

Loxoncus Schmidt-Göbel, 1846: Plate 3; Motschulsky, 1864: 201; Andrewes, 1930b: 28; Habu, 1973: 395; Noonan, 1976: 18; Kataev, 2003: 352; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 355; Jaeger & Kataev, 2017: 572; Akhil, 2020: 89; Divya, 2023: 69; Ashly, 2023: 62; Nijisha & Sabu, 2023: 466.

2.5.1. Subgenus *Loxoncus* Schmidt-Göbel, 1846

Type species: *Loxoncus elevatus* Schmidt-Göbel, 1846.

Loxoncus Schmidt-Göbel, 1846: Plate 3; Kataev, 2003: 354; Lorenz, 2005: 355; Jaeger & Kataev, 2017: 572; Nijisha & Sabu, 2023: 466.

Anoplogenius Chaudoir, 1852.

Lepithrix Nietner, 1857a.

Megrammus Motschulsky, 1858b.

Metagrammus † Motschulsky, 1857.

Neolissus Landin, 1955.

22. *@Loxoncus discophorus* (Chaudoir, 1852)

Anoplogenius discophorus Chaudoir, 1852: 90; Andrewes, 1930b: 29; Habu, 1978b: 10.

Loxoncus discophorus (Chaudoir, 1852); Kataev, 2003: 354; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 355; Jaeger & Ahmed, 2017: 612; Jaeger & Kataev, 2017: 572; Nijisha & Sabu, 2023: 466.

Anoplogenius bottcheri Jedlička, 1935b.

Anoplogenius patinalis Bates, 1892b.

Anoplogenius philippinus Jedlička, 1936a.

Lepithrix foliolosa Nietner, 1857a.

Specimens examined: 3 ex. 'India: Kerala: Kannur, Chambad, Odakkad, Light trap, 22.II.2021, K Shigina';

Distribution. ORR- India [New Delhi: Pusa (Andrewes, 1930b: 29); Assam: Kaziranga, Bagori (Kataev, 2003: 354); Chhattisgarh: Koriya, Rewala Talab (Nijisha & Sabu, 2023: 466)]; PAR- India [Himachal Pradesh: Shimla (Chaudoir, 1852: 90; Andrewes, 1930b: 29); Uttarakhand: Haldwani (Andrewes, 1930b: 29)]; ORR- Indochina; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; PAR- China; Nepal; Pakistan; Taiwan.

23. *Loxoncus nagpurensis* (Bates, 1891)

Anoplogenius nagpurensis Bates, 1891b: 333; Andrewes, 1930b: 30.

Loxoncus nagpurensis (Bates, 1891b); Kataev, 2003: 356; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 356; Jaeger et al., 2016: 1283; Jaeger & Kataev, 2017: 572; Divya, 2023: 69; Ashly, 2023: 63; Nijisha & Sabu, 2023: 466.

Anoplogenius discophorus sensu Habu, 1978b (non Chaudoir, 1852).

Specimens examined: 4 ex. 'India: Kerala: Kannur, Chambad, Odakkad, 22.II.2021, K Shigina'.

Distribution. ORR- India [Bihar: Muzzafarpur (Nijisha & Sabu, 2023: 466); Jharkhand: Chota Nagpur (Tetara) (Bates, 1891b: 333; Andrewes, 1930b: 30); West Bengal: Calcutta; Chhattisgarh: Bilaspur (Andrewes, 1930b: 30); Maharashtra: Nagpur (Andrewes, 1930b: 30); Tamil Nadu: Chennai (Andrewes, 1930b: 30); Kerala: Palakkad, Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; ORR- Sri Lanka; Thailand; Vietnam; PAR- Nepal.

24. *Loxoncus schmidti* Kataev, 2002

Loxoncus schmidti Kataev, 2002: 363; Lorenz, 2005: 356; Jaeger et al., 2016: 1284; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 572; Ashly, 2023: 65; Nijisha & Sabu, 2023: 467.

Specimen examined: 1 ex. 'India: Kerala: Chambad, Odakkad, Light trap, 22.II.2021, K Shigina'.

Distribution. ORR- India [New Delhi (Jaeger et al., 2016: 1284); Assam: Kaziranga (Nijisha & Sabu, 2023: 467); Kerala: Palakkad, Pattambi (Ashly, 2023)]; ORR- Sri Lanka; PAR- Nepal; Pakistan.

25. #*L. renitens* (Bates, 1886)

Anoplogenius renitens Bates, 1886: 79; id. 1889c: 272; id. 1892b: 346; Andrewes, 1930b: 29

Loxoncus renitens (Bates, 1886); Jaeger & Kataev, 2003: 404; Kataev, 2003: 367; Jaeger & Kataev, 2017: 572; Nijisha et al., 2024: 2.

Specimen examined: 1 ex. India: Kerala: Aralam Wildlife Sanctuary, Light trap, 26.II.2022,

K. Shigina.

Distribution. ORR- Sri Lanka.

2.5.2. Subgenus *Xoloncus* Kataev, 2002

Type species: *Anoplogenius microgonus* Bates, 1886.

Xoloncus Kataev, 2003: 374; Lorenz, 2005: 356; Jaeger & Kataev, 2017: 572; Nijisha & Sabu, 2023: 467.

26. *Loxoncus microgonus* (Bates, 1886)

Anoplogenius microgonus Bates, 1886: 78; id. 1889c: 272; id. 1891b: 333; id. 1892b: 345; Andrewes, 1930b: 29; Saha, 1995: 70.

Loxoncus microgonus (Bates, 1886); Jaeger & Kataev, 2003: 404; Kataev, 2003: 374; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 572; Akhil, 2020: 89; Divya, 2023: 70; Ashly, 2023: 62; Nijisha & Sabu, 2023: 467.

Anoplogenius andrewesi Jedlička, 1935b.

Anoplogenius renitens Bates, 1889c (non Bates, 1886).

Specimens examined: 14 ex. 'India: Kerala: Kannur, Chalode, 17.IX.2021, K Nijisha'; 13 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, 22.II.2021. K Shigina'; 3 ex. India: Tamil Nadu: Nagarkoil, Pechiparai lake, Light trap, 21.IX.2018, Dr. R V & Party'; 29 ex. 'India: Kerala: Wayanad, Muthanga, Light trap, 09.V.2016, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Bihar (Saha, 1995: 70); Jharkhand: Chota Nagpur (Tetara) (Bates, 1891b: 333); Barkuda Island (Chilika Lake); West Bengal: Calcutta, Sunderbans, Diamond Harbour, Surajabuggi, Sarda (Andrewes, 1930b: 29); Odisha (Saha, 1995: 70); Maharashtra: Nagpur (Kataev, 2003: 374); Tamil Nadu: Nilgiri Hills (Akhil, 2020: 89), Kerala: Malabar (Kataev, 2003: 374); Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; PAR- India [Himachal Pradesh: Shimla (Kataev, 2003:

374)]; ORR- Bangladesh; Indonesia; Laos; Malaysia; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; PAR- China; Nepal; Pakistan.

2.6. Genus *Pachytrachelus* Chaudoir, 1852

Type species: *Pachytrachelus cribriceps* Chaudoir, 1852.

Pachytrachelus Chaudoir, 1852: 85; Lacordaire, 1854: 259; Gemminger & Harold, 1868: 248; Péringuey, 1896: 419; Andrewes, 1924a: 39; id. 1930b: 256; Noonan, 1976: 26; Saha, 1995: 66; Lorenz, 2005: 361; Jaeger & Kataev, 2017: 573; Nijisha & Sabu, 2023: 467.

27. *Pachytrachelus cribriceps* Chaudoir, 1852

Pachytrachelus cribriceps Chaudoir, 1852: 86; Bates, 1891b: 333; Gemminger & Harold, 1868: 248; Andrewes, 1930b: 256; Saha, 1995: 66; Lorenz, 2005: 361; Nijisha & Sabu, 2023: 467.

Distribution. ORR- India [Bihar: Danapur, Pusa (Andrewes, 1930b: 256); Jharkhand: Konbir (Bates, 1891b: 333; Andrewes, 1930b: 256), Chota Nagpur, Ranchi (Andrewes, 1930b: 256); Madhya Pradesh: Gwalior (Andrewes, 1930b: 256); West Bengal: Kurseong (Bates, 1891b: 333; Andrewes, 1930b: 256), Murshidabad (Andrewes, 1930b: 256); Odisha: Brahmpur (Andrewes, 1930b: 256); Maharashtra: Nagpur, Ratnagiri (Andrewes, 1930b: 256); Karnataka: Belagavi (Andrewes, 1930b: 256)]; PAR- India [Himachal Pradesh: Shimla (Chaudoir, 1852: 86); West Bengal: Darjeeling (Saha, 1995: 66)]; ORR- Bangladesh.

2.7. Genus *Stenolophus* Dejean, 1821

Type species: *Carabus vaporariorum* Linné sensu Fabricius, 1787.

Stenolophus Dejean, 1821: 15; id. 1829: 405; Lacordaire, 1854: 303; Gemminger & Harold, 1868: 290; Péringuey, 1896: 457; Sloane, 1898: 456; Tschitschérine, 1900c: 364; id. 1901: 246; Lesne, 1904: 76; Andrewes, 1924a: 40; id. 1930b: 316; id. 1933c:

371; Habu, 1973: 341; Noonan, 1976: 17; Saha, 1995: 67; Saha & Halder, 2000: 15; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 353; Park et al., 2006: 96; Jaeger & Kataev, 2017: 573; Serrano et al., 2017: 218; Akhil, 2020: 89; Sruthi & Sabu, 2022: 21623; Divya, 2023: 70; Ashly, 2023: 66; Nijisha & Sabu, 2023: 469.

2.7.1. Subgenus *Egadroma* Motschulsky, 1855

Type species: *Carabus smaragdulus* Fabricius, 1798.

Egadroma Motschulsky, 1855: 43; id. 1864: 201; Tschitschérine, 1900c: 364; id. 1901: 246; Andrewes, 1930b: 316; Jeannel, 1948: 696; Basilewsky, 1956: 458; Habu, 1973: 376; Noonan, 1976: 18; Bruneau de Miré, 1976: 275; Saha, 1995: 68; Jaeger & Kataev, 2003: 405; Larochelle & Larivière, 2005: 72; Lorenz, 2005: 354; Kataev & Wrase, 2013: 258; Jaeger &

Kataev, 2017: 574; Nijisha & Sabu, 2023: 469.

Amphibia Perroud & Montrouzier, 1864.

28. *Stenolophus bajaurae* Andrewes, 1924

Stenolophus bajaurae Andrewes, 1924a: 95; id. 1926a: 69; id. 1930b: 316; Jedlička, 1967: 73; Kataev, 2002d: 724; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 354; Wrase, 2005: 852; Kataev, 2015a: 93; Kushwaha & Hegde, 2015: 401; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 574; Sruthi & Sabu, 2022: 21623; Divya, 2023: 66; Ashly, 2023: 71; Nijisha & Sabu, 2023: 469.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 17.IX.2021, K Nijisha'; 1 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021. K Shigina'.

Distribution. ORR- India [Punjab (Andrewes, 1926a: 69); New Delhi (Wrase, 2005: 852); Uttar Pradesh: Fyzabad (Andrewes, 1930b: 316); Bihar (Andrewes, 1926a: 69); Jharkhand: Sarju Valley (Andrewes, 1926a: 69); Kerala: Idukki, Kootar

(Sruthi & Sabu, 2022: 21623); Palakkad, Pudussery Paddy field (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; PAR- India [Jammu & Kashmir (Andrewes, 1926a: 69); Himachal Pradesh: Bajaura, Kangra, Spiti, Manikaran (Andrewes, 1924a: 95); Uttarakhand: Kumaon (Andrewes, 1930b: 316)]; PAR- Afghanistan; Nepal; Pakistan; Tajikistan; Turkmenistan; Uzbekistan.

29. *Stenolophus lucidus* Dejean, 1829

Stenolophus lucidus Dejean, 1829: 419; Andrewes, 1930: 317; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Jaeger & Kataev, 2017: 574; Sruthi & Sabu, 2022: 21623; Divya, 2023: 71; Ashly, 2023: 67; Nijisha & Sabu, 2023: 470.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 17.IX.2021, K Nijisha'.

Distribution. ORR- India [Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21623); Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; ORR- East Indies; PAR- Bhutan; China; Japan; Nepal; Taiwan.

30. *@Stenolophus nitens* (Motschulsky, 1864)

Egadroma nitens Motschulsky, 1864: 205.

Stenolophus nitens (Motschulsky, 1864): Andrewes, 1928: 8; id. 1930b: 318; Kataev, 2002d: 724; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Jaeger et al., 2016: 1287; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 574; Nijisha & Sabu, 2023: 470.

Stenolophus cyanellus Bates, 1889a.

Acupalpus viriditinctus Schauberger, 1938.

Specimens examined: 2 ex. 'India: Kerala: Kannur, Chambad, 10.XII.2021, K Shigina'; 8 ex. 'India: Tamil Nadu: Nagarkoil, Pechiparai lake, 21.IX.2018, Dr. R V

& Party'; 1 ex. 'India: Tamil Nadu: Thirunelveli, Kattabomman district, Light trap, 08.IV.1995, Kannadian & Party'; 1 ex. 'India: Karnataka, Hulikal PKH, Shimoga, Mookambika WLS, Light trap, 19–22.VI.2022, V.D.Hegde & Party'.

Distribution. ORR- India [West Bengal: Calcutta (Schauberger, 1938: 49); Maharashtra: Mumbai (Motschulsky, 1864: 205)]; PAR- India [Uttarakhand: Kumaon, Ramnagar (Jaeger et al., 2016: 1287)]; ORR- Indonesia; Myanmar; PAR- China; Nepal; Pakistan.

31. •▽*Stenolophus quinquepustulatus* (Wiedemann, 1823)

Badister 5 pustulatus Wiedemann, 1823: 58.

Stenolophus 5- pustulatus (Wiedemann, 1823); Bates, 1886: 79; id. 1892b: 350; Jedlička, 1963: 9.

Stenolophus quinque-pustulatus (Wiedemann, 1823); Bates, 1873a: 270; Sloane, 1920b: 321.

Stenolophus quinquepustulatus (Wiedemann, 1823); Dejean, 1829: 414; Putzeys, 1875: 49; Bates, 1889c: 272; id. 1891b: 333; Bouchard, 1903: 172; Lesne, 1904: 76; Andrewes, 1921a: 171; id. 1924e: 469; id. 1930b: 319; id. 1933c: 371; Habu, 1973: 382; Saha, 1995: 68; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Park et al., 2006: 96; Jaeger & Ahmed, 2017: 614; Jaeger & Kataev, 2017: 574; Pepito et al., 2020: 38; Sruthi & Sabu, 2022: 21623; Divya, 2023: 72; Ashly, 2023: 67; Nijisha & Sabu, 2023: 470.

Stenolophus apicalis Jedlička, 1952.

Stenolophus conjunctus Jedlička, 1956.

Stenolophus connexus Schauberger, 1928.

Stenolophus tripustulatus Jedlička, 1952.

Stenolophus unipustulatus Jedlička, 1952.

Specimens examined: 110 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, 01.V.2021, 10.XII.2021, 18.XII.2021, K Nijisha'; 55 ex. 'India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021, K Shigina'; 33 ex. 'India: Kerala: Kannur, Chambad, Light trap, 28.VIII.2019, K Shigina'; 14 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, K Shigina'; 2 ex. 'India: Karnataka: Gundalpet, Handpicking, 06.V.2016, S. V. Akhil & V. A. Jithmon'; 3 ex. 'India: Maharashtra, Kolhapur, Amba-Kerle, Light trap, 28.VIII.2013, K. Chandra'; 9 ex. 'India: Tamil Nadu, Thirukkurinjudi, Vaalaiyathu odai, Light trap, 24.IX.2018, Dr. R V & Party'; 3 ex. 'India: Tamil Nadu, Nagarkoil, Pechiparai lake, Light trap, 21.IX.2018, Dr. R V & Party'; 1 ex. 'India: Tamil Nadu, Keelasur on way to Velankanni, Thanjavur District, Light trap, 26.IV.1989, Dr. K. R. Rao & Party'; 2 ex. 'India: Karnataka, Areshiroor, Uduppi, Mookambika WLS, Light trap, 18.VI.2022, V.D.Hegde & Party'; 1ex. 'India: Karnataka, Hulikal PKH, Shimoga, Mookambika WLS, Light trap, 19–22.VI.2022, V.D.Hegde & Party'.

Distribution. ORR- India [Rajasthan: Tetara (Bates, 1891b: 333); Madhya Pradesh: Jabalpur (Nijisha & Sabu, 2023); West Bengal: Singur, Hooghly (Saha, 1995: 68); Chhattisgarh: Raipur, Barnawapara (Nijisha & Sabu, 2023: 470); Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21623); Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field, Walayar Reserve Forest (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; ORR- Cambodia; Indochina; Indonesia; Malaysia; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; PAR- China; Japan; Nepal; Pakistan; South Korea; Taiwan; AUR- Australia; Samoa; AFR- New Guinea.

32. *Stenolophus rectifrons* Bates, 1892

Stenolophus rectifrons Bates, 1892b: 348; Bouchard, 1903: 172; Lesne, 1904: 76; Andrewes, 1930b: 317; id. 1933c: 371; Saha, 1995: 69; Lorenz, 2005: 355; Akhil, 2020: 89; Nijisha & Sabu, 2023: 471.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, 01.V.2021, 10.XII.2021, 18.XII.2021, K Nijisha'; 1 ex. 'India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021, K Shigina'.

Distribution. ORR- India [Bihar (Saha, 1995: 69); Jharkhand: Chotta Nagpur (Andrewes, 1930b: 317); West Bengal: Calcutta (Andrewes, 1930b: 317; Saha, 1995: 69), South 24 Parganas (Saha, 1995: 69); Odisha: Puri; Tamil Nadu: Chennai, Nilgiri Hills (Akhil, 2020: 89); Kerala: Malabar, Thrissur (Andrewes, 1930b: 317)]; PAR- India [West Bengal: Darjeeling, Sukna (Saha, 1995: 69)]; ORR- Bangladesh; Indo-China; Indonesia; Malaysia; Myanmar; Singapore; Sri Lanka; Thailand; PAR- China.

33. •▽*Stenolophus smaragdulus* (Fabricius, 1798)

Carabus smaragdulus Fabricius, 1798: 60; id. 1801: 209.

Egadroma smaragdula Motschulsky, 1864: 205.

Stenolophus smaragdulus (Fabricius, 1798); Dejean, 1829: 418; Hope, 1838: 93; Schaum, 1847: 49; Motschulsky, 1855: 43; Gemminger & Harold, 1868: 292; Bates, 1891b: 333; id. 1892b: 349; Bouchard, 1903: 172; Sloane, 1920b: 321; Andrewes, 1921a: 160; id. 1924a: 40; id. 1930b: 318; id. 1933c; 371; Habu, 1973: 377; Saha, 1995: 69; Saha & Halder, 2000: 16;

Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Park et al., 2006: 96; Jaeger & Ahmed, 2017: 614; Jaeger & Kataev, 2017: 575; Sruthi & Sabu, 2022: 21623; Divya, 2023: 73; Ashly, 2023: 70; Nijisha & Sabu, 2023: 471.

Egadroma apicalis Motschulsky, 1864.

Harpalus stolidus Walker, 1858.

Stenolophus transmutans Bates, 1886.

Harpalus trechoides Hope, 1845.

Specimens examined: 14 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, 01.V.2021, 10.XII.2021, 18.XII.2021, K Nijisha'; 9 ex. 'India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021, K Shigina'; 15 ex. 'India: Kerala: Kannur, Chambad, Light trap, 28.VIII.2019, K Shigina'; 4 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, K Shigina'; 6 ex. 'India: Tamil Nadu, Nagarkoil, Pechiparai lake, Light trap, 21.IX.2018, Dr. R V & Party'; 2 ex. 'India: Tamil Nadu, Thirukkurinjudi, Vaalaiyathu odai, 24.IX.2018, Dr. R V & Party'; 1 ex. 'India: Karnataka, Nilsakal, Shimoga, Mookambika WLS, Light trap, 23.VI.2022, V.D. Hegde & Party'; 2 ex. India: Karnataka, Hulikal PKH, Shimoga, Mookambika WLS, Light trap, 19–22.vi.2022, V.D. Hegde & Party'; 5 ex. 'India: Karnataka, Chitoor Forest, Uduppi, Mookambika WLS, Light trap, 16.VI.2022, V.D. Hegde & Party'; 1 ex. 'India: Karnataka, Nilsakal, Shimoga, Mookambika WLS, Light trap, 23.VI.2022, V.D. Hegde & Party; 1 ex. 'India: Kerala, Valley view point Parambiculam Range, Parambiculam T R, Light trap, 31.X.2022, Dr. L Bindu & Party'.

Distribution. ORR- India [Punjab (Andrewes, 1924a: 40); Haryana: Kalka (Andrewes, 1924a: 40); Rajasthan: Tetara (Bates, 1891b: 333); Meghalaya: Khasi Hills, Jayantia Hills (Saha & Halder, 2000: 16); Jharkhand: Konbir (Bates, 1891b: 333); West Bengal: Calcutta, Midnapur, Kharagpur, Purulia (Saha, 1995: 69); Chhattisgarh: Raipur, Barnawapara (Nijisha & Sabu, 2023: 471); Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21623); Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field, Walayar Reserve Forest (Divya, 2023); Pattambi, Wayanad, Ambalavayal (Ashly, 2023)]; PAR- India [Himachal Pradesh: Bajaura, Kangara

(Andrewes, 1924a: 40); West Bengal: Darjeeling, Siliguri (Saha, 1995: 69)]; ORR- Indonesia; Malaysia; Myanmar; Sri Lanka; Philippines; Thailand; Vietnam; PAR- China; Denmark; Indochina; Japan; Pakistan; AUR- Australia; AFR- New Guinea.

3. Tribe Harpalini Bonelli, 1810

3.1. Subtribe Amblystomina Fauvel, 1889

3.1.1. Genus *Amblystomus* Erichson, 1837

Type species: *Acupalpus mauritanicus* Dejean, 1829.

Amblystomus Erichson, 1837: 59; Lacordaire, 1854: 301; Wollaston, 1867: 13; Reitter, 1883: 139; Péringuey, 1896: 466; Tschitschérine, 1900c: 348; Lesne, 1904: 73; Sloane, 1920a: 131; Andrewes, 1924a: 33; id. 1930b: 17; id. 1939: 130; Jeannel, 1948: 727; Habu, 1973: 15; Noonan, 1976: 54; Saha, 1995: 56; Jaeger & Wrase, 2003: 360; Lorenz, 2005: 384; Park et al., 2006: 95; Wrase, 2017: 502; Akhil, 2020: 86; Sruthi & Sabu, 2022: 21624; Divya, 2023: 75; Ashly, 2023: 53; Nijisha & Sabu, 2023: 472.

Artizoum Gistel, 1857.

Entomorrhinus Jeannel, 1948.

Hispalis Rambur, 1838.

Megaristerus Nietner, 1858.

Notophilus Blackburn, 1888.

Psilonothus Sloane, 1900.

Thenarotidius Sloane, 1898.

34. *Amblystomus aenescence* (Motschulsky, 1858)

Hispalis aenescence Motschulsky, 1858: 23; Andrewes, 1928: 21; id. 1930: 17; id. 1933: 7; Lorenz, 2005: 384; Sruthi & Sabu, 2022: 21624; Divya, 2023: 75; Nijisha & Sabu, 2023: 472.

Distribution. ORR- India [Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21624); Palakkad, Pudussery Paddy field, Walayar Reserve Forest (Divya, 2023)]; ORR- East Indies.

35. *Amblystomus fuscescens* (Motschulsky, 1858)

Hispalis fuscescens Motschulsky, 1858: 23.

Amblystomus fuscescens (Motschulsky, 1858): Bates, 1892b: 334; Andrewes, 1919a: 198; id. 1928: 21; id. 1930b: 18; Lesne, 1904: 73; Kapur, 1954: 316, 326; Lorenz, 2005: 384; Sruthi & Sabu, 2022: 21624; Divya, 2023: 75; Nijisha & Sabu, 2023: 473.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'; 3 ex. 'India: Kerala: Kannur, Chambad, Light trap, 28.VIII.2019, K Shigina'.

Distribution. ORR- India [Assam (Kapur, 1954: 316); Manipur: Imphal Valley (Kapur, 1954: 326); Karnataka: Mysore (Kapur, 1954: 316); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21624); Palakkad, Chulanur Peafowl Sanctuary, Walayar Reserve Forest (Divya, 2023)]; ORR- Cambodia; East Indies; Laos; Myanmar; Sri Lanka; Thailand.

36. *Amblystomus guttatus* Bates, 1873

Amblystomus guttatus Bates, 1873b: 327; id. 1892b: 336; id. 1892a: 231; Sloane, 1920b: 321; Andrewes, 1930b: 18; Jaeger & Wrase, 2003: 360; Lorenz, 2005: 384; Wrase, 2017: 502; Nijisha & Sabu, 2023: 473.

Distribution. ORR- India [Jharkhand: Chota Nagpur (Andrewes, 1930b: 18); Odisha: Ganjam, Rambha, Barkuda Island (Chilika Lake) (Andrewes, 1930b: 18); Tamil Nadu: Palni Hills (Andrewes, 1930b: 18)]; ORR- Cambodia; Myanmar; Philippines; PAR- China; AUR- Australia

37. *Amblystomus indicus* (Nietner, 1858)

Megaristerus indicus Nietner, 1858: 428; Gemminger & Harold, 1868: 286.

Amblystomus indicus (Nietner, 1858); Bates, 1886: 76; id. 1889c: 271; id. 1891b: 331; id. 1892b: 336; id. 1892a: 231; Sloane, 1920b: 321; Andrewes, 1927: 103; id. 1930b: 19; Lorenz, 2005: 384; Kushwaha & Hegde, 2015: 402; Wrase, 2017: 502; Sruthi & Sabu, 2022: 21624; Nijisha & Sabu, 2023: 473.

Specimens examined: 2 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Uttar Pradesh: Jalaun, Chilli, Jhansi, Barua sagar (Kushwaha & Hegde, 2015: 402); Jharkhand: Chota Nagpur (Tetara) (Bates, 1891b: 331); Madhya Pradesh: Pathrora (Kushwaha & Hegde, 2015: 402); West Bengal (Bates, 1892b: 336); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21624)]; ORR- Myanmar; Sri Lanka; Vietnam; AUR- Australia.

38. *Amblystomus punctatus* Bates, 1892

Amblystomus punctatus Bates, 1892b: 335; id. 1892a: 231; Andrewes, 1921b: 344; id. 1924a: 34; id. 1930b: 19; Lorenz, 2005: 384; Akhil, 2020: 86; Nijisha & Sabu, 2023: 473.

Specimen examined: 1 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Assam: Koka, Bhandara (Andrewes, 1930b: 19); Jharkhand: Chota Nagpur (Andrewes, 1930b: 19); West Bengal (Andrewes, 1921b: 344); Odisha: Ganjam, Surada, Barkuda Island (Chilika Lake) (Andrewes, 1924a: 34); Maharashtra: Mumbai (Andrewes, 1924a: 34); Andhra Pradesh: Visakhapatnam (Andrewes, 1930b: 19); Karnataka: Belagavi, Gadak, Dharwad, Mysore, Nandidurg, Chikkaballapur (Andrewes, 1930b: 19); Tamil Nadu: Chennai, Madura, Nilgiri Hills,

Bhavani Valley (Andrewes, 1930b: 19); Kerala: Malabar, Calicut, Malappuram, Nilambur (Andrewes, 1930b: 19)]; ORR- Myanmar; Sri Lanka.

39. ****Amblystomus quadriguttatus* **(Motschulsky, 1858)

Hispalis quadriguttatus Motschulsky, 1858: 24.

Amblystomus quadriguttatus (Motschulsky, 1858): Bates, 1891b: 331; id. 1892b: 336; Andrewes, 1928: 21; id. 1930b: 20; id. 1933a: 10; Kapur, 1954: 316, 326; Moore, 1963: 440; Habu, 1973: 16; Jaeger & Wrase, 2003: 360; Lorenz, 2005: 384; Park et al., 2006: 95; Baehr & Reid, 2017: 438; Wrase, 2017: 502; Nijisha & Sabu, 2023: 473.

Acupalpus ornatus Macleay, 1888.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'; 2 ex. 'India: Kerala: Kannur, Chambad, Light trap, 28.VIII.2019, K Shigina'.

Distribution. ORR- India [Assam (Kapur, 1954: 316); Manipur: Imphal (Kapur, 1954: 326); Karnataka: Mysore (Kapur, 1954: 316)]; ORR- East Indies; Indochina; Myanmar; Philippines; Sri Lanka; Thailand; Timor- Leste; Vietnam; PAR- China; Japan; AUR- Australia; New Zealand.

40. ****Amblystomus resectus* **Andrewes, 1924

Amblystomus resectus Andrewes, 1924a: 91; id. 1930b: 20; Lorenz, 2005: 385; Nijisha & Sabu, 2023: 473.

Specimen examined: 1 ex. 'India: Kerala: Palakkad, Kerala Agricultural University, Pattambi, Light trap, 14.XI.2016, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Odisha: Ganjam (Andrewes, 1924a: 91), Surada (Andrewes, 1930b: 20); Karnataka: Mysore, Chikkaballapur (Andrewes, 1930b: 20)].

41. ***Amblystomus vulneratus*** **(Dejean, 1831)**

Acupalpus vulneratus Dejean, 1831: 852; Schaum, 1847: 49; Motschulsky, 1855: 43.

Amblystomus vulneratus (Dejean, 1831); Bates, 1892b: 336; Andrewes, 1924a: 34; id. 1930b: 20; Lorenz, 2005: 385; Divya, 2023: 76; Ashly, 2023: 53; Nijisha & Sabu, 2023: 474.

Hispalis biguttatus Motschulsky, 1858.

Amblystomus tetrastigma Bates, 1892b.

Specimens examined: 2 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'; 2 ex. 'India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021, K Shigina'; 1 ex. 'India: Kerala: Kannur, Chambad, Light trap, 28.VIII.2019, K Shigina'; 1 ex. 'India: Tamil Nadu: Sengalthium Thalai Stream, Kalakael Range, Agastiyamalai BR, Light trap, 15.III.2022, R. Babu & Party'; 1 ex. 'India: Tamil Nadu: Manimuthar River, Tirunelveli, Agastiyamalai BR, Light trap, 11.III.2021, R. Babu & Party'.

Distribution. ORR- India [Odisha: Ganjam, Surada (Andrewes, 1924a: 34); Tamil Nadu: Tharangambadi (Motschulsky, 1858: 25); Kerala: Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field, Walayar Reserve Forest (Divya, 2023); Pattambi (Ashly, 2023)]; ORR- Laos; Myanmar; Sri Lanka.

3.1.2. Genus *Anomostomus* LaFerté-Sénectère, 1853

Type species: *Anomostomus torridus* LaFerté-Sénectère, 1853.

Anomostomus LaFerté-Sénectère, 1853: 376; Gemminger & Harold, 1868: 286; Andrewes, 1923a: 235; id. 1930: 27; Jeannel, 1948: 725; Noonan, 1976: 54; Lorenz, 2005: 385; Divya, 2023: 76; Ashly, 2023: 54; Nijisha & Sabu, 2023: 474.

42. †*Anomostomus devagiriensis* Nijisha et al., 2023

Anomostomus devagiriensis Nijisha et al., 2023: 2

Specimens examined: 2 ex. 'India: Kerala: Kannur, Chalode, Light trap, 09.X.2020, K Nijisha'.

Distribution. ORR- India [Kerala: Kannur, Chalode].

43. *Anomostomus orientalis* Andrewes, 1923

Anomostomus orientalis Andrewes, 1923a: 237; id. 1930b: 27; Lorenz, 2005: 385; Azadbakhsh & Rafi, 2017: 6; Divya, 2023: 76; Ashly, 2023: 54; Nijisha & Sabu, 2023: 474.

Specimens examined: 1 ex. 'India: Tamil Nadu: Thirunelveli District, Kattabommen Muthur, Light trap, Ravi & Party'.

Distribution. ORR- India [Chhattisgarh, Raigarh, Gomarda Wildlife Sanctuary, Mathopathi Pond (Nijisha & Sabu, 2023: 474); Odisha: Puri (Andrewes, 1923a: 237); Karnataka: Mysore, Chikkaballapur (Andrewes, 1923a: 237), Ramdurg (Andrewes, 1930b: 27); Tamil Nadu: Chennai, Madura (Andrewes, 1923a: 237), Tiruchirappalli (Andrewes, 1930b: 27); Kerala, Palakkad, Pudussery Paddy field (Divya, 2023); Pattambi (Ashly, 2023)]; ORR- Sri Lanka; PAR- Pakistan.

3.1.3. Genus *Oosoma* Nietner, 1857

Type species: *Oosoma arenaria* Nietner, 1857.

Oosoma Nietner, 1857a: 144; id. 1857b: 368; Andrewes, 1930b: 37; Schauberger, 1933a: 73; Noonan, 1976: 55; Lorenz, 2005: 385; Wrase, 2017: 503; Akhil, 2020: 87; Nijisha & Sabu, 2023: 474.

44. *Oosoma gyllenhalli* (Dejean, 1829)

Barysomus gyllenhalli Dejean, 1829: 59; Bates, 1886: 77; Andrewes, 1930b: 37.

Oosoma gyllenhalli (Dejean, 1829); Lorenz, 2005: 385; Akhil, 2020: 87; Nijisha & Sabu, 2023: 474.

Oosoma arenarius Nietner, 1857a.

Distribution. ORR- India [West Bengal: Calcutta (Andrewes, 1930b: 37); Odisha: Chilka Lake (Andrewes, 1930b: 37); Karnataka: Kanara (Andrewes, 1930b: 37); Kerala: Malabar (Andrewes, 1930b: 37)]; ORR- Sri Lanka.

45. *Oosoma semivittatum* (Fabricius, 1798)

Carabus semivittatus Fabricius, 1798: 59.

Barysomus semivittatus (Fabricius, 1798); Dejean, 1829: 60; Motschulsky, 1855: 44; Redtenbacher, 1867: 14; Bates, 1889c: 269; Andrewes, 1921b: 344; id. 1921a: 160; id. 1924c: 467; id. 1930b: 38.

Oosoma semivittatum (Fabricius, 1798); Schauberger, 1933a: 74; Lorenz, 2005: 385; Wrase, 2017: 503; Nijisha & Sabu, 2023: 474.

Oosoma gerstaeckeri Nietner, 1857a.

Distribution. ORR- India [Bihar: Pusa (Andrewes, 1930b: 38); Jharkhand: Madhupur (Andrewes, 1930b: 38); West Bengal (Andrewes, 1921b: 344); Odisha: Balighai, Chandipur, Barkuda Island (Chilka Lake) (Andrewes, 1930b: 38); Karnataka: Devaraya Durg (Andrewes, 1930b: 38); Tamil Nadu: Chennai, Tiruchirappalli (Andrewes, 1930b: 38)]; ORR- Indo- China; Sri Lanka; Vietnam; PAR- China.

3.2. Subtribe Ditomina Bonelli, 1810

3.2.1. Genus *Panagrius* Andrewes, 1933

Type species: *Panagrius hystrix* Andrewes, 1933.

Panagrius Andrewes, 1933b: 104; Kataev, 2005b: 266; Lorenz, 2005: 385; Nijisha & Sabu, 2023: 475.

Indiophonus Ito, 1996c.

46. *Panagrius nigricans* (Ito, 1996)

Indiophonus nigricans Ito, 1996c: 224; Lorenz, 2005: 375; Nijisha & Sabu, 2023: 475.

Panagrius nigricans (Ito, 1996); Kataev, 2005b: 268.

Distribution. ORR- India [Tamil Nadu: Karikal (Ito, 1996c: 224); Pondicherry (Ito, 1996c: 224)].

3.3. Subtribe Harpalina Bonelli, 1810

3.3.1. Genus *Allosiopelus* Ito, 1995

Type species: *Allosiopelus punctatipennis* Ito, 1995.

Allosiopelus Ito, 1995: 153; Lorenz, 2005: 376; Kataev, 2021: 453; Sruthi & Sabu, 2022: 21624; Nijisha & Sabu, 2023: 476.

47. *Allosiopelus fulvicollis* Ito, 2016

Allosiopelus fulvicollis Ito, 2016: 365; Kataev, 2021: 453; Nijisha & Sabu, 2023: 476.

Specimens examined: 5 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Tamil Nadu: Coimbatore, Chennai (Ito, 2016: 365)].

48. *Allosiopelus punctatipennis* Ito, 1995

Allosiopelus punctatipennis Ito, 1995: 154; Lorenz, 2005: 376; Sruthi & Sabu, 2022: 21624; Nijisha & Sabu, 2023: 476.

Specimen examined: 1 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Tamil Nadu: Tharangambadi (Tranquebar) (Ito, 1995: 154); Pondicherry (Ito, 1995: 154); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21624)].

3.3.2. Genus *Bradybaenus* Dejean, 1829

Type species: *Carabus scalaris* Olivier, 1808.

Bradybaenus Dejean, 1829: 160; Hope, 1838: 84; Lacordaire, 1854: 292; Gemminger & Harold, 1868: 261; Péringuey, 1896: 427; Andrewes, 1930b: 54; Jeannel, 1948: 667; Bruneau de Miré, 1976: 274; Noonan, 1976; 50; Facchini & Sciaky, 2004: 11; Lorenz, 2005: 382; Facchini & Giachino, 2020: 9; Nijisha & Sabu, 2023: 476.

Calodromus Nietner, 1858.

49. *Bradybaenus festivus* Dejean, 1829

Bradybaenus festivus Dejean, 1829: 163; Bates, 1886: 77; id. 1891b: 333; Andrewes, 1930b: 54; Lorenz, 2005: 382; Kushwaha et al., 2015: 22; Nijisha & Sabu, 2023: 476.

Calodromus exornatus Nietner, 1858.

Bradybaenus ornatus Redtenbacher, 1867.

Specimen examined: 1 ex. 'India: Tamil Nadu, Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon';

Distribution. ORR- India [Rajasthan: Ajmer (Andrewes, 1930b: 54); Jharkhand: Konbir (Bates, 1891b: 333; Andrewes, 1930b: 54), Chota Nagpur (Andrewes, 1930b: 54); Madhya Pradesh: Raisen, Badi, Forest rest house (Nijisha & Sabu, 2023); Chhattisgarh: Raipur, Barnawapara (Kushwaha et al., 2015: 22); Karnataka: Mysore, Chikkaballapur (Andrewes, 1930b: 54); Tamil Nadu: Chennai (Bates, 1891b: 333), Madura, Coimbatore (Andrewes, 1930b: 54)]; PAR- India [West Bengal: Panighatta (Andrewes, 1930b: 54)]; ORR- Sri Lanka; AFR- Senegal.

3.3.3. Genus *Coleolissus* Bates, 1892

Type species: *Hypolithus perlucens* Bates, 1878.

Coleolissus Bates, 1892b: 338; Lesne, 1904: 74; Andrewes, 1930b: 119; id. 1939: 132; Habu, 1973: 215; Noonan, 1976: 47; id. 1985: 54; Saha, 1995: 67; Kataev et al., 2003: 369; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517; Baehr, 2018: 46; Kataev

& Wrase, 2018: 359; Kataev, 2021: 452; Kataev, 2022: 286; Divya, 2023: 77; Nijisha & Sabu, 2023: 476.

Tenuistilus Habu, 1978c.

3.3.3.1. Subgenus *Coleolissus* Bates, 1892

Type species: *Hypolithus perlucens* Bates, 1878.

Coleolissus Bates, 1892b: 338; Habu, 1973: 216; Kataev et al., 2003: 369; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517; Akhil, 2020: 86; Nijisha & Sabu, 2023: 477.

Tenuistilus Habu, 1978c.

50. ♦*Coleolissus deformipenis* Kataev, 2022

Coleolissus deformipenis Kataev, 2022: 292; Nijisha & Sabu, 2023: 477.

Distribution. ORR- India [Kerala: Eravikulam (Kataev, 2022: 292)].

51. ♦*Coleolissus inessae* Kataev, 2021

Coleolissus inessae Kataev, 2021: 449; Nijisha & Sabu, 2023: 477.

Distribution. ORR- India [Karnataka: Jog Falls (Kataev, 2021: 449)].

52. *Coleolissus iris* Andrewes, 1924

Coleolissus iris Andrewes, 1924b: 135; id. 1930b: 119; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517; Akhil, 2020: 86; Kataev, 2022: 294; Divya, 2023: 77; Nijisha & Sabu, 2023: 477.

Hyphaereon iris (Andrewes, 1924b); Noonan, 1985: 55.

Coleolissus andrewesi Alluaud, 1932 [RN].

Calathomimus splendens Ito, 1997.

Coleolissus turturensis Ito, 2016.

Specimens examined: 2 ex. ‘India: Kerala: Kannur, Chalode, Light trap, 22.II.2021. K Nijisha’; 7 ex. ‘India: Kerala: Kannur, Odakkad, Light trap, 22.XII.2021. K

Shigina'; 1 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Punjab: Hoshiarpur, Rormazara (Kataev, 2022: 294), Chandigarh (Ito, 1997: 518); Madhya Pradesh: Mhow (Dr. Ambedkar Nagar), Balaghat (Andrewes, 1930b: 119); Odisha: Khorda (Andrewes, 1924b: 135); Maharashtra: Khandesh, Nagpur, Mumbai (Andrewes, 1930b: 119); Karnataka: Mysore, Nandidurg (Andrewes, 1930b: 119); Tamil Nadu: Vilupparam (Andrewes, 1930b: 119; Kataev, 2022: 294), Auroville (Kataev, 2022: 294), Chennai (Andrewes, 1930b: 119; Ito, 1997: 518), Kodaikanal, Nilgiri Hills, Palni Hills (Andrewes, 1924b: 135), Karikal, Coimbatore (Ito, 1997: 518);; Pondicherry (Ito, 1997: 518); Kerala: Eravikulam, Kallar, Munnar (Kataev, 2022: 294); Palakkad, Chulanur Peafowl Sanctuary, Walayar Reserve Forest (Divya, 2023)]; PAR- India (Uttarakhand: Dehra Dun (Andrewes, 1930b: 119), Kumaon (Andrewes, 1924b: 135)]; ORR- Sri Lanka; PAR- Nepal; Pakistan.

53. *Coleolissus kejvali* Kataev, 2022

Coleolissus kejvali Kataev, 2022: 290; Nijisha & Sabu, 2023: 477.

Distribution. ORR- India [Kerala: Kallar (Kataev, 2022: 290)].

54. ♦*Coleolissus nakajimai* Ito, 2016

Coleolissus nakajimai Ito, 2016: 362; Nijisha & Sabu, 2023: 477.

Specimen examined: 1 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- [India: Tamil Nadu: Anamalai Hills, Valparai (Ito, 2016: 362)].

55. *@Coleolissus perlucens* (Bates, 1878)

Hypolithus perlucens Bates, 1878b: 715; id. 1892b: 339.

Coleolissus perlucens (Bates, 1878b); Andrewes, 1930b: 120; id. 1939: 132; Saha, 1995: 67; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517; Kataev, 2022: 286; Nijisha & Sabu, 2023: 478.

Hyphaereon perlucens (Bates, 1878b); Noonan, 1985: 55.

Specimens examined: 5 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon'; 1 ex. 'India: Kerala: Wayanad, Muthanga, Light attracted, Hand picking, 06.V.2016, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [West Bengal: Birbhum (Saha, 1995: 67); PAR- India (Jammu & Kashmir (Bates, 1892b: 339); Uttarakhand: Karnaprayas (Kataev, 2022: 286)]; PAR- Pakistan.

3.3.4. Genus *Dioryche* MacLeay, 1825

Type species: *Harpalus torta* MacLeay, 1825.

Dioryche MacLeay, 1825: 21; Lacordaire, 1854: 300; Gemminger & Harold, 1868: 287; Bates, 1873: 271; †Baer, 1886: 102; Péringuey, 1896: 455; Alluaud, 1917: 321; Andrewes, 1919a: 156; id. 1924a: 32; id. 1930b: 146; id. 1933c: 344; Schauberger, 1935: 93; Noonan, 1976: 47; id. 1985: 34; Saha, 1995: 62; Kataev et al., 2003: 369; Lorenz, 2005: 376; Kataev, 2012a: 112; Kushwaha & Hegde, 2015: 402; Kataev & Wrase, 2017b: 518; id. 2018: 359; Akhil, 2020: 87; Kataev & Wrase, 2020: 837; Sruthi & Sabu, 2022: 21624; Divya, 2023: 78; Ashly, 2023: 55; Nijisha & Sabu, 2023: 478.

Hypodioryche Schauberger, 1935.

56. *Dioryche chinnada* Andrewes, 1921

Dioryche chinnada Andrewes, 1921b: 342: id. 1930b: 146; Shauberger, 1935: 93; † Dobler, 1975: 107; Noonan, 1985: 35; Saha, 1995: 62; Kataev et al., 2003: 369;

Kushwaha & Hegde, 2015: 402; Kataev & Wrase, 2017b: 518 Nijisha & Sabu, 2023: 478.

Distribution. ORR- India [Uttar Pradesh: Gorakhpur (Andrewes, 1930b: 146); Bihar: Pusa (Andrewes, 1930b: 146); Madhya Pradesh (Kushwaha & Hegde, 2015: 402); West Bengal (Andrewes, 1930b: 146); Chhattisgarh: Bilaspur, Janjgir, Tumgaon (Raipur) (Andrewes, 1921b: 342); Odisha: Ganjam, Barkuda Island (Chilka Lake) (Andrewes, 1921b: 342); Maharashtra: Mumbai, Satara, Medha, Ratnagiri, Pimple, Nagpur (Andrewes, 1921b: 342); Karnataka: Kanara, Belagavi, Bangalore (Andrewes, 1921b: 342); Tamil Nadu: Chennai, Coimbatore (Andrewes, 1921b: 342); Pondicherry (Andrewes, 1921b: 342); Kerala: Malabar (Andrewes, 1921b: 342)]; ORR- Sri Lanka.

57. ****Dioryche convexa* **Andrewes, 1924

Dioryche convexa Andrewes, 1924a: 90; id. 1930b: 147; Schauberger, 1935: 93; Noonan, 1985: 35; Kataev et al., 2003: 370; Kataev & Wrase, 2017b: 518; Nijisha & Sabu, 2023: 478.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Assam: Majgaon (Andrewes, 1924a: 90); Madhya Pradesh: Jabalpur (Andrewes, 1924a: 90); Maharashtra: Mumbai (Andrewes, 1924a: 90); Karnataka: Belagavi, Nagargali (Andrewes, 1924a: 90)]; PAR- Nepal.

58. *Dioryche cuprina* (Dejean, 1829)

Selenophorus cuprinus Dejean, 1829: 96.

Dioryche cuprina (Dejean, 1829); Kataev, 2012a: 114; Kataev & Wrase, 2017b: 518; Sruthi & Sabu, 2022: 21624; Nijisha & Sabu, 2023: 478.

Cardiaderus scitus Walker, 1858.

Dioryche colombensis Andrewes, 1921b.

Dioryche colombensis Nietner, 1857b.

Harpalus colombensis Nietner, 1857b.

Platymetopus colombensis Bates, 1886.

Specimens examined: 15 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon'; 4 ex. 'India: Kerala: Wayanad, Tholpetty, Light trap, 27.IV.2016, S. V. Akhil & V. A. Jithmon'; 5 ex. 'India: Tamil Nadu: Thirukkurinjudi, Vaalaiyathu odai, Light trap, 24.IX.2018, Dr. R V & Party'; 2 ex. 'India: Tamil Nadu, Iron bridge, Light trap, 29.IX.2018, R. Venkiteshan'; 1 ex. 'India: Tamil Nadu: Manimuthar River, Tirunelveli, Agastiyamalai BR, Light trap, 11.III.2021, R. Babu & Party'; 3 ex. 'India: Tamil Nadu: Kallikudi, Trichy, Light trap, 18.VIII.2013, Dr. J. Thilak'.

Distribution. ORR- India [Goa (Kataev, 2012a: 114); Karnataka: Kanara (Kataev, 2012a: 114); Tamil Nadu: Karikal, Coimbatore, Chennai (Kataev, 2012a: 114); Pondicherry (Kataev, 2012a: 114); Kerala: Thiruvananthapuram, Kallar, Calicut, Malabar (Kataev, 2012a: 114), Idukki, Alampetty (Sruthi & Sabu, 2022: 21624); Mahi (Kataev, 2012a: 114)]; ORR- Maldives; Sri Lanka; Thailand; PAR- Nepal.

59. *Dioryche dravidana* Kataev, 2012

Dioryche dravidana Kataev, 2012a: 123; Sruthi & Sabu, 2022: 21625; Nijisha & Sabu, 2023: 479.

Distribution. ORR- India [Karnataka: Mysore, Shivamogga (Kataev, 2012a: 123); Tamil Nadu: Shambaganur, Madura (Kataev, 2012a: 123); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625)].

60. *_Dioryche lucidula_ (Dejean, 1829)

Selenophorus lucidulus Dejean, 1829: 95.

Dioryche lucidula (Dejean, 1829); Lorenz, 2005: 376; Kataev, 2012a: 119; Kataev & Wrase, 2017b: 518; Nijisha & Sabu, 2023: 479.

Platymetopus colombensis var. *braccatus* Bates, 1891b.

Dioryche colombensis var. *braccatus* Andrewes, 1926a.

Dioryche braccatus Schauberger, 1934a.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [New Delhi (Kataev, 2012a: 119); Rajasthan: Jodhpur (Kataev, 2012a: 119); Uttar Pradesh: Jhansi, Babina (Kataev, 2012a: 119); Jharkhand: Konbir, Chota Nagpore (Tetara) (Bates, 1891b: 330); Madhya Pradesh: Panna National Park, Khujuraho (Kataev, 2012a: 119); West Bengal: Gangani (Kataev, 2012a: 119); Maharashtra: Nagpur (Kataev, 2012a: 119); Tamil Nadu: Karikal (Kataev, 2012a: 119); Pondicherry (Kataev, 2012a: 119)]; PAR- India [Uttarakhand: Karnaprayag, Haridvar-Chila, Rishikesh, Dehra Dun, Uttarkashi, Bageshwa, Khati, Mussoori, Dakpatthar, Nainital, Khairna Bridge, Ramganga valley (Kataev, 2012a: 119)]; ORR- Maldives; PAR- Bhutan; China; Nepal; Pakistan.

61. •*Dioryche solida* Andrewes, 1933

Dioryche solida Andrewes, 1933d: 32; Schauberger, 1935: 93; Noonan, 1985: 35; Lorenz, 2005: 376; Ashly, 2023: 55; Nijisha & Sabu, 2023: 479.

Specimen examined: 1 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Maharashtra: Mumbai (Andrewes, 1933d: 32); Karnataka: Kanara (Andrewes, 1933d: 32); Kerala: Palakkad, Pattambi (Ashly, 2023)].

62. *Dioryche torta* MacLeay, 1825

Dioryche torta MacLeay, 1825: 21; Hope, 1838: t. 2; Gemminger & Harold, 1868: 287; Bates, 1873a: 271; Andrewes, 1919a: 154; id. 1926a: 68; id. 1930b: 148; id. 1933c: 344; Schauberger, 1934a: 10; id. 1935: 93; Noonan, 1985: 35; Saha, 1995: 63; Lorenz, 2005: 376

ssp. *formosensis* Schauberger, 1934a: 12; Kataev et al., 2003: 369; Lorenz, 2005: 376; Kataev & Wrase, 2017b: 518; Sruthi & Sabu, 2022: 21625; Divya, 2023: 78; Ashly, 2023: 55; Nijisha & Sabu, 2023: 479.

ssp. *torta* MacLeay, 1825: 21; Schauberger, 1934a: 10; Kataev et al., 2003: 369; Lorenz, 2005: 376; Kataev & Wrase, 2017b: 518; Nijisha & Sabu, 2023: 480.

Platymetopus amoena Dejean, 1829.

Platymetopus laetula Bates, 1889c.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021. K Nijisha'.

Distribution. ORR- India [West Bengal: Murshidabad (Saha, 1995: 63); Tamil Nadu: Nilgiri Hills (Andrewes, 1922: 291); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625); Palakkad, Chulanur Peafowl Sanctuary (Divya, 2023); Palakkad, Pattambi (Ashly, 2023)]; PAR- India [Uttarakhand: Gori Valley (Andrewes, 1926a: 68)]; ORR- Indochina; Indonesia; Myanmar; Philippines; Sri Lanka; PAR- Taiwan.

3.3.5. Genus *Harpaliscus* Bates, 1892

Type species: *Harpaliscus birmanicus* Bates, 1892.

Harpaliscus Bates, 1892b: 340; Andrewes, 1930b: 175; Noonan, 1976: 44; id. 1985: 27; Saha, 1995: 61; Saha & Halder, 2000: 15; Kataev et al., 2003: 393; Lorenz, 2005: 375; Kataev & Wrase, 2017b: 518; Nijisha & Sabu, 2023: 484.

63. *Harpaliscus andrewesianus* (Schauberger, 1934)

Trichotichnus andrewesianus Schauberger, 1934c: 100.

Siopelus andrewesianus (Schauberger, 1934c): Noonan, 1985: 28; Lorenz, 2005: 375; Akhil, 2020: 89.

Harpaliscus andrewesianus (Schauberger, 1934): Kataev & Wrase, 2017b: 518; Nijisha & Sabu, 2023: 484.

Harpaliscus punctulatus Andrewes, 1923.

Distribution. ORR- India [West Bengal: Calcutta (Schauberger, 1934c: 100); Tamil Nadu: Chennai, Madura, Shembaganur, Tiruchirappalli, Nilgiri Hills (Schauberger, 1934c: 100), Pillur, Ouchterlony Valley, Palni Hills, Kavunji, Kookal, Ootacamund, Kodaikanal Lake, Shevaroy Hills, Naduvattam, Yercaud (Andrewes, 1923: 447); Pondicherry (Schauberger, 1934c: 100)]; PAR- China; Nepal.

3.3.6. Genus *Harpalus* Latreille, 1802

Type species: *Carabus proteus* Paykull, 1790.

Harpalus Latreille, 1802: 92; Dejean, 1829: 190; Hope, 1838: 84; Lacordaire, 1854: 295; Motschulsky, 1864: 209; Gemminger & Harold, 1868: 272; Péringuey, 1896: 441; Tschitschérine, 1900c: 360; id. 1901: 233; Andrewes, 1924a: 36; id. 1930b: 176; Jeannel, 1948: 674; Habu, 1973: 67; Noonan, 1976: 31; Kirschenhofer, 1992: 21; Saha, 1995: 60; Kataev, 1997a: 123; Saha & Halder, 2000: 15; Kataev et al., 2003: 369; Lorenz, 2005: 363; Park et al., 2006: 95; Kataev, 2014b: 258; Kataev & Wrase, 2017b: 519; Serrano et al., 2017: 219; Nijisha & Sabu, 2023: 480.

3.3.6.1. Subgenus *Pseudoophonus* Motschulsky, 1844

Type species: *Carabus ruficornis* Fabricius, 1775.

Pseudoophonus Motschulsky, 1844: 196; id. 1864: 208; Tschitschérine, 1901: 236; Andrewes, 1930b: 243; Habu, 1973: 75; Noonan, 1976: 33; Kataev, 2001b: 391;

Kataev et al., 2003: 384; Lorenz, 2005: 364; Moon & Paik, 2006: 66; Kataev & Liang, 2015: 3; Kataev & Wrase, 2017b: 540; Nijisha & Sabu, 2023: 480.

Cephalomorphus Tschitschérine, 1897.

Empeirus Motschulsky, 1844 [RN].

Erpeinus Motschulsky, 1844.

Holosus Fischer von Waldheim, 1829 [nom. obl.].

Megapangus Casey, 1914.

Migadophonus Tschitschérine, 1897.

Neopardileus Habu, 1954.

Pardileus Gozis, 1882.

Platus Motschulsky, 1844.

Pseudophonus Motschulsky, 1844 [incorr. subs. spell].

Harpalus meridianus Andrewes, 1923

Harpalus meridianus Andrewes, 1923b: 443; Kataev, 2001b: 406; Kataev et al., 2003: 385; Lorenz, 2005: 364; Kataev & Wrase, 2017b: 542.

Ophonus meridianus (Andrewes, 1923); Andrewes, 1930b: 244; Akhil, 2020: 88.

Harpalus indicola sensu Schauberger, 1930 (non Bates, 1878).

Distribution. ORR- India [Maharashtra: Mumbai, Nasik (Kataev, 2001b: 406); Tamil Nadu; Chennai, Nilgiri Hills, Palni Hills, Utacamand (Andrewes, 1923b: 443), Kodaikanal, Madura (Andrewes, 1930b: 244)]; PAR- India [Jammu & Kashmir: Daksum, Pahalgam (Kataev, 2001b: 406); Uttarakhand: Kumaon, Nainital, Bhimtal (Kataev, 2001b: 406)]; PAR- Mongolia; Pakistan.

64. *Harpalus meridianus* Andrewes, 1923

Harpalus meridianus Andrewes, 1923b: 443; Kataev, 2001b: 406; Kataev et al., 2003: 385; Lorenz, 2005: 364; Kataev & Wrase, 2017b: 542.

Ophonus meridianus (Andrewes, 1923); Andrewes, 1930b: 244; Akhil, 2020: 88; Nijisha & Sabu, 2023: 483.

Harpalus indicola sensu Schauberger, 1930 (non Bates, 1878).

Distribution. ORR- India [Maharashtra: Mumbai, Nasik (Kataev, 2001b: 406); Tamil Nadu; Chennai, Nilgiri Hills, Palni Hills, Utacamand (Andrewes, 1923b: 443), Kodaikanal, Madura (Andrewes, 1930b: 244)]; PAR- India [Jammu & Kashmir: Daksum, Pahalgam (Kataev, 2001b: 406); Uttarakhand: Kumaon, Nainital, Bhimtal (Kataev, 2001b: 406)]; PAR- Mongolia; Pakistan.

3.3.7. Genus *Kareya* Andrewes, 1919

Type species: *Platymetopus erebius* Bates, 1892.

Kareya Andrewes, 1919b: 473; id, 1924a: 32; id. 1930b: 186; Jedlička, 1957: 91; Noonan, 1976: 44; id. 1985: 33; Saha, 1995: 65; Saha & Halder, 2000: 16; Kataev et al., 2003: 387; Lorenz, 2005: 374; Kataev, 2010: 279; id. 2012a: 113; id. 2015b: 348; Kushwaha & Hegde, 2015: 402; Kataev & Wrase, 2017b: 544; Nijisha & Sabu, 2023: 484.

Pseudokareya Schauberger, 1933a.

Paratheles Basilewsky, 1950.

65. *Kareya major* (Bates, 1891)

Platymetopus (?) major Bates, 1891b: 330.

Kareya major (Bates, 1891b): Andrewes, 1919b: 473; id. 1930b: 188; Noonan, 1985: 34; Kataev et al., 2003: 387; Lorenz, 2005: 374; Kataev, 2015b: 355; Kataev & Wrase, 2017b: 545; Nijisha & Sabu, 2023: 485.

Distribution. ORR- India [Uttar Pradesh: Lucknow (Andrewes, 1930b: 188); Jharkhand: Konbir, Chota Nagpur (Tetara) (Bates, 1891b: 330; Andrewes, 1930b: 188), Chaibasa, Ranchi, Lohardaga (Kataev, 2015b: 355); Madhya Pradesh: Balaghat

(Andrewes, 1930b: 188); Andhra Pradesh: Visakhapatnam (Kataev, 2015b: 355); Goa: Mollem (Kataev, 2015b: 355)]; PAR- India [Uttarakhand: Kumaon, Nainital, Bhimtal (Kataev, 2015b: 355)]; PAR- Nepal.

66. *Kareya sublaevis* (Bates, 1891)

Platymetopus (?) sublaevis Bates, 1891b: 330; id. 1892b: 331.

Kareya sublaevis (Bates, 1891b): Andrewes, 1919: 473; id. 1930b: 187; Jedlička, 1957: 91; Noonan, 1985: 34; Lorenz, 2005: 374; Kataev, 2015b: 354; Kushwaha & Hegde, 2015: 402; Kataev & Wrase, 2017b: 545; Nijisha & Sabu, 2023: 485.

Distribution. ORR- India [Uttar Pradesh: Lucknow (Andrewes, 1930b: 187); Assam: Kaziranga Nature Reserve (Kataev, 2015b: 354); Bihar: Purnea (Andrewes, 1930b: 187); Jharkhand: Konbir (Bates, 1891b: 330; Andrewes, 1930b: 187), Chota Nagpur (Andrewes, 1930b: 187); Madhya Pradesh: Mandla, Baihar (Andrewes, 1930b: 187); Maharashtra: Nagpur (Andrewes, 1930b: 187; Kataev, 2015b: 354); Andhra Pradesh: Visakhapatnam (Andrewes, 1930b: 187); Karnataka: Castlerock (Andrewes, 1930b: 187)]; PAR- India [Uttarakhand: Kumaon, Almora (Andrewes, 1930b: 187); Arunachal Pradesh: Rotung (Andrewes, 1930b: 187)]; ORR- Cambodia; Indochina; Laos; Myanmar; Thailand; Vietnam; PAR- China.

3.3.8. Genus *Lampetes* Andrewes, 1940

Type species: *Lamprophonus lucens* Bates, 1889.

Lampetes Andrewes, 1940: 536; Noonan, 1976: 47; id. 1985: 60; Kataev et al., 2003: 387; Lorenz, 2005: 382; Kataev & Wrase, 2017b: 545; Nijisha & Sabu, 2023: 485.

Lamprophonus Bates, 1889a.

67. *Lampetes lucens* (Bates, 1889)

Lamprophonus lucens Bates, 1889a: 102; id. 1892b: 329; Andrewes, 1930b: 189; Saha, 1995: 59.

Axinotoma lucens (Bates, 1889a); Noonan, 1985: 60.

Trichotichnus lucens (Bates, 1889a); Lorenz, 2005: 382.

Lampetes lucens (Bates, 1889a); Kataev et al., 2003: 387; Kataev & Wrase, 2017b: 545; Nijisha & Sabu, 2023: 486.

Distribution. ORR- India [Uttar Pradesh: Fyzabad (Andrewes, 1930b: 189); Bihar: Pusa, Chapra, Patna, Barwa (Andrewes, 1930b: 189); Jharkhand: Madhupur, Chota Nagpur (Andrewes, 1930b: 189); Madhya Pradesh: Chhindwara (Andrewes, 1930b: 189); West Bengal: North 24 Parganas (Saha, 1995: 59); Odisha: Barkuda Island (Chilka Lake) (Andrewes, 1930b: 189); Maharashtra: Khandesh, Berar (Andrewes, 1930b: 189); Telangana: Kunavaram (Andrewes, 1930b: 189); Tamil Nadu: Chennai (Andrewes, 1930b: 189)]; ORR- Bangladesh; Indonesia; Myanmar; Sri Lanka; PAR- China; Nepal; Pakistan; Taiwan.

68. ♦*Lampetes marginalis* (Walker, 1859)

Drimostoma ? marginale Walker, 1859: 51; Chaudoir, 1872: 13; Bates, 1886: 212; Tschitschérine, 1900b: 264.

Lamprophonus marginale (Walker, 1859); Andrewes, 1919a: 193; id. 1930b: 190.

Axinotoma marginalis (Walker, 1859); Noonan, 1985: 60.

Trichotichnus marginalis (Walker, 1859); Lorenz, 2005: 382.

Lampetes marginalis (Walker, 1859); Nijisha & Sabu, 2023: 486.

Distribution. ORR- India [Tamil Nadu: Nilgiri Hills (Andrewes, 1919a: 193)]; ORR- Sri Lanka.

69. *Lampetes pseudolucens* (Schauberger, 1935)

Lamprophonus pseudolucens Schauberger, 1935: 95.

Axinotoma pseudolucens (Schauberger, 1935); Noonan, 1985: 60.

Trichotichnus pseudolucens (Schauberger, 1935); Lorenz, 2005: 382.

Lampetes pseudolucens (Schauberger, 1935); Kataev & Wrase, 2017b: 545; Nijisha & Sabu, 2023: 486.

Distribution. ORR- India [Tamil Nadu: Chennai (Schauberger, 1935: 95)]; PAR- India [Uttarakhand (Kataev & Wrase, 2017b: 545)]; ORR- Sri Lanka; PAR- Nepal.

3.3.9. Genus *Meroctenus* Gemminger & Harold, 1868

Type species: *Ctenomerus crenulatus* Chaudoir, 1843.

Meroctenus Gemminger & Harold, 1868: 262; Noonan, 1976: 60; Lorenz, 2005: 387; Kataev, 2017: 511; Divya, 2023: 78; Ashly, 2023: 56; Nijisha & Sabu, 2023: 487.

3.3.9.1. Subgenus *Meroctenus* Gemminger & Harold, 1868

Type species: *Ctenomerus crenulatus* Chaudoir, 1843.

Meroctenus Gemminger & Harold, 1868: 262; Kataev, 2017: 514.

Ctenomerus Chaudoir, 1843.

Paregaploa Müller, 1947.

70. *Meroctenus mediocris* (Andrewes, 1936)

Xenodus mediocris Andrewes, 1936: 205.

Xenodochus mediocris (Andrewes, 1936); Noonan, 1985: 52; Lorenz, 2005: 379.

Meroctenus mediocris (Andrewes, 1936); Kataev, 2017: 518; Divya, 2023: 79; Ashly, 2023: 56; Nijisha & Sabu, 2023: 487.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, K Shigina'.

Distribution. ORR- India [Maharashtra: Nagpur (Andrewes, 1936: 205); Kerala: Palakkad, Pudussery Paddy field (Divya, 2023); Palakkad, Pattambi (Ashly, 2023)]; ORR- Sri Lanka.

3.3.9.2. Subgenus *Xenodochus* Andrewes, 1941

Type species: *Xenodus dabreui* Andrewes, 1924.

Xenodochus Andrewes, 1941: 317; Basilewsky, 1956: 457; Noonan, 1976: 45; id. 1985: 51; Kataev et al., 2003: 397; Lorenz, 2005: 379; Kataev, 2017: 520; Kataev & Wrase, 2017b: 562; Nijisha & Sabu, 2023: 487.

Xenodus Andrewes, 1924a.

Afropangus Jeannel, 1946.

71. *Meroctenus dabreui* (Andrewes, 1924)

Xenodus dabreui Andrewes, 1924a: 94; id. 1930: 357.

Xenodochus dabreui (Andrewes, 1924a): Noonan, 1985: 52; Kataev et al., 2003: 397; Lorenz, 2005: 379; Kataev & Wrase, 2016b: 265; Kataev & Wrase, 2017b: 562; Nijisha & Sabu, 2023: 487.

Meroctenus dabreui (Andrewes, 1924a): Kataev, 2017: 520.

Distribution. ORR- India [Punjab (Andrewes, 1924a: 94); New Delhi (Andrewes, 1930: 357; Kataev & Wrase, 2016b: 265); Uttar Pradesh: Manikpur (Andrewes, 1924a: 94), Jhansi (Kataev & Wrase, 2016b: 265); Bihar: Chapra (Andrewes, 1930: 357); Madhya Pradesh: Jabalpur (Andrewes, 1924a: 94); Maharashtra: Nagpur, Mumbai, Kasara, Ratnagiri (Andrewes, 1924a: 94); Telangana: Hyderabad, Secunderabad (Andrewes, 1924a: 94), Kunavaram (Andrewes, 1930: 357); Goa: Mormugao (Andrewes, 1930: 357); Tamil Nadu: Chennai (Andrewes, 1930: 357)]; PAR- India [Uttarakhand: Roorkee (Andrewes, 1924a: 94)]; ORR- Maldives; PAR- Nepal; Pakistan.

3.3.10. Genus *Oesyperus* Andrewes, 1923

Type species: *Oesyperus unctulus* Andrewes, 1923.

Oesyperus Andrewes, 1923b: 444; id. 1930b: 233; id. 1939: 136; Noonan, 1976: 48; id. 1985: 19; Kataev et al., 2003: 392; Lorenz, 2005: 374; Kataev, 2006: 44; Nijisha & Sabu, 2023: 487.

Merklia Ito, 2004.

Merklophonus Ito, 2005.

72. *Oesyperus planus* Andrewes, 1923

Oesyperus planus Andrewes, 1923b: 446; id. 1930b: 233; Kataev, 2006: 50; Nijisha & Sabu, 2023: 487.

Parophonus planus (Andrewes, 1923b); Noonan, 1985: 22; Lorenz, 2005: 374.

Distribution. ORR- India [Tamil Nadu: Chennai, Madura, Shembaganur (Andrewes, 1923b: 446)].

73. *Oesyperus pygmaeus* Andrewes, 1923

Oesyperus pygmaeus Andrewes, 1923b: 446; id. 1930b: 233; Kataev, 2006: 51; Nijisha & Sabu, 2023: 487.

Parophonus pygmaeus (Andrewes, 1923b); Noonan, 1985: 22; Lorenz, 2005: 374.

Distribution. ORR- India [Tamil Nadu: Chennai, Palni Hills, Marian Shola (Andrewes, 1923b: 446)].

74. ♦*Oesyperus unctulus* Andrewes, 1923

Oesyperus unctulus Andrewes, 1923b: 445; id. 1930b: 233; Kataev, 2006: 47; Nijisha & Sabu, 2023: 487.

Parophonus unctulus (Andrewes, 1923b); Noonan, 1985: 22; Lorenz, 2005: 374.

Specimen examined: 1 ex. 'India: Tamil Nadu: Kavu malai, Valpari range near Balaji temple, Light trap, 19.VII.2013, S. Prabhakaran & Party'.

Distribution. ORR- India [Tamil Nadu: Palni Hills, Kodaikanal (Andrewes, 1923b: 445)].

3.3.11. Genus *Ooidius* Chaudoir, 1847

Type species: *Ooidus suturalis* Chaudoir, 1847.

Ooidius Chaudoir, 1847: 2; Noonan, 1976: 51; Gemminger & Harold, 1868: 262; Facchini & Sciaky, 2004: 11; Lorenz, 2005: 383; Facchini & Giachino, 2020: 9; Nijisha & Sabu, 2023: 488.

Pteroglossus Chaudoir, 1843.

75. *Ooidius advolans* (Nietner, 1857)

Harpalus advolans Nietner, 1857b: 377; Andrewes, 1921b: 344; id. 1927: 106; id. 1930b: 176.

Ooidius advolans (Nietner, 1857b): Schauberger, 1933b: 136; Lorenz, 2005: 383; Facchini & Giachino, 2020: 10; Nijisha & Sabu, 2023: 488.

Distribution. ORR- India [Odisha: Barkuda Island (Lake Chilka), Chatrapur (Andrewes, 1930b: 176); Tamil Nadu: Tiruchirappalli, Manaparai, Ramanathapuram, Pamban, Chennai, Dindigul (Andrewes, 1930b: 176); Pondicherry (Andrewes, 1930b: 176); Mahe (Andrewes, 1930b: 176)]; ORR- Sri Lanka.

3.3.12. Genus *Ophoniscus* Bates, 1892

Type species: *Ophoniscus iridulus* Bates, 1892.

Ophoniscus Bates, 1892b: 337; Andrewes, 1923b: 446; id. 1930b: 242; id. 1939: 136; Noonan, 1976: 46; id. 1985: 31; Ito, 1994a: 81; Saha, 1995: 63; Kataev et al., 2003: 388; Kataev, 2005b: 269; Lorenz, 2005: 376; Kataev & Wrase, 2012: 215; Kataev & Wrase, 2017b: 546; Kataev, 2018: 319; Kataev & Wrase, 2018: 359; Sruthi & Sabu, 2022: 21625; Divya, 2023: 79; Ashly, 2023: 56; Nijisha & Sabu, 2023: 488.

76. *Ophoniscus compositus* (Walker, 1858)

Curtonotus compositus Walker, 1858: 204; Bates, 1886: 211; Andrewes, 1923b: 446.

Siopelus compositus (Walker, 1858): Andrewes, 1919a: 189.

Ophoniscus compositus (Walker, 1858); Andrewes, 1930b: 242; Kataev, 2005b: 278; Lorenz, 2005: 373; Kataev & Wrase, 2012: 218; Kataev, 2018: 324; Nijisha & Sabu, 2023: 488.

Parophonus compositus (Walker, 1858); Noonan, 1985: 22.

Siopelus ferreus Bates, 1886.

Ophoniscus insulicola Ito, 1994a.

ssp. *compositus* (Walker, 1858): 204; Kataev, 2018: 324; Nijisha & Sabu, 2023: 488.

Specimens examined: 4 ex. 'India: Tamil Nadu: Nilgiri Hills, Light trap, 13.XII.2016, S. Prabhakaran & Party'; 1 ex. 'India: Tamil Nadu: Manimuthar River, Tirunelveli, Agastiyamalai BR, Light trap, 11.III.2021.R. Babu & Party'.

Distribution. ORR- India [West Bengal (Kataev, 2005b: 278); Maharashtra: Mahabaleshwar, Panchgani (Kataev, 2005b: 278; id. 2018: 324), Bhushi Dam, Lonavala, Mulshi environment, Pune (Kataev, 2018: 324); Goa: Calangute (Kataev, 2018: 324); Tamil Nadu: Chennai, Madura, Palni Hills (Andrewes, 1923b: 446), Kodaikanal, Tiruchirappalli (Andrewes, 1930b: 242), Shembaganur (Kataev, 2005b: 278)]; ORR- Sri Lanka.

77. *Ophoniscus puneensis* Kataev, 2018

Ophoniscus puneensis Kataev, 2018: 321; Sruthi & Sabu, 2022: 21625; Divya, 2023: 79; Ashly, 2023: 57; Nijisha & Sabu, 2023: 488.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, Light trap, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Maharashtra: Mulshi environment, Pune (Kataev, 2018: 321); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625); Palakkad, Chulanur Peafowl Sanctuary (Divya, 2023); Pattambi (Ashly, 2023)].

3.3.13. Genus *Parophonus* Ganglbauer, 1891

Type species: *Carabus maculicornis* Duftschmid, 1812.

Parophonus Ganglbauer, 1891: 340; Jeannel, 1942: 625; id. 1948: 648; Noonan, 1976: 45; id. 1985: 19; Kataev et al., 2003: 392; Lorenz, 2005: 373; Kataev, 2010: 278; Kataev & Wrase, 2017b: 553; Serrano et al., 2017: 219; Sruthi & Sabu, 2022: 21625; Divya, 2023: 79; Nijisha & Sabu, 2023: 490.

3.3.13.1. Subgenus *Hyparpalus* Alluaud, 1930

Type species: *Carabus saponarius* Olivier, 1795.

Hyparpalus Alluaud, 1930: 162; Noonan, 1976: 46; Bruneau de Miré, 1976: 273; Noonan, 1985: 19; Kataev et al., 2003: 392; Lorenz, 2005: 373; Kataev, 2010: 279; Kataev & Wrase, 2017b: 553; Nijisha & Sabu, 2023: 490.

Hypolithus Dejean, 1829.

? Orphanixus Clarke, 1971b.

78. *Parophonus acutangulus* (Bates, 1891)

Hypolithus acutangulus Bates, 1891b: 331; Andrewes, 1930b: 184.

Hyparpalus acutangulus Andrewes, 1933c: 351; Lorenz, 2005: 364.

Parophonus acutangulus (Bates, 1891b); Kataev, 2010: 296; Kataev & Wrase, 2017b: 553; Sruthi & Sabu, 2022: 21625; Divya, 2023: 80; Nijisha & Sabu, 2023: 490.

Hyparpalus gracilis Andrewes, 1947.

Specimens examined: 1 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, K Shigina'; 3 ex. 'India: Kerala: Wayanad, Tholpetty, Light trap, 26.IV.2016, S. V. Akhil & V. A. Jithmon';

Distribution. ORR- India [New Delhi: Pusa (Andrewes, 1930b: 184); Uttar Pradesh: Prayagraj (Allahabad), Sitapur (Andrewes, 1930b: 184); Bihar: Muzzafarpur (Nijisha & Sabu, 2023: 490); Jharkhand: Chota Nagpur (Tetara) (Bates, 1891b: 331); Madhya Pradesh: Mhow (Dr. Ambedkar Nagar) (Andrewes, 1930b: 184); Gujarat:

Surat (Andrewes, 1930b: 184); Maharashtra: Mumbai (Andrewes, 1930b: 184); Tamil Nadu: Tharangambadi (Tranquebar) (Andrewes, 1930b: 184), Coimbatore (Kataev, 2010: 296); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625); Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field, Walayar Reserve Forest (Divya, 2023)]; PAR- India [Jammu & Kashmir (Kataev, 2010: 296); Uttarakhand: Dehra Dun (Kataev, 2010: 296); West Bengal: Barodabri (Kataev, 2010: 296)]; ORR- Indonesia; Malaysia; Myanmar; Sri Lanka; Nepal; Pakistan.

79. *Parophonus cyaneotinctus* (Bates, 1889)

Hypolithus cyaneotinctus Bates, 1889c: 269; Andrewes, 1922: 288; id. 1930b: 184.
Parophonus cyaneotinctus (Bates, 1889c); Noonan, 1985: 22; Lorenz, 2005: 374; Kataev, 2010: 282; Kataev & Wrase, 2017b: 553; Nijisha & Sabu, 2023: 490.

Distribution. ORR- India [Bihar: Barwa (Andrewes, 1930b: 184); Jharkhand: Chota Nagpur (Tetara), Ranchi (Andrewes, 1922: 288); West Bengal (Andrewes, 1922: 288); Karnataka: Mysore (Andrewes, 1922: 288), Chikkaballapur, Nandidurg, Bangalore (Andrewes, 1930b: 184)]; PAR- India [Uttarakhand: Dehra Dun (Andrewes, 1930b: 184)]; ORR- Sri Lanka; Vietnam; PAR- China.

80. *Parophonus indicus* (Andrewes, 1931)

Hyparpalus indicus Andrewes, 1931: 516.
Parophonus indicus (Andrewes, 1931): Noonan, 1985: 22; Lorenz, 2005: 374; Kataev, 2010: 283; Kataev & Wrase, 2017b: 553; Sruthi & Sabu, 2022: 21625; Nijisha & Sabu, 2023: 491.
Hypolithus cyaneotinctus Bates, 1891b [non Bates, 1889].

Distribution. ORR- India [Uttar Pradesh: Rishikesh (Kataev, 2010: 283); Bihar: Barwa, Munger (Andrewes, 1931: 516); Jharkhand: Konbir, Chota Nagpur (Tetara), Ranchi (Andrewes, 1931: 516); Madhya Pradesh: Balaghat, Baihar, Mandla,

Seoni, Khawasa (Andrewes, 1931: 516), Motinala (Kataev, 2010: 283); Karnataka: Mysore, Chikkaballapur, Nandidurg, Bangalore (Andrewes, 1931: 516); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625)]; PAR- India [Jammu & Kashmir (Kataev, 2010: 283); Uttarakhand: Dehra Dun (Andrewes, 1931: 516); Sikkim (Kataev, 2010: 283); West Bengal: Darjeeling (Kataev & Wrase, 2017: 553)]; PAR- Pakistan.

81. *Parophonus lividus* (Andrewes, 1923)

Hypolithus lividus Andrewes, 1923a: 234; id. 1930b: 184; Saha, 1995: 65.

Parophonus lividus (Andrewes, 1923a); Noonan, 1985: 22; Lorenz, 2005: 374; Kataev, 2010: 289; Kataev & Wrase, 2017b: 553; Divya, 2023: 80; Nijisha & Sabu, 2023: 491.

Hyparpalus hiekei Ito, 1993.

Specimen examined: 1 ex. 'India: Tamil Nadu: Srivilliputhur, Light trap, 26.IV.2016, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Uttar Pradesh: Sitapur, Lucknow (Andrewes, 1923a: 234); Bihar: Chapra, Muzaffarpur, Pusa, Katithar (Andrewes, 1923a: 234); Gujarat: Surat (Andrewes, 1923a: 234); West Bengal: Calcutta (Andrewes, 1923a: 234 ; Saha, 1995: 65); Odisha: Sarda, Siripur (Andrewes, 1923a: 234 ; Saha, 1995: 65), Saran (Saha, 1995: 65); Maharashtra: Mumbai, Nagpur (Andrewes, 1923a: 234); Karnataka: Belagavi (Andrewes, 1923a: 234); Tamil Nadu: Coimbatore (Kataev, 2010: 289); Kerala: Palakkad, Chulanur Peafowl Sanctuary, Pudussery Paddy field, Walayar Reserve Forest (Divya, 2023)]; PAR- India [Uttarakhand: Haridwar, Roorkee (Andrewes, 1923a: 234)]; ORR- Bangladesh; Sri Lanka; PAR- Pakistan.

82. **Parophonus subtilis* (Bates, 1892)

Hypolithus subtilis Bates, 1892b: 338; Andrewes, 1930b: 185.

Parophonus subtilis (Bates, 1892b); Noonan, 1985: 22; Lorenz, 2005: 374; Kataev, 2010: 285; Kataev & Wrase, 2017b: 553; Nijisha & Sabu, 2023: 491.

Hyparpalus iridicolor Landin, 1955.

Hyparpalus nagpurensis Ito, 1993.

Hyparpalus nagpurensis curvatus Ito, 1993.

Hyparpalus pakistanensis Ito, 2008.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, K Shigina'.

Distribution. ORR- India [New Delhi (Kataev, 2010: 285); Uttar Pradesh: Rampur (Kataev, 2010: 285); Assam (Kataev, 2010: 285); Rajasthan: Jodhpur, Ganganagar (Kataev, 2010: 285); Maharashtra: Nagpur (Ito, 1993: 164); Tamil Nadu: Coimbatore, Chennai (Kataev, 2010: 285)]; PAR- India [Jammu & Kashmir: Punch (Kataev, 2010: 285)]; ORR- Myanmar; Sri Lanka; PAR- Nepal; Pakistan.

3.3.14. Genus *Platymetopus* Dejean, 1829

Type species: *Platymetopus vestitus* Dejean, 1829.

Platymetopus Dejean, 1829: 68; Lacordaire, 1854: 300; Bates, 1892b: 332; Tschitschérine, 1901: 232; Lesne, 1904: 73; Alluaud, 1917 (1918): 321; Andrewes, 1919a: 156; id. 1924a: 31; id. 1930b: 280; id. 1933c: 367; id. 1939: 137; Jeannel, 1948: 644; Habu, 1973: 204; Noonan, 1976; 46; Bruneau de Miré, 1976: 274; Noonan, 1985: 7; Saha, 1995: 66; Kataev et al., 2003: 393; Lorenz, 2005: 373; Kataev & Wrase, 2017b: 554; Serrano et al., 2017: 219; Akhil, 2020: 88; Divya, 2023: 81; Nijisha & Sabu, 2023: 491; Kataev, 2023: 503.

83. *Platymetopus figuratus* Boheman, 1848

Platymetopus figuratus Boheman, 1848: Basilewsky, 1948a: 27; id. 1968a: 4.

ssp. *pictus* Andrewes, 1923a; Kataev & Wrase, 2016b: 262; Kataev & Wrase, 2017b: 554; Divya, 2023: 81; Nijisha & Sabu, 2023: 492; Kataev, 2023: 530.

Platymetopus pictus Andrewes, 1923a.

Platymetopus figuratus somalicus Basilewsky, 1948c.

Platymetopus indicus Jedlička, 1969.

Specimen examined: 1 ex. 'India: Tamil Nadu: Kallikudi, Trichy, Light trap, 18.VIII.2013, Dr. J. Thilak'.

Distribution. ORR- India [Uttar Pradesh: Sitapur (Andrewes, 1923: 233); Rajasthan: Jodhpur (Kataev & Wrase, 2016b: 262); Maharashtra: Mumbai (Andrewes, 1923: 233); Karnataka: Belagavi, Gunji, Ballari, Mysore, Bangalore (Andrewes, 1923: 233); Andhra Pradesh: Yemmiganur (Andrewes, 1930: 281); Tamil Nadu: Chennai, Coimbatore (Jedlička, 1969: 3); Palakkad, Pudussery Paddy field (Divya, 2023)]; ORR- Sri Lanka; PAR- Pakistan; Saudi Arabia; Yemen.

84. *Platymetopus flavilabris* (Fabricius, 1798)

Carabus flavilabris Fabricius, 1798: 59; Hope, 1838: 90; Schaum, 1847: 48; Motschulsky, 1855: 43; Andrewes, 1921a: 160; id. 1921b: 344; id. 1924a: 31; id. 1930b: 280; id. 1933c: 367; †Kushwaha, 1960: 177; Louwerence, 1967: 199; Habu, 1973: 205; Noonan, 1976: 46; Saha, 1995: 67; Sato & Kasahara, 1991: 56; Kataev et al., 2003: 393; Lorenz, 2005: 373; Park et al., 2006: 95; Kushwaha & Hegde, 2015: 403; Kataev & Wrase, 2017b: 554; Nijisha & Sabu, 2023: 491; Kataev, 2023: 504.

Platymetopus corrosus Bates, 1873a.

Dioryche formosanus Dupuis, 1912.

Platymetopus cobscuripes Schaufuss, 1887.

Harpalus punctulatus MacLeay, 1825.

Platymetopus punctulicollis Bates, 1889c.

Harpalus thunbergi Quensel, 1806.

ssp. **flavilabris* (Fabricius, 1798): 59; Kataev, 2023: 509.

Harpalus senilis Nietner, 1857b.

Platymetopus keiseri Louwerens, 1956.

Specimens examined: 1 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, K Shigina'; 1 ex. 'India: Tamil Nadu: Tirunelveli, Light trap, 11.III.2021, R Babu & party'.

Distribution. ORR- India [Punjab: Chandigarh (Kataev, 2023: 509); New Delhi: Delhi, airport (Kataev, 2023: 509); Uttar Pradesh: Unit. Prov., Fyzabad (Kataev, 2023: 509), Prayagraj (Allahabad), Chatham lines (†Kushwaha, 1960: 177), Hardoi (Kushwaha & Hegde, 2015: 403); Assam: Kaziranga Nat. Park (Kataev, 2023: 509); Gujarat: Mandvi, Kutch (Kataev, 2023: 509); West Bengal: Calcutta, Murshidabad (Saha, 1995: 67); Karnataka: Bandipur [Tiger] Reserve (Kataev, 2023: 509); Tamil Nadu: Chennai, Manapakham (Kataev, 2023: 509)]; PAR- India [Himachal Pradesh: Bajaura, Kangra (Andrewes, 1924a: 31); Uttarakhand: Uttarkashi Distr., Rishikesh, (Kataev, 2023: 509); West Bengal: Darjeeling (Kataev et al., 2003: 393; Kataev & Wrase, 2017: 554)]; ORR- Andaman Nicobar Islands; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; Indochina; Indonesia; Malaysia; PAR- Bhutan; China; Japan; Nepal; Pakistan; South Korea; Taiwan.

85. *Platymetopus rugosus* (Nietner, 1857)

Harpalus rugosus Nietner, 1857a: 150; id. 1857b: 373.

Platymetopus rugosus (Nietner, 1857b); Bates, 1891b: 329; Andrewes, 1921b: 343; id. 1927: 106; id. 1930b: 281; Kataev et al., 2003: 393; Lorenz, 2005: 373; Kushwaha & Hegde, 2015: 403; Kataev & Wrase, 2017b: 55; Akhil, 2020: 88; Nijisha & Sabu, 2023: 492; Kataev, 2023: 524.

ssp. *rugosus* (Nietner, 1857); Kataev, 2023: 526

Specimens examined: 1 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, K Shigina'; 1 ex. 'India: Tamil Nadu: Srivilliputhur, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Uttar Pradesh: Faizabad (Andrewes, 1930b: 281); Jharkhand: Konbir (Bates, 1891b: 329; Andrewes, 1930b: 281), Chota Nagpur (Andrewes, 1930b: 281); Odisha: Rambha (Ganjam), Barkuda Island (Chilka Lake) (Andrewes, 1930b: 281); Karnataka: Mangalore, Mysore (Andrewes, 1930b: 281); Andhra Pradesh: Visakhapatnam, Nagalapuram (Chingleput) (Andrewes, 1930b: 281); Tamil Nadu: Ennore, Chennai (Andrewes, 1930b: 281; Kataev, 2023: 526), Nilgiri Hills (Andrewes, 1930b: 281; Akhil, 2020: 88), Coimbatore (Kataev, 2023: 526); Kerala: Mahi (Kataev, 2023: 526)]; PAR- India [Uttarakhand: Almora (Andrewes, 1930b: 281); West Bengal: Panighatta (Andrewes, 1930b: 281), Darjeeling (Kataev & Wrase, 2017b: 55)]; ORR- Sri Lanka; AUR- Australia.

3.3.15. Genus *Siopelus* Murray, 1859

Type species: *Siopelus calabaricus* Murray, 1859.

Siopelus Murray, 1859: 27; Péringuey, 1896: 439; Noonan, 1976: 44; id. 1985: 24; Kataev et al., 2003: 393; Lorenz, 2005: 375; Kataev, 2012a: 113; Kataev & Wrase, 2017b: 555; Serrano et al., 2017: 221; Akhil, 2020: 88 Nijisha & Sabu, 2023: 492.

3.3.15.1. Subgenus *Siopelus* Murray, 1859

Type species: *Siopelus calabaricus* Murray, 1859.

Siopelus Murray, 1859: 27; Noonan, 1976: 44; id. 1985: 27; Lorenz, 2005: 375; Kataev & Wrase, 2017b: 555 Nijisha & Sabu, 2023: 492.

Harpalidium Kolbe, 1883.

Liosepus Basilewsky, 1950.

86. *_Siopelus tamilnadensis_ Kataev, 2002

Siopelus tamilnadensis Kataev, 2002b: 248; Lorenz, 2005: 375; Kataev & Wrase, 2016b: 262; Kataev & Wrase, 2017b: 555 Nijisha & Sabu, 2023: 492.

Specimens examined: 2 ex. 'India: Kerala: Kannur, Aralam Wildlife Sanctuary, Light trap, 22.II.2021, K Shigina'; 3 ex. 'India: Tamil Nadu: Srivilliputhur, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Punjab: Hoshiarpur, Rormazara (Kataev & Wrase, 2016b: 262); Uttar Pradesh: Jhansi (Kataev & Wrase, 2016b: 262); Karnataka: Bangalore, Silvepoora (Kataev & Wrase, 2016b: 262); Tamil Nadu: Chennai, Manapakkam (Kataev, 2002b: 248); Pondicherry (Kataev & Wrase, 2016b: 262)]; ORR- Myanmar; PAR- Nepal.

3.3.16. Genus *Trichotichnus* Morawitz, 1863

Type species: *Trichotichnus longitarsis* Morawitz, 1863.

Trichotichnus Morawitz, 1863: 63; Tschitschérine, 1900c: 362; id. 1901: 244; Andrewes, 1930b: 351; Habu, 1973: 223; Noonan, 1976: 43; id. 1985: 65; Saha, 1995: 64; Kataev et al., 2003: 394; Lorenz, 2005: 380; Ito, 2009: 599; Kataev, 2016: 69; Morita, 2016: 171; Kataev & Schmidt, 2017: 304; Kataev & Wrase, 2017b: 555; Kataev & Schmidt, 2018: 263; Ghosh et al., 2020: 227; Kataev, 2020: 174; Nijisha & Sabu, 2023: 493.

3.3.16.1. Subgenus *Bottchrus* Jedlička, 1935

Type species: *Bottchrus philippinus* Jedlička, 1935.

Bottchrus Jedlička, 1935a: 8; Noonan, 1976: 59; Kataev, 2016: 69; Kataev & Schmidt, 2017: 304; Kataev & Wrase, 2017b: 557; Kataev, 2020: 191; Nijisha & Sabu, 2023: 493.

Bellogenus Clarke, 1971a.

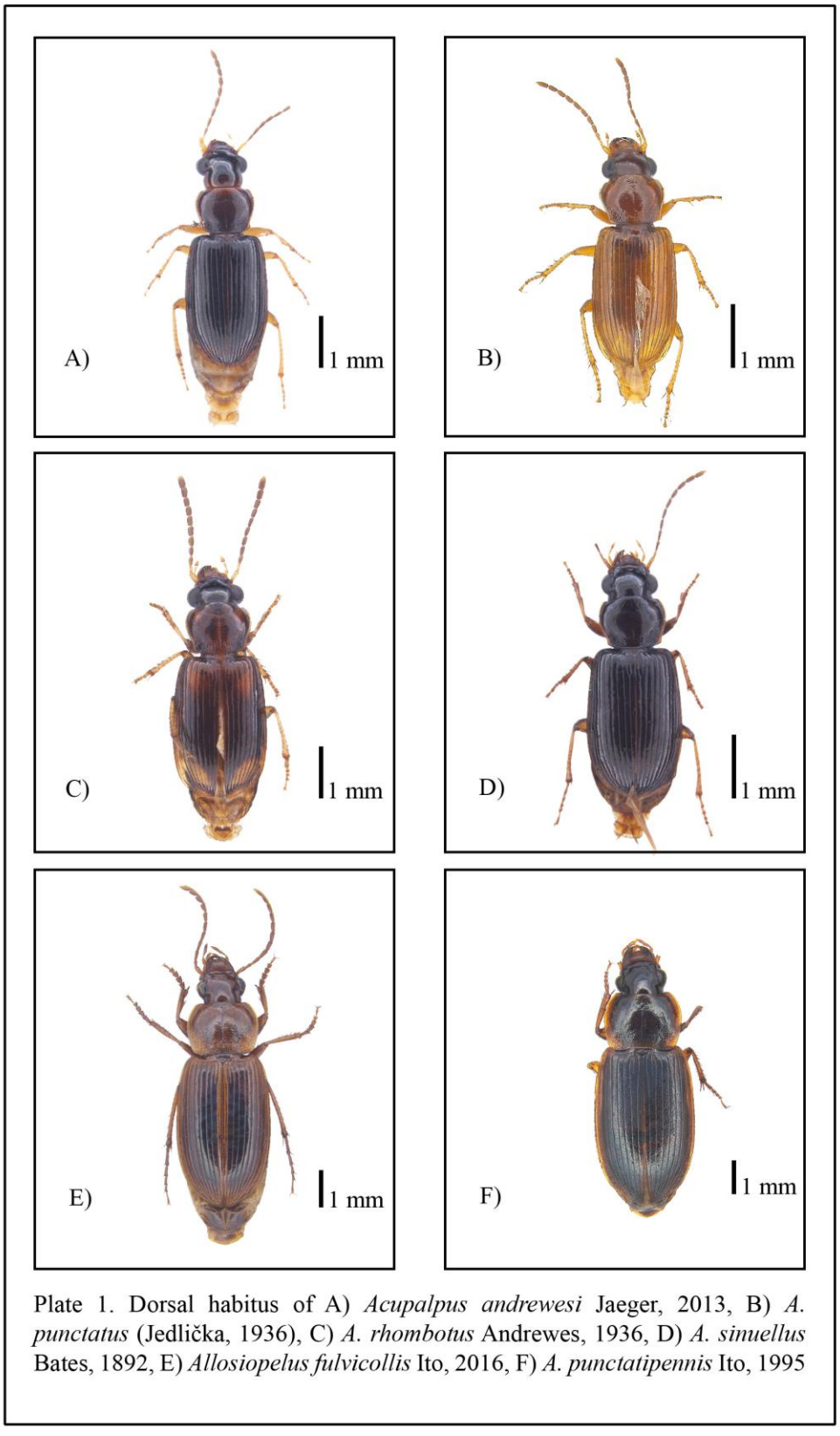


Plate 1. Dorsal habitus of A) *Acupalpus andrewesi* Jaeger, 2013, B) *A. punctatus* (Jedlička, 1936), C) *A. rhombotus* Andrewes, 1936, D) *A. simuellus* Bates, 1892, E) *Allosiopelus fulvicollis* Ito, 2016, F) *A. punctatipennis* Ito, 1995

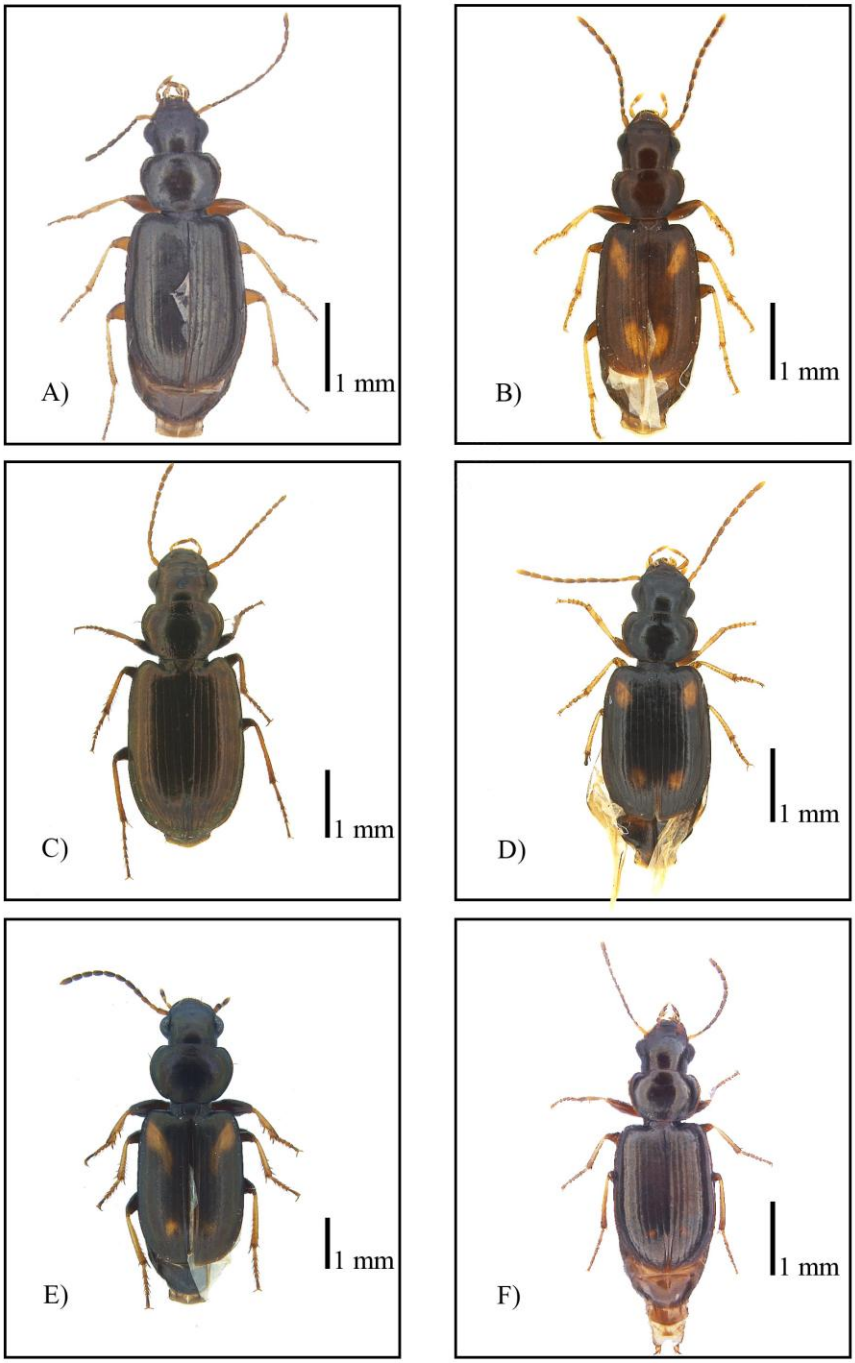


Plate 2. Dorsal habitus of A) *Amblystomus fuscescens* (Motschulsky, 1858), B) *A. indicus* (Nietner, 1858), C) *A. punctatus* Bates, 1892, D) *A. quadriguttatus* (Motschulsky, 1858), E) *A. resectus* Andrewes, 1924, F) *A.vulneratus* (Dejean, 1831)

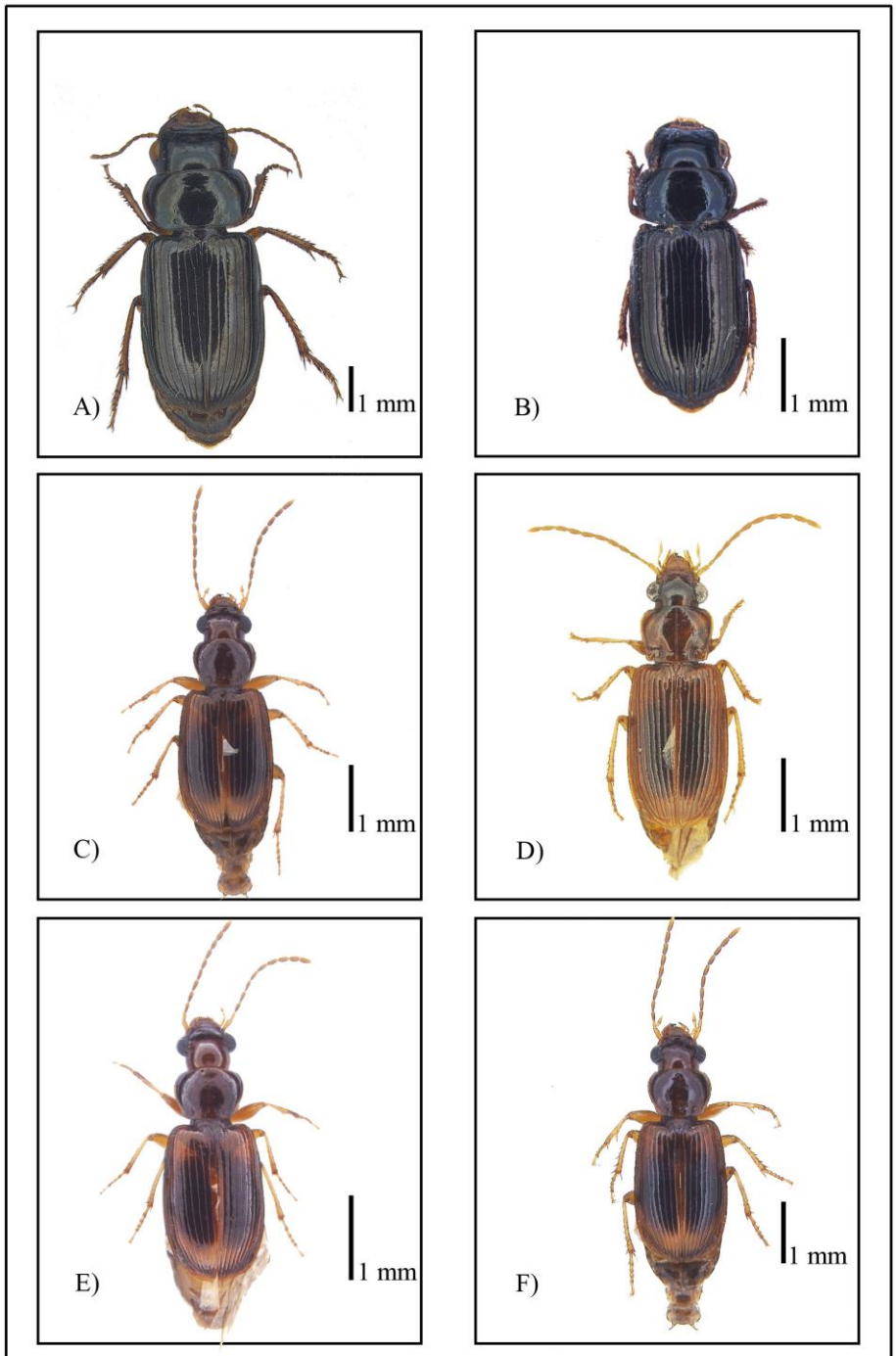


Plate 3. Dorsal habitus of A) *Anomostomus devagiriensis* Nijisha, Sabu & Aswathi, 2023, B) *A. orientalis* Andrewes, 1923, C) *Anthracus anichtchenkoi* Jaeger, 2015, D) *A. horni* (Andrewes, 1923), E) *A. nathani* Jaeger, 2017, F) *A. skalei* Jaeger, 2015

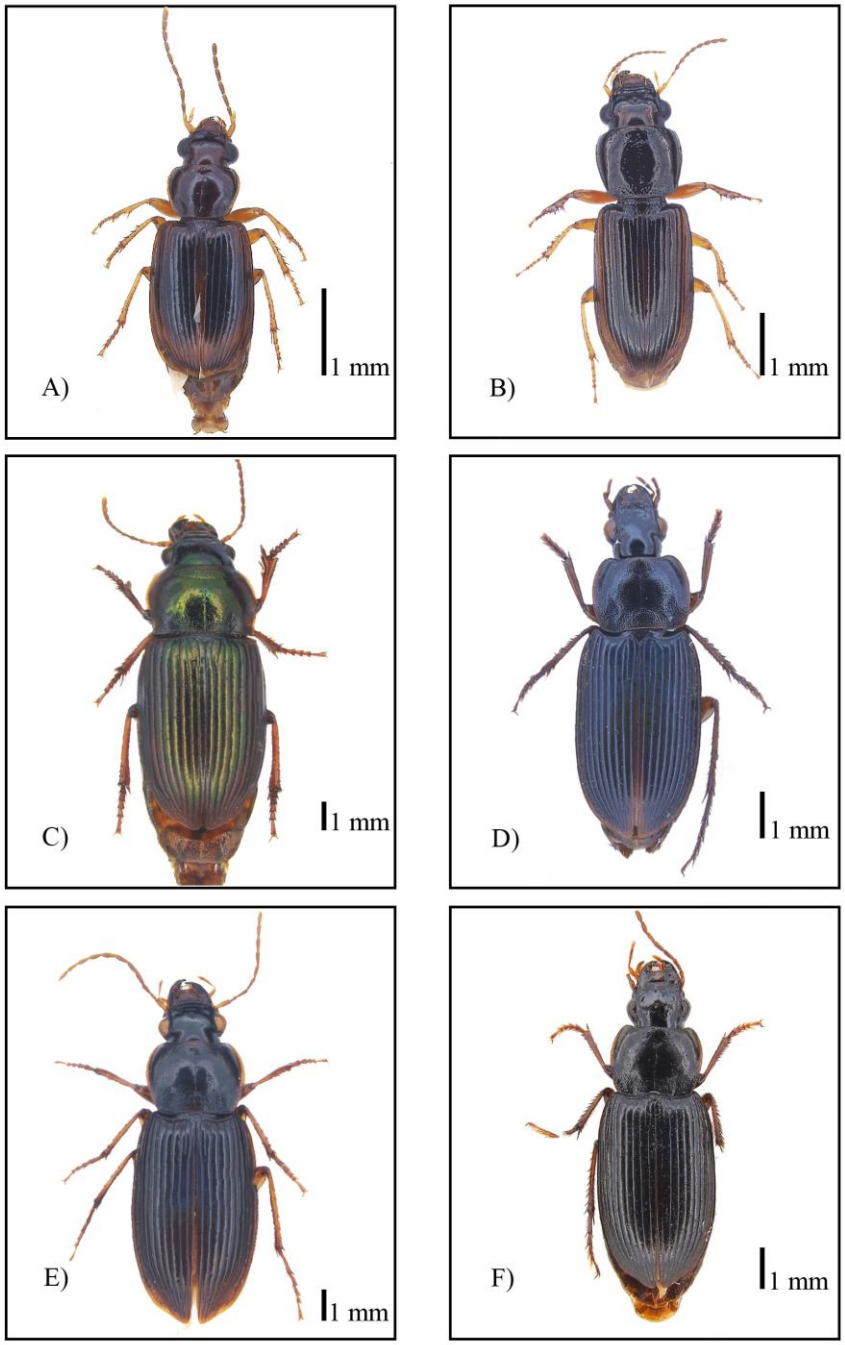


Plate 4. Dorsal habitus of A) *Anthracus weigeli* Jaeger, 2015, B) *Batoscelis oblonga* (Dejean, 1831), C) *Bradybaenus festivus* Dejean, 1829, D) *Coleolissus iris* Andrewes, 1924, E) *C. nakajimai* Ito, 2016, F) *C. perlucens* (Bates, 1878)

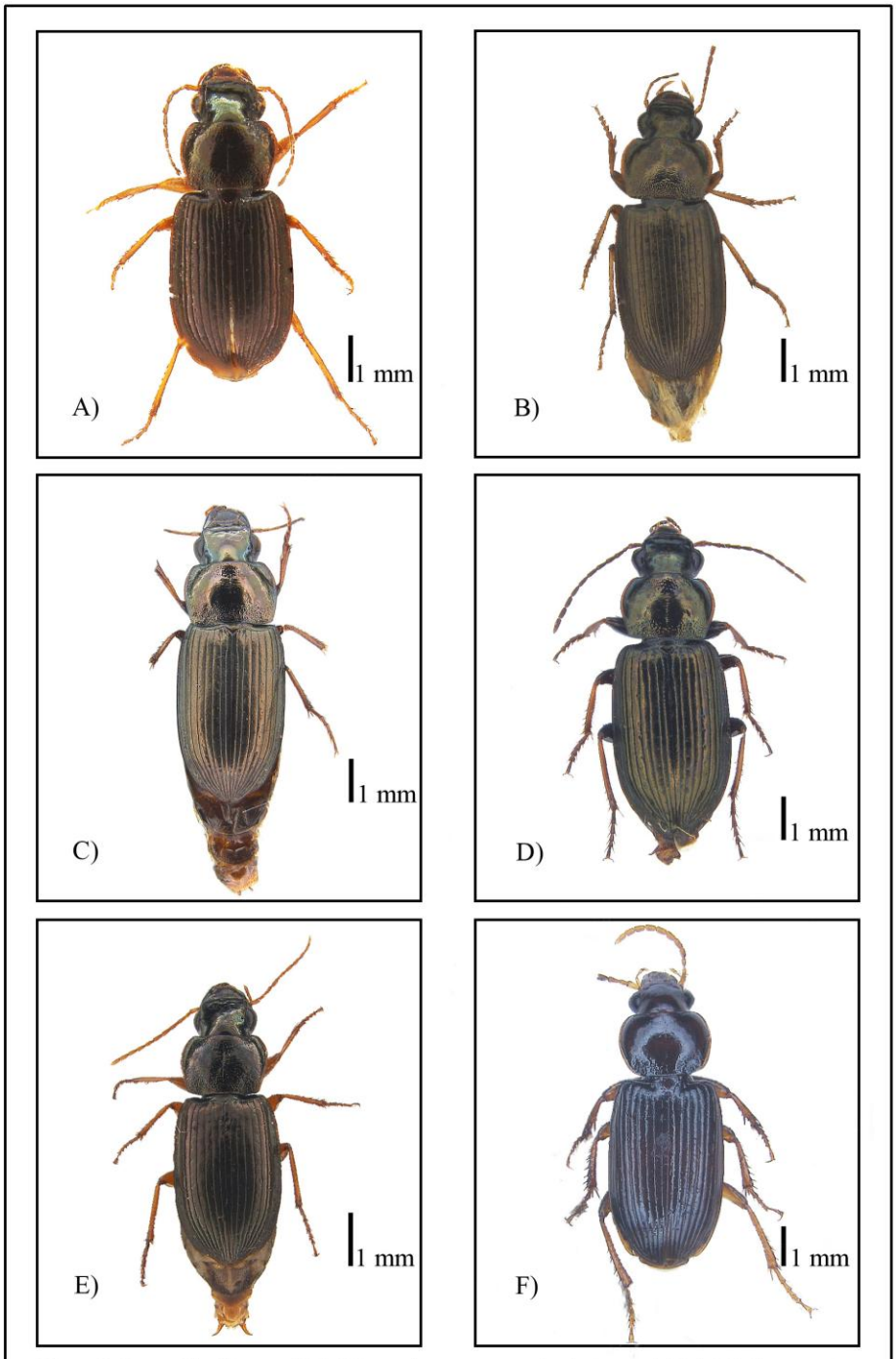


Plate 5. Dorsal habitus of A) *Dioryche convexa* Andrewes, 1924, B) *D. cuprina* (Dejean, 1829), C) *D. lucidula* (Dejean, 1829), D) *D. solida* Andrewes, 1933, E) *D. torta* MacLeay, 1825, F) *Idiomelas fulvipes indus* (Erichson, 1843)

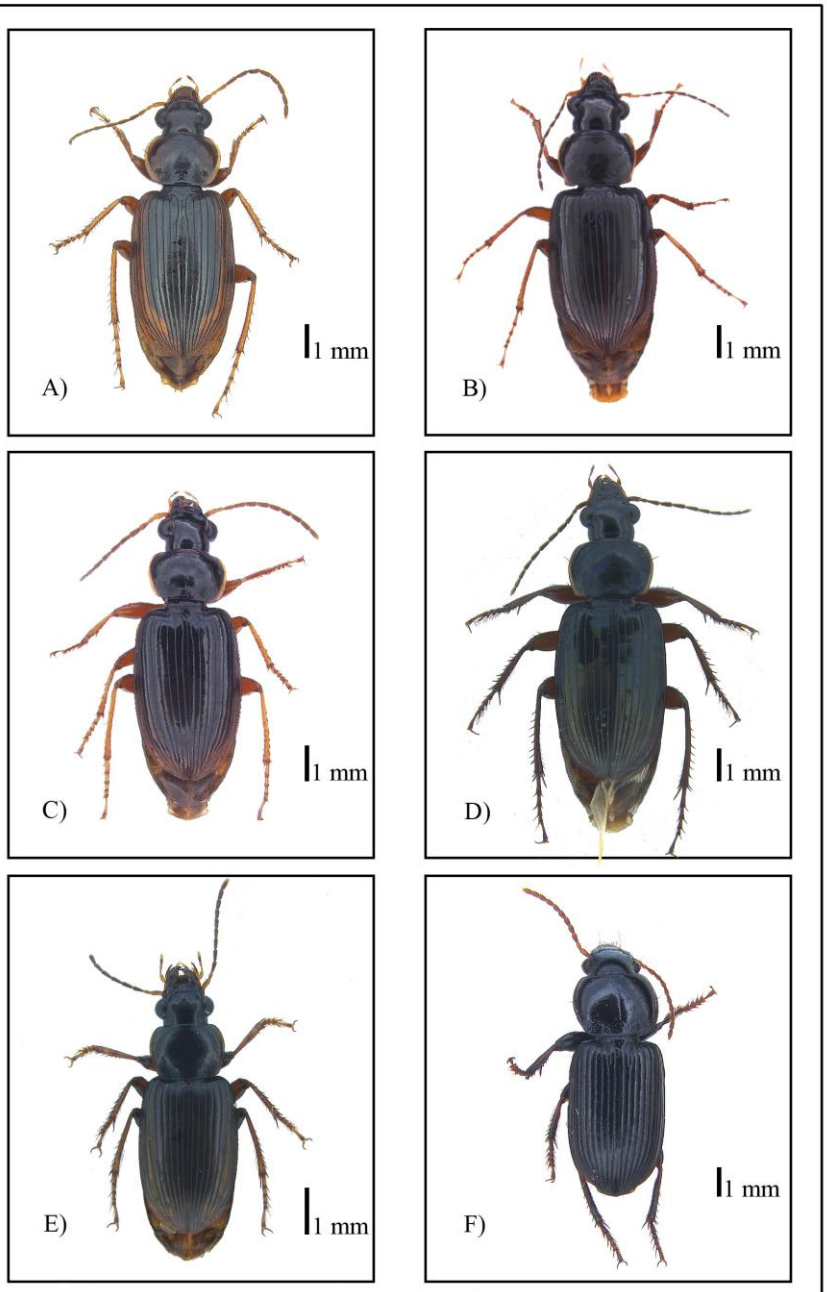


Plate 6. Dorsal habitus of A) *Loxoncus discophorus* (Chaudoir, 1852), B) *L. microgonus* (Bates, 1886), C) *L. nagpurensis* (Bates, 1891), D) *L. schmidti* Kataev, 2002, E) *L. renitens* (Bates, 1886), F) *Meroctenus mediocris* (Andrewes, 1936)

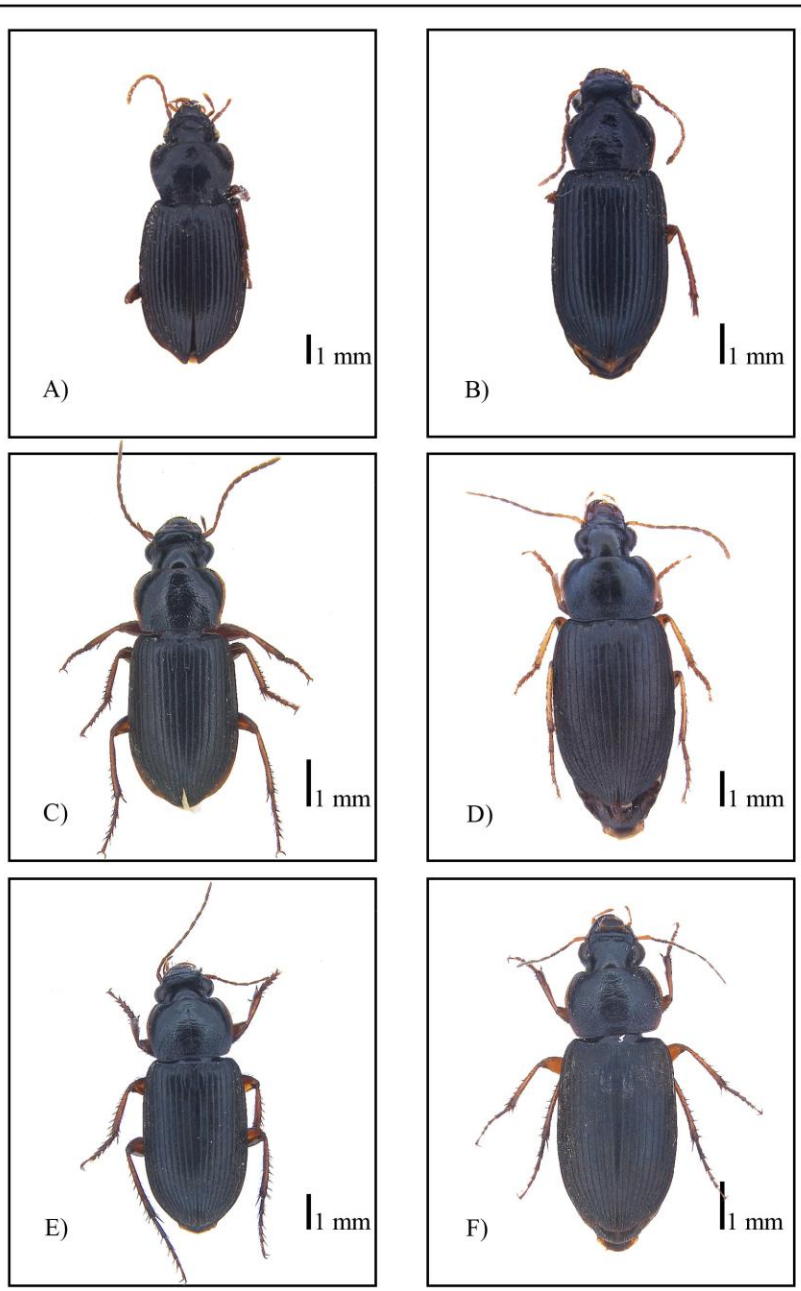


Plate 7. Dorsal habitus of A) *Oesyperus unctulus* Andrewes, 1923, B) *Ophoniscus compositus compositus* (Walker, 1858), C) *O. puneensis* Kataev, 2018, D) *Parophonus acutangulus* (Bates, 1891), E) *P. lividus* (Andrewes, 1923), F) *P. subtilis* (Bates, 1892)

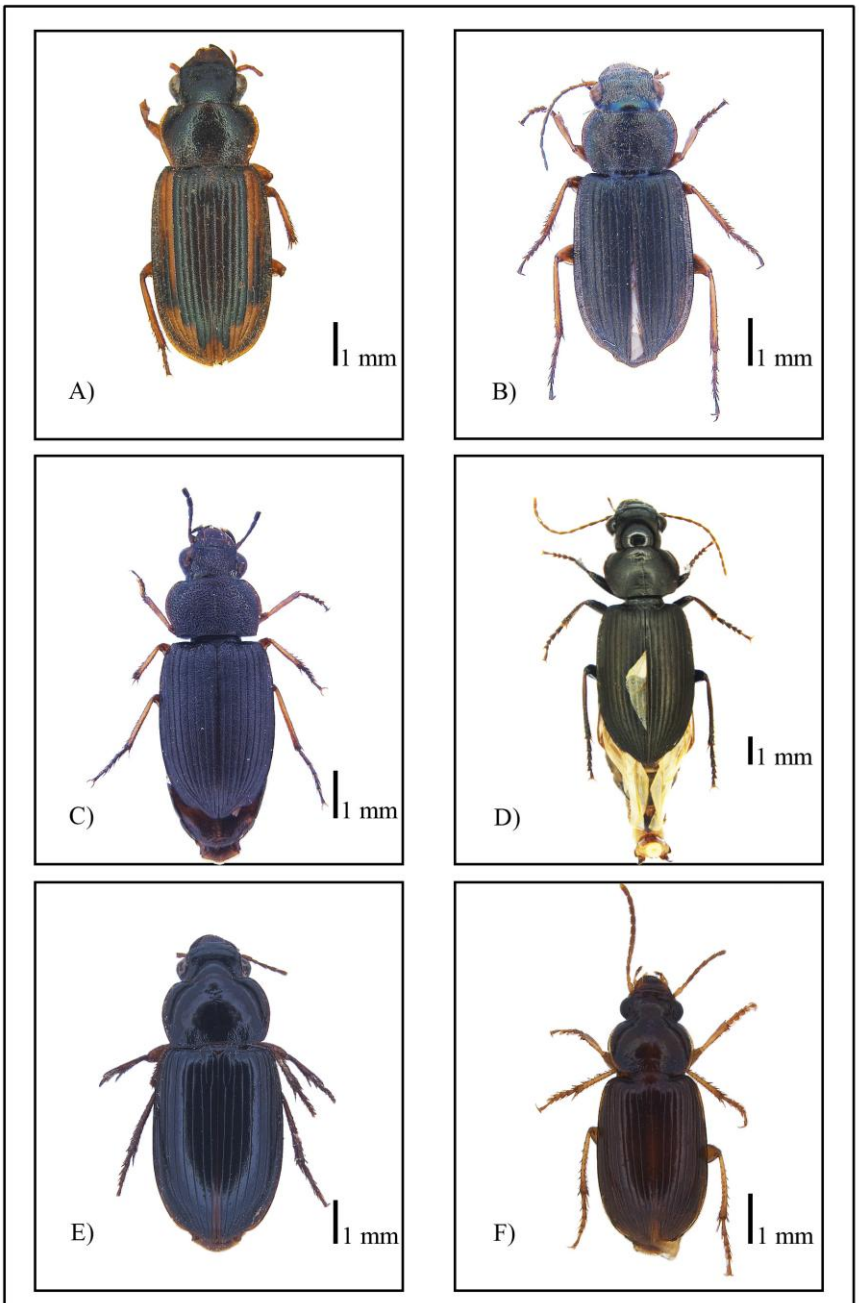


Plate 8. Dorsal habitus of A) *Platymetopus figuratus pictus* Andrewes, 1923, B) *P. flavilabris flavilabris* (Fabricius, 1798), C) *P. rugosus rugosus* (Nietner, 1857), D) *Pseudognathaphanus punctilabris* (MacLeay, 1825), E) *Siopelus tamilnadensis* Kataev, 2002, F) *Stenolophus bajaurae* Andrewes, 1924

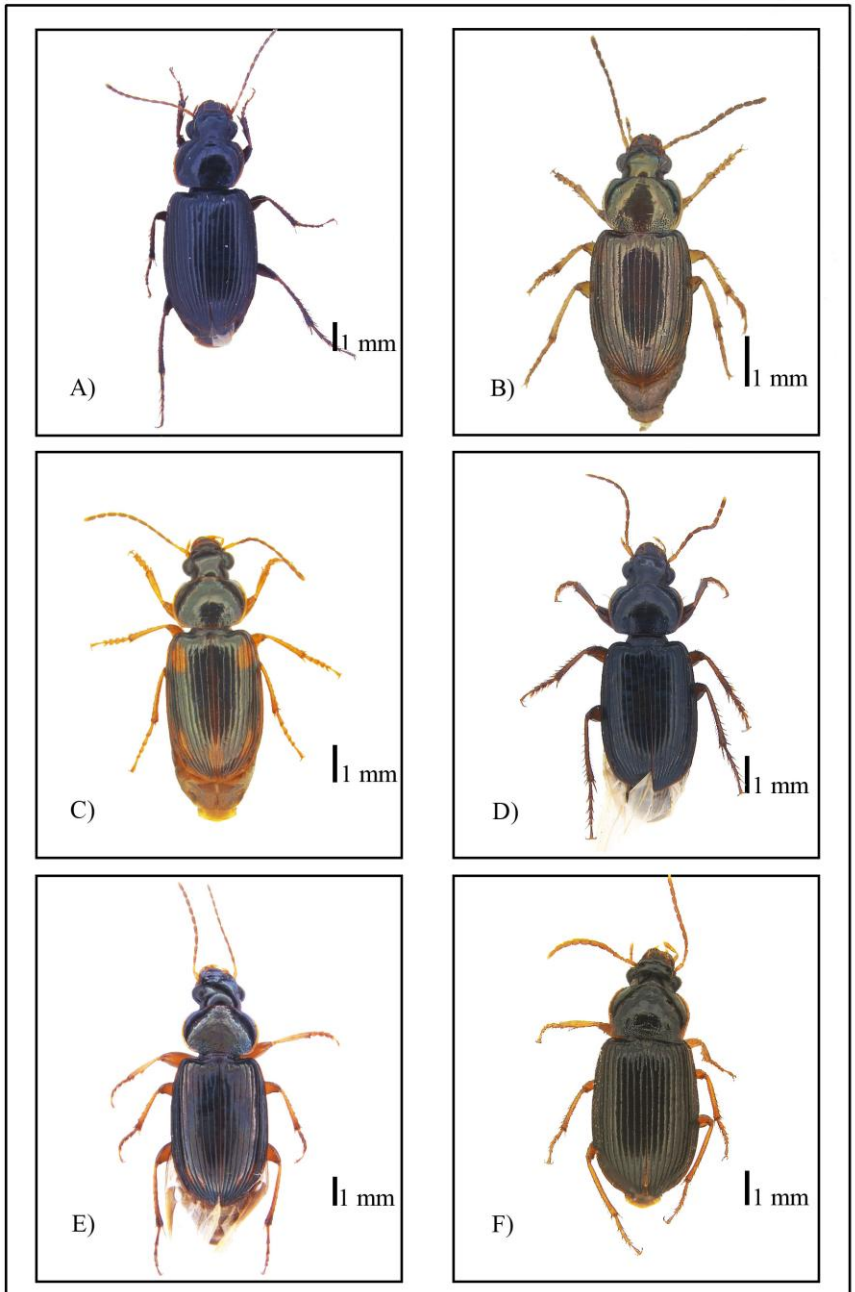


Plate 9. Dorsal habitus of A) *Stenolophus lucidus* Dejean, 1829, B) *S. nitens* (Motschulsky, 1864), C) *S. quinquepustulatus* (Wiedemann, 1823), D) *S. rectifrons* Bates, 1892, E) *S. smaragdulus* (Fabricius, 1798), F) *Trichotichnus saluki* Kataev, 2020

Pseudotrichotichnus Habu, 1973.

87. *Trichotichnus globulipennis* Schauberger, 1935

Trichotichnus globulipennis Schauberger, 1935: 145; Noonan, 1985: 68; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Schmidt, 2017: 302; Kataev & Wrase, 2017b: 557; Nijisha & Sabu, 2023: 493.

Distribution. ORR- India [Tamil Nadu: Madura (Schauberger, 1935: 145)]; PAR- Nepal.

88. *Trichotichnus lamprus* (Bates, 1886)

Tachycellus lamprus Bates, 1886: 80.

Trichotichnus lamprus (Bates, 1886): Andrewes, 1919b: 475; id. 1930b: 351; Noonan, 1985: 70; Ito, 1997b: 155; Lorenz, 2005: 380; Nijisha & Sabu, 2023: 493.

Distribution. ORR- India [Tamil Nadu: Kodaikanal, Tiruchirappalli, Shembaganur (Andrewes, 1930b: 351); Pondicherry (Andrewes, 1930b: 351)]; ORR- Sri Lanka.

3.3.16.2. Subgenus *Parairidessus* Kataev, 2020

Type species: *Trichotichnus saluki* Kataev, 2020 Nijisha & Sabu, 2023: 494.

Parairidessus Kataev, 2020: 174.

89. **Trichotichnus saluki* Kataev, 2020

Trichotichnus saluki Kataev, 2020: 175 Nijisha & Sabu, 2023: 494.

Specimen examined: 1 ex. 'India: Kerala: Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Karnataka: Jog Falls (Kataev, 2020: 175)].

4.1.3. Taxonomic Keys.

4.1.3.1. Taxonomic keys and descriptions to the tribes, subtribes, genera and species to the subfamily Harpalinae from India.

Key to the Tribes of Subfamily Harpalinae Bonelli, 1810 (Key modified from Habu, 1973).

1. Penultimate segment of labial palpi with two or rarely three setae interior; umbelicate pores on elytral interval nine widely interrupted at middle, generally with 14 pores……..**Stenolophini** Kirby, 1837

- Penultimate segment of labial palpi with more than three or rarely three setae interior; umbelicate pores on elytral interval nine often continuous, generally with more than 15 pores……...……..……2

2. Pro-tarsi of male with two rows of adhesive hairs on ventral side; suture between mentum and submentum complete, submentum with one or two setae on either side…….**Harpalini** Bonelli, 1810

- Pro-tarsi of male with compact, not two-rowed adhesive hairs on ventral side; suture between mentum and submentum generally (not always) incomplete, submentum with two setae on either side……**Anisodactylini** Lacordaire, 1854

Tribe 1: **Anisodactylini Lacordaire, 1854**

Description taken from Habu, 1973: 19.

Head: Clypeus and labrum are symmetric in proportions; penultimate segment of labial palpi with more than three setae at inside; suture between mentum and submentum often obliterate wholly or partially (complete in *Gnathaphanus*); ligula bisetose.

Elytra: Basal border complete; scutellary striole present between striae one and two.

Legs: In male, second to fourth pro-tarsomeres and often first to fourth or second to fourth meso-tarsomeres with compact, not two-lined, adhesive hairs on ventral side.

Tribe 2: **Harpalini Bonelli, 1810**

Description taken from Habu, 1973: 66.

Head: Penultimate segment of labial palpi with more than three setae at inside; mentum and submentum completely separated with suture; submentum with one to two setae on either side; ligula with two setae.

Legs: In male, second to fourth pro-tarsomeres and often second to fourth meso-tarsomeres more or less dilated, first to fourth pro-tarsomeres and first to fourth or second to fourth meso-tarsomeres with two rows of adhesive hairs on ventral side.

Tribe 3: **Stenolophini Kirby, 1837**

Description taken from Habu, 1973: 301.

Head: Frontal impressions extending in posterolateral direction; penultimate segment of labial palpi commonly with two, rarely three setae at inner side. Mentum and submentum completely separated.

Elytra: Basal border complete; scutellary striole situated between striae one and two, or absent; marginal series of pores widely interrupted at middle, generally with 14 pores.

Legs: In male, first to fourth pro- and meso-tarsomeres dilated or not, first to fourth or second to fourth with two rows of adhesive hairs on ventral side, sometimes absent in mid tarsi.

Female genitalia: Apical area of hemisternites membranous and transparent, generally glabrous at apical membranous part, setae present (sometimes absent) on subapical sclerotized area.

Key to the East Asian and Oriental genera of the Tribe *Anisodactylini* Lacordaire, 1854. (Key modified from Kataev and Wrase, 2001).

1. Pronotum with two lateral setae on each side, one at middle and second one closer to basal angle…….***Progonochaetus*** Müller, 1938

- Pronotum with three and more lateral setae on each side, placed either before middle or along entire length……***Chydaeus*** Chaudoir, 1854 (part)
- Pronotum with only one lateral seta at middle on each side.……2

2. Body with dense pubescence except in median part of elytra in some specimens, ……***Crasodactylus*** Guérin-Méneville, 1847
- Body without dense pubescence at least ventrally ……3

3. Mentum and submentum completely separated by transverse suture…….***Gnathaphanus*** MacLeay, 1825
- Mentum and submentum completely fused……4

4. Presence of prominent long mentum median tooth……..***Chydaeus*** Chaudoir, 1854 (part)
- Absence of prominent mentum median tooth ……..……..5

5. Elytra with more than one discal setigerous pore at least on each 3rd interval…….***Pseudognathaphanus*** Schauberger, 1932 (part)
- Elytra at most with one discal setigerous pore on each 3rd interval……...6

6. More or less parallel–sided or apically weakly widened ligula. ……...7
- Apically strongly widened ligula.……...***Anisodactylus*** Dejean, 1829

7. Paraglossae very broad, distally attached to ligula: 2nd to 4th meta-tarsomeres in male and female and 2nd to 4th pro- and meso- tarsomeres in female with dense ventrolateral thickened setae…….***Pseudognathaphanus*** Schauberger, 1932 (part)
- Paraglossae narrow, not fused distally to ligula: tarsi without dense ventrolateral thickened setae……***Pseudorhysopus*** Kataev & Wrase, 2001

Genus 1: ***Anisodactylus*** **Dejean, 1829**

Description taken from Noonan, 1973: 348 and Habu, 1973: 19.

Body stout, cylindrical and convex. Glabrous or partially ciliate in dorsal side.

Size: Length 7–19 mm.

Color: Varies.

Head: Moderately wider or somewhat narrower than pronotum. Genae and temporae normal, somewhat developed postgenae. Each outer angle of clypeus with one to several setigerous punctures. Labrum six setose. Frontal fovea various, but in most specimens with clypeo–ocular prolongation. Mentum without tooth or with small tooth. Mentum and submentum not separated by transverse suture. Ligula strongly widened laterally at apex, or only moderately expanded in some specimens. Paraglossa slightly longer than ligula and membranous. Microsculpture in most species with isodiametric meshes, obsolescent medially in some species, with granulate isodiametric meshes or with punctures in a few species.

Pronotum: With lateral, apical and basal beads and without posterior marginal setae. Microsculpture of isodiametric meshes or granulate isodiametric meshes, of punctures or obsolete.

Elytra: External intervals, base and apex pubescent in some species. Inner intervals not densely and regularly pubescent. Presence of moderately long scutellary striole; with basal pore; third elytral interval with or without discal setigerous puncture, fifth and seventh intervals without series of pores.

Wings present.

Ventral surface: In male, sternum VI with one or two pairs of ambulatory setae.

Legs: Meta-femur with two setae near hind margin (sometimes with some short secondary setae); tarsi glabrous or pubescent on dorsal side, pubescent on ventral side; two to four meso-tarsomeres in male more or less dilated, with adhesive hairs venrally.

Aedeagus: Median lobe arcuate except in subgenus *Pseudhexatrichus*; with or without apical disc. Internal sac with or without armature.

Female genitalia: Valvifer various, constant in shape for species of most subgenera.

1. ***Anisodactylus karennius* (Bates, 1892)**

Description taken from Bates, 1892b: 341

Color: Shiny black. Antennae, palpi and tarsi pitch-red.

Head: Short, convex, smooth, with an anteriorly arched labrum, frontal suture and foveae deep and thin stripes on both sides drawn obliquely towards the edge of the eyes.

Pronotum: Transverse, scarcely narrower than the elytra in front, moderately arched at the sides; slightly narrowed anteriorly; the posterior angles being obtuse; convex disc; margins and base broadly regular-punctate; basal foveae on both sides more coarsely punctate.

Elytra: Convex, shoulders sub-acute, slightly sinuate; straited, with smooth intervals, two or three external intervals sparsely punctated; intervals slightly convex. Third elytral interval a setigerous puncture.

Legs: Tarsi glabrous dorsally, meta-tarsomere 1 longer than 2 and 3 combined.

Genus 2: ***Chydaeus* Chaudoir, 1854**

Description taken from Noonan, 1973: 345.

Body narrow, but in some specimens are stout due to broad elytra.

Size: Length 9–14 mm.

Color: Body dark piceous to black.

Head: Labral strongly emarginate medially at apex. Frontal fovea obsolescent to moderately prominent and punctiform or somewhat linear, with or without clypeo–ocular prolongation. Mentum with very prominent, long tooth. Mentum and

submentum not separated by transverse suture. Ligula narrow or moderately expanded at apex. Paraglossae slightly longer than ligula and well separated distally from ligula.

Pronotum: Pronotum comparatively small, somewhat cordate. Lateral bead complete; basal bead complete in most specimens, but obsolescent medially in some specimens; apical bead present laterally.

Elytra: Scutellar stria with length varied within individual species, in many specimens distal portion of stria one captured and base of stria one left as apparent false scutellar stria. Intervals flat to convex, without setigerous punctures. Interval seven with distal ocellate puncture.

Ventral surface: In male, sternite VI with two pairs of ambulatory setae. Tergite VIII of male rounded at apex.

Legs: Distal portion of pro-tibia moderately expanded laterally. Apical spur lanceolate. Meta- femur of most specimens with two long setae on posterior margin. First segment of meta-tarsi slightly shorter to slightly longer than two and three combined. Apex of first segment and two to four segments of pro-tarsi of male expanded and with spongy pubescence beneath. Two to four meso-tarsomeres of male laterally expanded and with spongy pubescence beneath.

Aedeagus: Median lobe lacking apical disc.

Female genitalia: Valvifer slightly convex, moderately sclerotized, with several distal setae. Distal mesal margin somewhat membranous and without discrete boundary. Proctiger modified into moderately sclerotized elongate plate on each side of anal orifice and with or without setae.

Key to the species of the genus *Chydaeus* (Chaudoir, 1854) [Key modified from Shauberger, 1932 and Kataev & Schmidt, 2006].

1. Elytra with deep preapical sinuation……***C. bedeli*** Tschitschérine, 1897

- Elytra with shallow preapical sinuation…….2

2. Posterior angle of pronotum sharply right angled or slightly acute ……..3

- Posterior angle of pronotum obtuse……..……..5

3. Basal angle of pronotum without denticle at apices……***C. andrewesi*** Schauberger, 1932

- Basal angle of pronotum with distinct or tiny denticle at apices……4

4. Basal angles of pronotum distinctly denticulate at apices.....***C. semenowi*** (Tschitschérine, 1899)

- Basal angles of pronotum obtuse, each at most only with traces of obtuse denticle at apex ……***C. obtuscicollis*** Schauberger, 1932

5. Basal angle of pronotum without denticle at apices……..*****C. obscurus*** Chaudoir, 1854

- Basal angle of pronotum with traces of obtuse denticle at apices……...***C. salvazae*** Schauberger, 1934

1. *Chydaeus andrewesi* Schauberger, 1932

Description taken from Schauberger, 1932b: 52

Size: Length 10–11.5 mm.

Color: Black. Palpi rust-red, antennae red-brown or rust-red with browned basal segments.

Head: Moderately large, with eyes as wide as pronotum between front corners; eyes moderately strongly arched; temples moderately long, but fairly flat merging into a slightly thicker neck; frontal foveae fairly small, but deep, round, from which a fairly deep oblique furrow arise towards the inner edge of the eye; clypeus unisetose, mentum tooth rather long and pointed; the dorsum extremely finely, sometimes hardly visibly punctured.

Pronotum: Rather strongly transverse; in the front third ½ times as wide as long; the base scarcely wider than the front edge, which is slightly arched; the front corners slightly protruding and moderately broadly rounded. The sides very narrowly grooved, not raised infront of the posterior angles; unisetose; strongly rounded; widened; running towards the basal angle; the basal angle usually sharply right angled, sometimes slightly acute angled, but scarcely projecting outwards; the base completely bordered, slightly sinuate at the sides; the basal foveae fairly large, moderately deep or shallow, the space between them and the lateral margin is slight, but distinctly arched; the dorsal side is extremely fine, only slightly more coarsely punctured behind the anterior edge, the basal part is rather finely punctured over its entire width and little or moderately dense. Basal foveae somewhat more coarsely and densely punctured, but not or hardly confluently punctured.

Elytra: Elongated, elliptical, moderately convex; the basal border is quite wide, the basal edge bent forward laterally, it meets the lateral edge at a definite obtuse angle, but does not form a clear shoulder tooth; the preapical sinuation flat; sutural angle is at a right or slightly acute angled, mostly blunted at the end or more or less broadly rounded; the striae are moderately strong and moderately arched, scutellar striae are long; the third interval without a puncture and fifth and seventh intervals without series of punctures before apex.

Ventral surface: The penultimate abdominal segments are smooth and glabrous.

Legs: Meta-femur on lower inner edge with two bristle points.

Aedeagus: Apical part of the penis very long and narrow, more than five times as long as wide, sword-shaped, sharply pointed at the end.

2. *Chydaeus bedeli* (Tschitschérine, 1897)

Description taken from Kataev & Schmidt, 2002: 394.

Size: Length 9.1–11.7 mm; width 3.8–5.0.

Color: Black; usually slightly paler tibiae and tarsi; palpi brownish, antennae dark brown with two or more basal antennomeres black; upper side shiny and not iridescent.

Head: Somewhat large, measured across eyes 0.70–0.82 and across neck constriction 0.59–0.70 times as wide as pronotum, without punctures. Tempora relatively long, hardly convex, slopingly declining to neck. Frontal suture thin. Ligular sclerite and paraglossae narrow. Antennae not long with middle antennomeres about two times as long as wide, reaching elytral base in male, a little shorter in female. Dorsal microsculpture visible as fine transverse meshes only behind eyes.

Pronotum: Fairly convex, 1.46–1.63 times as wide as long, maximum width in anterior third where lateral seta inserted, sides fairly rounded anteriorly and slightly sinuate before base. Anterior margin emarginate, bordered only laterally. Posterior margin more or less rectilinear, entirely clearly bordered, either equal to or wider than anterior margin and slightly narrower than elytral base between humeral angles. Anterior angles notably protruding, narrowly rounded. From apical angles lateral depressions arises, becoming widened behind lateral seta and fused basally with somewhat deep basal foveae and are separated from each other by a convex area weakly impressed against anterior part of pronotal disc. Pronotal surface distinctly punctate except, for central part, along base and in lateral depressions with more coarse punctures. Microsculpture usually visible as isodiametric or weakly transverse meshes only along sides and in basal foveae, highly reduced in male.

Elytra: Not joined along suture, fairly convex, 1.34–1.54 times as long as wide, 2.67–3.32 times as long and 1.22–1.37 times as wide as pronotum, maximum width at middle or just behind it, with sides slightly rounded, subangulate humeri, each with

rounded apex and with a tiny tooth, visible only from behind. Basal edge hardly sinuate laterally, form an obtuse angle with margin. Scutellar stria long, with basal seta. Intervals without punctures, somewhat flat throughout. Umbilicate setae 15–19 in number. Microsculpture consisting of fine transverse meshes developed throughout.

Ventral surface: Prosternum with short and scattered pubescence. Anal sternite in both male and female somewhat truncate at apex and with two pairs of marginal setae. Met-episterna clearly longer than wide and strongly narrowed towards base.

Legs: Pro-tibia with two to three lateroapical and one ventroapical spines. Meta-femur generally with two, sometimes three to four setae along posterior margin. Each meta-coxa with an additional posterior seta medially. Dorsal surface of tarsi glabrous, male pro- and meso-tarsomeres dilated and with sparse setiferous punctures in lateral side. Usually three, more rarely four pairs of latero-ventral setae present in fifth tarsomere. Meta-tarsus approximately equal to width of head measured across neck constriction, with first tarsomere longer than second but shorter than second and third and approximately 2.5 times as long as wide at its apical part. Second to third pro-tarsomeres and third meso-tarsomere clearly wider than long and with second meso-tarsomere approximately as wide as long.

Aedeagus: Apical portion of median lobe somewhat straight, slightly directed ventrad and with apex curved dorsad (lateral aspect); terminal lamella fairly broad with sides rectilinearly converging to narrowly rounded apex (dorsal aspect); internal sac with a large spine formation at middle and a narrow spiny patch at right side.

Female genitalia: With fairly long and weakly arcuate stylus.

3. *Chydaeus obscurus* Chaudoir, 1854

Description from Chaudoir, 1854: 344.

Color: Completely dull black, palpi, antennae and tarsi ferruginous red.

Head: Quadrate, broad at its base and narrowed towards anterior, smooth, with two foveae between the antennae; eyes small, not very prominent.

Pronotum: Very large, half as wide as the head, less long than wide, subcordiform, slightly indented anteriorly, truncated squarely at its base, anterior angles little advanced, obtuse at apex; sides slightly rounded in their anterior part, long but weakly sinuate towards the posterior angles which are straight, but whose apex is slightly blunt; the top quite convex anteriorly, almost smooth, flattening towards the base which is covered with a weak, but fairly coarse punctuation, lateral edges also punctated, but weakly, a little flattened and finely raised, the base smooth on the sides; the two transverse impressions are scarcely distinct, the middle line is clearly marked, but it does not reach the extremities.

Elytra: Same width of the corselet, only half as long as it is wide, adapting exactly to the latter; base with a border which ends in a small projection at the shoulder; sides not very rounded, end rounded and slightly sinuate, the top very convex, especially towards the end and towards the sides; on each elytron nine smooth striae present, quite marked, with the fairly long rudiment of a tenth at the base near the scutellum, smooth intervals, slightly convex; on the eighth intervals the setigerous pores are widely spaced in the middle. The **Ventral surface:** Underside of the body is smooth and fairly convex.

Remarks: Detailed redescription of the species is available in Kataev & Schmidt, 2006: 136.

4. *Chydaeus obtusicollis* Schauberger, 1932

Description taken from Schauberger, 1932b: 53.

Size: Length 9–10 mm.

Color: Black; Palpi rusty red, basal segments of antennae brown and remaining ones are reddish brown or rusty red, tarsi reddish brown to rusty red.

Head: Rather large, with eyes as wide or almost as wide as the pronotum between the front corners; eyes strongly protruding, temples shorter and sloping rather steeply towards the neck; frontal foveae quite small, but deep, usually a fairly sharply dug oblique furrow sending towards the inner edge of the eye; clypeus with one setae on either side, mentum with a bristle on each side, mentum tooth quite long and sharp; dorsal surface is extremely finely punctated only near the eyes.

Pronotum: Strongly transverse, quite broad at the base and at the front edge; the base as wide as the anterior edge; the front edge is cut out in a very flat, arched shape, the front corners protrude very slightly and are moderately broadly rounded; the sides narrowly grooved, not flared in front of the posterior angles, unisetose, quite strongly rounded, widened, narrowed in a uniform arc up to the posterior angles, the side edge bulge equally narrow; the posterior angle obtuse, without distinct teeth; the base completely bordered, barely inclined at the sides; the basal foveae moderately deep, sometimes quite shallow, the space between them and the lateral edge slightly convex; the dorsal surface is very fine, usually rather more clearly punctated behind the anterior edge, the basal area is moderately fine and not very dense across its entire width, usually very sparsely punctated in the middle, somewhat coarsely punctated in the basal foveae, but not converging in a wrinkled manner.

Elytra: Elongated, elliptical, moderately convex; the basal border is quite wide, the basal edge is clearly curved forward laterally and it meets the side edge in a clear obtuse angle, but does not form a shoulder tooth; the sutural angle has a right or slightly acute angle, and is usually more or less rounded at the end; the striae are moderately strong and moderately deepened, the scutellar striae is long; the spaces

between them are moderately convex, the third without a setigerous pore, the fifth and seventh in front of the tip without a row of pores.

Ventral surface: The episterna of the meta-thorax are 1/2 times as long as they are wide at the front and narrow considerably towards the back. The penultimate abdominal segments are smooth and glabrous except for the normal setae.

Legs: The hind legs have two bristle points on the lower inner edge.

Aedeagus: penis quite slender; the apical part almost symmetrical, long triangular, narrowly rounded at the front, narrow and very flatly curved inwards, the outermost end in turn very slightly curved outwards.

Remarks: Detailed redescription of the species is available in Kataev & Schmidt, 2006: 148.

5. *Chydaeus salvazae* Schauberger, 1934

Description taken from Schauberger, 1934a: 9.

Size: Length 11–12 mm.

Color: Body black, palpi rusty red, antennae reddish-brown, with first segments dark brown, legs black, with pitch-brown tarsi.

Head: Rather large, with eyes as wide or almost as wide as the pronotum between the front corners, eyes quite large, moderately protruding, temples long, moderately sloping, neck slightly thickened; frontal foveae quite small, rounded, deep, the oblique eye furrow shallow or almost completely absent; clypeus with one seta on either side, mentum tooth moderately long and sharp; the dorsal surface is scarcely visibly punctured.

Pronotum: Very flatly convex, strongly transverse, narrowing towards the base as much as towards the front, maximum width at the front third; the front edge cut out in a moderate curve, the anterior angles only slightly advanced and fairly broadly

rounded; the sides unisetose, strongly rounded expanded, evenly curved up to the anterior angles, towards the posterior the sides run in a slight curve or almost in a straight line, the curvature of the slopes only slightly towards the side edge groove, which is also very broadly set off like a groove at the front, but widens only slightly towards the posterior, the space between the basal foveae and the lateral edge groove slightly convex; the posterior angles are quite obtuse, not protruding outwards in the shape of teeth; the base is laterally very short and slightly sloping, completely bordered, the basal foveae large, elongated and quite deep; the basal part is quite coarsely and quite densely punctured throughout, the sides and the anterior edge are finer, but clearly and quite abundantly punctured, the disc is very finely and sparsely punctured.

Elytra: Short, ovate, flat, widest almost in the middle, quite dull in the front half widest almost in the middle, front half with quite dull and roughly isodiametric meshes, moderately shiny in the back half and on the suture half of the first interval and with fairly strongly transverse meshes; the basal border is moderately wide, the basal edge is slightly bent forward at the side and is at a very obtuse but clear angle with the lateral edge; the sutural angle is more or less narrowly rounded; the striae quite fine and moderately deep, smooth, the scutellar striae not long; the spaces between them are slightly convex, the third interval without setigerous pore, the fifth and seventh without a row of punctures in front of the tip. Winged.

Ventral surface: The penultimate abdominal segments smooth and glabrous.

Legs: Hind leg on the inner edge with two bristle points.

Remarks: Detailed redescription of the species is available in Kataev & Schmidt, 2006: 153.

6. *Chydaeus semenowi* (Tschitschérine, 1899)

Description taken from Kataev & Schmidt, 2002: 391.

Size: Length 8.2–10.1 mm; width 3.5–4.1 mm.

Color: Black; labrum externally, base of mandibles and tarsi often slightly paler, palpomeres brown usually infuscated basally; antennae dark brown with basal antennomeres sometimes almost black.

Head: Comparatively large, ratio width across eyes and width across neck constriction/width of pronotum: 0.70–0.75 and 0.60–0.65, sometimes finely micro-punctate dorsally. Tempora rather short, either flat or slightly convex, slopingly descending to neck. Frontal suture thin. Ligular sclerite slightly widened anteriorly. Paraglossae narrow, antennae not long, middle antennomeres about 1.5 times as long as wide. In male reaching at most only basal ridge of elytra, in female shorter, not reaching pronotal base. Dorsal microsculpture strongly obliterate, clearly visible only under and behind eyes, consisting of fine weakly transverse or almost isodiametric meshes.

Pronotum: Moderately convex, 1.46–1.56 times as wide as long, widest in anterior third. Anterior margin widely emarginate, bordered only laterally. Posterior margin more or less rectilinear, entirely distinctly bordered, approximately equal to anterior margin and notably narrower than elytral base between humeral angles. Apical angles slightly protruding, very narrowly rounded at apex; basal angles sharp each with small acute denticle protruding laterally. Lateral furrow narrow, not widened basally; basal fovea rather large and clearly deepened, either oval or somewhat longitudinal, separated from each other and from lateral furrows by convexities. Pronotal surface, except for central part and often also area along anterior margin, densely punctate, with more coarse punctures in basal foveae and in area near basal angles. Microsculpture in male highly reduced, poorly visible only along sides, consisting of

transverse meshes, in female more distinct, consisting of more or less isodiametric meshes and usually visible also on disc.

Elytra: Not fused along suture, comparatively convex, 1.34–1.47 times as long as wide, 2.53–2.78 times as long and 1.21–1.29 times as wide as pronotum, widest behind middle. Humeri angulate, each with a tiny, acute denticle, visible from behind. Basal edge markedly sinuate laterally, meeting lateral margin in right or weakly obtuse angle with sharp vertex. Intervals impunctate, somewhat flat throughout. Marginal series consisting of 16–22 umbilicate setae. Microsculpture in male visible on two to three external intervals throughout and on other intervals only at base and at apex, consisting of fine, weakly transverse or almost isodiametric meshes, in female on all intervals throughout meshes distinct, isodiametric.

Ventral surface: Pro-sternum anteriorly and laterally with very short and sparse pubescence. Met-episterna notably longer than wide and strongly narrowed basad. Anal sternite in both sexes rounded at apex and with two pairs of marginal setae.

Legs: fore tibia with two to five lateroapical and one ventroapical spines. Metafemur with two setae along posterior margin. Dorsal surface of tarsi largely glabrous but dilated pro- and meso-tarsomeres of male bearing usually very sparse setiferous punctures laterally. Meta-tarsus in male approximately equal to width of head measured across neck constriction, in female shorter than it; in both sexes first tarsomere longer than second but shorter than second and third combined and approximately 2.3–2.4 times as long as wide at its apical part. Second to fourth pro- and meso-tarsomeres of male strongly enlarged, much wider than long.

Aedeagus: Median lobe strongly curved behind basal bulb, with almost straight apical portion (lateral aspect); terminal lamella short and broad with sides almost rectilinearly converging to more or less acute apex (dorsal aspect) and with small

apical capitulum inclined dorsad; internal sac with three spiny patches; two ventrobasal and one dorsolateral.

Female genitalia: With rather short and moderately arcuate stylus.

Genus 3: ***Crasodactylus*** **Guérin-Méneville, 1847**

Description taken from Noonan, 1973: 286.

Body with short moderately dense pubescent.

Size: Length 7.5–10 mm.

Color: Black to dark piceous colour.

Head: Labral apex moderately to strongly emarginate medially. Clypeus with apex straight to slightly emarginate medially; raised transverse ridge present behind apex. Frons with fovea in punctatus punctiform and in many specimens fovea obscured by mainly non-setigerous punctures, in indicus fovea punctiform with clypeo-ocular prolongation and also in many specimens fovea obscured by mainly non-setigerous punctures; microsculpture obsolete. Antenna short, scarcely reaching pronotal base. Mentum without tooth or with slight median swelling in punctatus, with tooth in indicus. Mentum and submentum separated by complete transverse suture. Ligula narrow, not laterally expanded at apex. Paraglossa longer than ligula and curving behind it distally; dorsum and sides with moderately long pubescence.

Pronotum: Pronotum suborbiculate in form, convex. Posterior angle broadly rounded. Lateral depression narrow. Lateral and basal beads complete. Apical bead present laterally. Microsculpture obsolete.

Elytra: Intervals slightly convex. Moderately dense setigerous punctures covering surface in *C. punctatus*. Setigerous punctures sparse and irregular on median portion but moderately dense on base, sides and apex in *C. indicus*. Microsculpture obsolescent except for irregular weak isodiametric mesh apically.

Ventral surface: Sterna with short dense pubescence. Sternum VI of male with two pairs of ambulatory setae. Sternum VI of female with median portion of apex slightly swollen as small plate-like disc.

Legs: Foretibia with distal portion moderately expanded laterally. Apical spur lanceolate. Hind femur with two long and various numbers of short setae on posterior margin. Hind tarsus with segment one shorter than two and three combined. Dorsum of all tarsi pubescent. Fore tarsus of male with apex of segment one in many specimens and all of segments two to four in all specimens laterally expanded and spongy pubescent beneath. Meso-tarsus of most males with segments two to four slightly expanded laterally and each with patch of ventral spongy pubescence.

Aedeagus: Median lobe with small apical disc.

Female genitalia: Valvifer strongly sclerotized and with several fine short distal setae. Distal lateral margin deeply emarginate. Stylus with several fine short setae present proximally on apical segment. Proctiger on each side modified into sclerotized paddle-like structure free distally from tergum and with stout setae apically and laterally.

1. ***Crasodactylus indicus* Andrewes, 1933**

Description taken from Andrewes, 1933b: 103.

Size: Length 10–11.5 mm.

Color: Black; palpi and joint 1 of antennae dark ferruginous, tarsi piceous; body sparsely pubescent, rather more densely beneath and towards apex of elytra.

Head: Large, frontal foveae short but fairly deep, curving round sharply towards eyes, labrum slightly emarginate, clypeus bordered, both it and front coarsely punctate, vertex nearly impunctate, eyes moderately prominent, antennae short, mentum with a short tooth, bearing two long setae at its base.

Prothorax: Convex, suborbicular, not quite a half wider than head and as much wider than long, base bordered throughout, apex at sides only, hind angles rounded away, but the base is truncate at middle; all the normal impressions very faint, surface sparsely punctate, a little more closely along base.

Elytra: Convex, shoulders square, sharply rounded, and a little emarginate on each side at apex, a fourth wider than prothorax, three-fifths longer than wide, slightly dilated behind and widest a little behind middle; striae moderately impressed and finely punctate, scutellary striole rather long, intervals moderately convex, odd ones with an irregular row of comparatively few and small punctures, which are placed along the outer side of the interval on 1, along the inner side on the others, the apical fourth in the case of the inner intervals, the third in the ease of the outer ones, and the whole of 9 densely punctate. The microsculpture of the elytra is a faint reticulation, of which the meshes are a little wider than long. Underside finely punctate; last ventral segment with two marginal setae in both sexes.

Genus 4: ***Gnathaphanus*** **MacLeay, 1825**

Description taken from Noonan, 1973: 289 and Habu, 1973: 56.

Body slender to moderately stout.

Size: Length 7–17 mm.

Color: Varies.

Head: Relatively large, black, smooth, and shining, with a narrow well-defined transverse impression in front of the eyes, curved backward at each end. Rather wide, frontal impressions not or faintly extending in posterolateral direction of eyes distant from buccal fissure beneath. Cross square head, extend and long, anteriorly truncated, short face. Frons with fovea punctiform. Clypeal apex straight to moderately emarginated medially. Clypeus bisetose postgenae well developed, genae and

postgenae glabrous. Second segment of antennae are equal or shorter in length. Labrum with six setae, cross square labrum, anteriorly rounded corners. Labral apex straight to slightly emarginate medially. Mandibles hidden under the shield, only its base is appearing, short. Final segment of maxillary palp subsubulato, third obconicaly shorter. Final segment of labial palp sharpened, previous segment shorter, with penultimate joint plurisetose. Short mentum, suture between mentum and submentum complete, mentum with distinct simple tooth. Ligula narrow, not dilated at apex. Paraglossae glabrous, adnate to ligula though exceeding ligula or separated from ligula by shallow notch. Paraglossa slightly longer than ligula.

Pronotum: Posterior angle of pronotum moderately to broadly rounded in most species. Lateral bead complete; apical and basal beads present at least laterally. Without posterior marginal setae, the thorax is also smooth, with the medial line indistinctly marked posteriorly and not at all anteriorly, the impressions near the base on each side also rather indistinct. Short linear trenches on both sides, posteriorly impressed.

Elytra: Intervals flat to strongly convex. Number of setigerous dorsal punctures and intervals on which such punctures located varied according to species, always however with at least three dorsal setigerous punctures on apical 1/3 to 1/4 of interval three. Interval seven with small ocellate puncture at extreme apex and large prominent ocellate puncture slightly more proximally located. Elytra with scutellary striole moderately long, basal pore present, apical sinuation often deep. The elytra are striated with a row of punctures along the lateral margins. Elytra with irregular striae, lines and points. Apex emarginate or hollowed. Elytra fully striate with at least third interval pluripunctate.

Ventral surface: Sternum VI with one or two pairs of ambulatory setae in male.

Legs: Fore-tibia with distal portion moderately expanded laterally. Apical spur lanceolate, angulate medially on each side or swollen basally. Hind femora with two setae near hind margin. Tarsi pubescent on dorsal side. In mid tarsi of male segments two to four well dilated with adhesive hairs on ventral side. Tarsal segment V setose on ventral side. Posterior tarsi long. First joint as long as or longer than two succeeding joints together.

Aedeagus: Median lobe lacking apical disc.

Female genitalia: Valvifer moderately sclerotized and in most species with few distal setae. Shape various but distal lateral margin atleast slightly emarginate in most species.

Key to the species of the genus *Gnathaphanus* Macleay, 1825 (Key modified from Andrewes, 1920)

1. Odd intervals slightly raised, 3 with a series of large dots around striae 2, 5 sometimes with one or two dots towards the end…….***G. vulneripennis*** Macleay 1825

– Convex and similar intervals, 3 with a series of average points, in striae 3 towards the base and striae 2 towards the apex……...***G. philippensis*** Chevrolat, 1841

1. *Gnathaphanus philippensis* (Chevrolat, 1841)

Description taken from Chevrolat, 1841: 221 and Macleay, 1864: 117.

Color: Dark black, a little less shining on the elytra than on the head and pronotum.

Head: Broad anteriorly, triangular in shape, semi-circular labrum, last segment of antennae red in colour. Head black, smooth and shining, with a narrow well-defined transverse impression in front of the eyes, curved backwards at each end. Female head is larger and wider than male.

Pronotum: Under–square, moderately rounded sides, posterior angle rounded. Disc smooth, with the medial line indistinctly marked posteriorly and not at all anteriorly, the impressions near the base on each side are also rather indistinct. Prothorax with wider flattened space near each posterior angle and along sides.

Elytra: Striated with a row of punctures along the lateral margins. Elytra are more elongated and more parallel, intervals convex. Third interval with a series of average points, near the third striae towards the base and the second striae towards the extremity. In male, the elytral intervals are nearly equal in width near the apex. In the female, they are alternately broader and narrower.

2. ***Gnathaphanus vulneripennis*** **(MacLeay, 1825)**

Description taken from MacLeay, 1825: 20 and Bates, 1892b: 327.

Color: Little shiny. Antennae dark pubescent, basal joint of antennae is red, black legs.

Head: In the female the head is larger and remarkably exerted.

Elytra: Scutellum inconspicuous. The fourth and fifth, sixth and seventh stria confluent at the apex, the space between the seventh and eighth bi- or tri-punctate, that between the tenth and the marginal stria coarsely punctate. The dorsal foveae of elytra, in both sexes are limited to the third interval and small and inconspicuous. In the female the elytral intervals are nearly equal in width near apex.

Genus 5: ***Progonochaetus*** **Müller, 1938**

Description taken from Noonan, 1973: 340.

Length: 9–11 mm.

Color: Body of most specimens black to piceous. Elytron of some specimens with slight bronze tinge.

Head: Labral apex straight to moderately emarginate medially. Clypeal apex straight to slightly emarginate medially. Mentum lacking tooth. Mentum and submentum separated medially by transverse suture; such suture obliterated laterally in many specimens. State of suture laterally varied within some species. Ligula narrow, with or without distal dorsal setae. Paraglossa various in length, with setae on dorsal base and in many specimens with setae along mesal and dorso-mesal sides (setae may be difficult to discern in some species).

Pronotum: With two lateral seta, one near middle and one towards posterior angle. Lateral bead complete; apical and basal beads present at least laterally.

Elytra: Scutellar stria unmodified or in some specimens long and joined distally with interval one. Intervals flat to slightly convex. Interval three and in some specimens interval seven with several dorsal setigerous punctures. Interval seven with minute ocellate puncture at extreme apex and large prominent ocellate puncture slightly more proximally located. **Ventral surface:** Sternum VI of male with one or two pairs of ambulatory setae.

Legs: Fore tibia with distal portion moderately expanded laterally; apical spur lanceolate. Hind femur of most specimens with two long setae on posterior margin. Hind tarsus with segment one shorter to longer than two and three combined. Dorsum of all tarsi pubescent in most specimens.

Aedeagus: Median lobe lacking apical disc.

Female genitalia: Valvifer moderately sclerotized, varied in shape. Stylus with apical segment moderately to strongly elongate. Proctiger well sclerotized, distal portion free from tergum in many species.

Key to the species of the genus *Progonochaetus* Müller, 1938

1. Pronotum ciliate along posterior margin with fine isodiametric meshes; meta-coxae with additional posterolateral pore; median lobe of aedeagus almost angularly bent medially, with slightly curved apex.....***P. indicus*** Kataev, 2002

- Pronotum not ciliate along posterior margin with fine weakly transverse meshes; meta-coxae without additional posterolateral pore; median lobe of aedeagus weakly arcuate, with pointed apex……..***P. laevistriatus*** Sturm, 1818

1. ***Progonochaetus indicus* Kataev, 2002**

Description taken from Kataev, 2002b: 241.

Size: Length 11.8–13.2 mm; width 4.8–5.3 mm.

Color: Black colour, usually labrum externally and clypeus anteriorly paler, reddish brown. Antennae dark brown, with two first antennomeres reddish brown. Palpi also reddish brown. Legs dark brown to black. Upperside shin, without any metallic hue.

Head: Measured across eyes and across neck constriction, correspondingly 0.75–0.79 and 0.62–0.67 times as wide as pronotum, impunctate on dorsum (sometimes with fine micropunctures around and behind supraorbital pore.) Eyes large and convex. Clypeus with one setigerous pore on each side of anterior margin. Clypeo–ocular prolongations distinct, rather short, not reaching supra orbital furrows.Supra orbital pores situated in front of hind margin of eyes. Tempora somewhat flat, sloped to neck. Labium with rather narrow ligular sclerite not widened at apex. Paraglossae comparitively narrow, much extended beyond ligular sclerite, pointed at apex and pubescent along mesal margins. Epilobes of mentum rather narrow, slightly widened anteriorly. Antennae not long, extending slightly beyond basal ridge of elytra. Microsculpture obsolete dorsally, well visible laterally, behind supraorbital pore: consisting of fine transverse meshes.

Pronotum: Moderately and rather evenly convex, slightly flattened baso–laterally, 1.49–1.58 times as wide as long, widest a little before middle, rounded at sides and ciliate along basal edge. Anterior lateral setigerous pore in each side situated in anterior third of pronotum. Anterior margin moderately arcuately emarginate, bordered only laterally: posterior margin more or less straigt, bead along it rather broadly interrupted medially. Apical angles notably protruding, narrowly rounded at apex. Basal angles very widely rounded. Lateral depressions not developed. Basal foveae usually small and superficial, sometimes lacking. Pronotal surface very finely punctulate and wrinkled baso–laterally and very narrowly along sides, consisting of fine isodiametric meshes.

Elytra: Moderately convex, 1.49–1.53 times as long as wide, 2.85–2.93 times as long and 1.24–1.29 times as wide as pronotum, widest behind middle and weakly rounded at sides. Shoulders prominent, rounded at apex, without denticle. Subapical sinuation comparitively deep without denticle at base. Sutural angles acutangular, somewhat sharp at apex. Basal bead glabrous, slightly sinuate, continuing in even curvature around shoulder and merged with lateral bead. Interval largely somewhat flat, weakly convex before apex. One or two lateral intervals throughout and elytral apices of all other intervals finel punctate and pubescent: often also very fine unsetigerous punctures present on elytral disc throughout. Striae impunctate (sometimes hardly crenulate), weakly deepened at apex. Scutellar stria long, with basal pore. Third and fifth intervals each with several dorsal setigerous pores associated with second (basally), third (apically) and fifth (almost throughout) striae respectively: seventh interval without dorsal setigerous pores. Marginal series without wide gap at middle. Microsculpture distinct, visible throughout, consisting of fine isodiametric meshes.

Ventral surface: Met-episterna much longer than wide and strongly narrowed posteriad. Three last abdominal sterna except for standart fixed setae glabrous. Anal sternum rounded at apex, in male with one to two pairs, in female two pairs of setigerous pores along apical margin. Anal tergum in male widely rounded at apex, in female bilaterally concave and narrowly rounded at apex.

Legs: Meta-coxae each, except for two obligatory fixed setigerous pores, with additional posterolateral pore. Meta-femur with two setigerous pore at behind margin. Tarsi densely pubescent dorsally: first metatarsomere a little longer than second and third together.

Aedeagus: Median lobe of aedeagus almost angularly bent medially, with apex slightly curved ventrally (lateral aspect). Terminal lamella rather narrow, slightly longer than wide, evenly narrowed to blunt apex (dorsal aspect). Apical capitulum lacking. Internal sac without any remarkable sclerotic elements.

Female genitalia: Hemisternite and basal stlomere of female genitalia without any setae or spines. Apical stylomere rather long and weakly arcuate, blunted at apex.

2. ***Progonochaetus laevistriatus* (Sturm, 1818)**

Description taken from Kataev, 2002b: 243.

Size: Size on average smaller: length 11.0–12.5 mm; width 4.4–5.0 mm.

Head: With relatively more narrow neck: measured across eyes and across neck constriction, correspondingly 0.77–0.82 and 0.60–0.65 times as wide as pronotum. Antennae slightly longer and slenderer.

Pronotum: Relatively smaller, 1.47–1.57 times as wide as long, and usually more strongly narrowed basally: in most specimens not ciliate along posterior margin. Microsculpture more distinct, visible throughout and consisting of fine weakly transverse meshes on pronotal disc.

Elytra: Narrower and longer, 1.50–1.60 times as long as wide, 3.00–3.15 times as long as long and 1.25–1.37 times as wide as pronotum.

Ventral surface: Anal sternum of male weakly concave at apex, with one pair of setigerous pores along apical margin. Median lobe of aedeagus weakly arcuate, with shorter triangular terminal lamella, pointed at apex.

Legs: Meta-coxae without additional posterolateral pores, only with two obligatory fixed setigerous pores. Tarsal pubescence, especially on meso and metatarsi, very sparse.

Aedeagus: Median lobe of aedeagus weakly arcuate, with shorter triangular terminal lamella, pointed at apex.

Genus 6: ***Pseudognathaphanus*** **Schauberger, 1932**

Description taken from Noonan, 1973: 344.

Size: Length 9–15 mm.

Body elongate, moderately convex.

Color: Body brown to black, no metallic tinge.

Head: Labral apex straight to slightly emarginate medially. Clypeal apex straight to moderately emarginate medially. Frontal fovea moderate, bearing prominent clypeo-ocular prolongation. Mentum lacking tooth. Mentum and submentum completely fused. Ligula narrow, not expanded laterally at apex. Paraglossa longer than ligula.

Pronotum: With lateral bead complete; apical and basal beads present at least laterally.

Elytra: Intervals flat to slightly convex; specimens of *P. dekannus* with only one dorsal setigerous puncture, this puncture located near apical 1/5 of interval three, specimens of other species with several to many dorsal setigerous punctures located

on various intervals; interval seven with minute ocellate puncture at extreme apex and large prominent ocellate puncture slightly more proximal.

Hind wing: Full and probably functional in all species examined.

Ventral surface: Sternum VI with one or two pairs of ambulatory setae in male.

Legs: Fore-tibia with distal portion moderately expanded laterally; apical spur lanceolate to swollen basally. Hind femur of most specimens with two long setae on posterior margin. Hind tarsus with first segment approximately 2.5 to 3 times as long as wide at apex, shorter than two and three combined. Segments two to four of hind tarsus of both sexes and segments two to four of fore- and meso-tarsus of female with dense ventro-lateral cover of somewhat thickened setae. Fore- and meso-tarsus of male with apex of segment one and all of segments two to four laterally expanded and spongy pubescent beneath.

Aedeagus: Median lobe with or without apical disc.

Female genitalia: Valvifer various depending on species.

Key to species of the genus *Pseudognathaphanus* Schauberger, 1932 of the Oriental region (Key modified from Kataev & Wrase, 2016)

1. Basal angles of pronotum completely rounded.....***P. punctilabris*** (MacLeay, 1825)

– Basal angles of pronotum well marked, more or less angulate.....2

2. Pronotum with setae along posterior edge; pro-tibia with five to eight pre apical spines on external margin.....***P. rusticus*** (Andrewes, 1920)

– Pronotal posterior edge glabrous; pro-tibia with two to four preapical spines on external margin.....3

3. Elytral interval 3 with at most only one dorsal setigerous puncture; pronotum more elongate, less strongly narrowed posteriad; median lobe of

aedeagus more asymmetrical in dorsal view, with wider terminal lamella; body convex and robust, length 11.2–14.5 mm.***P. dekkanus*** (Andrewes, 1933)

– Elytral interval 3 with several setigerous pores; pronotum wider and more strongly narrowed posteriad; median lobe of aedeagus somewhat symmetrical, almost straight in dorsal view, with narrower terminal lamella; body flatter, with moderately convex pronotum and elytra; length 9.7–10.4 mm……..***P. exaratus*** (Bates, 1892)

1. ***Pseudognathaphanus dekkanus*** **Andrewes, 1933**

Description taken from Andrewes, 1933b: 102 and Kataev & Wrase, 2016a: 233.

Color: Black, usually with palpi, basal antennomere and tarsi paler.

Head: With widened neck and moderately convex eyes. Head with small but rather deep frontal foveae, continued on each side by a fine line to the eye, labrum and clypeus both emarginate, eyes fairly prominent, mentum without tooth, antennae slender, hardly reaching beyond base of elytra. Microsculpture strongly obliterated on frons.

Pronotum: Subquadrate, very convex in front, where the sides are strongly declivous, about a third wider than head and a fourth wider than long, widest at a third from apex, where a pore and seta present, sides gently rounded, but more contracted in front than behind, so that the base, which is bordered, is a little wider than the apex, a slight sinuation quite close to the hind angles, which are right and sharp: all the normal impressions are present, but slightly developed, the basal foveae sub–linear and converging a little forwards, surface fairly smooth, the basal area, especially at sides, microscopically punctulate. Relatively long, with almost right, slightly denticulate basal angles and glabrous basal edge; disc, with very fine latero-basal punctation. Microsculpture on pronotum much finer, slightly transverse.

Elytra: With at most only one setigerous puncture on intervals three in its apical portion, and with at most three preapical punctures on intervals seven; also, humeral angle with a small acute denticle at tip. Elytral preapical sinuation moderate, not deep; epipleura apically almost invisible in dorsal view. Microsculpture on elytra distinct, consisting of isodiametric meshes.

Ventral surface: Pro-sternal process pubescent: meta-sterna process finely bordered, met-episterna impunctate, a half longer than wide: venter glabrous, apical segment with one marginal seta on each side in the male, two in the female.

Legs: Pro-tibia with two to four preapical spines on outer margin. In male, apex of last visible abdominal sternite subtruncate; pro and meso-tarsi moderately dilated, with tarsomeres two to four having spongy vestiture on ventral side.

Aedeagus: Median lobe of aedeagus arcuate, bent before middle, in dorsal view asymmetrical, slightly widened in apical half; terminal lamella rather wide, with sides roundly converging to rounded apex; internal sac without any distinct sclerotic elements.

2. ***Pseudognathaphanus exaratus*** **(Bates, 1892)**

Description taken from Bates, 1892b: 352 and Kataev & Wrase, 2016a: 230.

Head: Black, usually with infuscate basal antennomere. The head is not shortened before the eyes, smooth, with deep frontal foveae and distinct striations on both sides from the fovea to the edge of the eye.

Pronotum: Comparatively small, transverse, with well-marked, obtuse, occasionally denticulate basal angles: sides before them almost rectilinearly converging. Pronotal disc and basal edge glabrous. Shoulder rounded, without denticle at tip.

Elytra: Elytra convex, deeply striated. Elytral intervals three with several small discal setigerous punctures at stria two, and intervals seven and usually five with several

preapical setigerous punctures. Elytral preapical sinuation moderately deep, epipleura apically invisible in dorsal view. Microsculpture on head, pronotum and elytra distinct, consisting of more or less isodiametric meshes, on head and pronotum finer, somewhat obliterate.

Legs: Pro-tibia with three or four, occasionally two, preapical spines on outer margin. In male, apex of last visible abdominal sternite subtruncate or slightly concave: pro– and meso-tarsi moderately dilated, with tarsomeres 2–4 having spongy vestiture on ventral side.

Aedeagus: Median lobe of aedeagus rather evenly arcuate in lateral view, bent nearly at the middle, somewhat symmetrical, almost straight in dorsal view: terminal lamella slightly longer than wide, with sides evenly converging to blunted apex: internal sac without any distinct sclerotic elements.

3. *Pseudognathaphanus punctilabris* (MacLeay, 1825)

Description taken from Habu, 1973: 62 and Kataev & Wrase, 2016a: 226.

Colour: Black, shiny, elytra of male a little less shiny than head and pronotum, elytra of female mat; palpi dark reddish brown, yellowish at apical half of apical segment, antennae reddish brown, segments one to three blackish, segment four rather dark, lateral margins of pronotum and of elytra not or slightly reddish, legs almost wholly black, tarsi slightly reddish at apical one or two segments in part; ventral side black.

Head: Head convex; dorsal side not punctate, faintly and transversely rugose; micro-sculpture distinct though faint on disk, meshes isodiametric; eyes convex, disparity between genuine and apparent ventral margins somewhat distinct, genuine ventral margin moderately remote from buccal fissures; frontal impressions distinctly reaching frontal lateral furrows; clypeus not sulcate between setae, apical angles well prominent forward; antennae fully reaching base of pronotum; labrum almost straight

at apex; penultimate segment shorter than apical segment in maxillary palpi, a little longer than apical segment in labial palpi, suture between mentum and submentum visible at median area, obliterate at either lateral area; mentum with setae widely remote from each other. Microsculpture on head distinct, consisting of more or less isodiametric meshes.

Pronotum: With widely rounded basal angles and glabrous basal edge, very finely pubescent on disc along base. Shoulder rounded, without denticle at tip. Microsculpture on pronotum distinct, consisting of more or less isodiametric meshes.

Elytra: Elytral intervals three, five, and seven with several setigerous punctures. Elytral preapical sinuation deep, epipleura apically visible in dorsal view and forming an obtuse denticle at base of elytral preapical sinuation. Microsculpture on elytra distinct, consisting of more or less isodiametric meshes.

Legs: Pro-tibia with two to four preapical spines on outer margin. In male, apex of last visible abdominal sternite subtruncate; pro- and meso-tarsi strongly dilated, with tarsomeres one to four (meso-tarsomere one only just at apex) having spongy vestiture on ventral side.

Aedeagus: Median lobe of aedeagus with very short terminal lamella and with oblique horseshoe-shaped apical capitulum having a small deep incision at apex; internal sac with a basal longitudinal spiny patch and one or two very small medial spiny patches.

4. ***Pseudognathaphanus rusticus*** **(Andrewes, 1920)**

Description taken from Kataev & Wrase, 2016a: 232.

Color: Black, usually with paler palpi and basal antennomeres.

Head: Microsculpture on head much finer, on frons rather strongly obliterate.

Pronotum: With obtuse, occasionally slightly blunted basal angles; sides before them almost rectilinearly converging. Pronotal disc more finely punctate latero-basally, with few very fine, poorly recognizable setae at basal angles. Microsculpture on pronotum with much finer isodiametric meshes and central part of pronotal disc rather strongly obliterate.

Elytra: Shoulder rounded, without denticle at tip. Elytral intervals three with several small discal setigerous punctures at stria two, and intervals seven and usually five with several preapical setigerous punctures. Elytral preapical sinuation moderately deep, epipleura apically invisible in dorsal view. Microsculpture on head, pronotum and elytra distinct, consisting of more or less isodiametric meshes, on head and pronotum much finer, on frons and central part of pronotal disc rather strongly obliterate.

Legs: Pro-tibia with six to eight preapical spines on outer margin. pro- and meso-tarsi moderately dilated, with tarsomeres two to four having spongy vestiture on ventral side.

Ventral surface: In male, apex of last visible abdominal sternite subtruncate or slightly concave. **Aedeagus:** Median lobe of aedeagus markedly arcuate in lateral view, bent nearly at middle; terminal lamella wider than that in *P. exaratus* with sides roundly converging to apex; internal sac without any distinct sclerotic elements.

Genus 7: ***Pseudorhysopus*** **Kataev & Wrase, 2001**

Description taken from Kataev & Wrase, 2001: 640.

Body medium sized, glabrous on dorsal side and slightly iridescent on elytra.

Head: Large, impunctate, with comparatively small and moderately convex eyes broadly separated from buccal fissure ventrally and with genae notably wider than width of first antennomere. Fronto-clypeal suture deep, continued postero-laterally

toward eyes as clypeo-ocular prolongation; latter deep at clypeus and shallow at inner margin of eyes. Clypeus with one setigerous pore on each side, arcuately emarginate anteriorly, with labral base slightly exposed. Labral apex rather deeply emarginate medially. Mandibles stout, left sharply truncate at apex. Labium with mentum and submentum completely fused. Mentum lacking median tooth, with a pair of median setae. Submentum with two lateral setae on each side. Ligular sclerite comparatively narrow, slightly widened at apex, with two ventroapical setae. Dorsoapical setae absent. Paraglossae glabrous, narrow, scarcely extended beyond ligular sclerite and separated distally from it by deep notch. Penultimate labial palpomere approximately as long as terminal, with several (five to seven) setae at anterior margin. Antennae slender, pubescent from apical half of third segment.

Pronotum: Roundly narrowed basad, with one lateral seta on each side and with obtuse basal angles. Apical and basal beads usually obsolete medially. Basal pronotal edge glabrous. Surface except for central portion, punctate.

Elytra: Oval, rather broad, with rounded humeral angles and deep subapical sinuation. Striae deep, impunctate. Ninth stria apically separated from lateral furrow by distinct short convexity. Seventh stria with ocellate pore-puncture before apex. Scutellar stria long, with a basal pore. Intervals convex, inner ones smooth, external ones densely punctate. Third interval with one discal pore behind middle; fifth and seventh intervals without pores. Marginal series either with narrow gap medially or more or less continuous. Wings fully developed.

Ventral surface: Ventral surface of the body, except for standard fixed setae and very fine pubescence on pro- and meta-sternum and median part of third abdominal sternum, glabrous. Anal sternum in both sexes with two pairs of setigerous pores

along apical margin, apex in male slightly concave, in female rounded. Apex of anal tergum in both sexes rounded.

Legs: Pro-tibia with two or three apical spines at outer margin and one spine at apex of very small ventroapical tubercle; apical spur strongly dentate laterally at base, trifid. Metafemur with two setigerous pores at hind margin. Tarsi dorsally impunctate and glabrous; fifth segment with usually three, sometimes four, pairs of latero-ventral setae. Metatarsus as long as width of head measured at neck constriction; first meta-tarsomere slender, approximately as long as second and third together and four times as long as its apical width. Pro- and meso-tarsi of male moderately dilated and carrying spongy adhesive vestiture underneath; first meso-tarsomere with adhesive vestiture only apically.

Aedeagus: Median lobe of aedeagus with apical orifice in dorsal position and with small oblique terminal capitulum. Hemisternite of female genitalia with two short spines latero-apically. Apical stylomere strongly arcuate and narrowly rounded at tip, with a seta at inner margin before apex.

1. ***Pseudorhysopus kabakovi* Kataev & Wrase, 2001**

Description taken from Kataev & Wrase, 2001: 640.

Size: Body length 9.0–9.4 mm; width 3.9–4.1 mm (in holotype 9.4 and 4.1mm, respectively). **Color:** Body black, with labrum and clypeus externally, palpi, antennae and tarsi brownish; antennae infuscated from second antennomere. Dorsum shiny, slightly iridescent on elytra.

Head: Measured across eyes and across neck constriction, correspondingly 0.75–0.77 and 0.62–0.63 times as wide as pronotum. Tempora moderately long, flat, sloped to neck. Antennae short, with middle antennomeres a little more than twice as long as wide, reaching only basal ridge of elytra. Dorsal microsculpture strongly obliterated,

in male fine weakly transverse meshes clearly visible only under and behind eyes, in female shallow isodiametric meshes visible also on frons and vertex.

Pronotum: Moderately convex, rather narrow, 1.51–1.52 times as wide as long, widest before middle and with lateral setigerous pore on each side inserted approximately at end of first third. Anterior margin deeply arcuately emarginate, posterior margin more or less straight, slightly narrower than former and much narrower than elytral base between humeral angles. Apical angles strongly protruded, narrowly rounded at apex. Basal angles well marked, obtusangular, blunted at apex. Lateral depressions beginning from apical angles as narrow furrows, then strongly widened in posterior half to base and fused there with broad basal foveae forming comparatively deep united latero-basal depressions; latter separated from each other by convexity. Pronotal surface, except for central part, densely punctate, with coarser punctures in latero-basal depressions. Microsculpture very fine in central part, more distinct along margins, consisting of weakly transverse meshes (nearly isodiametric in mediobasal portion).

Elytra: Moderately convex, 1.35–1.37 times as long as wide, 2.47–2.58 times as long and 1.19–1.25 times as wide as pronotum, widest behind middle. Humeri slightly prominent, rounded at apex, without denticle. Sutural angles acutangular, in male slightly blunted, in female sharp at apex. Basal edge glabrous, weakly sinuate, meeting lateral margin at very obtuse angle. Intervals strongly narrowed before apex; two lateral intervals with nonsetigerous punctures. Striae wide at apex. Marginal series consisting of 18–22 umbilicate pores. Microsculpture clearly visible throughout, consisting of fine transverse lines.

Ventral side: Met-episterna longer than wide, strongly narrowed posteriad. Meta-coxae each with only two standard fixed setigerous pores, without any additional

pores. Median lobe of aedeagus evenly arcuate, with apex slightly curved dorsad (lateral aspect), with apical orifice wide and extended to large basal bulb. Terminal lamella rather short, moderately broad, rounded at apex, with sides sinuately convergent apicad (dorsal aspect). Internal sac with two small spiny patches medially.

Key to the subtribes of the tribe Harpalini Bonelli, 1810

1. Basal border of elytra more or less sharply curved anteriorly and clearly raised before scutellum, incomplete or absent…….**Ditomina** Bonelli, 1810
- Basal border of elytra complete…….2
2. Clypeus and labrum more or less asymmetrically emarginate at apex; scutellary striole present between suture and first stria……**Amblystomina** Fauvel, 1889
- Clypeus and labrum normal, not asymmatrically emarginate at apex; scutellary striole present between first and second stria……...**Harpalina** Bonelli, 1810

Subtribe 1: **Amblystomina Fauvel, 1889**

Description taken from Habu, 1973: 15.

Head: Clypeus and labrum more or less asymmetrically sinuate at apex, basal margin of labrum visible in sinuation of clypeus; mandibles short and stout; penultimate segment of labial palpi with more than three setae on inner side; suture between mentum and submentum complete; ligula bisetose.

Elytra: With complete basal border; scutellary striole situated between suture and stria one.

Legs: Fore-tarsi and often meso-tarsi in male with two rows of adhesive hairs on ventral side.

Subtribe 2: **Ditomina Bonelli, 1810**

Remarks: Detailed description of the subtribe is available in Kataev & Wrase, 2018: 351.

Subtribe 3: **Harpalina Bonelli, 1810**

Description taken from Habu, 1973 : 66.

Head: Clypeus and labrum asymmetric, penultimate segment of labial palpi with more than three setae on inner margin; suture between mentum and submentum complete, submentum with one to two setae on either side; ligula bisetose.

Elytra: Elytra with complete basal border; scutellary striole between striae one and two.

Legs: In male segments two to four of fore-tarsi and segments one to four or two to four of meso-tarsi with adhesive hairs arranged in two rows of ventral side.

Key to the genera of the subtribe *Amblystomina* Fauvel, 1889

1. Sides of pronotum narrowing towards base……..……2
- Sides of pronotum narrowing towards apex……***Oosoma*** Neitner, 1857
2. Wider pronotum; elytral apex truncate...***Anomostomus*** Laferte-senectere 1853
- Narrow pronotum; elytral apex obliquely truncate……..***Amblystomus*** Erichson, 1837

Genus 1: ***Amblystomus*** **Erichson, 1837**

Description from Habu, 1973: 15.

Body without pubescence, and without clear punctures.

Head: Somewhat sizable; post-genae underdeveloped; clypeus with two setae; mentum moderately notched, lacking a central tooth and midline seta, with distinct epilobes; submentum with a single seta on each side; ligula slender, paraglossae nearly fused to ligula, extending slightly past ligula.

Pronotum: Lacking posterior marginal setae; basal corners, somewhat rounded; no basal foveae present.

Elytra: Apically obliquely truncated; possessing a basal pore; interval three featuring one dorsal pore adjacent to stria two.

Wings developed.

Legs: Tarsi smooth on the upper surface; the first four segments of male fore tarsi expanded, bearing adhesive hairs on the underside; male mid tarsi not expanded, possibly with adhesive hairs on the ventral side.

Aedeagus: Featuring a robust, sizable basal bulb, not twisted to have the apical orifice on the dorsal surface.

Key to the species of the genus *Amblystomus* Erichson, 1837

1. Elytra with spots……2
- Elytra without spots……...7
2. Elytra without anterior spot……***A. vulneratus*** Dejean, 1831
- Elytra with anterior spot…….3
3. Elytra with a single spot extending from base to the apex of elytra… .....***A. bivittatus*** Andrewes, 1919
- Elytra with spot at base and apex without any connection between them…….4
4. Anterior spot on elytra oblique……..……..…..…….5
- Anterior spot on elytra round…….***A. guttatus*** Bates, 1873
5. Posterior spot on elytra very small……..……..…….6
- Posterior spot on elytra large…….***A. indicus*** Nietner, 1858
6. Elytra convex……...***A. quadriguttatus*** Motschulsky, 1858
- Elytra parallel……..***A. resectus*** Andrewes, 1924
7. Elytra less striated…….……8

- Elytra strongly striated……...***A. fuscescens*** Motschulsky, 1858

8. Elytral striae evenly less marked…….……...9

- Elytral striae deep towards the suture…….……..10

9. Posterior angle of pronotum less rounded……***A. rotundiceps*** Bates, 1892

- Posterior angle of pronotum strongly rounded……***A. aenescens*** Motschulsky, 1858

10. Labrum clearly assymmetrical……***A. femoralis*** Motschulsky, 1858

- Labrum not clearly assymmetrical……..***A. punctatus*** Bates, 1892

1. *Amblystomus aenescence* (Motschulsky, 1858)

Description taken from Motschulsky, 1858: 23 and Andrewes, 1933a: 7.

Species without multicoloured elytra.

Size: Length 3 mm.

Pronotum: Proportionately narrower pronotum and a little more contracted behind.

Elytra: The striae of the elytra less marked; brownish color with a coppery reflection, all the parts are little narrower, and the elytra more finely striate.

2. *Amblystomus bivittatus* Andrewes, 1919

Description taken from Bates, 1892a: 231.

Size: Length 4 mm.

Color: Antennae are wholly reddish instead of blackish with the three basal joints only red.

Pronotum: The sides of the pronotum are perceptibly more rounded behind the middle.

Elytra: Ornamented by a testaceous-yellow discoidal spot, curved towards the shoulder near the base, straight in its central portion and curved again, slightly towards the suture (near the apex).

3. *Amblystomus femoralis* (**Motschulsky, 1858)**

Description taken from Andrewes, 1933a: 8.

Size: Length 3–3.5 mm.

Color: Dark in color, occasionally displaying a faint bronze hue in certain individuals; palpi, first and second segments of antennae, tibiae, and tarsi reddish-brown, while the undersides and femora are dark brown, though the femora can vary, sometimes matching the light coloration of the tibiae and tarsi. Some specimens exhibit small reddish-brown spots near the apex on intervals four and five of the elytra; in others, the elytra are uniformly colored. It seems that in this genus, as in some others, the presence or absence of these apical spots is not a highly significant characteristic.

Head: Somewhat bulky, the clypeus showing slight asymmetry, while the labrum displays more noticeable asymmetry.

Pronotum: Slightly narrowed towards the posterior, about one-fourth broader than the head and approximately one-third wider than long, with rounded sides and hind angles. The transverse impressions are fairly distinct, and the basal region is finely but somewhat indistinctly punctured.

Elytra: Only slightly expanded posteriorly, so that the sides appears nearly parallel, approximately a third wider than the pronotum, three-fifths longer than wide, the shoulders square, the apex somewhat truncate; the three inner striae and the short scutellary striole are fine but clear, the remaining ones are faint or no longer present, eighth striae fairly deep behind and with some large punctures, the intervals flat, three possess a small pore behind, adjacent to second stria**.**

Ventral surface: Ventral surface without any pubescence,

Legs: No setae present on the underside of fifth joint of tarsi**.** In the male fourth joint of pro-tarsi is only slightly emarginate and is hardly narrower than the preceding joints. The microsculpture with isodiametric meshes.

Aedeagus: The aedeagus is very slender and sharply pointed at the apex, much finer in comparison with *A. fuscescens.*

4. ***Amblystomus fuscescens*** **(Motschulsky, 1858)**

Description taken from Andrewes, 1933a: 6.

Size: Length 3.54 mm.

Color: Head and prothorax dark brown in color; elytra brown, with a faint aeneous tinge; palpi, one and two joints of the antennae, undersurface, and legs with color varying from pale yellow to deep reddish-brown.

Head: Not so large as is usually seen in the genus, on each side at the ends of the clypeal suture a slight impression present, clypeus with border, moderately emarginate, but not asymmetrical, exposing the basal membrane of the labrum to some extent, and is emarginate, with short hairs (apart from the normal six setae), and clearly asymmetrical, the left side projecting forward far beyond the right side, the eyes are not prominent, adjoining buccal fissure, a single supraorbital seta present, mandibles are short and wide, briefly hooked at apex, right one with a small sharp tooth, left one with a blunt tooth, mentum deeply emarginate, without tooth, second segment of labial palpi with some small accessory hairs in addition to the two usual setae, antennae fairly stout, extending fairly beyond the base of the elytra.

Pronotum: Rather convex, a fifth wider than head and almost a half wider than long, with nearly evenly rounded sides, though the maximum width is slightly before middle, a single seta on either side at a third from apex, posterior angles visible, though obtuse and evidently rounded; median line remarkably fine, two transverse

impressions are quite clear, basal foveae slight, base finely and somewhat sparsely punctate.

Elytra: Rather convex, not quite a half wider than prothorax, a little more than a half longer than wide, basal border complete, shoulders square, gently expanded posteriorly and maximum width at a third from apex, which is somewhat truncate; striae moderately fine, very vaguely crenulate, but more deep near apex, scutellary striole short, present between 1 and elytral suture, intervals moderately flat, third with a pore towards apex, adjacent to second stria. The microsculpture of the elytra is reticulate, the meshes on average three times as wide as long, similar on the prothorax but a little finer, both elytra and prothorax near apex have isodiametric meshes, as has the head.

Ventral surface: Pro-sternal process pilose; meta-sternal process with border; met-episterna long; venter sparingly pilose, without any fovea at the base, the apical segment on each side with two setae and with an obtuse marginal tooth between these setae.

Legs: In male pro-tarsi with three expanded joints; meta-tarsi not externally sulcate; joint four emarginate (not bilobed, as stated by the author); fifth joint with at least a pair of setae underneath.

Aedeagus: Long and moderately slender, dorsally channeled, slightly hooked, and somewhat sharply pointed at apex.

5. ***Amblystomus guttatus* Bates, 1873**

Description taken from Bates, 1873b: 327.

Long, narrow, slightly convex body.

Color: Black with greenish tint, silky-luster; small, yellow-brick two rounded light spot on sides of elytra.

Head: Large and wide.

Pronotum: Transverse, short, posterior angle barely visible; the anterior angles of the pronotum are distant from the sides of the neck, and the sides are gradually and not very much narrowed and rounded to the base. Sides of the thorax little wider.

Elytra: With little wider sides, elongate, posteriorly a little wide, obtuse at apex, striae on the upper surface strong, with the sides less impressed, the spot present towards the shoulder of the intervals five to six, second spot occupy towards the apex of intervals three to four. The elytra have a slight blueish-brassy gloss. The third elytral interval has one puncture, much after the middle, and near the second stria.

6. ***Amblystomus indicus*** **(Nietner, 1858)**

Description taken from Nietner, 1858: 428 and Bates, 1892b: 336.

Size: Length 3.5 mm.

Color: Dark coppery green color. Underside brownish, tibiae and tarsi brownish, base of antennae and mouth brownish, the femora are dark brown, tibiae and tarsi and two basal joints of antennae pale testaceous.

Head: The sinuation of the labrum is strongly asymmetrical and distorted.

Elytra: Elytral apex more rounded, the anterior yellow spot of the elytra is oblique and much larger and extends over the intervals four to seven, the posterior spot is also large; the lateral striae of the elytra obliterated.

7. ***Amblystomus punctatus*** **Bates, 1892**

Description taken from Bates, 1892b: 335.

Oblong, coppery-bright brassy shining, with finely dispersed punctures.

Size: Length 4 mm.

Color: Palpi and tibia yellowish brown.

Head: Antenna joined basally. Head not large however noticeably shortened; labrum deeply arched and emarginated, not clearly asymmetrical; mandible normal.

Pronotum: Slightly wrinkled; less transverse, anteriorly very rounded, then narrowed down to the base, posterior angle obsolete.

Elytra: Striate, striae towards suture deep.

8. *Amblystomus quadriguttatus* (Motschulsky, 1858)

Description taken from Andrewes, 1933a: 10.

Size: Length 3–3.5 mm.

Color: Black and shiny; palpi, one and two joints of antennae, and legs (the femora sometimes darker) rusty brown.

Head: Large and broad, frontal foveae fine, labrum and clypeus show slight asymmetry and a little emargination, the basal membrane of the labrum occasionally a little exposed; clypeal suture clear, eyes not prominent, antennae extending well beyond base of elytra, mandibles massive.

Pronotum: Convex, somewhat quadrate, approximately a sixth wider than head, a half wider than long, maximum width before middle, with rounded sides, posterior angles distinct, though obtuse, rounded and rather reflexed; median line very slight, both transverse impressions distinct, basal foveae obsolete, disk with some fine, irregular, transverse striae, basal area with vague rugose-punctation.

Elytra: Each elytron with two flavous oval spots, the front one present on intervals five to seven, the hind one present on intervals three to six. Convex, approximately a third wider than pronotum, and about a half longer than wide, slightly expanded behind and maximum width at about apical third, shoulders square, apex somewhat truncate; striae very vaguely crenulate, the four inner striae somewhat lightly impressed, the outer ones faint, though visible, eighth striae fairly deep behind and

also visible behind shoulder, intervals almost flat, first interval narrowed and raised towards apex, three with a pore adjacent to second stria at about a fourth from apex. Elytra with microsculpture formed by very clear meshes, on average about twice as wide as long; on the disk of the pronotum the meshes are finer and wider, but in front and behind they are hardly wider than long; on the head the meshes are isodiametric.

Ventral surface: Pro-sternal process to some extent bordered, meta-sternal process conspicuously bordered; met-episterna about twice as long as wide; ventral surface at base and sides with traces of pubescence.

Legs: Fifth tarsal joint with a pair of setae underneath.

Aedeagus: The aedeagus is slender but not quite so sharp at apex.

9. *Amblystomus resectus* Andrewes, 1924

Description taken from Andrewes, 1924a: 91.

Size: Length 5 mm; width 1.6 mm.

Color: Quite shiny, very finely shaded on dorsal side: elytra appears with a very light greenish tint, brownish below; palpi, one to three antennal segments (remaining ones are dark), legs, tarsi and two spots on elytra are reddish testaceous.

Head: Head large, very convex and smooth, labrum slightly asymmetrical. Suture line fine, eyes not very prominent, mandibles short and very strong.

Pronotum: Convex, approximately as wide as the elytra, with a straight cut at apex, sides and base regularly rounded and circular in shape, finely rimmed and slightly raised back; median line very fine, surface glabrous, but exhibits small scattered dots along the edges, finely rough base.

Elytra: Elongated and parallel, a little depressed, with well-marked shoulders, rounded extremity and apex not sinuated, finely striated, first two striae are punctured, the remaining ones little printed and becoming invisible towards the sides: surface

glabrous, except for a few very small barely visible points, interval three with a single setiferous pore not far from the end; anterior spot oblique, linear, present between the sixth stria near the base and third a little before the middle, posterior spot very small, present on the third interval and near the end.

Ventral side: Met-episterna longer than wide and in male the last ventral segment has two pores on either side; in male one to four segments of the pro- and meso-tarsi very slightly expanded; the first segment of the meta-tarsi equal to the two and three combined together.

10. *Amblystomus rotundiceps* Bates, 1892

Description taken from Bates, 1892a: 231.

Slender elongated

Color: Greenish- black, silky shiny, antenna dark red, tibia and tarsi brownish yellow.

Head: Eyes not protruding, head is short and broad before the scarcely prominent eyes and gradually narrowed behind; labrum little asymmetrical and emarginated, the sinuation of the labrum is not strongly asymmetrical or deep and the membranous base of the labrum is not covered.

Pronotum: Posterior angle obtuse and distinct, less rounded form, the curvature of the sides behind the middle being very slight and the hind angles distinct, though very obtuse.

Elytra: Striae little impressed.

11. *Amblystomus vulneratus* (Dejean, 1831)

Description taken from Dejean, 1831: 852.

Color: Black-moderate golden green color. Base of antenna and legs brownish yellow. Labrum little reddish brown. The palps are a fairly pale brownish yellow color, with an obscure spot on the last article. The first article of the antennae and the

end of the second are of a brownish yellow; the others are blackish-brown. The underside of the body is dark black.

Pronotum: Moderately round. Pronotum is more rounded on the sides and slightly narrowed posteriorly; the two transverse impressions are more distinct; the posterior angles are even more rounded, less marked, and the whole base appears rounded.

Elytra: Moderately striated, interval three with a setigerous puncture, presence of a rounded spot on the back. The elytra have roughly the same shape; they have towards the end, between the third and the fifth striae, a rounded spot of a slightly reddish-yellow or brownish yellow; the striae are smooth, fine, but very distinct; the intervals are almost flat.

Genus 2: ***Anomostomus*** **LaFerté-Sénectère, 1853**

Description taken from Andrewes, 1923a: 235.

Head: Large, very wide, convex, extending forwards very little beyond eyes, neck inflated, gula with a large setiferous pore on either side, close to buccal fissure; eyes large, but not protruding, not far removed from buccal fissure, a single supra-orbital seta present; clypeus short, deeply emarginated in a regular arc in front and bordered, revealing the basal membrane of the labrum, front angles with two setae, the suture with a fine pore behind each extremity, which is carried forward, not backward towards eye; labrum small, narrow, with six setae, emarginate, with rounded angles; mandibles short but powerful, scrobe without seta, slightly hooked at apex, blunt, without tooth, widely separated at base, and when closed completely concealed by the labrum; ligula short and narrow, bisetose, surrounded by the wide paraglossae which is membranous, and are glabrous, expanded at apex, with a notch at the point where they meet in front; mentum small but broad, emarginate and edentate; maxillae short, curved at apex and very sharp; palpi small, scarcely setose, last joint acuminate, but

truncated at tip, equal in labials to penultimate, a little longer in maxillaries; antennae pubescent from third segment, the joints are approximately equal, but second segment a little shorter than the remaining ones.

Pronotum: Prothorax very wide, completely bordered, though very finely in front, a seta present at sides just before middle, no one present at hind angles, which are almost completely rounded.

Elytra: Short and square shaped, convex, base bordered, nine striate, eighth striae rather deeply impressed in front and behind, a scutellary striole present, intervals flat, third interval exhibit a single pore near apex, adjacent to second stria, apex truncate and slightly emarginate on either side, without any inner plica.

Ventral surface: Pro-sternal process rounded, with fine setae, met-episterna long, strongly narrowed towards posterior side. Venter segments with fine border, with two setae, last one with two widely distant sets on either side.

Legs: Somewhat short, pro-tibiae rather notched, half a dozen small spines on outer margin, apex not protruded externally, meso- and meta-tibiae spinulose, tarsal joints triangular, joint one of meta- tarsi very nearly equal to two, three and four combined. In none of the specimens examined are the pro-tarsi expanded or squamulate underneath.

Key to the species of the genus *Anomostomus* LaFerté-Sénectère, 1853 (Key modified from Nijisha et al., 2023)

1. Ligula bisetose; elytral striae crenulate……***A. orientalis*** Andrewes 1923

- Ligula quadrisetose; elytral striae punctate……...***A. devagiriensis*** Nijisha et al., 2023

1. *Anomostomus orientalis* Andrewes, 1923

Description taken from Andrewes, 1923a: 237.

Size: Length 6.0–8.0 mm; width 2.6–3.0 mm.

Color: Black and shiny, elytra often appear with a greenish tinge, labrum, one to two joints of antennae, palpi, and legs testaceous red in color, three to 11 joints of antennae, border of prothorax and elytra, and under surface more or less reddish-black hue.

Head: Very glabrous, not narrowing behind, antennae almost reaching the base of prothorax.

Pronotum: Slightly wider than head and twice as wide as long, base curved, apex widely though slightly emarginate, with evenly rounded sides, though narrowed a little more behind than in front; median line and transverse impressions barely visible, basal foveae small but clear, punctate, marginal channels slightly crenulate, surface generally glabrous.

Elytra: With very distinct square shoulders, very slightly broader than prothorax, and half as long again as wide, striae distinctly out and finely crenulate, umbilical series of pores widely spaced, surface very finely but not closely punctate, much more clearly present along marginal channel and towards apex.

2. ***Anomostomus devagiriensis*** **Nijisha et al., 2023**

Description taken from Nijisha et al., 2023: 2.

Size: Length: Holotype, 8.29 mm.

Color: Dorsal surface black, shiny and exhibits greenish tinge. Antennal segments one and two, palpi and basal portion of labrum yellowish. Remaining antennal segments, side margins of pronotum and legs brownish yellow in color. Labrum except basal portion, clypeal anterior angles, mandibles except apex and apex of scutellum reddish brown in color. Apex of mandibles black. Genae and gula blackish

brown. Pro-, meso- and meta-sternum at its middle portion and apex of abdominal ventrites four to seven reddish brown.

Head: Large and broad with fine punctures, convex towards posterior. Labrum asymmetrical; left lobe slightly larger than right lobe; deeply emarginate at apex with six setae; several small setae are present in lateral and anterior margins of labrum. Clypeus deeply emarginate at apex exposing the basal portion of labrum; anterior angles rounded with single seta on each side. Fronto-clypeal suture distinct with a pore behind each extremity. Mandibles short. Eyes not prominent. Mentum without median tooth. Mentum and submentum separated by complete transverse suture and submentum with large single seta on each side. Ligula short and narrow, quadrisetose, with two small and two large setae; not widening towards apex and surrounded by wide and membranous paraglossae. Last segments of palpi acuminate but truncate at apex. Antennae pubescent from third segment; second segment a little shorter than the other segments. Anterior portion of genae with fine and few coarse punctures on each side. Labrum with isodiametric meshes and head without any microsculpture.

Pronotum: Transverse with fine punctures. Widest at middle with single seta on each side placed just before middle. Sides evenly rounded and marginal channels slightly crenulate. Median line clearly visible only at disc and not reaching anterior and posterior borders. Transverse impressions faint. Basal foveae small and distinct with punctures. Anterior angles rounded and posterior angles widely rounded. Pronotum without any microsculpture.

Elytra: Parallel, widest just behind middle. Shoulders square. Scutellar striole present between elytral suture and first striae. Intervals flat with fine punctures. Third interval with single pore near apex adjoining stria two. Striae punctated. Subapical sinuation

fine. Interval 10 and apex of all intervals densely pubescent. Elytra without any microsculpture. Hind wings well developed.

Ventral surface: Shiny with scattered coarse punctures. Pro-sternal process round, not bordered and with fine setae. Met-episterna elongate and strongly narrowing towards posterior side. Last abdominal segment rounded at apex with a pair of widely placed setae on each side.

Legs: Small with triangular tarsomeres. Tibiae with spines. Meta-tarsomere one is nearly equal to the second, third and fourth combined. Front tarsi not dilated and without adhesive vesture ventrally.

Genus 3: ***Oosoma*** **Nietner, 1857**

Description taken from Neitner, 1857a: 144.

Head: Transversely orbicular; clypeus narrow, transverse, rather deeply emarginated in the form of a crescent, anterior angles acuminated; labrum is of thin, translucent texture, deeply angularly emarginated in front, the anterior angles rounded, setose, sides angular, rounded; mandibles short and thick, curved from the middle to the tip, edentate; maxillae simple; antennae short, thick, reaching a little beyond the middle of the thorax, joints two to 11 pubescent, five to 11 slightly compressed, one to three narrowed at the base, four to 11 oval, one and 11, two 10 of about equal length respectively; mentum with a straight, deep emargination, lobes rounded externally, rather obtuse at the apex, tooth very small, obtuse; ligula very small, narrow, slightly dilated towards and rounded at the apex, paraglossae very large, enveloping the ligula on all sides, the whole slightly truncated at the anterior angles and slightly, but sharply and pretty deeply emarginated or notched at the centre of the anterior margin; palpi, both maxillary and labial ones, with the terminal joint oval, rather abruptly

narrowed and slightly truncated at the apex; these characteristics more distinctly expressed in the labial ones.

Pronotum: A little broader than the head, nearly twice as broad as long, quadratic at the base, slightly narrowed towards the apex, anterior angles slightly produced, the anterior margin hardly emarginated, slightly sinuous at the base.

Elytra: Rather abruptly cut away at the apex, internal angles rather obtuse, slightly dehiscent. Scutellum broad, triangular.

Ventral surface: Pro-sternum highly developed.

Legs: Stout and strongly armed. The spines of the tibiae are inserted on ridges, the anterior ones being dilated. The tarsi are all concave on the inner side. The anterior tarsi are dilated, and post ones more and more elongated and the joints subcylindrical; joint one of the latter is longer than the three following together.

Key to the species of the genus *Oosoma* Nietner, 1857

1. Elytra with a small slightly yellowish white band interrupted at the middle……..***O. semivitatum*** Fabricious, 1798

- Elytra without any band……..…***O. gyllenhalli*** Dejean, 1829

1. *Oosoma gyllenhalli* (Dejean, 1829)

Description taken from Dejean, 1829: 59.

Color: Antennae and legs reddish brown, the legs are slightly ferruginous (reddish brown) yellow reddish, the underside of the body is black and little brownish.

Head: Smooth, not very convex, and has on each side, between the antennae, a small point barely pressed separate; the labrum, palps and antennae are a slightly reddish-ferruginous yellow.

Pronotum: With four impressions, broader than the head, almost transverse, slightly narrowed anteriorly, slightly convex; barely wavy transverse wrinkles in its middle

and small faintly marked longitudinal streaks are present along the anterior edge and the base; the two transverse impressions are not very sensitive; a little faint longitudinal impression on each side of the base and also at each side two fairly distinct recessed points present; the anterior edge is slightly notched and slightly sinuous; the anterior angles are not very sharp and almost rounded; the sides are slightly rounded; the posterior angles are cut squarely; the base is slightly sinuous and cut almost downright.

Elytra: Striated, slightly wider than the pronotum, short, slightly oval, almost parallel, slightly convex, quite strongly sinuous and almost notched obliquely at the end; they have nine striae, and the beginning of a tenth at the base, near the shield; these striae are smooth, strongly marked and arranged roughly; the intervals are flat; there are no points on the third interval; several recessed points arranged along the outer edge, towards the base and the end, longer; the lower edge is slightly reddish-ferruginous (reddish brown) yellow. There is wings under the elytra.

2. ***Oosoma semivittatum*** **(Fabricius, 1798)**

Description taken from Dejean, 1829: 60.

Color: Elytra pitch black, antennae and legs reddish brown, the first three articles of the antennae are the same color, the labrum and palps are a slightly reddish-ferruginous yellow, underside of the body is blackish brown, the legs are a slightly rough, pertaining to a rust red color.

Head: Almost blackish brown, smooth, not very convex, a small indented little point present between the antennae on each side.

Pronotum: Wider than the head, less long than broad, almost transverse, narrowed anteriorly, almost trapezoidal and fairly convex; it has a few barely distinct transverse wrinkles; the longitudinal line in the middle is not very marked; the anterior

transverse impression is in an arc and quite distinct; the posterior is a little less; small, little visible wrinkles present along the base, and on each side a little longitudinal impression very little marked; the front edge is slightly indented; the front angles are rounded; the sides are very slightly rounded and depressed towards the posterior angles; these are cut squarely; the base is very slightly sinuous and cut almost squarely.

Elytra: Black elytra with small white interruption are blackish brown on the sides, and almost reddish towards the suture; they are a little wider than the pronotum, very slightly oval, almost parallel, fairly convex, strongly sinuous and almost notched obliquely at the end; each has a sinuous longitudinal band, interrupted in the middle, slightly yellowish white, which goes from the angle of the base to near the end of the suture; the upper part is made up of three spots: the first on the seventh interval goes from the base to the quarter of the elytra; the second on the sixth goes from the base to about half of the elytra, and the third on the fifth, small, almost square, is placed about a third of the elytra; the lower part is composed of six spots: the first three on the seventh, sixth and fifth intervals, are quite elongated, almost equal, and are placed obliquely about two thirds of the elytra; the interior is a little higher than the others; the fourth and fifth on the fourth and third intervals and lower than the previous ones; finally the sixth on the second interval and near the end; elytra with nine striae, and the beginning of a tenth at the base, these striae are smooth and strongly marked; the intervals are flat, and there are no dots pressed on the third. There are wings under the elytra.

Key to the genera of the subtribe Ditomina Bonelli, 1810

1. Mentum with short obtuse medial tooth……..***Panagrius*** Andrewes, 1933
- Mentum without median tooth……...***Indocarterus*** Kataev &Wrase, 2018

Genus 1: ***Indocarterus*** **Kataev & Wrase, 2018**

Remarks: Detailed genus description is available in Kataev & Wrase, 2018: 354.

1. ***Indocarterus inexspectatus*** **Kataev & Wrase, 2018**

Remarks: Detailed species description is available in Kataev & Wrase, 2018: 355.

Genus 2: ***Panagrius*** **Andrewes, 1933**

Description taken from Kataev, 2005b: 266.

Color: Body dark, not iridescent and without distinct metallic lustre, palpi, antennae, and legs ferruginous.

Pubescence and punctation: Body densely punctate and pubescent; punctation on dorsum coarse and irregular, consisting of larger and smaller punctures; setae rather long but differing in length, particularly long setae present on head and pronotum laterally and on elytral disc; elytral pubescence consisting of a mixture of more and less long setae; setae on ventral side of body, including prosternum and abdominal sternites, moderately long.

Head: Clypeo-ocular prolongations present, thin, not reaching supraorbital grooves (this character hardly recognized because of dense and coarse general punctation). Genae narrow. Mentum separated from submentum by complete suture, with short obtuse medial tooth and two medial setae; epilobes notably widened apically; submentum with two lateral setae on each side. Ligular sclerite narrow, slightly narrowed before apex, and not or only weakly expanded apically (external angles more or less notably protruding laterally), with two ventro-apical setae, without apical ventral plate or distal dorsal setae; labial basal palpomere not carinate.

Pronotum: On each side, except for one obligatory medial marginal seta, with additional one to two long setae at apical angle; these setae much longer than setae of pronotal general pubescence. Pronotal base not bordered.

Elytra: With rounded humeral angles and weak preapical sinuations. Scutellar striole long, with a basal pore. Discal pores on third, fifth and seventh intervals of elytra not recognizable against background of rather coarse general punctation. Wings fully developed.

Ventral surface: Met-episterna narrow, much longer than wide, rather strongly narrowed posteriad. Apical abdominal sternum with two pairs of setae in both sexes (male examined only in *P. hystrix*)

Legs: Meta-coxae without any additional setigerous pores. Pro-tibia densely setose ventrally (except for a longitudinal row of ventral spines); its apical spur stout, clearly dentate at margins. All tarsi pubescent dorsally. In male, pro-tarsi (at least in *P. hystrix*) very weakly dilated, but with biseriate adhesive vestiture ventrally; meso-tarsi scarcely dilated and with highly reduced adhesive vestiture. First meta-tarsomere approximately as long as second and third together.

Aedeagus: Median lobe of aedeagus with apical orifice in dorsal position, lacking any large spines in the internal sac (at least in *P. hystrix*).

Female genitalia: Apical stylomere of female genitalia rather broad, rounded at apex, with a long seta on dorsal side closer to its apex and with one to two short setae on basal, external side.

Key to the species of the genus *Panagrius* Andrewes, 1933 (Key from Kataev, 2005)

1. Pronotal sides clearly sinuate before nearly rectangular basal angles, disc of pronotum finely and densely punctate, distance between punctures in central part of pronotum equal to or slightly greater than their diameter; sutural angles of elytra acutangular, sharp at apex, head relatively large; large: body length 11.5–13.5 mm. ……..*P. hystrix* **Andrewes, 1933**

- Pronotal sides nearly rectilinear before obtuse basal angles, disc of pronotum coarsely and sparsely punctate, distance between punctures in central part of pronotum much greater than their diameter; sutural angles of elytra acutangular, narrowly rounded at apex; head relatively small; small: body length 9.5 mm (according to the original description, 10.5 mm, probably from apex of left mandible to apex of elytra) .....***P. nigricans* Ito, 1996**

1. ***Panagrius hystrix* Andrewes, 1933**

Description taken from Ito, 1996c: 222 and Kataev, 2005b: 268.

Size: Length 12.7–13.7 mm.

Color: Palpi, antennae and legs reddish brown.

Body: Oblong, rather flattened, black and shiny, with slightly bluish aeneous tinge on elytra, densely covered throughout with long seta-like pubescence which spreads over labrum, mentum and elytral epipleura and is shorter there, densely and coarsely punctate on both dorsal and ventral surfaces, the punctures bearing the pubescence.

Head: Large, a little more than four-fifths pronotal width, with interocular space wide and three-fourths as wide as the width of head including eyes, gently convex, almost flattened on frons; labrum transversely quadrate, truncate at apex; clypeus not raised, narrowly depressed along apical margin, and coarsened due to the confluent punctures; clypeal suture fine and shallow, but clearly carved; frontal impressions shallow, arcuately divergent behind, becoming fine near eyes; eyes large and not prominent; temples relatively long, gently obliquely contracted behind, obtusely meeting with neck constriction; antennae of the average length and slender, first segment very sparsely and second sparsely pubescent in apical half, third twice the second's length and as long as the fourth; mandibles robust and short, vertically

truncate at apex of left mandible; maxillary and labial palpi slender, apical two segments of both the palpi densely pubescent, second of labial palpus bearing many setae along front margin and several setae in hind apical margin, one-fourth longer than the third; ligula subparallel at sides, weakly expanded before truncate apex, sharply angulate at apical corners; paraglossae considerably wide, well produced forwards beyond ligula, fused with ligula to the expansion; mentum not transverse, median tooth small, rounded at tip, epilobes relatively wide; microsculpture almost wholly invisible, observable as clear reticulation in apical half area of clypeus and as vague and transverse meshes near supraorbital setae.

Pronotum: Cordiform, flat on disc, steeply declivous latero-apically, widest at apical two-sevenths; sides gently arcuate from apex to middle, thence straightly oblique behind and clearly sinuate before base; apex uniformly and somewhat deeply emarginate, unbordered in the most part; base as wide as apex, slightly oblique at sides, weakly emarginate in middle, bordered only at the oblique parts; apical angles narrowly rounded; basal angles almost rectangular, very narrowly rounded at tips; basal foveae rounded and more or less deep; lateral furrows running in a line, not widened behind; both front and hind transverse impressions shallowly engraved; median line fine and clear, not reaching apex and base; several marginal setae situated near apical angles, at apical fifth and basal angles; microsculptures obscure, composed of fine and transverse meshes, clearly sinuate sides of the pronotum and the rather fine and dense punctation on the disc.

Elytra: Oblong, a half longer than wide and one-sixth wider than pronotum, parallel-sided, gently convex, weakly sloped towards apices; apical sinus quite indistinct; apices not produced, closed to each other and very narrowly rounded at tips; bases very shallowly bisinuate, clearly rounded at humeral angles; striae narrow on disc, a

little widened apically, seriately and sparsely punctulate and finely, obscurely crenulate, scutellar stride fully long, adjoining first striae; intervals convex, equal in degree of convexity even near apices, dorsal pores of third interval (and / or fifth and seventh) indistinguishable from the regular punctures with pubescence or may be absent; marginal series interrupted medially, composed of 8 + (9-10) umbilicate pores; microsculpture discerned except isodiametric meshes on the ninth intervals under 80 X magnification.

Hind wings entirely developed.

Ventral surface: Met-episternum four-fifths longer than wide; sixth abdominal segment bordered throughout along outer margins and bisetose at each side in both sexes, very weakly emarginate in male and gently arcuate at apex in female.

Legs: Mid coxae and trochanters and hind coxae densely and fore coxae sparsely pubescent; both front and hind areas of and dorso-apical areas of fore and mid femora densely and hind femora sparsely pubescent; tibiae densely pubescent, fore tibia weakly dilated forwards, trispinous apico-externally, with truncate apex, terminal spur robust and short, blunt at tip, toothed medially at margins; tarsi comparatively short and densely pubescent dorsally, hind tarsi seven-tenths in male and about two thirds the width of head in female, 1st segment equal in length to the second and third combined and twice as long as the second, fourth two-thirds the third, claw segment quadrior quinquesetose along each ventral margin.

Aedeagus: Aedeagus more or less robust, gently arcuate, sharpened distally, apex thin and simple; apical orifice opened above, inner sac armed with a small sclerite; apical lamella small and triangular, narrowly rounded at tip; ventral side unbordered. The terminal lamella of the aedeagus is flat, triangular, approximately as long as wide, and

lacking an apical capitulum; the internal sac has a small spiny patch, without any larger teeth.

Female genitalia: Stylus wide and rather well arcuate, with a long seta situated a little far apart from apex and with two short setae at a little inner side of each outer margin; basal segment trisetose near apex; valvifer trisetose along apical margin and bisetose on apico-ventral surface. the apical stylomere of the female genitalia is rather broad, rounded at the apex, with two short setae on each outer margin.

2. ***Panagrius nigricans*** **(Ito, 1996)**

Description taken from Ito, 1996c: 224 and Kataev, 2005b: 268.

Size: Length 10.5 mm; width 3.8 mm.

Color: Body oblong, pitchy black, shiny, without iridescent lustre, wholly covered with pubescence; antennae and legs reddish brown, basal areas of mandibles dark reddish brown, palpi light brown.

Head: Relatively and uniformly convex, considerably wide, only a little less than three-fourths pronotal width, coarsely and not densely punctate from clypeus to vertex and genae and a little more finely punctate on labrum, the punctures bearing long pubescence; labrum subtransverse and weakly bilobed; clypeus shallowly weakly swollen, emarginate at apex, with the punctures partly confluent; clypeal suture fine and never deepened; frontal impressions reaching supra orbital grooves, mostly fine and shallow except the apical portions somewhat deep; inter ocular space wide, three fourths the width of head; eyes small and more prominent than in the previous species; temple glabrous, one-sixth the longitudinal length of eye; mandibles robust and short, gently curved inwards, vertically truncate at tips, terebral tooth trapezoidal in left mandible and weakly triangular in right one, retinacular tooth not exposed, viewed ventrally and truncate in left mandible and a little exposed and blunt at tip in

right one; antennae short, more or less thickened distally in first to fifth segments, sparsely pubescent in the first and second and densely so in the third to apical segment, third one-sixth longer than the fourth and one and seven-tenths the second; genuine ventral margin of eye rather widely separated from buccal fissure; maxillary palpi slender and sparsely pubescent; labial palpus slender, first segment bisetose, second slender and bearing many setae along front and hind margins, third sparsely pubescent, short and seven-tenths the second; ligula constricted before apex which is shallowly emarginate, sharply prominent at apical corners; paraglossae wide and fully prolonged forwards beyond ligular apex, separated from ligula in front from the constriction; mentum comparatively transverse, wide at bottom of apical emargination, median tooth regular- triangular, narrow and small, epilobes well expanded in front, suture with submentum entire and deep; microsculpture invisible under 80 X magnification.

Pronotum: Transversely subquadrate, about a half wider than long (1.55 in ratio), widely flattened on disc, steeply declivous latreo-apically, widest at apical fifth, coarsely and rather densely punctate, the punctures especially dense and confluent in part in basal foveae; sides gently arcuately in front and almost straightly contracted behind from the widest point, feebly sinuate before base; apex evenly and somewhat deeply emarginate, unbordered in the most area; base subtruncate, very oblique at sides, obtusely bordered only in the oblique areas; apical angles widely arcuate; basal angles considerably wider than rectangle, narrowly rounded at tips; seven or eight marginal setae arranged from apex to base, the seta at apex and two ones near middle longer than the others; lateral furrows grooved in a line, not widened even near base; basal foveae small and shallow, widely distant to each other; front transverse impression short and obscure, but clearer than the hind transverse one; median line

fine and clear, laying between both the impressions; microsculpture unable to be detected under 80 X magnification.

Hind wings fully developed.

Elytra: Widely oblong, a half longer than wide, subparallel- sided, more or less convex, a little more steeply declivous towards apices, a little less coarsely punctate than pronotum, furnished with dense and long pubescence not only on dorsal surface but also on epipleura; apices not produced, very gently oblique at margins, closed to each other, obtuse and angulate at sutural angles; apical sinuations distinctly shallow; base weakly arcuately oblique at sides, humeral angles fully rounded, edentate at tips; striae shallow and somewhat wide, finely crenulate, scutellar striole moderate in length; intervals almost flattened, not raised even near apices; marginal series divided into two groups, the fore group composed of eight umbilicate pores and the hind one of seven to eight pores; microsculpture not observed.

Ventral surface: Densely and rather coarsely punctate throughout except abdominal segments finely punctate, wholly and densely pubescent; met-episternum well contracted behind, two-thirds longer than wide; apical margin of sixth abdominal segment quadrisetose and rather clearly arcuate at apex in female.

Legs: Pro-coxae sparsely and mid coxae densely setose; dorsal and ventral margins at front side of Pro-femora and at hind side of meso-femora seriately plurisetose, hind femur bisetose at hind margin; fore and mid tibiae densely and hind tibiae sparsely pubescent, fore tibia robust, well dilated distally, subtruncat and bearing a tiny protuberace at apex, armed apico-externally with six short spines, terminal spur unidentate at each margin; tarsi densely pubescent on dorsal sides, hind tarsus seven-tenths the width of head in female, first segment as long as the second and third

together and four fifths longer than the second, fourth one-fourth shorter than the third, claw segment quadrisetose ventrally along each side.

Female genitalia: Stylus chisel-shaped in lateral view, blunt at tip, with a seta at apical third of inner sides and a very short seta near ventro-external margin. Apical stylomere with only one very short seta on the ventro-external margin.

Key to the genera of the subtribe Harpalina Bonelli, 1810

1. Elytra completely pubescent or external intervals pubescent……...2
- Elytra glabrous……12
2. Elytra completely pubescent…….…….3
- External intervals pubescent……..…8
3. Elytral interval 3 with row of setigerous punctures……...4
- Elytral interval 3 without row of setigerous punctures……..***Platymetopus*** Dejean, 1829
4. Pronotum with 1–2 long marginal seta at apex……..5
- Pronotum with one marginal seta at apex……..6
5. Head with distinct clypeo-ocular prolongations; mentum without tooth……..***Ophoniscus*** Bates, 1892
- Head without distinct clypeo-ocular prolongations, mentum with tooth….....***Ophonus*** Dejean, 1821
6. Interval 5 and 7 with row of setigerous punctures……..…7
- Interval 5 and 7 without row of setigerous puncture……***Oesyperus*** Andrewes, 1923
7. Head impunctate and glabrous; pronotal punctation and pubescence restricted to basal

and laterobasal areas, pronotal basal angles very obtuse or rounded ……...***Kareya*** Andrewes, 1919

- Head punctate and pubescent; pronotum punctate throughout, basal angles rounded or sharp…….……***Parophonus*** Ganglbauer, 1891

8. Striae punctate…….***Meroctenus*** Gemminger & Harold, 1868

- Striae impunctate……..……..9

9. Elytral intervals finely punctate……..***Dioryche*** MacLeay, 1825

- Elytral intervals densely punctate…….10

10. Head impunctate……...11

- Head punctate……..***Parophonus*** Ganglbauer, 1891, ***Siopelus*** Murray, 1859

11. Median lobe of aedeagus weakly chitinized…… ***Kareya*** Andrewes, 1919

- Median lobe of aedeagus membranous…….. ***Siopelus*** Murray, 1859

12. Elytral interval 3 with row of setigerous punctures…….…13

- Elytral interval 3 with one puncture or without puncture……..…….…….16

13. Mentum with tooth……..…….……14

- Mentum without tooth……..***Bradybaenus*** Dejean, 1829

14. Elytral interval 3 & 5 with row of punctures…….***Allosiopelus*** Ito, 1995

- Elytral interval 3 with row of punctures……...15

15. Fourth tarsomere of male not conspicuously dilated ...***Harpaliscus*** Bates, 1892

- Fourth tarsomere of male moderately dilated……**……*Coleolissus*** Bates, 1892

16. Elytral interval 3 with one setigerous puncture……..……..17

- Elytral interval 3 without setigerous puncture…….……...…….20

17. Body stout; paraglossae pubescent…….***Acinopus*** Dejean, 1821

- Body narrow; paraglossae glabrous…….……18

18. Scutellary striole short……...……..***Oxycentrus*** Chaudoir, 1854

- Scutellary striole more or less developed……19

19. Mentum with median tooth……...…….***Trichotichnus*** Morawitz, 1863

- Mentum without median tooth……..***Lampetes*** Andrewes, 1940

20. Mentum without tooth……..***Liodaptus*** Bates, 1889

- Mentum with tooth……..…….21

21. Basal angle of pronotum narrowly or widely rounded...***Acinopus*** Dejean, 1821

- Basal angle of pronotum outwardly prominent…….***Ooidius*** Chaudoir, 1847

Explanation 1: Genera *Parophonus* and *Siopelus* are not separated in the key due to the unavailability of key characters and genus *Harpalus*, is not included in the key due to the similar morphological characters with other genera in the tribe Harpalini.

Genus 1: ***Acinopus*** **Dejean, 1821**

Description taken from Wrase and Kataev 2016: 1783.

Medium-sized to large.

Color: Black, without metallic shine, with appendages somewhat lighter, having the body glabrous, stout, more or less cylindrical, superior surface convex, in one case somewhat flat.

Head: Large, with the antennae long but fine, genae with preocular sulcus for reception of antennomere one, paraglossae setose, epilobes strongly widened anteriorly, ligula with two distal setae, penultimate segments of labial palpi relatively long, and with mandibles asymmetrical (right mandible with excision at upper edge) in most species.

Pronotum: Strongly transverse and basally completely bordered, the posterior angles are narrowly or widely rounded, without setae.

Elytra: More or less parallel or somewhat oval (depending, if the species are macropterous or brachypterous), the elytral stria eight in its middle portion removed

from stria nine and accordingly interval nine widened there, the interval three with one or without pore puncture (often variable within one species), intervals three and five apically often with some pore punctures.

Ventral surface: Anal sternite in females distinctly swollen apically.

Legs: Hind coxa with one posteromedial additional setigerous pore puncture, femora with long numerous bristles, ventro-apical tubercle of pro-tibia with four (rarely three) to six spines arranged in a transverse row.

Aedeagus: Median lobe of aedeagus with orificium in dorsal position and terminal lamella flat, without apical capitulum.

1. ***Acinopus laevigatus* Ménétriés, 1832**

Description taken from Ménétriés, 1832: 128.

Cylindrical body.

Head: Especially smaller than other species in the genus.

Color: Black, antennae and tarsi rusty.

Pronotum: More transverse.

Elytra: Finely striated.

Genus 2: ***Allosiopelus* Ito, 1995**

Remarks: Detailed genus description is available in Ito, 1995: 153.

Key to the species of the genus *Allosiopelus* Ito, 1995

1. Body black; elytra densely and coarsely punctate..***A. punctatipennis* Ito, 1995**
- Body yellowish light brown; elytra more sparsely punctatate……***A. fulvicollis* Ito, 2016**

1. ***Allosiopelus fulvicollis* Ito, 2016**

Description taken from Ito, 2016: 365.

Body oblong, yellowish light brown, flattened.

Size: Length 8.3 mm; width 4.6 mm.

Color: Apices of mandibles black, elytra black and iridescent on second to sixth intervals except for apical and basal areas.

Head: Weakly convex, moderate in width, two-thirds as wide as the pronotal width, sparsely and very minutely punctate; labrum subtrapezoidal, very shallowly and triangularly emarginate at apex; clypeus quite flat, gently and triangularly produced at apical angles, straight between the angles; clypeal suture linear, clearly impressed; frontal impressions weakly arcuately divergent to each other, not deep; interocular space wide, 0.68 times as wide as the width of head; eyes large, fairly but not hemispherically prominent; temples short, one-fourth the eye length; genuine ventral margins of eyes closed to buccal fissure; mandibles elongate, arcuate and sharpened at apices; antennae slender, third segment pubescent in apical four-fifths, 0.87 times as long as the fourth and twice the second; labial palpi not stout, third segment 1.14 times as long as the second; ligula gently widened forwards, apex weakly arcuate; mentum bearing weakly produced median tooth which is blunt at apex, epilobes abruptly widened; microsculpture mostly invisible under 80× magnification.

Pronotum: Quadrate, two-fifths wider than long, gently rounded at sides, flattened on disc, sparsely and minutely punctate on central area, coarsely and more densely so near apical area, lateral furrows and basal foveae; apex obtrapezoidally emarginate, entirely bordered; base 1.3 times as wide as apex, bisinuate, entirely bordered; apical angles fairly and roundly protruding; basal angles quite rounded; lateral furrows wide, expanded backwards, joining basal foveae; basal foveae subquadrate, shallow; front transverse impression very shallow, the hind one obscure; median line thin, shallow, lying between both the impressions; microsculpture invisible under 80× magnification.

Elytra: Oblong, 1.61 times as long as wide, 1.26 times as wide as the pronotal width, sparsely punctate, weakly convex, flattened on disc, almost parallel-sided, very shallowly sinus preapically; apices weakly produced backwards, very narrowly rounded at tips, sharp at sutural angles; bases each well emarginate, with humeral angle pointed and little larger than right angle; striae fairly deep and wide, clearly crenulate in bottoms, scutellar striole moderate in length; intervals weakly convex on disc, gradually becoming a little more convex apicad and basad, seriate setiferous pores eight in number on third interval, three to four in apical half of fifth interval, and one at apical fifth of seventh right interval; marginal series widely interrupted medially, composed of 9 + (9–10) umbilicate pores; microsculpture more or less clear, consisting of transverse lines. Hind wings fully developed.

Ventral surface: Mostly smooth, sparsely punctate laterally on pro-, meso- and meta-ventrites, obscurely and very sparsely so on met-episterna, microscopically and very sparsely so along middle of third to seventh abdominal sternites; met-episterna rather elongate, one-fifth longer than wide; seventh abdominal sternite in male truncate at apical margin, bisetose at each side.

Legs: Not long; pro-tibiae each entirely sulcate; hind tarsus 1.21 times as long as the width of head, first segment as long as the second and third taken together, 1.82 times as long as the second, nearly three times the fourth, claw segment quadrisetose along outer ventral margin and trisetose along the inner one.

Aedeagus: More or less thick, almost straight, thinned preapically, thickened at apex, with a tiny hook ventrally; apical orifice widely open, not armed with any sclerites, apical lobe subquadrate, 1.07 times as long as wide, gently rounded distal margin.

2. ***Allosiopelus punctatipennis* Ito, 1995**

Remarks: Detailed species description is available in Ito, 1995: 154.

Genus 3: ***Bradybaenus*** **Dejean, 1829**

Description taken from Dejean, 1829: 160.

Body short and not very convex.

Head: Almost rounded, very slightly narrowed posteriorly. Last segment of the palps very slightly oval, almost cylindrical and truncated at the end. Antennae short and threadlike and shorter than the head and pronotum combined. Labrum square, less long than wide. Labrum is almost flat or very slightly convex, square, less long than wide, and very slightly indented at its front. The mandibles are arched and not very acute. The mentum is short, slightly concave, strongly indented in an arc of a circle, and it has no tooth in the middle of its notch. **Pronotum:** Less long than wide and almost square.

Elytra: Rather short and almost parallel.

Legs: The legs are short enough and strong enough for the size of the insect. The front legs are rather strongly indented. The first four articles of the anterior tarsi are short, tight, and very slightly dilated in males; the first three tarsomeres are triangular; those of the intermediate tarsi are still less markedly dilated than those of the anterior tarsi; they are more elongated, very slightly triangular and almost cylindrical. The first four tarsomeres of pro-tarsi very slightly dilated in males; those of the anterior tarsi short, tight and triangular or heart-shaped; those of intermediaries more elongated and very slightly triangular.

1. ***Bradybaenus festivus*** **Dejean, 1829**

Description taken from Dejean, 1829: 163.

Proportionally a little less wide.

Color: The head is of a tan green, with a light reflection of a blue violet, the mandibles are blackish; labrum, palps and antennae are testaceous yellow, the body is

of a brilliant bronze-green, with a wide lateral border of a testaceous yellow which blends imperceptibly with the green color; the underside of the body and the lower edge of the elytra are testaceous yellow, slightly reddish; the legs are paler testaceous yellow.

Pronotum: The median line is more marked; the basal foveae seen on each side of the base and the part of the base near the posterior corners are covered with more marked and quite distinct small punctures; the anterior angles are very rounded; the hind angles are less acute and cut squarely.

Elytra: More convex and slightly sinuate subapically; they are of a brilliant bronze-green, and they each have a longitudinal band of testaceous yellow, sinuate internally, which begins at the base on the fifth, sixth and seventh intervals, descends to the extremity following the seventh striae, and goes up a little along the suture; the striae are smooth and strongly marked; the intervals are a little convex; on the middle of the first, third, fifth and seventh intervals, a row of very small punctures hardly visible; a row of fairly marked punctures along the outer edge, between the eighth and ninth striae also present.

Genus 4: ***Coleolissus*** **Bates, 1892**

Description taken from Habu, 1973: 215 and Baehr, 2018: 46.

Medium sized to rather large, depressed species.

Color: Surface usually rather black, very glossy, without micro reticulation.

Head: Somewhat small or moderately large; eyes developed, almost reaching buccal fissures; frontal impressions extending in posterolateral direction; clypeus bisetose; labrum with six setae, not rounded at apex; mandibles rather slender; apical segment of palpi subcylindrical; mentum with simple median tooth; ligula wide, bisetose, paraglossae membraneous, glabrous, almost adnate to ligula, apex well extending

beyond ligula. Eye large, laterad well produced; mentum with unidentate tooth; glossa bisetose; paraglossae attached to glossa but much longer, apically rounded; penultimate palpomere of labial palpus with more than second setae.

Pronotum: Wide, with widely rounded basal angle; usually the base laterally densely punctate, without basal seta.

Elytra: Wide, in basal half impressed or not; striae impunctate; third interval seriate-punctate; metathoracic wings fully developed; basal pore present; scutellary striole developed; interval third with series of several small pores adjoining stria two or without pores, interval five and seven without series of pores.

Ventral surface: Sternites glabrous, sternite six protrudent at apex in female, not so protrudent in male.

Legs: Hind femora with two setae near hind margin; apical spur of fore tibiae simple; tarsi glabrous on dorsal side, segments two to four of fore and mid tarsi moderately dilated, segment five with some setae ventrally.

Aedeagus: Usually with rows of sclerotized teeth in the internal sac; gonocoxite two narrow and elongate, with only one very elongate subapical nematiform seta.

Key to the species of the genus *Coleolissus* Bates, 1892

1. Head impunctate; all elytral intervals impunctate or lateral intervals punctate……..2
- Head and all elytral intervals minutely punctate……7
2. Elytral lateral intervals punctate ……....3
- All elytral intervals impunctate……..4
3. Pronotal median line distinct, slightly impressed, isolated from apical margin and touching basal margin; elytral intervals flat on disk……***C. inessae*** Kataev, 2021

- Pronotal median line fine, superficial, not reaching apical margin and basal margins; elytral intervals slightly convex on disk….***C. perlucens*** (Bates, 1878)

4. Elytral interval 3 with a series of 3–4 small discal setigerous pores adjoining stria 2……....***C. noeli*** Andrewes, 1930

- Elytral interval 3 with a series of 5–8 small discal setigerous pores adjoining stria 2……..5

5. Abdominal sternites finely pubescent……...….***C. kejvali*** Kataev, 2022

- Abdominal sternites glabrous…….6

6. Fronto-ocular furrows vaguely reaching supraorbital furrows; humerus without a denticle at apex; apex of last visible sternite concave in male…….....**.....*C. deformipenis*** Kataev, 2022

- Fronto-ocular furrows reaching supraorbital furrows; humerus of pronotum with a denticle at apex; apex of last visible sternite subtruncate in male……..***C. brevis*** Kataev & Wrase, 2023

7. Pronotum narrowed apically than basally……..8

- Pronotum narrowed basally than apically……...***C. nakajimai*** Ito, 2016

8. Mentum with prominent median tooth; meta-tarsomeres 2–4 markedly widened distally; meta-tarsomere 1 longer than meta-tarsomeres 2–4 combined ……...……....***C. monstrosipennis*** Kataev, 2022

- Mentum with less prominent median tooth; meta-tarsomeres 2–4 only slightly widened distally; meta-tarsomere 1 not longer than or as long as meta-tarsomeres 2–4 combined……...……..…***C. iris*** Andrewes, 1924

1. *Coleolissus brevis* Kataev & Wrase, 2023

Remarks: Detailed species description is available in Kataev & Wrase, 2023: 284.

2. *Coleolissus deformipenis* Kataev, 2022

Remarks: Detailed species description is available in Kataev, 2022: 292.

3. *Coleolissus inessae* Kataev, 2021

Description taken from Kataev, 2021: 449.

Body elongate, medium-sized.

Size: Length 7.8 mm; width 3.0 mm.

Color: Body pitch black, shiny and iridescent on dorsal and ventral sides, with labrum, base of mandibles and very narrow lateral margins of pronotum reddish brown; palpi, antennae and legs yellowish brown; antennomeres three to 11 and apices of tibiae very slightly infuscate.

Head: Medium-sized, impunctate. Eyes large, moderately convex, separated ventrally from buccal fissure by very short distance about as wide as antennomere one basally. Genae glabrous. Tempora short, oblique, gently sloping to neck. Labrum slightly convex, very shallowly concave anteriorly. Clypeus somewhat flat, slightly emarginated along anterior margin, with a pair of lateral setigerous pores and a pair of very short longitudinal wrinkles each adjacent medially to lateral pore. Fronto-clypeal suture fine, slightly impressed, almost straight. Frontal foveae like elongate short pit without prolongation on clypeus. Fronto-ocular furrows very fine, vaguely reaching supraocular furrows. Frons with angulate shallow depression and with a few very fine micropunctures at lateral margins of this depression. Supraorbital furrows very narrow, touching upper margin of eyes. Supraorbital setigerous pores small, situated slightly before level of posterior margin of eyes and removed from supraorbital furrows by diameter of pores. Mentum separated from submentum by complete transverse suture, with a very short and wide median tooth; epilobes markedly widened apically; submentum with one pair of long lateral setae. Ligular sclerite almost parallel-sided, truncate at apex, with one pair of ventroapical setae.

Paraglossae glabrous, moderately wide, markedly longer than ligular sclerite and separated from it apically by narrow notches. Basal labial palpomere not carinate; penultimate labial palpomere about as long as ultimate one. Mandibles very moderately elongate, evenly curved apically, with wide bases; left mandible blunted at tip. Dorsal microsculpture very fine, obliterated, consisting of indistinct, more or less isodiametric meshes. Antennae slender, surpassing pronotal basal edge by two apical antennomeres, pubescent from apical half of antennomere three, with antennomeres four to eight about two times as long as wide and basal antennomere slightly longer than antennomere three.

Pronotum: Transverse, comparatively long for genus, widest slightly before the middle, very moderately narrowed apically and basally, with one lateral seta inserted at the end of the anterior third. Sides rounded along entire length; lateral bead complete, throughout very narrow. Apical margin shallowly emarginated, almost straight medially, very narrowly bordered along entire length; border slightly obliterated at the middle. Apical angles rounded, slightly protruding anteriorly. Basal margin almost straight in middle portion, slightly rounded laterally, bordered along entire length, not ciliate, slightly longer than apical margin and almost as long as base of elytra between humeral angles. Basal angles obtuse, rounded at apex. Disc convex. Lateral depressions beginning from lateral setae, very shallow, widened basally and disappearing before the apical quarter. Basal foveae elongate oval, shallow, isolated from lateral margins and from each other by convex areas. Median line distinct, slightly impressed, isolated from apical margin and touching basal margin. Anterior transverse depression wide and shallow. Surface with dense distinct non-setigerous punctures basally and along sides, with sparser and finer punctation at apical margin

including anterior transverse depression. Microsculpture highly obliterated, not forming distinct meshes.

Elytra: Convex, elongate, only slightly wider than pronotum, widest before the apical third; sides very slightly diverging in the apical two thirds, with weak sinuation before the middle, and roundly converging in the apical third; subapical sinuation distinct but shallow. Humeri rounded, with an indistinct denticle recognizable in caudal view. Sutural angle narrowly rounded at tip, not extended posteriorly. Basal edge slightly arched, forming a sharp, very obtuse angle with lateral margin. Striae comparatively wide, impunctate, impressed along entire length, reaching anteriorly basal elytral border, with granulate microsculpture on bottom. Intervals glabrous, almost flat on disc, gradually becoming convex and narrow at apex; intervals eight and nine throughout and other intervals just at apex irregularly punctate; punctation of intervals eight and nine in apical half very fine and sparse. Parascutellar (abbreviate) striole long, about 0.2 as long as elytron, with a large setigerous pore basally isolated from basal elytral border. Interval three with a series of seven very distinct discal setigerous pores adjoining to stria two along its entire length; intervals five and seven without discal pores. Marginal umbilicate series without distinct gap at middle, consisting of 22–25 setigerous pores. Lateral groove narrow and flat throughout, without distinct elongate convexity along this groove apically. Microsculpture highly obliterated on intervals, without distinct meshes or lines, granulate in lateral groove.

Wings fully developed.

Ventral surface: Ventral side of thorax glabrous except for sparse very fine short setae on prosternum anteriorly, almost throughout finely punctate laterally. Met-episternum markedly longer than wide, strongly narrowed posteriorly. Abdominal sternites mostly smooth, only two basal ones with very fine non-setigerous punctures;

last visible sternite (VII) (in male) very widely rounded at apex, with one pair of marginal setae; these setae not removed from margin.

Legs: Meta-coxae each only with two obligatory setigerous pores, without additional pores and setae. Pro-femur with deep longitudinal excavation on inner side. Pro-tibia on dorsal side without longitudinal sulcus, with two similar sized preapical spines on outer margin. Metafemur ventrally with two setae at posterior margin and without setae at anterior margin. Pro- and meso-tarsi dorsally with a few very fine and short setae. Pro-tarsomeres one to four and meso-tarsomeres two to four (in male) markedly widened, short, with biseriate adhesive scales ventrally; meso-tarsomere one not widened, elongate, only slightly shorter than meso-tarsomeres two and three combined, with a pair of very small scales just at apex. Meta-tarsus slender, about as long with tarsomeres two and three weakly and tarsomeres three and four markedly widened distally; meta-tarsomere one slightly longer than meta-tarsomeres two and three combined. Tarsomere five with two pairs of ventro-lateral setae.

Aedeagus: With comparatively large parameres and basal bulb. Median lobe of aedeagus in lateral view arcuate on dorsal side, with ventral margin almost straight in middle portion and convex in the apical quarter; apex sharply hooged ventrally; in dorsal view median lobe almost straight, with terminal lamella very wide and short, rounded apically. Apical orifice in dorsal position, wide apically. Internal sac with spiny formation medially, without spines.

4. *Coleolissus iris* Andrewes, 1924

Description taken from Andrewes, 1924b: 135 and Kataev, 2022: 294.

Size: Length 9.0–10.0 mm; width 3.0–3.6 mm.

Color: Black, elytra strongly iridescent: margins of prothorax and elytra, suture (on apical half), palpi, antennae, and legs testaceous. Wider yellowish-brown margins, and elytra along sides and suture in apical half are also yellowish brown.

Head: Convex, smooth and polished, though with traces of minute punctuation, frontal furrows oblique, barely reaching eye, joint three of antennae nearly twice as long as two. Head very finely punctate, with fronto-ocular furrows reaching supraorbital furrows; mentum with a very wide and short, less prominent tooth.

Pronotum: Quadrate, moderately convex, more than half as wide again as head, a fourth wider than long, base a little wider than apex, sides slightly reflexed and gently rounded, with a setiferous pore before middle, hind angles obtuse and rounded, but evident; median line fine, base somewhat depressed, with wide shallow foveae, surface very finely punctate, sparsely on disk, which is consequently shiny, closely and confluently across base. Pronotum relatively narrower, with wider base, more widely rounded sides and more narrowly rounded basal angles.

Elytra: Elongate-oval, rather less than twice as long as wide, base bi-emarginate, shoulders obsolete, border forming a sharp angle above them, slightly sinuate close to apex; striae deep, striole fairly long between one and two, intervals convex, three with a series of punctures along margin of stria two, surface shiny, but finely and sparsely punctate. Elytra relatively longer, their basal border more strongly arched, forming almost right or acute angle with lateral border; all elytral intervals finely punctate.

Ventral surface: Beneath, the surface is shiny and iridescent, vaguely striate, the sterna with a few punctures. Abdominal sternites finely pubescent, last visible abdominal sternite rounded and with two pairs of setae in both sexes.

Legs: In the meta-tarsi joint one equal to two and three combined. In the male the first four joints of the pro- and meso-tarsi are dilated and clothed with squamae beneath. Fore tibiae with longitudinal sulcus. Pro- and meso-tarsomeres in male less widened.

Aedeagus: Median lobe of aedeagus much slenderer, with button-like apical capitulum and without sclerotic spines in internal sac.

5. ***Coleolissus kejvali*** **Kataev, 2022**

Remarks: Detailed species description is available in Kataev, 2022: 290.

6. ***Coleolissus monstrosipenis*** **Kataev, 2022**

Remarks: Detailed species description is available in Kataev, 2022: 296.

7. ***Coleolissus nakajimai*** **Ito, 2016**

Description taken from Ito, 2016: 362.

Body widely oblong, similar in outline to genus *Harpalomimetes.*

Size: Length 12.5 mm; width 4.8 mm.

Color: Black, shiny, clearly iridescent on elytra and weakly so on pronotum; appendixes of buccal part, antennae, lateral margins of pronotum, and legs yellowish brown, labrum and mandibles brown. Head large, 0.68 times as wide as the pronotal width, gently convex, mostly sparsely and minutely punctate, rather coarsely and densely so near lateral bases of clypeus; labrum subsquare; clypeus shallowly emarginate at apex, mostly bearing longitudinal rugosities; clypeal suture clearly but not deeply impressed; frontal impressions moderate in depth in apical third, thence abruptly shallowed backwards and obliterated near supraorbital grooves; eyes large, not convex; temples rather long, gently convergent backwards; genuine ventral margins of eyes narrowly isolated from buccal fissure; antennae slender, third segment pubescent in apical four-fifths, as long as the fourth and twice the second; ligula almost parallel-sided, slightly emarginate at apex; paraglossae long, rather

wide; third segment of labial palpus slender, truncate at apex, one-tenth longer than the second; mentum blunt-triangularly toothed at apex, epilobes narrow, not widened apicad; microsculpture largely invisible, observed only on apical areas of clypeus as isodiametric meshes.

Pronotum: Quadrate, 1.31 times as wide as long, weakly convex, almost flat on disc, arcuate at sides, a little more strongly convergent basad than apicad, minutely and rather densely punctate in apical areas, lateral furrows and basal areas whose punctures in median part are finer and sparser; apex obtrapezoidally emarginate, unbordered in narrow middle area; base almost equal in length to apex, hardly emarginate in middle, weakly rounded at sides; apical angles fairly produced forwards, narrowly rounded; basal angles regularly rounded; lateral furrows narrow, weakly gradually widened basad, fused with basal foveae which are shallow, ill-defined, and bear thin rugosities near apico-internal areas; front transverse impression shallow, the hind one more vague; median line somewhat wide in middle, narrower and shallower near apex, thence obsolete; microsculpture partly visible in surrounding areas of disc, consisting of very obscure minute transverse meshes.

Elytra: Widely oblong, 1.17 times as wide as the pronotum, approximately two-thirds longer than wide, weakly elevated, almost flattened on disc, very sparsely and microscopically punctate; sides weakly curved in humeri, barely arcuate in middle, gently incurved from apical third, shallowly sinuate before apices; apices narrow, produced backwards, narrowly rounded at distal margins, edentate at sutural angles; bases each shallowly emarginate, thickened in lateral fourth, with an obtuse and acute humeral angle; striae deep, clearly crenulate in bottoms, scutellar striole long; intervals fairly convex even on disc, becoming more convex towards the surrounding areas of the disc, third interval with a series of seven to nine setiferous pores along

second stria; marginal series not interrupted, composed of 22–24 umbilicate pores; microsculpture invisible under 80× magnification. Hind wings vestigial, 0.57 times as long as elytral length.

Ventral side: Almost smooth, pro, meso- and met-episterna, and lateral areas of meta-ventrite minutely punctate; met-episterna a little long, one-fourth longer than wide; apical margin of seventh abdominal sternite in female quadrisetose and widely and weakly rounded.

Legs: Long; fore tibiae each gently dilated apicad, not sulcate, with three thin spines along apico-external margin; tarsi long and slender, hind tarsi in female 1.07 times as long as the width of head, first segment as long as the second and third taken together, four-fifths longer than the second, four times as long as the fourth, claw segment trisetose along inner ventral margin and bisetose along the outer one.

Female genitalia: Styluses each clearly curved outwards, with two fine setae a little apart from tip, without seta along both margins; basal segment bearing one long seta behind apical margin; valvifer bisetose at apex.

8. *Coleolissus noeli* Andrewes, 1930

Description taken from Andrewes, 1930a: 18.

Size: Length 8 mm.

Color: Black, slightly iridescent, shiny: palpi, antennae, and lateral border of prothorax ferruginous, legs flavous.

Head: Small, convex, smooth, clypeal suture fairly deep, continued obliquely on each side towards eye, eyes rather flat, antennae extending a little way beyond base of prothorax, mentum with a short tooth.

Pronotum: Convex, subquadrate, nearly two-thirds wider than head, a third wider than long, base wider than apex, its sides bordered and slightly oblique, sides

unisetose, narrowly bordered, explanate from near front angle, the explanate part widening rapidly to about basal fourth, gently and uniformly rounded, hind angles obtuse but hardly rounded; median line very fine, connecting the two transverse impressions, front one faint, hind one fairly deep, basal foveae shallow, basal area depressed, its sides uneven, finely punctate, the punctures extending forward along the explanate area, disk smooth.

Elytra: Convex, ovate, pointed at apex, base truncate, its border rather distant from margin, bisinuate and forming at shoulder a sharp angle with side border, a fourth wider than prothorax, a little more than a half longer than wide; striae moderately deep, impunctate, intervals somewhat convex on disk, much more convex near apex, inner margin of eight subcarinate near base, three with three or four minute pores adjoining stria two, surface smooth. No microsculpture, except some vestiges on head.

Ventral surface: Underside smooth, pro-sternal process bisetose at apex, met-episterna longer than wide, not much contracted behind, last ventral segment of female with two setae on each side.

9. *Coleolissus perlucens* (Bates, 1878)

Description taken from Bates, 1878b: 715.

Color: Pitch-black iridescens, glabrous, antennae, palpi and legs are yellowish.

Head: Narrowed posteriorly, clypeal suture reaches eyes.

Pronotum: Quadrate. The sides gently curved, posterior angle obtuse, posterior margin wide and sinuate, edges reddish.

Elytra: Striated, intervals slightly convex, third interval multipunctated.

Remarks: Detailed redescription of the species is available in Kataev, 2022: 286.

Genus 5: ***Dioryche* MacLeay, 1825**

Description from Noonan, 1985: 34 and Kataev, 2012a: 112.

Length: Approximately 7 to 10 mm.

Color: Body reddish brown, reddish black, black. Appendages partly or completely lighter in color than body. Dorsal Luster. With or without slight metallic tinges.

Dorsal Microsculpture: Mesh isodiametric and prominent to obsolete on frons of head; isodiametric and prominent to average, slightly or completely transverse or obsolete on pronotum; slightly transverse, average to prominent on elytra.

Punctuation, pubescence and setation: Punctures, each with short fine seta, distributed as follows: moderate sized, nearly confluent on pronotum posteriorly; small to moderate sized and moderately dense on pronotal and elytral lateral margins; small, sparse to moderately dense on pronotal disc; very small, moderately dense on venter. Elytral intervals one to seven or eight with very fine to moderate sized punctures, sparse to moderately dense, each with or without short and very fine to short seta. Dorsa of tarsi with moderately dense fine short setae. Elytral intervals three, five, and seven each with row of nine to 15 setigerous punctures, mostly adjacent to interneurs two, five, and seven respectively and small to large and prominent according to species. Ovipositor, valvifers each with two to three distal ventral setae; stylomeres one each with two or three distal lateral setae on venter; stylomeres two each with one or two proximal dorsal setae.

Head: Rather deeply emarginate clypeal apex bordered along its entire length with the labral base visible in the emargination, frontal foveae very small without clypeo-ocular prolongations, mentum without medial tooth, mentum and submentum separated by complete transverse suture, epilobes narrow, ligular sclerite narrow, paraglossae wide, labial basal palpomere not carinate. Clypeal apex deeply emarginate.

Pronotum: With posterior angles acute to obtuse.

Elytra: Finely, not densely punctate elytra with very short and fine setae on two or three external intervals. elytral intervals three, five, and seven each with rows of setigerous pores, anal sternite with two pairs of setae in both sexes.

Legs: Meta-coxa without posteromedial pore, pro-tibia ventrally sulcate along entire length, apical spur of pro-tibia slender, lanceolate, tarsi with sparse or moderately dense fine short setae dorsally. Hind basitarsi approximately 0.7 to 1.0 length of tarsomeres two and three combined.

Aedeagus: Median lobe of aedeagus with apical orifice extended to basal bulb and with several separate spines in internal sac. Median lobe in some species with knob like apical disc; dorsal membranous area rapidly narrowed proximally or not, extended to basal bulb. Internal sac with two to nine enlarged spines.

Female Genitalia: Apical stylomere with one or two proximal dorsal setae.

Key to the species of the genus *Dioryche* Macleay, 1825 (Key modified from Andrewes, 1933 and Kataev, 2012)

1. Intervals of the elytra near apex of approximately the same width……2
- Intervals 3 and 5 near apex clearly wider than the adjoining ones…….8
2. Intervals flat; upper surface cupreous or brassy…….***D. torta*** Macleay, 1825
- Intervals convex; upper surface black with greenish reflections……..…3
3. Meshes of the microsculpture slightly transverse on the elytra…….……..***D. convexa*** Andrewes, 1924
- Meshes of the microsculpture distinctly isodiametric on elytra……..…...4
4. Femora pale, brownish yellow, not darker than tibiae……...…5
- Femora dark, notably darker than tibiae…….……..…..6

5. Elytral basal border meeting lateral margin at nearly right angle; pronotum with deep apical emargination and distinct, at most only slightly obliterate microsculpture on disc, pronotal lateral depression moderately wide in its apical portion……..……..***D. cuprina*** Dejean, 1829

- Elytral basal border meeting lateral margin at distinct obtuse angle; pronotum with shallow apical emargination and obliterate microsculpture on disc, pronotal lateral depression very narrow in its apical portion…….……***D. subrecta*** Kataev, 2012

6. Elytral basal border meeting lateral margin at distinct obtuse angle; pronotal basal edge ciliate; elytral microsculpture consisting of scarcely visible, weakly transverse meshes; pronotum markedly narrowed basad; male anal sternite rounded at apex……..……..***D. nitidula*** Kataev, 2012

- Elytral basal border meeting lateral margin at nearly right angle; pronotal basal edge glabrous; elytral microsculpture consisting of distinct isodiametric meshes; pronotum comparatively weakly narrowed basad; male anal sternite rounded or truncate at apex……7

7. Pronotal microsculpture more distinct, in both sexes visible throughout, consisting of slightly obliterate meshes.....***D. dravidana*** Kataev, 2012

- Pronotal microsculpture less distinct, in female consisting of strongly obliterate, weakly transverse meshes, in male often absent on disc……...***D. lucidula*** Dejean, 1829

8. Sides of prothorax not sinuate behind; elytral striae moderately impressed; microsculpture of the elytra formed by meshes at least approximately isodiametric……9

- Sides of prothorax slightly, though evidently sinuate before base; elytral striae very deep throughout; microsculpture of the elytra formed by meshes on average three times wider than long……...……....***D. solida*** Andrewes, 1933

9. Elytral intervals moderately convex, very narrow and subcostate near apex; scutellary striole, though very short, generally visible; femora dark……..***D. nagpurensis*** Bates, 1891

- Elytral intervals only slightly convex and though narrow, hardly more convex near apex; scutellary striole usually formed by an umbilicate pore only; legs pale…….***D. chinnada*** Andrewes,1921

1. *Dioryche chinnada* Andrewes, 1921

Description taken from Andrewes, 1921b: 342.

Size: Length 7.5–8.0 mm.

Color: Piceous upper side aeneous, finely greened, under side with a faint green reflection; joints one to two of antennae and legs (except knees and tarsi) testaceous, last joint of labial and last two joints of maxillary palpi (except apex) fuscous.

Head: Wide, convex behind, flattened in front, front of clypeus bordered and strongly emarginated, suture fine, ending on each side in a fine point, eyes moderately prominent, antennae hardly reaching beyond base of prothorax, surface very finely and sparsely punctuate.

Pronotum: Transverse (1.9–2.5 mm), moderately convex, widest rather before middle, base rather wider than apex, sides gently rounded, not sinuate behind, hind angles obtuse, basal foveae moderately deep, surface faintly laterally rugose, finely and sparsely punctuate, base closely punctuate, with some minute longitudinal striae in the middle.

Elytra: Rather flat, elongate, sides parallel, base strongly bisinuate, border forming a well-marked angle on shoulder, sides rather deeply emarginated before apex, striae clearly cut but not deep, impunctate, not becoming deeper near apex, scutellary striole very short, arising from an umbelicate pore, intervals flat, even ones much narrower than odd ones towards apex, three, five and seven seriate punctuate, the punctures rather large and conspicuous, five depressed near apex, marginal series interrupted in middles, surface finely punctuate.

2. *Dioryche convexa* Andrewes, 1924

Description taken from Andrewes, 1924a: 90.

Size: Length 7.5 mm.

Color: Black, with a very slight greenish reflection on the elytra; article one to two of antennae, palps, sides of the labrum, and femora red; the rest of the antenna, legs, tarsi, and basal part of the mandibles brownish.

Head: Fairly small head (wide. 1.5 mm), very convex, strongly scabby labrum, exposing the basal membrane of the labrum, very straight suture, terminated by a round point on each side, little protruding eyes.

Pronotum: Transverse pronotum (1.6*1.9 mm), convex, cut squarely and almost equally tapered at the ends, sides slightly rounded so that the extreme width is at a little before the middle, without trace of sinuation before the posterior angles, which are a little obtuse, a setae at the three eighths of the base, sides of the base rounded: median line fine, visible only on the middle of the disc, basal foveoles shallow, fairly close to the angles, very smooth surface, only a few scattered points on the disc, base punctuated.

Elytra: Elongated, oval rimmed forment base, forming a slightly obtuse angle to the shoulders with the marginal rim, sinuate sides near the end; striae well marked,

smooth, slightly convex intervals on the disc, very convex and of uniform width at the end: surface of striae with few small dots, intervals three, five and seven each with a series of slightly larger dots but quite small and very clearly indicated.

Ventral side: Below fairly smooth, pro-sternal process carrying a large point on each side towards the end, met-episterna longer than wide, tucked in on the internal side.

3. *Dioryche cuprina* (Dejean, 1829)

Description taken from Kataev, 2012a: 114.

Size: Length 6.0–7.4 mm; width 2.3–2.9 mm

Color: Body brownish black or reddish black, in many specimens with light copper or green metallic lustre on head and pronotum and in some specimens also on elytra. Labrum entirely or externally, base of mandibles and very narrow lateral margins of pronotum usually reddish brown. Palpi, antennae and legs in most specimens unicolorous, brownish yellow, in some specimens antennomeres two to 11 or three to 11 and tarsi slightly infuscate.

Head: Head moderately sized, smooth or finely and sparsely punctate along inner margin of eyes. Eyes rather convex, separated from buccal fissure ventrally by distance equal to or slightly greater than width of antennomere one. Tempora moderately long, somewhat convex, rather abruptly sloped to neck. Labrum slightly concave anteriorly. Frontal suture slightly deepened. Ligular sclerite very narrow, not widened apically. Paraglossae wide, much extended beyond ligular sclerite. Antennae slender, surpassing pronotal base by one apical antennomere. Middle antennomeres (five to eight) about twice as long as wide. Dorsal microsculpture visible throughout, consisting of distinct, more or less isodiametric meshes.

Pronotum: Pronotum, widest before middle and behind lateral setigerous pore, with sides either rather evenly rounded along entire length or almost rectilinearly

converging (very widely rounded) basally. Apical margin rather deeply emarginate, bordered only laterally; basal margin concave medially, rounded laterally, bordered along entire length, slightly longer than apical margin and approximately equal to elytral base between humeral angles. Apical angles markedly protruding, rounded at apex. Basal angles obtuse, with tiny obtuse denticle at apex. Pronotal basal edge glabrous. Lateral depressions beginning at apical angles, moderately wide apically, notably widened behind lateral setigerous pore and fused basally with wide latero-basal depressions. Basal foveae shallow, elongate, weakly delimited within latero-basal depressions. Pronotal disc weakly convex and evenly sloped to lateral depressions. Basal area between latero-basal depressions convex or slightly depressed. Pronotal surface finely, densely and irregularly punctate basally and along sides (many punctures confluent) and more sparsely punctate along apical margin; central part of disc either smooth or with scattered fine punctures; setae in punctures very short and hardly visible. Microsculpture visible throughout, consisting of distinct meshes, isodiametric along margins and weakly transverse, occasionally slightly obliterate, in central portion of disc.

Elytra: Elytra moderately convex, elongate, widest at middle, very widely rounded or almost parallel at sides. Shoulders angulate, each with tiny denticle at apex (in most specimens visible only from behind). Elytral sides rounded just behind shoulders. Subapical sinuation moderately deep, without denticle at base. Sutural angle acute, in both sexes blunt at apex. Basal border glabrous, strongly and rather evenly sinuate along entire length, meeting lateral margin at nearly right angle. Striae impunctate, superficial or slightly impressed on disc and deepened before apex. Parascutellar striole short, at most as long as width of second interval basally, with basal pore. Intervals largely wide and flat (in some specimens weakly convex), narrow and

markedly convex before apex. All intervals near apex approximately equal in width. Intervals finely and sparsely punctate; punctation on lateral intervals denser than on inner ones. Two or three lateral intervals covered with very short and fine setae. Third, fifth and seventh intervals each with longitudinal row of distinct dorsal setigerous pores mostly not associated with striae (pore diameter half to one-third as great as width of interval). Lateral series of umbilicate setigerous pores widely interrupted at middle, and posterior group of pores divided in two subgroups (preapical and apical), each consisting of four and three pores respectively; in some specimens fourth pore of preapical group slightly separated from first, second and third pores. Dorsal microsculpture in both sexes visible throughout, consisting of distinct isodiametric meshes.

Hind wings fully developed.

Ventral surface: All visible abdominal sternites, in addition to obligatory fixed setae, covered with very short scattered setae. Apex of anal sternite subtruncate in male and rounded in female.

Legs: Meta-coxae finely punctulate and finely setose, without any additional setigerous pores. Meta-femur with two setigerous pores at hind margin. Tarsi clearly setose dorsally Meta-tarsomere one slender, approximately equal to meta-tarsomeres two and three combined. In male, pro and meso-tarsomeres one to four comparatively weakly dilated, with biseriate adhesive vestiture ventrally; meso-tarsomere one as long as meso-tarsomeres two and three combined and with adhesive scales only in apical half.

Aedeagus: Median lobe arcuate, with apex curved ventrad and with comparatively large oblique apical capitulum protruding ventrally and dorsally (lateral aspect); dorsoapical flange situated more distally than ventroapical one. Terminal lamella

long, in dorsal aspect about 3.5–4.0 times as long as wide, slightly rounded at sides, widest at middle and evenly narrowed to apex. Internal sac with group of eight to ten large and moderately-sized spines.

Female genitalia: Hemisternite with three thick setae distally. Basal stylomere with one long seta latero-distally. Apical stylomere comparatively long and weakly curved, with one long and thin proximal seta at dorsal margin of scrobe.

4. *Dioryche dravidana* Kataev, 2012

Description taken from Kataev, 2012a: 123.

Size: Length 5.9 mm; width 2.3 mm; paratype: 5.8 and 2.4 mm, respectively.

Color: Body black, with light copper (in holotype) or metallic green (in paratype) luster on dorsum. Outer margins of labrum and very narrow lateral margins of pronotum reddish brown. Palpi, antennomeres two to 11, trochanters, femora and tarsi blackish brown; antennomeres one to two and tibiae paler, brownish yellow.

Head: Head moderately sized, with few fine punctures near supraorbital setigerous pore (in holotype) or impunctate (in paratype). Eyes moderately convex, separated from buccal fissure ventrally by distance approximately equal to width of antennomere one. Tempora moderately long, somewhat convex, sloped to neck. Labrum slightly concave anteriorly. Frontal suture superficial. Ligular sclerite narrow, not widened apically. Paraglossae wide, much extended beyond ligular sclerite. Antennae slender, surpassing pronotal base by one apical antennomere. Middle antennomeres (five to eight) about 1.7–1.8 times as long as wide. Dorsal microsculpture visible throughout, consisting of fine isodiametric meshes, slightly obliterate on frons.

Pronotum: Widest before middle and behind lateral setigerous pore, with sides rounded along entire length but in basal half more widely. Apical margin moderately

emarginate, bordered only laterally; basal margin more or less straight medially, very widely rounded laterally, bordered along entire length, slightly longer than apical margin and slightly shorter than elytral base between humeral angles. Apical angles moderately protruding, rounded at apex. Basal angles obtuse, with tiny obtuse denticle at blunt apex. Pronotal basal edge glabrous, not ciliate. Lateral depressions very narrow from apical angle to lateral seta and evenly widened from lateral seta to base where they are fused with wide and rather shallow latero-basal depressions. Basal foveae shallow, oval, weakly delimited within latero-basal depressions. Pronotal disc moderately convex and evenly sloped to lateral depressions. Basal area between latero-basal depressions somewhat convex. Pronotal surface finely, densely and irregularly punctate basally and narrowly along sides (many punctures confluent) and more sparsely along apical margin; central part of disc with scattered finer punctures; setae in punctures very short and hardly visible. Microsculpture visible throughout, consisting of distinct isodiametric meshes along margins and of obliterate, weakly transverse meshes on disc.

Elytra: Moderately convex, elongate, widest at middle, very widely rounded at sides. Shoulders angulate, each with tiny acute denticle at apex (visible from behind). Elytral sides rounded just behind shoulders. Subapical sinuation moderately deep, without denticle at base. Sutural angle acute, in both sexes blunt at apex. Basal border glabrous, strongly and rather evenly sinuate along entire length, meeting lateral margin at nearly right angle. Striae impunctate, slightly impressed on disc and markedly deepened before apex. Parascutellar striole short, approximately as long as width of second interval basally, with basal pore. Intervals largely wide and flat, narrow and markedly convex before apex (in paratype more convex than in holotype). All intervals near apex approximately equal in width; fifth interval in holotype

slightly sloped to fifth stria. All intervals distinctly and sparsely punctate; punctation on lateral intervals denser than on inner ones. Two or three lateral intervals covered with very short and fine setae. Third, fifth and seventh intervals each with longitudinal row of comparatively large dorsal setigerous pores mostly not associated with striae (diameter of pores half or one-third as great as width of interval). Lateral series of umbilicate setigerous pores widely interrupted at middle, posterior group of pores divided in two subgroups (preapical and apical) consisting each of four and three pores respectively. Dorsal microsculpture in both sexes visible throughout, consisting of distinct, more or less isodiametric meshes.

Hind wings fully developed.

Ventral surface: All visible abdominal sternites, in addition to obligatory fixed setae, covered with very short scattered setae. Apex of anal sternite truncate in male and rounded in female.

Legs: Meta-coxae finely punctulate and finely setose, without any additional setigerous pores. Metafemur with two setigerous pores at hind margin. Tarsi rather clearly setose dorsally. Meta-tarsomere one slender, approximately equal to meta-tarsomeres two and three combined. In male, pro- and meso-tarsomeres one to four comparatively weakly dilated, with biseriate adhesive vestiture ventrally; meso-tarsomere one approximately as long as meso-tarsomeres two and three combined and with adhesive scales apically.

Aedeagus: Median lobe weakly arcuate, with moderately large oblique apical capitulum approximately equally protruding ventrally and dorsally (lateral aspect); ventroapical flange situated more distally than dorsoapical one. Terminal lamella moderately long and narrow in dorsal aspect about 2.5 times as long as wide, evenly

and rather weakly narrowed to apex. Internal sac with group of four comparatively large spines apically and group of three smaller spines medially.

Female genitalia: Hemisternite with two long and thick setae distally. Basal stylomere with one long and thick seta latero-distally. Apical stylomere weakly curved, with one long and thin proximal seta at dorsal margin of scrobe.

5. ***Dioryche lucidula* (Dejean, 1829)**

Description taken from Kataev, 2012a: 119.

Size: Length 5.8–6.9 mm; width 2.3–2.7 mm.

Color: Body brownish black to black, with more or less vivid metallic green or bronze luster on dorsum. Labrum entirely or externally, base of mandibles and very narrow lateral margins of pronotum often reddish brown. Palpi, antennae and tibiae brownish yellow; femora and trochanters blackish brown; tarsi brown; in most specimens antennomeres three to 11 and tibiae apically slightly infuscate.

Head: Head moderately sized, in most specimens finely and sparsely punctate along inner margin of eyes, mainly around supraorbital setigerous pore. Eyes moderately convex, separated from buccal fissure ventrally by distance equal to or slightly greater than width of antennomere one. Tempora moderately long, somewhat convex, rather abruptly sloped to neck. Labrum slightly concave anteriorly. Frontal suture slightly deepened. Ligular sclerite narrow, not widened apically. Paraglossae wide, much extended beyond ligular sclerite. Antennae slender, surpassing pronotal base by one apical antennomere. Middle antennomeres (five to eight) about 1.8–2.0 times as long as wide. Dorsal microsculpture consisting of strongly obliterate, more or less isodiametric meshes, on frons of male indistinct.

Pronotum: Widest in apical third, behind lateral setigerous pore, with sides rather evenly rounded in apical half and almost rectilinearly converging (very widely

rounded) basally. Apical margin moderately emarginate, bordered only laterally; basal margin slightly concave medially, very widely rounded or oblique laterally, bordered along entire length, slightly longer than apical margin and approximately equal to or slightly shorter than elytral base between humeral angles. Apical angles slightly protruding, rounded at apex. Basal angles obtuse, with tiny obtuse denticle at apex. Pronotal basal edge glabrous, not ciliate. Lateral depressions very narrow from apical angle to lateral seta and evenly widened from lateral seta to base where they are fused with wide and rather shallow latero-basal depressions. Basal foveae shallow, elongate, weakly delimited within latero-basal depressions. Pronotal disc moderately convex and evenly sloped to lateral depressions. Basal area between latero-basal depressions somewhat convex. Pronotal surface finely, densely and irregularly punctate basally and along sides (many punctures confluent) and more sparsely along apical margin; central part of disc either smooth or with scattered fine punctures mainly along median line; setae in punctures very short and hardly visible. Microsculpture in female consisting of distinct isodiametric meshes along margins and of more or less strongly obliterate meshes on disc, in male meshes obliterate throughout and usually indistinct on disc.

Elytra: Moderately convex, elongate, widest at middle, very widely rounded or almost parallel at sides. Shoulders angulate, each with tiny acute denticle at apex (in many specimens visible dorsally). Elytral sides rounded just behind shoulders. Subapical sinuation moderately deep, without denticle at base. Sutural angle acute, in both sexes blunt at apex. Basal border glabrous, strongly and rather evenly sinuate along entire length, meeting lateral margin at nearly right angle. Striae impunctate, slightly impressed on disc and markedly deepened before apex. Parascutellar striole short, at most as long as width of second interval basally, with basal pore. Intervals

wide and slightly convex basally, narrow and rather strongly convex before apex. All intervals near apex approximately equal in width. Intervals finely and sparsely punctate; punctuation on lateral intervals denser than on inner ones. Two or three lateral intervals covered with very short and fine setae. Third, fifth and seventh intervals each with longitudinal row of distinct dorsal setigerous pores mostly not associated with striae (diameter of pores variable, half to one-fifth as great as width of interval). Lateral series of umbilicate setigerous pores widely interrupted at middle, posterior group of pores consisting of (3+1) + 3 pores. Dorsal microsculpture in both sexes visible throughout, consisting of distinct isodiametric meshes.

Hind wings fully developed.

Ventral surface: All visible abdominal sternites, in addition to obligatory fixed setae, covered with very short scattered setae. Apex of anal sternite rounded in both sexes.

Legs: Meta-coxae finely punctulate and finely setose, without any additional setigerous pores. Meta-femur with two setigerous pores at hind margin. Tarsi rather clearly setose dorsally. Meta-tarsomere one slender, approximately equal to meta-tarsomeres two and three combined. In male, pro- and meso-tarsomeres one to four comparatively weakly dilated, with biseriate adhesive vestiture ventrally; meso-tarsomere one approximately as long as meso-tarsomeres two and three combined and with adhesive scales only at apex.

Aedeagus: Median lobe bent in basal half, almost straight in apical half, with comparatively large oblique apical capitulum rather weakly protruding ventrally and rather strongly protruding dorsally (lateral aspect); dorsoapical flange situated more distally than ventroapical one. Terminal lamella moderately long, in dorsal aspect about three times as long as wide, slightly sinuate at sides and narrowed to apex. Internal sac with group of six comparatively large spines.

Female genitalia: Hemisternite with two long and thick setae distally. Basal stylomere with one long and thick seta latero-distally. Apical stylomere shallowly curved, with one long and thin proximal seta at dorsal margin of scrobe.

6. ***Dioryche nagpurensis* (Bates, 1891)**

Description taken from Bates, 1891b: 329 and Andrewes, 1921b: 342.

Size: Length 7.5 mm.

Color: More slender, narrow enough, oblong, darker greenish-bronze, basal joints of antennae, palpi and tarsi brick red in color.

Head: Not enlarged but before the eye a little wider; clypeus arched.

Pronotum: Subcordato-square, sides of the base slightly sinuated, posterior angle right angled; above smooth, coarsely punctated discreetly. The base is discretely and coarsely punctuated, basal pit deep, with scattered punctures, is scarcely evident.

Elytra: Striate, striae attenuated at the apex with difficulty the deeper of the peak, with broad intervals, the back of these, no less than distinctly punctated, third, fifth and seventh seriately punctated.

7. ***Dioryche nitidula* Kataev, 2012**

Description taken from Kataev, 2012a: 125.

Size: Holotype: length 6.5 mm; width 2.6 mm; paratype: 6.6 and 2.7 mm, respectively.

Color: Body reddish black, with rather vivid metallic green lustre on dorsum. Outer margins of labrum, base of mandibles, very narrow pronotal lateral margins and elytral epipleurae reddish brown. Palpi, antennae and legs brownish yellow; femora more strongly and antennomeres three to 11 and tarsi less strongly infuscate.

Head: Moderately sized, with few fine punctures along inner margin of eyes and scattered micropunctures on frons (in holotype) or head almost impunctate (in

paratype). Eyes moderately convex, separated from buccal fissure ventrally by distance slightly greater than width of antennomere one. Tempora moderately long, somewhat convex, sloped to neck. Labrum slightly concave anteriorly. Frontal suture slightly impressed. Ligular sclerite narrow, not widened apically. Paraglossae wide, much extended beyond ligular sclerite. Antennae slender, surpassing pronotal base by one apical antennomere. Middle antennomeres (five to eight) about 2.0–2.5 times as long as wide. Dorsal microsculpture visible only along apical margin of clypeus and on narrow area along inner margin of eyes, consisting of very fine isodiametric meshes.

Pronotum: Widest before middle and behind lateral setigerous pore, markedly narrowed basad, with sides rounded in apical half and almost rectilinearly converging posteriad in basal half. Apical margin moderately emarginate, bordered only laterally; basal margin more or less straight, bordered along entire length, slightly shorter than elytral base between humeral angles and slightly longer than (in holotype) or approximately equal to (in paratype) apical margin. Apical angles comparatively weakly protruding, rounded at apex. Basal angles more than 90°, rather sharp, with tiny obtuse denticle at apex. Pronotal basal edge ciliate. Lateral depressions very narrow in apical two-thirds and evenly widened in basal third where they are fused with wide and shallow latero-basal depressions. Basal foveae shallow and oval, located within latero-basal depressions. Pronotal disc moderately convex, evenly sloped to lateral depressions. Basal area between latero-basal depressions somewhat convex. Pronotal surface finely, densely and irregularly punctate basally and narrowly along sides, with scattered punctures along apical margin; central part of disc with scattered fine punctures in holotype and smooth in paratype; setae in punctures very short and hardly visible. Microsculpture highly reduced; more or less distinct

isodiametric or weakly transverse meshes visible along pronotal margins; meshes scarcely visible (in holotype) or absent (in paratype) on disc.

Elytra: Moderately convex, elongate, widest behind middle, with sides slightly diverging in middle portion. Shoulders weakly prominent, each with tiny acute denticle at apex (visible from behind). Elytral sides rounded just behind shoulders. Subapical sinuation moderately deep, without denticle at base. Sutural angle acute, slightly blunted at apex. Basal border glabrous, moderately and rather evenly sinuate along entire length, meeting lateral margin at distinct obtuse angle. Striae impunctate, slightly impressed on disc and markedly deepened before apex. Parascutellar striole short, approximately as long as width of second interval basally, with basal pore. Intervals wide and weakly convex, almost flat on disc, narrow and markedly convex before apex. All intervals near apex approximately equal in width. Intervals on disc very finely and sparsely punctate; punctation on lateral intervals much coarser and denser than on inner ones. Three lateral intervals covered with very short and fine setae. Third, fifth and seventh intervals each with longitudinal row of dorsal setigerous pores mostly not associated with striae (diameter of pores about one-third as great as width of interval). Lateral series of umbilicate setigerous pores widely interrupted at middle, posterior group of pores divided in two subgroups (preapical and apical) consisting each of four and three pores respectively. Dorsal microsculpture throughout very fine, consisting of strongly obliterate, weakly transverse meshes.

Hind wings fully developed.

Ventral surface: All visible abdominal sternites, in addition to obligatory fixed setae, covered with very short scattered setae. Apex of anal sternite (in male) rounded.

Legs: Meta-coxae finely punctulate and finely setose, without any additional setigerous pores. Metafemur with two setigerous pores at hind margin. Tarsi rather sparsely and finely setose dorsally. Meta-tarsomere one slender, approximately equal to meta-tarsomeres two and three combined. In male, pro- and meso-tarsomeres one to four very weakly dilated (more weakly than in other related species), with biseriate adhesive vestiture ventrally; meso-tarsomere one approximately as long as meso-tarsomeres two and three combined and with adhesive scales apically.

Aedeagus: Median lobe weakly arcuate, with comparatively small oblique apical capitulum slightly protruding ventrally (lateral aspect). Terminal lamella moderately long and narrow, slightly curved ventrad; in dorsal aspect about 3.5 times as long as wide, notably narrowed at middle and rounded at apex. Internal sac with two very large and one medium spines apically and two large spines medially.

8. *Dioryche solida* Andrewes, 1933

Description taken from Andrewes, 1933d: 32.

Size: Length 8–9 mm; width, 3–3.5 mm.

Color: Black, moderately shiny, upper surface dark bronze, palpi, joints one and two of antennae, and tibiae dark ferruginous.

Head: Large, convex, eyes not prominent, clypeus bordered, slightly emarginate, antennae slender, barely reaching base of elytra, surface with a few minute punctures on front and at sides. On the head the meshes are isodiametric.

Pronotum: Convex, a fourth wider than head and as much wider than long, widest just before middle, base a little wider than apex, its sides slightly oblique, sides finely bordered, gently rounded in front and faintly sinuate behind, a seta at apical fourth, hind angles slightly obtuse and moderately sharp; median line very faint, basal foveae

small but fairly deep, surface with some fine, vague, scattered punctures, the base more closely punctate, especially the foveae, which contain some larger punctures.

Elytra: Oval, convex, a third wider than pronotum, two-thirds longer than wide, the basal and side borders meeting in a small sharp angle at shoulder, a fairly deep sinuation on each side near apex; striae fairly deep, impunctate, scutellary striole reduced to an elongate, umbilicate pore, intervals flat, three and five evidently wider than the adjacent intervals near apex, three, five, and seven seriate-punctate, the punctures small and not very numerous, marginal series widely interrupted, surface very finely and indistinctly punctate. Microsculpture of the elytra and pronotum formed by meshes on average three times as wide as long.

Ventral surface: Pro-sternal process, meta-sternum, and middle of venter slightly and finely pubescent; meta-sternal process bordered; met-episterna bordered, a half longer than wide; last ventral segment with two lateral setae on each side in both sexes.

Legs: Male pro-tarsi with four slightly dilated joints.

9. *Dioryche subrecta* Kataev, 2012

Description taken from Kataev, 2012a: 127.

Size: Length 6.1–6.8 mm; width 2.5–2.8 mm.

Color: Body brownish black to black, with light metallic green or copper lustre on dorsum, at least along elytral margins. Labrum entirely or externally, base of mandibles and very narrow lateral margins of pronotum often reddish brown. Palpi, antennae and tibiae brownish yellow, at most antennomeres three to 11 or four to 11, tibiae apically and tarsi slightly infuscate.

Head: Moderately sized, smooth or with few very fine punctures at supraorbital setigerous pore. Eyes moderately convex, separated from buccal fissure ventrally by distance equal to or slightly greater than width of antennomere one. Tempora

moderately long, somewhat convex, rather abruptly sloped to neck. Labrum slightly concave anteriorly. Frontal suture slightly impressed. Ligular sclerite narrow, narrowed apicad. Paraglossae wide, much extended beyond ligular sclerite. Antennae slender, surpassing pronotal base by one apical antennomere. Middle antennomeres (five to eight) about 1.8–2.0 times as long as wide. Dorsal microsculpture visible throughout, in both sexes consisting of more or less obliterate isodiametric meshes.

Pronotum: Widest in apical third, just behind lateral setigerous pore, with sides in basal half either very widely rounded or almost rectilinearly converging posteriad. Apical margin moderately emarginate, bordered only laterally; basal margin more or less straight or slightly concave medially, bordered along entire length, slightly longer than apical margin and slightly shorter than elytral base between humeral angles. Apical angles slightly protruding, rounded at apex. Basal angles obtuse, with tiny obtuse denticle at sharp apex. Pronotal basal edge glabrous, not ciliate. Lateral depressions very narrow from apical angle to lateral seta and evenly widened from lateral seta to base where they are fused with wide and rather shallow latero-basal depressions. Basal foveae shallow, oval, usually weakly delimited within latero-basal depressions. Pronotal disc moderately convex and evenly sloped to lateral depressions. Basal area between latero-basal depressions somewhat convex. Pronotal surface rather densely and irregularly punctate basally and in lateral depressions, in most specimens also, but more sparsely, along apical margin; central part of disc usually smooth, occasionally with very fine scattered punctures; setae in punctures very short and hardly visible. Microsculpture in both sexes visible throughout, consisting of fine, more or less obliterate isodiametric meshes.

Elytra: Moderately convex, elongate, widest behind middle, with sides slightly diverging in middle portion. Shoulders angulate, each with tiny acute denticle at apex

(in many specimens visible dorsally); elytral sides rounded just behind shoulders. Subapical sinuation moderately deep, without denticle at base. Sutural angle acute, in both sexes either somewhat sharp or slightly blunted at apex. Basal border glabrous, moderately sinuate along entire length, meeting lateral margin at distinct obtuse angle. Striae impunctate, slightly impressed on disc and markedly deepened before apex. Parascutellar striole short, at most as long as width of second interval basally, with basal pore. Intervals wide and slightly convex basally, narrow and rather strongly convex before apex. All intervals near apex approximately equal in width. Intervals very finely and sparsely punctate; punctation on two or three lateral intervals denser and coarser than on inner ones. Two or three lateral intervals covered with very short and fine setae. Third, fifth and seventh intervals each with longitudinal row of distinct dorsal setigerous pores mostly not associated with striae (diameter of pores one-quarter to one-third as great as width of interval). Lateral series of umbilicate setigerous pores widely interrupted at middle, posterior group of pores consisting of four and three pores, respectively. Dorsal microsculpture in both sexes visible throughout, consisting of distinct isodiametric meshes.

Hind wings fully developed.

Ventral surface: All visible abdominal sternites, in addition to obligatory fixed setae, covered with very short scattered setae. Apex of anal sternite slightly emarginate in male and rounded in female. Meta-coxae finely punctulate and finely setose, without any additional setigerous pores. Meta-femur with two setigerous pores at hind margin. Tarsi rather clearly setose dorsally. Meta-tarsomere one slender, approximately equal to meta-tarsomeres two and three combined. In male, pro- and meso-tarsomeres one to four comparatively weakly dilated, with biseriate adhesive vestiture ventrally;

meso-tarsomere one approximately as long as meso-tarsomeres two and three combined and with adhesive scales only in apical half.

Aedeagus: Median lobe not bent in basal half, almost straight, with apex curved ventrad and without apical capitulum; ventral margin of median lobe rather strongly convex at middle. Terminal lamella triangular, approximately as long as wide, rounded to apex. Internal sac with four very small spines in apical half.

Female genitalia: Hemisternite with one long and thick seta distally. Basal stylomere with one long and thick seta latero-distally. Apical stylomere curved, with one long and thin proximal seta at dorsal margin of scrobe.

10. *Dioryche torta* MacLeay, 1825

Description taken from Macleay, 1825: 21 and Andrewes, 1919a: 154.

Size: Length 7 mm; width head: 1.50 mm, pronotum: 2.25 mm, elytra: 3.00 mm.

Color: Antenna brown, legs yellow, elytra black-brassy, black, shiny, upper surface brassy, labrum dark brown, palpi and legs yellow, antennae reddish. palpi reddish brown: third and sixth stria punctuated.

Head: Black with greenish tint, wide, shiny, finely punctuate, clypeus emarginated, leaving the basal membrane of the labrum exposed, clypeal suture fairly deep, ending in a punctiform fovea, from which a fine line runs obliquely backwards towards the eye; eyes rather flat, mandibles short and very strong.

Pronotum: Posteriorly frequently spotted. Transverse, not very convex, declivous to front angles, rather strongly emarginate in front, nearly straight behind, widest before middle, sides rounded in front then quite straight to hind angles, finely bordered, the border extending a little way from each angle along the front and basal margins, a setigerous pore at a third from apex, front angles rather sharp though rounded, hind angles obtuse, not much rounded; surface shiny, finely but not closely punctuate, front

transverse impression very shallow, hind one rather deeper, median line fine extending between them, a large shallow fovea on each side of the base, which is more closely punctate than the general surface.

Elytra: Fairley short, with well-marked shoulders, at which the border is distinctly angles, margin strongly sinuate before apex; striae well marked, impunctate, a long scutellary striole between one and two, intervals flat, narrow and convex towards apex, where the odd are a little wider than the even ones, very finely but not closely punctuate, three, five and seven with a series of about 15 larger punctures, on three adjoining stria two, on five adjoining stria five and on seven adjoining stria seven, eight a little carinate towards apex, nine wide- especially behind where the sinuation occurs and where there are two or three very large punctures, second stria to scutellum short, striae space between the third and fourth, fifth and sixth punctured.

Ventral surface: Smooth, shiny, pro-sternal process not bordered, met-episterna long and narrow with a furrow on inner side; last ventral segment with two setae on each side, both on the margin and widely distant from each other.

Legs: Tarsi smooth on upper surface; front and intermediate tarsi of male with the first four joints narrowly dilated, and apparently clothed with scales beneath.

Genus 6: ***Harpaliscus*** **Bates, 1892**

Description taken from Bates, 1892: 340.

The body is smooth and shiny.

Head: The frontal suture is angled on both sides and continued to the edge of the eye; mentum with tooth; mandibles bluntly truncate at apex; ligula elongate-oblong, apex truncate, widely bisetose and free, the paraglossae a little longer and wider; apical joint of palpi fusiform, gradually pointed, hardly truncate; eyes prominent.

Pronotum: Transversely square, posterior angles straight.

Elytra: Third interval of elytra seriate punctate.

Legs: Tarsi glabrous above. Fourth tarsomere of male not conspicuously dilated, joints one to four with rounded corners, fourth tarsomere bilobed.

Key to the species of the genus *Harpaliscus* Bates, 1892 (Key modified from Schauberger, 1934)

1. Basal border of pronotum broadly interrupted in the middle……...***H. stevensi*** (Schauberger, 1934)

- Basal border of pronotum complete, mostly as strong in the middle as laterally, sometimes weaker, but not clearly interrupted…….……...2

2. Microsculpture of elytra roughly cross-meshed, elytral intervals clearly punctured along entire length; disc of the pronotum clearly punctured; elytra wider and shorter; length 7.5–8.5 mm..***H. andrewesianus*** (Schauberger, 1934)

- Microsculpture of elytra rather narrow transverse meshes, puncturing of elytral intervals are limited to two lateral intervals and apex of the inner intervals; disc of the pronotum impunctate; elytra slightly longer and stretched…….***H. birmanicus*** (Bates, 1892)

1. ***Harpaliscus andrewesianus*** **(Schauberger, 1934)**

Description taken from Schauberger, 1934c: 100 and Andrewes, 1923b: 447.

Size: Length 7.5–8.5 mm.

Color: Black, shiny, sometimes faintly iridescent; palpi, antennae, and legs testaceous, labrum, margins of ventral segments, and apical border of elytra reddish.

Head: Wide, convex, smooth, though with some minute scattered punctuation, labrum slightly emarginate, antenna reaching a little beyond base of elytra.

Pronotum: Basal part of the pronotum is fine and quite compact, and also in the middle clearly punctured, in the basal fossae more or less clearly wrinkled and

converging. Pronotum rather wider than head, not quite half as wide again as long, extremities truncate, sides rounded and bordered, faintly sinuate before base, a single seta at apical third, hind angles sharp, though very slightly obtuse; median line and transverse impressions slight, foveae shallow and vague, surface very finely punctate, disk minutely, basal area more conspicuously.

Elytra: Wider and shorter. Inner intervals are clearly punctured along entire length. Microsculpture of the elytra roughly cross-meshed. Elytra with nearly parallel sides, basal border straight, forming a very obtuse angle at shoulder, a slight sinuation in sides near apex; striae fairly deep, impunctate, striole moderately long, intervals flat, but convex close to apex, three with a row of six or seven punctures adjoining stria two, surface minutely and sparsely punctate, more closely and evidently at sides and near apex.

Ventral surface: Beneath the body is finely though not closely punctulate and pubescent, pro-sternal process unbordered, pilose, met-episterna much contracted behind, twice as long as wide, ventral segments with a single seta, apical segment in both sexes with two setae on each side

Aedeagus: Apical part of the penis rather narrow, somewhat asymmetrically narrowed, rounded at the end.

2. ***Harpaliscus birmanicus*** **(Bates, 1892)**

Description taken from Bates, 1892b: 341.

Color: Shiny, brownish-black, with rufous antennae and legs.

Pronotum: Thorax very transverse, anterior angles rounded, slightly narrowed towards base, posterior angles straight, basal margin slightly emarginate. Base broadly depressed on both sides, punctate and wrinkled.

Elytra: Deeply striated, intervals flat. Elytra slightly sinuate subapically.

3. *Harpaliscus stevensi* (Schauberger, 1934)

Description taken from Schauberger, 1934c: 99.

Size: Length 7.5–9.5 mm.

Color: Pitch brown to pitch black, the lateral edges of the pronotum narrowly reddish translucent, the antennae, palpi and legs reddish yellow.

Head: The head is of normal size, with the eyes as broad or a little broader than the pronotum between the front corners, the eyes are very strong, hemispherically arched, the temples rather short and steep, the oblique furrow running towards the centre of the eyes is deep.

Pronotum: The pronotum is moderately transverse, narrows to the base almost as much as to the front, widest in the front third, cut off almost straight at the front edge, rather strongly rounded on the sides; the sides are almost straight or slightly flared in front of the back corners, the side edge groove is set off relatively broadly like a channel, the back corners are slightly obtuse-angled, but sharp, margins only on the sides, no margins in the middle, the elongated basal foveae are shallow deepened; the basal part is moderately finely and fairly densely punctured, in the basal foveae wrinkles are also present, the front edge is also clearly punctured.

Elytra: The elytra are moderately deeply striated, the striae smooth, the scutellar striae long; the intervals are flatly arched, with very wide cross-meshed microsculpture and sparse and shallow punctation, the outer and inner ones moderately finely and more or less densely punctured in front of the apex and very short hairy; the third with a longitudinal row of large, fewer numerous dots; the subapical sinuation moderately deep.

Ventral surface: All abdominal segments are rather finely and sparsely punctured and have short hairs; the anal segment of male has two setae on each side.

Aedeagus: The apical part of the penis is broad, narrows in a clear curve and ends in a very sharp, slightly protruding point, it appears hooked inwards.

Genus 7: ***Harpalus*** **Latreille, 1802**

Description taken from Habu, 1973: 67.

Body glabrous, or pubescent wholly or partially.

Head: Not conspicuously large; frontal impressions short, not extending in posterolateral direction; eyes well distant from buccal fissures, so post genae distinct; clypeus bisetose; rarely with some secondary setae; labrum with six setae; apical segment of palpi fusiform; mentum with or without median tooth, tooth simple; ligula generally more or less dilated and truncate at apex, bisetose, paraglossae semi membranous, separated from ligula by deep notch, almost as long as or slightly exceeding ligula, generally pubescent on dorsal side, rarely pubescent on lateral margins, sometimes glabrous.

Pronotum: Without posterior marginal setae, sometimes some additional setae present.

Elytra: Generally, not iridescent; interval three with or without one pore, rarely with more than one pore; marginal series of pores not interrupted at middle.

Legs: Hind femora with raw of at least three (rarely two) setae near hind margin; tarsi glabrous or ciliate on dorsal side; fore and meso-tarsi of male with segments two to four dilated; tarsal segment five at least with two setae on each ventro lateral margin.

Ventral surface: Abdominal sternite six with two setae on either side in male and female.

Aedeagus: With apical orifice large, generally turning more less to left side.

Key to the species of the genus *Harpalus* Latreille, 1802 (Key modified from Kataev, 2002)

1. Tarsi dorsally densely punctate and pubescent, legs unicolorous, reddish yellow, even femora not infuscated……...…….2
- Tarsi dorsally impunctate and glabrous, sometimes with few setae in some of tarsomeres, legs dark or at least femora infuscated……...…….5
2. Elytral microsculpture consisting of transverse meshes, isodiametric towards apex……3
- Elytral microsculpture consisting of isodiametric meshes…….4
3. Latero-basal depressions on pronotum deep……..…….***H. meghalayensis*** Kataev, 2001
- Latero-basal depressions on pronotum shallow……..***H. indicus*** Bates, 1891
4. Apical spur of foretibiae non dendate……...***H. meridianus*** Andrewes, 1923
- Apical spur of foretibiae dendate……..***H. salinus*** Dejean, 1829
5. Basal edge of elytra pubescent……***H. melaneus*** Bates, 1878
- Basal edge of elytra glabrous……..……...6
6. Basal edge of pronotum ciliate…….……..7
- Basal edge of pronotum glabrous, not ciliate…….……8
7. Elytral intervals convex, wider apically……...***H. idiotus*** Bates, 1889
- Elytral intervals scarcely convex or rather flat, narrower apically……...***H. indicola*** Bates, 1878
8. Elytral intervals apically rather flat and broad. ……..***H. amarellus*** Bates, 1891
- Elytral intervals apically convex and narrow ……..…..9
9. Elytral sutural angle acute angular (in male) or sharp (in female) at apex…..10
- Elytral sutural angle rounded at apex……...***H. fuscipalpis*** Sturm, 1818
10. Met-episterna very narrow and long, at least 1.5 times as long as wide; basal labial palpomere with oblique carina ventrally……...***H. grilli*** Kataev, 2002

- Met-episterna wider and shorter, approximately 1.2 times as long as wide; basal labial palpomere lacking oblique carina ventrally……..***H. practicola*** Bates, 1891

1. ***Harpalus amarellus*** **Bates, 1891**

Description taken from Bates, 1891a: 10.

More ovate, much smaller and flatter.

Size: Length 7.5–8 mm.

Color: Pitchy-black, with aeneous tinge; the four anterior tarsi, antennae, and palpi reddish.

Head: The tooth of the mentum is extremely short.

Pronotum: Thorax transverse-quadrate; sides from before the middle to the base nearly straight, with hind angles rectangular, though blunted at the apex; the fine lateral margins are sometimes reddish, the surface smooth and remarkably plane towards the hind angles, the basal foveae very shallow and sometimes obsolete.

Elytra: The elytra are moderately shining and sericeous in both sexes; the striae simple, acute, the intervals flat to the apex; the third interval with a puncture distant from the second stria, and placed midway between the middle and the apex. The preapical sinuation is well marked, especially in the female, but the apex is only moderately produced and acutely rounded even in the male.

Ventral surface: The prosternum is plurisetose at the apex.

2. ***Harpalus fuscipalpis*** **Sturm, 1818**

Description taken from Sturm, 1818: 66 and Kataev, 1989: 219.

Size: Length 6.6–9.4 mm.

Color: Coloring without metallic tones. Most specimens have a dark, black or brown upper coloration. Sometimes, also in the east of the range, individuals with

"variegated" elytra- light spots are scattered on a dark background on, often merging into crimped striae. Legs in most cases dark, sometimes lightened, black, shining, segments of antennae red, legs pitch brown.

Head: Relatively small, smooth, with two points intended over the eyes.

Pronotum: Square with fine punctures, basal impression on both sides on the posterior edge, pronotum square, but somewhat wider than broad, the sides straight and finely rounded to the posterior edge.

Elytra: Equally wide, rounded at the apex, flat, smooth and finely grooved on the back, the elytra finely and smoothly furrowed.

Winged.

3. ***Harpalus grilli* Kataev, 2002**

Description taken from Kataev, 2002c: 373.

Size: Length in holotype 8.9 mm, in paratypes 8.8–10.4 mm.

Color: Black, with very narrow lateral margins of pronotum, knees, tarsi, two basal antennomeres and palpi (in the paratypes also labrum externally and base of mandibles) reddish brown. Palpi scarcely infuscated, antennae slightly paler apically; upper side shiny.

Head: Medium size, measured across eyes and across neck constriction, correspondingly 0.64–0.68 and 0.51–0.54 times as wide as pronotum. Eyes convex and large. Tempora moderately long, slopingly descending to neck; non pubescent. Clypeus with two setigerous pores. Tooth of mentum short and very broad, obtusangular; basal labial palpomere with oblique carina ventrally. Antennae not long, a little acrossing elytral base, their middle antennomeres approximately 1.7–1.8 times as long as wide. Dorsal surface impunctate; microsculpture strongly obliterate, more or less distinct isodiametric meshes visible only behind supraorbital pore.

Pronotum: Moderately convex and small, not depressed along base, 1.37–1.40 times as wide as long, widest approximately at middle. Sides unisetose, rounded up to base or almost straight behind lateral pore. Anterior margin scarcely emarginate; posterior one almost straight, slightly wider than anterior margin and hardly narrower than elytral base between humeral angles; pronotal basal edge glabrous, not ciliate. Apical angles not protruding; basal angles obtuse, rounded at apex. Lateral depressions almost not developed and area at basal angles somewhat convex. Basal foveae broad and shallow, coarsely and densely punctate; punctation irregular and punctures often confluent. More fine punctation present also along base outside of basal foveae, along sides and at anterior margin of pronotum. Microsculpture visible only along pronotal margins (in female more widely than in male), consisting of fine isodiametric or slightly transverse meshes.

Elytra: Comparatively convex, 1.45–1.50 times as long as wide, 2.58–2.63 times and 1.25–1.30 times as wide as pronotum, rounded at sides and widest behind middle. Humeri subangulate, each with tiny acute denticle at apex. Subapical sinuation rather deep, without denticle at base. Sutural angle acutangular, in male scarcely blunted, in female sharp at apex. Basal edge glabrous, weakly sinuate, meeting lateral margin at very obtuse angle. Striae impunctate, impressed slightly basally and rather strongly apically; scutellar stria long, with basal pore. Intervals impunctate and not pubescent, convex and strongly narrowed to apex. Third interval with one discal pore in apical quarter (this pore absents in right elytron of holotype); fifth and seventh intervals lacking rows of setigerous pores before apex. Microsculpture developed throughout, consisting of distinct isodiametric meshes.

Winged.

Ventral surface: Met-episterna very long and narrow, at least 1.5 times as long as wide. Three last abdominal sternites impunctate and glabrous. Anal sternite without pronounced sexual dimorphism, in both sexes rounded at apex.

Legs: In pro-tibia, outer distal margin with three spines and ventroapical tubercle with one spine at apex. Meta-coxae glabrous, without additional setigerous pores. Meta-femora each with four setigerous pores along posterior margin and with several pores along anterior margin. Tarsi dorsally impunctate and glabrous, but some tarsomeres with solitary setae; metatarsus comparatively short, slightly shorter than width of head measured across eyes, with first tarsomere slightly longer than second and approximately two times as long as wide in its apical portion; in male first meso-tarsomere lacking adhesive vestiture ventrally.

4. ***Harpalus idiotus* Bates, 1889**

Description taken from Bates, 1889b: 213 and Kataev, 2013: 380.

Relatively short.

Size: Length 8.2–10.4 mm.

Color: Palpi, antennae and tarsi reddish.

Head: Much smaller, neck narrower, head behind the eyes narrower. Mentum with very small, often indistinct median tooth. Microsculpture on head and pronotum slightly more distinct, usually not obliterate.

Pronotum: Before middle slightly rounded dilated, posterior right angled, posterior angle obtuse, base coarsely punctate, pronotum is less narrowed behind, with angles more nearly approaching a right angle and the base punctured. Pronotum widest slightly before middle, with sides in posterior half in most specimens almost rectilinearly converging and, in some specimens, very widely rounded.

Elytra: Twice as much as longer than the pronotum, obliquely strongly sinuated, clearly and deeply striated, especially towards the apex of the intervals, intervals convex, third interval unipunctate, elytra deeply striated, black, shiny. Elytron without rows of setigerous pores at apex of intervals five and seven; intervals apically wider.

Legs: Meta-coxa normally without additional setigerous pore (but with such pore in one examined specimen).

Aedeagus: Lobe of aedeagus with shorter terminal lamella and without medial group of small spines in the internal sac; in addition, terminal lamella not narrowed basally, with sides slightly converging to apex.

5. ***Harpalus indicola* Bates, 1878**

Description taken from Kataev, 2002c: 359.

Size: Length 8.0–10.0 mm.

Color: Body black; palpi, antennae, tarsi, tibiae at least basally and knees brown; upper side in male shiny, sometimes with very weak blue hue, in female matt.

Head: Comparatively large, with convex eyes. Tempora flat or weakly convex, slopingly descending to neck, non-pubescent. Clypeus with two setigerous pores. Tooth of mentum short, obtusangular. Dorsal microsculpture in male visible only under and behind eyes and consisting of very fine, weakly transverse meshes; in female microsculpture distributed also more medially and consisting of more distinct, almost isodiametric meshes.

Pronotum: Moderately or weakly convex, not depressed along base, widest before middle and with one lateral pore. Sides rounded anteriorly and variable in basal half from rounded up to basal angles to slightly sinuate. Shape of basal angles variable from almost rectangular with rather sharp apex to obtusangular with rounded apex. Anterior margin more or less emarginate; posterior one almost straight or weakly

concave, approximately as wide as or scarcely wider than anterior margin, slightly narrower than elytral base between humeral angles. Apical angles weakly protruding, rounded at apex. Lateral furrows thin throughout and lateral depressions in most specimens not developed, rarely narrow depressions very poorly visible only just behind lateral pore. Basal foveae small and usually very shallow, either longitudinal, fused basally with pronotal base, or oval, separated from pronotal base by convexity. Pronotal surface either finely punctate along base and in very narrow area along sides or almost impunctate. Microsculpture either restricted to narrow area along sides or distributed almost throughout, consisting usually of fine isodiametric meshes.

Elytra: Somewhat convex, evenly rounded at sides, widest usually behind middle, more rarely just in it. Humeri angulate or subangulate, each with small acute denticle at apex. Subapical sinuation not deep (shallower than in *H. morvani,* but usually scarcely deeper than in *H. hartmanni*); sutural angle almost rectangular, in females somewhat sharp, in males blunted at apex. Basal edge glabrous, notably sinuate, meeting lateral margin at weakly obtuse angle with distinct vertex. Striae impunctate, slightly impressed; scutellar stria present, with basal pore. Intervals scarcely convex or rather flat, narrowed before apex, non-pubescent. Third interval usually with one dorsal pore in basal third, but sometimes this pore absent; fifth and seventh intervals without rows of setigerous pores before apex. Microsculpture consisting of isodiametric meshes; in male meshes more fine, visible at least on two lateral intervals throughout and on all other intervals apically, in female meshes more distinct, almost granulate, always developed on all intervals throughout.

Ventral surface: Met-episterna notably narrowed posteriad, variable in length: from scarcely longer than wide to scarcely wider than long. Three last abdominal sternites impunctate and glabrous, each throughout with fine microsculpture; meshes

isodiametric in lateral portions of sternites and weakly transverse (in male also slightly suppressed) in their medial portion. Anal sternite in both sexes rounded at apex.

Legs: In pro-tibia, outer distal margin usually with three, rarely four spines. Meta-coxae glabrous, without additional setigerous pores. Meta-femora each with four (sometimes three) setigerous pores along posterior margin and with two to four pores along apical half of anterior margin. Tarsi dorsally impunctate and glabrous; metatarsus short, in male approximately as long as width of head measured across neck constriction; in female shorter than width of head, first meta-tarsomere in both sexes slightly longer than second, in female approximately 1.7 times, in male about two times as long as wide in its apical portion; in male first meso-tarsomere with adhesive vestiture in apical half.

Aedeagus: Penis: arcuate, with apical half directed ventrad (lateral aspect). Terminal lamella longer than wide and more or less markedly widened apically (dorsal aspect), with small horseshoe-shaped apical capitulum. Internal sac with two more or less curved teeth differing in size (smaller proximal and larger distal) and one to three small spiny patches.

6. *Harpalus indicus* Bates, 1891

Description taken from Kataev, 2001b: 394.

Size: Length 8.9–13.6 mm; width 3.6–5.5 mm.

Color: Body dark brown to black, shiny on dorsum and slightly iridescent on elytra; labrum, bases of mandibles and very narrow margins of pronotum usually paler; palpi, antennae and legs reddish brown.

Head: Comparatively a little larger, measured across eyes and across neck constriction, respectively 0.72–0.82 and 0.57–0.66 times as wide as pronotum.

Pronotum: Moderately convex, 1.35–1.55 times as wide as long, widest before middle. Sides unisetose, either rounded throughout or straightly converging in basal half. Anterior margin weakly or rather strongly arcuately emarginated; posterior margin usually more or less straight, sometimes very widely rounded, equal to anterior margin or slightly wider, a little narrower than elytral base between humeral angles. Apical angles usually slightly protruding, rounded at apex. Basal angles well marked, obtuse, with apex variable in shape; in most cases, rather narrowly rounded, more rarely (in some specimens from Western Nepal) rather sharp, but never denticulate. Lateral depressions extremely narrow apically, widened behind lateral pore and fused basally with somewhat broad and shallow basal foveae forming rather shallow latero-basal depressions; often finer punctuation present also at anterior margin near apical angles. Microsculpture fine, consisting of slightly suppressed, weakly transverse meshes in central part of pronotal disc and of more distinct, isodiametric meshes along pronotal margins.

Elytra: Moderately convex, elongate, 1.44–1.57 times as long as wide, 2.51–2.77 times as Long and 1.15–1.23 times as wide as pronotum, evenly rounded at middle or just behind it. Humeri angulate, rounded at apex, each usually with tiny acute denticle poorly visible only from behind. Subapical sinuation rather deep; sutural angle slightly blunted at apex. Basal edge glabrous, scarcely or markedly sinuate, meeting lateral margin in obtuse angle with distinct vertex. Striae thin and impunctate; scutellar striae long, with basal pore; ninth stria clearly visible, long. Intervals convex, narrowed before apex, non-pubescent; two lateral intervals finely and sparsely punctuate. Microsculpture visible throughout, consisting of fine, clearly transverse meshes on elytral disc and of granulate, isodiametric meshes along margins and at apex of elytra.

Ventral surface: Met-episterna longer than wide, strongly narrowed posteriad. Two penultimate abdominal sternites glabrous; third visible sternite finely setaceous medially and glabrous laterally. Anal sternite and tergite in both sexes rounded at apex, but tergite, especially in female, much more narrowly than sternite.

Legs: In pro-tibia, apical spur not dentate, only slightly angulate at margins; outer distal margin with four spines at apex. Hind femora each with two or three (very rarely four) setigerous pores along hind margin. Tarsi densely pubescent dorsally; in male, first meso-tarsomere either without ventral adhesive vestiture or at most with a pair of adhesive scales at apex.

Aedeagus: Penis: internal sac either without any sclerotic armature or with one comparatively large dorsomedial spiny patch; always clearly visible long field "a" in basal half of penis and often peculiar folded formation "b" in apical half (view from right side).

7. *Harpalus meghalayensis* Kataev, 2001

Description taken from Kataev, 2001b: 403.

Size: Length 10.5–11.1 mm; width 4.1–4.4 mm.

Color: Dark brown to black, shiny on dorsum and weakly iridescent on elytra: labrum, bases of mandibles and margins of pronotum usually reddish brown; palpi, antennae and legs brownish yellow to brown; third to seventh antennomeres each with longitudinal dark strip.

Head: Measures across eyes and across neck constriction, respectively 0.72–0.75 and 0.60–0.61 times as wide as pronotum, micropunctate and slightly wrinkled behind eyes. Tooth of mentum narrowly rounded at apex. Dorsal microsculpture highly suppressed on frons and vertex, clearly visible around supraorbital seta and behind eyes, consisting of more or less isodiametric meshes.

Pronotum: Rather convex and comparatively broad, 1.53–1.56 times as wide as long, widest in anterior third, with unisetose sides rounded anteriorly and almost straightly converging to base posteriorly. Anterior margin weakly emarginated; posterior margin somewhat straight, only scarcely rounded medially, a little wider than anterior margin and slightly narrower than elytral base between humeral angles. Apical angles hardly protruding, rather widely rounded at apex; basal angles well marked, obtuse, only slightly blunted at apex. Lateral depressions beginning from apical angles, extremely narrow apically, evenly widened behind lateral pore and fused basally with broad and poorly visible basal foveae, forming rather deep latero- basal depressions; area at base between latter convex. Pronotal surface coarsely and densely punctuate in lateral and latero- basal depressions; punctures confluent; finer and sparser punctation present at anterior margin near anterior angles. Microsculpture fine, consisting of weakly transverse meshes in central part of pronotum and of isodiametric meshes along pronotal margin.

Elytra: Convex, elongate, 1.52-1.56 times as long as wide, 2.73-2.84 times as long and 1.17-1.19 times as wide as pronotum, slightly rounded at sides, widest at middle or just behind it. Humeri angulate, each with a tiny acute denticle at apex. Subapical sinuation distinct, moderately deep; sutural angle acute, sharp or slightly blunted at apex. Basal edge glabrous, weakly sinuate, meeting lateral margin in obtuse angle with distinct vertex. Striae thin and impunctate; scutellar stria long, with basal pore; ninth stria clearly visible, long. Intervals convex, notably narrowed before apex; non pubescent; only two lateral intervals very finely and sparsely punctuate. Microsculpture clearly visible throughout, consisting of fine, transverse meshes on disc and of isodiametric, nearly granulate meshes along lateral margins and at apex of elytra.

Ventral surface: Met-episterna long and strongly narrowed posteriad. Anal sternites, except for obligatory setae and fine cilia in medial part of third visible sternite, glabrous. Anal sternite (in male) slightly truncate and anal tergite (in male) rounded at apex.

Legs: in pro-tibia, apical spur not dentate but obtusely angulate at margins; outer distal margin with four (sometimes five) spines and ventro apical tubercle with two spines at apex. Hind femora each with two (more rarely three) setigerous pores along hind margin. Tarsi densely pubescent dorsally; first meta-tarsomere in male with vestigial adhesive scales at apex.

Aedeagus: Penis moderately arcuate, with apex slightly directed ventrad (lateral aspect); terminal lamella much longer than wide, weakly narrowed to apex, with oblique horse-shoe-shaped apical capitulum narrowly rounded at apex (dorsal aspect). Internal sac with one or two medial spiny patches and comparatively short field "a".

8. *Harpalus melaneus* Bates, 1878

Description taken from Kataev, 2002c: 379.

Size: Length 9.4–12.5 mm; width 3.9–4.6 mm.

Color: Black, with palpi, antennae and tarsi dark brown; upper- side shiny, in female elytra mat.

Head: Comparatively large, with convex eyes. Antennae rather short, maximally reaching elytral base. Microsculpture usually visible only around and behind supraorbital pore, in female sometimes visible dorsally throughout; meshes isodiametric.

Pronotum: Moderately convex, widest in most cases before middle, with sides often straightly converging posteriad. Pronotal base narrower than elytral base, usually punctate, rarely almost smooth. Pronotum moderately convex, widest before or at

middle, narrower than elytra. Sides either rounded throughout or almost straight in basal half. Anterior margin arcuately emarginate, posterior one almost straight. Apical angles slightly protruding, right or obtusangular; basal angles obtusangular; both rounded at apex. Base near basal angles convex or flattened. Lateral furrows usually thin throughout. Basal foveae narrow or oval, very variable in depth. Pronotal surface either impunctate or finely punctate along base and sides; often punctation restricted to area around basal foveae. Microsculpture very fine, usually obliterate, consisting of isodiametric meshes.

Elytra: Moderately convex, rounded at sides, widest at middle or behind it. Humeri angulate, each with small acute denticle at apex. Subapical sinuation distinct, but not deep. Basal edge pubescent. Microsculpture in male fine, consisting of isodiametric meshes, in female granulate.

Winged.

Ventral surface: Met-episterna notably narrowed posteriad, longer than wide. Abdominal sternites with few additional long setae, sometimes almost glabrous.

Legs: In pro-tibia, outer distal margin with three to five spines either isolated from spines on lower surface of tibia or forming with them single row; ventroapical tubercle with two spines at apex. Meta-coxae glabrous, without additional setae. Meta-femora each with four to six setigerous pores along posterior margin and with two to five pores along anterior margin.

Aedeagus: Penis arcuate, with comparatively narrow and long terminal lamella, slightly widened apically, and with horseshoe- shaped apical capitulum. Internal sac without teeth, with only small dorsal spiny patch behind middle of median lobe.

9. *Harpalus meridianus* Andrewes, 1923

Description taken from Kataev, 2001b: 406.

Size: Length 11.0–12.9 mm; width 4.4–5.1 mm.

Color: Body dark brown to black, shiny on dorsum but not iridescent, with paler labrum, anterior part of clypeus, bases of mandibles and often very narrow margins of pronotum; underneath paler than uppers ide, dark brown; palpi, antennae and legs brownish yellow; antennae beginning from second or third segment slightly infuscated (in holotype, each of third-eleventh antennomeres with longitudinal dark strip).

Head: Moderate in size, measured across eyes, 0.70–0.71 times as wide as pronotum, impunctate. Eyes large and convex. Tempora non pubescent, more or less abruptly descending to neck. Clypeus with two setigerous pores. Tooth of mentum obtuse, slightly rounded at apex. Basal segment of labial palpi lacking carina ventrally. Dorsal microsculpture visible only behind eyes, consisting of fine isodiametric meshes.

Pronotum: Moderately convex, 1.48–1.55 times as wide as long, widest either in middle (in holotype) or before it, with unisetose sides rounded up to base; sides basally rounded very widely, nearly straight. Anterior margin only weakly emarginated; posterior margin more or less straight, entirely bordered, notably wider than anterior margin and a little narrower than elytral base between humeral angles. Apical angles weakly protruding, rounded at apex; basal angles well marked, obtusangular, narrowly rounded or blunted at apex. Lateral depressions beginning from apical angles, very narrow apically, gradually widened in basal half up to pronotal base. Basal foveae broad, superficial, separated from lateral depressions by small flattened convexity; area between basal foveae somewhat convex. Lateral portions of pronotal base and lateral depressions densely punctuate, punctures often confluent; more sparse and fine punctuation also present at anterior margin and in

mediobasal portion of pronotum. Microsculpture fine, consisting of weakly transverse meshes.

Elytra: Elongate, comparatively broad, 1.50–1.54 times as long as wide, 2.68–2.78 times as long and 1.16–1.20 times as wide as pronotum, weakly rounded at sides, widest just behind middle. Humeri subangulate, obtuse, each with a tiny acute denticle at apex well visible from behind. Subapical sinuation weak; sutural angle sharp at apex. Basal edges glabrous, weakly sinuate, meeting lateral margin in very obtuse angle with more or less distinct vertex. Striae thin and impunctate, slightly impressed; scutellar stria well developed, with basal pore. Intervals somewhat convex, narrow before apex, non-pubescent; two or four lateral intervals punctuate; in latter case, eighth and ninth intervals much densely and coarsely than sixth and seventh; elytral apex nearly impunctate; sometimes very fine punctuation also present at base of elytra along basal edge. Microsculpture fine, clearly visible throughout, consisting of isodiametric meshes.

Ventral surface: Met-episterna long, approximately 1.5 times as long as wide, strongly narrowed posteriad. Prosternum finely and densely pubescent. Abdominal sternites, except for obligatory setae, glabrous. Anal sternite blunted at apex.

Legs: In pro-tibiae, apical spur not dentate but distinctly obtusely angulate at margins; outer distal margin with four spines and ventroapical tubercle with two spines at apex. Hind femora each with four or five setigerous pores along hind margin. Tarsi dorsally densely pubescent; in male, first meso-tarsomere with vestigial adhesive vestiture ventroapically.

Aedeagus: Penis comparatively weakly arcuate, with apex scarcely directed dorsad (lateral aspect); terminal lamella a little longer than wide, hardly narrowed to apex, with oblique horseshoe-shaped apical capitulum rounded at apex (dorsal aspect).

Terminal lamella a little longer than wide, hardly narrowed to apex, with oblique horseshoe- shaped apical capitulum rounded at apex (dorsal aspect). Internal sac with three (proximal and two distal) large spiny patches in medial part of median lobe.

10. *Harpalus salinus* Dejean, 1829

Description taken from Dejean, 1829: 341 and Kataev, 1984: 81.

Size: Length 6 mm; width 2.5 mm.

Color: Dorsal side fairly shiny black. The underside of the body is a little brownish black. The legs are a ferruginous red.

Head: The head is quite elongated, almost oval, barely narrowed posteriorly and very - slightly convex; covered with very small sunken dots not very close to one another and barely sensitive; it has on each side, between the antennas, an oblong impression, slightly marked, whose bottom and edges are a little rough. Labrum is reddish brown. The mandibles are russet at the base and blackish towards the end. The palps and antennae are red-ferruginous. Somewhat brownish. The eyes are not very prominent.

Pronotum: About twice as wide as the head, less long than wide, fairly short, almost square, slightly rounded on the sides and fairly convex; it is converted from barely distinct wavy transverse wrinkles. Median line is fine, very little marked cut almost cariment and does not go beyond the anterior transverse impression; this one is in an arc and quite marked; the posterior is a little sinuous and also quite marked; it has on each side of the base an oblong impression, rather deep, whose bottom and edges are a little rough; the front edge is slightly indented; the front angles are rounded; the sides are slightly rounded and quite strongly depressed towards the posterior angles which are almost rounded and slightly marked; the base is a little sinuous and cut almost cariment.

Elytra: Elongate, sub-parallel to the striae, the scutellum is smooth, triangular, and its point barely exceeds the base of the elytra. These are a little wider than pronotum, elongated, almost parallel, not very convex, and slightly sinuously oblique at the end; the striae are smooth, fine and fairly marked; the intervals are flat; on the third a row of small sunken dots quite distant from each other; the first two or three are placed near the third striae, and the next near the second; those near the end are in the middle of and closer to each other; four to five points at the base of the fifth interval, three or four at its end, five or six on that of the seventh, a row of deeper and more marked depressed points along the outer edge, near the eighth striae, and other smaller points in the intervals of the first, closer to the outer edge.

Winged.

11. *Harpalus praticola* Bates, 1891

Description taken from Bates, 1891b: 332.

Size: Length 8–9 mm.

Color: Black-brassy bright, shiny, legs, antennae more or less bright yellow.

Head: Smooth, moderate, frontal foveae deep.

Pronotum: Crosswise square, anteriorly rounded, posterior slightly narrow, posterior angle somewhat blunted, basal pits deep on both sides and the base outwardly punctuated.

Elytra: Striate, intervals plane polished, third interval unipuntate, lateral intervals punctate.

Ventral surface: Sides of meta-sternum punctated. Met-episterna rather long and narrow.

Genus 8: ***Kareya* Andrewes, 1919**

Head: Smooth, both ligula and paraglossae are larger, the former bisetose but free at the apex, the latter wider, glabrous except for one or two minute hairs on the sides towards base. Mentum edentate, but with the middle of the emargination generally thickened; penultimate joint of labial palpi plurisetose; head with a fine suture on each side, extending from the frontal fovea to the eye.

Pronotum: Prothorax smooth, finely punctate over the basal area.

Elytra: Minutely punctulate and very finely pubescent, one or more odd intervals (third always) seriate-punctate.

Legs: Tarsi hairy on upper surface; front and intermediate tarsi in male with four moderately dilated joints, biseriately squamose beneath and fringed with long hairs; hind tarsi with joint 1=2+3.

Remarks: Detailed redescription of the genus is available in Kataev, 2015b: 348.

Key to the species of the genus *Kareya* Andrewes, 1919

Remarks: Key to the species of the genus Kareya is available in Kataev, 2015b: 362.

1. ***Kareya edentata* (Bates, 1892)**

Description taken from Bates, 1892b: 331.

Size: Length 10–11 mm.

Color: Antennae and legs rufous.

Head: Mentum without tooth.

Remarks: Detailed redescription of the species is available in Kataev, 2015b: 360.

2. ***Kareya erebia* (Bates, 1892)**

Description taken from Bates, 1892b: 331.

Size: Length 11.5 mm.

Color: Elongate-oblong, glossy black elytra densely subopaque and minutely punctate, pubescent, antennal palps and tarsi pitchy.

Head: Smooth, glabrous, with an anteriorly arched clypeus, with frontal foveae impressed, from the outside towards the edge of the eye emitting a branch. The labrum is sometimes red. Mentum without tooth.

Pronotum: Quadrate with rounded sides, slightly narrowed from the middle to the base, with the posterior angles almost rounded; smooth, base on both sides broadly depressed and rugose-punctate.

Elytra: Relatively long, apex moderately obliquely sinuate, sharply hardly punctate, striated (elongate scutellar striole), intervals slightly convex and minutely and densely punctate. **Remarks:** Detailed redescription of the species is available in Kataev, 2015b: 351.

3. ***Kareya grandiceps* (Bates, 1892)**

Description taken from Bates, 1892b: 332.

Larger species.

Size: Length 14–15 mm.

Color: Blackish and shiny, the tip of the palps and antennae partly pitch-red.

Head: Comparatively larger and the eyes wider behind, mentum without tooth.

Elytra: Sparsely punctate anteriorly, densely posteriorly, more deeply striated, intervals convex, interstices three, five and seven are less conspicuously seriate-punctate.

Remarks: Detailed redescription of the species is available in Kataev, 2015b: 358.

4. ***Kareya major* Bates, 1891**

Description taken from Bates, 1891b: 330.

Larger species.

Size: Length 13–14 mm.

Color: Black, shiny, antennae and legs yellowish, tarsi infuscated.

Head: Relatively large, the labrum is strongly arched anteriorly, the frontal foveae forms a thin branch from the outside. The mentum is short and broadly toothed.

Pronotum: Thorax relatively slightly underrounded, posteriorly more narrowed than anteriorly, posterior angles completely rounded; basal foveae slight and broad and densely punctate.

Elytra: Strongly obliquely sinuate at the apex, sharply striated, the intervals flat, third, fifth and seventh intervals serially punctate.

Remarks: Detailed redescription of the species is available in Kataev, 2015b: 355.

5. ***Kareya sublaevis* Bates, 1891**

Description taken from Bates, 1891b: 330 and Bates, 1892b: 331.

Size: Length 11mm.

Color: Shiny black, with yellowish antennae and legs with varying colouraation, blackish and red; the antennae and labrum are mostly rufous-testaceous.

Head: Labrum arched-emarginate, thin frontal suture on both sides curved and continued towards the eye.

Pronotum: Subrounded, smooth, wide foveae on both sides and punctated throughout the base.

Elytra: Sharply striated, third, fifth and seventh intervals serially punctate. Intervals flat, more sparsely and less sharply punctate.

Remarks: Detailed redescription of the species is available in Kataev, 2015b: 354.

Genus 9: ***Lampetes* Andrewes, 1940**

Description taken from Bates, 1889a: 101.

The oblong body is slightly convex above the shiny metallic point very minutely and discreetly.

Head: Short and broad, with very prominent eyes; frontal furrows curved outwards towards the eyes. Hairy palps narrowed towards the tip. The mentum is slightly arched at the bottom of the middle, but not toothed.

Pronotum: Transverse, strongly rounded anteriorly, posteriorly sinuous-narrowed with straight posterior angles.

Elytra: Obliquely sinuous at the tip, with striations and scutellar striations between striae one and two, with flat intervals. Third interval with a large umbilical point.

Legs: Thin, spinulous, tarsus slender, with the first joint of the hind joint equal in length to the following three; joint four, barely emarginate; male anterior article one slightly dilated, almost oblong, two and three obtusely triangular; fourth cordate, the fourth below densely clothed with erect gravy hairs; simple intermediates, intermediate tarsals are not widened.

Key to the species of the genus *Lampetes* Andrewes, 1940 (Key from Schauberger, 1935)

1. Microsculpture of the elytra wide-meshed, the net meshes almost isodiametric or slightly transversely drawn, elytra dark to the apex or at most faint and faded, brownish translucent before the apex…….……2
- Microsculpture of the elytra very closely cross-meshed, almost cross-grooved, elytra with a wide, straw-yellow lace border, which extends laterally more or less far forward continues……...3
2. The points of the outer wing ceiling spaces too coarse wrinkles converging, the dotting of the inner a little denser……..……...***L. lucens*** (Bates, 1889)
- The points of the outer wing ceiling spaces individually, not flowing together in wrinkles, the puncturing of the inner less dense……....***L. pseudolucens*** (Schauberger, 1935)

3. The puncturing of elytra on the disc moderately fine and dense; pronotum constricts somewhat more towards the base, with a broad yellow side ……..***L. marginalis*** (Walker, 1859)

- The puncturing of the elytra on the disc is moderate fine, but more spacious; pronotum somewhat weakly narrowed towards the base, only very narrow yellowish margins……***L. assamensis*** (Schauberger, 1935)

1. *Lampetes assamensis* (Schauberger, 1935)

Description taken from Schauberger, 1935: 107.

Size: Length 10 mm.

Color: Body brown-black, the upper side bronze-colored, with a clear coppery appearances; the pronotum with very narrow yellowish margins; sides of elytra with rather narrow straw yellow color and equally colored, distinctly widened at the apex; the abdominal segments yellow on the sides; palpi, antennae and legs reddish yellow; the upper side quite shiny.

Microsculpture: The head almost without microsculpture, with weakly isodiametric meshes at the vertex, the pronotum with transverse meshes on disc, and other surfaces with isodiametric meshes. Elytra very closely cross-meshed.

Head: Moderately large, including the eyes, slightly wider than the pronotum between the anterior angles, the eyes large, very convex, almost hemispherical, the temples rather short and rather steep; the frontal foveae rather large, rounded and rather deeply indented, the frontal furrow sharp and complete, the clypeal suture sharp but not very deep; the clypeus unisetose, cut off almost straight at the anterior edge, with a shallow, less distinct transverse furrow behind it; the upper surface finely and fairly densely punctured; the mentum tooth rather strong; the eyes on the underside are only narrowly separated from the maxillary area.

Pronotum: A little wider than the head with the eyes, much narrower than the elytra, rather strongly transverse, narrowing to the base almost as much as to the front, widest almost in the anterior third; the front edge cut out in a slight curve, the anterior angles fairly broadly rounded, hardly protruding; the sides are moderately rounded and widened, moderately strongly curved in front of the posterior angle, with a seta on each side in the anterior third, the lateral margins rather narrow; the posterior angle sharp, slightly obtuse-angled, the base slightly sloping laterally, to the middle clearly, but finely margined; the basal foveae elongated, moderate deep, flattened outward, the space between them and the lateral margin depressed, the whole upper surface finely and rather densely punctured; in the basal foveae somewhat coarser and very crowded.

The sides of the pro-sternum not clearly punctured.

Elytra: Elongate-ovate, rather broad and moderately convex, rather broadly rounded at the shoulder; the basal edge curved flat forward at the side, meeting the lateral margin at somewhat rounded shape, no shoulder tooth present; the subapical sinuation moderatly deep, the suture angle narrowly rounded; the striae moderately fine, smooth, deeper in front of the tip, the scutellar striae long, with a navel point at its beginning; the intervals very flatly arched, the inner ones moderately fine, not very crowded, the outer ones dotted a little coarser and more densely, the third with a pierced point a little behind the middle on the second striae, the umbilical row not interrupted in the middle.

Winged.

Ventral surface: Episterns of posterior thorax fairly long, about 1.5 times as long as the front, broad and moderately narrowed towards posterior side. The last abdominal segments apart from the normal setae, almost glabrous.

2. ***Lampetes lucens*** **(Bates, 1889)**

Description taken from Bates, 1889a: 102.

Size: Length 9.5 mm.

Color: Above dark black-brown; palpi, antennae and legs are flavotestaceis.

Head: Finely punctate.

Pronotum: Finely punctate, middle of the pronotum almost smooth.

Elytra: Discrete and minute towards sides, and striae are thin (striae here and there subinterrupted), intervals plane, interval three near the second striae with a large point.

Ventral surface: Underside smooth, lateral side of meta-sternum with minute punctures.

3. ***Lampetes marginalis*** **(Walker, 1859)**

Description taken from Walker, 1859: 51 and Bates, 1886: 212.

Upper surface finely punctated.

Color: Black colored, antennae, palpi and pronotum yellowish.

Pronotum: Pronotum and abdomen with yellow margin; pronotum narrowed posteriorly, posterior angles well defined.

Elytra: Margin of elytral striae yellow, apex dilated.

4. ***Lampetes pseudolucens*** **(Schauberger, 1935)**

Description taken from Schauberger, 1935: 95.

Color: Body brown black, the upper side quite dark colored, the side margin near apex and the folded sides of the elytra are at most brownish translucent, palpi, antennae and legs reddish yellow. The upper surface moderately shiny.

Microsculpture: Head without microsculpture except isodiametric meshes at vertex. The pronotum with isodiametric meshes (on the disc more suppressed), the elytra with

almost isodiametric meshes, only laterally and towards the tip, a little more transverse, but still very wide net meshes.

Head: Moderately large, including the eyes slightly wider than the pronotum between the front corners, the eyes very large, very strongly arched, almost hemispherical, the temples rather short and quite steep; the frontal foveoles rather large, round and fairly deep, the oblique furrow sharp and complete, the clypeal suture sharp but not very deep; clypeus unisetose, cut off almost straight at the anterior margin, with a shallow, less distinct transverse furrow behind it; the dorsal side finely and moderately densely punctured; the mentum tooth quite strong; the eyes on the underside are only very narrowly separated from the maxillary area.

Pronotum: Pronotum a little wider than the head with the eyes, much narrower than the elytra, quite strongly transverse, narrowing towards the base almost as much as towards the front, widest almost in the front third; the front edge cut out in a very flat arc, the anterior angles hardly protruding, rather broadly rounded; the sides moderately strongly rounded, moderately flared in front of the posterior angles, with a setae on each side in the front third. Lateral margin of pronotum rather narrow; the posterior angles sharp, right angled, slightly obtuse-angled only as a result of the beveling of the sides of the base, the base clearly margined only laterally, the basal foveae elongated, moderately deep, the space between them and the margin perfectly even; the whole top fine and fairly dense, the basal part somewhat coarser and more densely punctured.

Elytra: Elongate- ovate, fairly broad, moderately arched, broadly rounded at the shoulder; the basal edge meeting the lateral margin at a very obtuse, somewhat rounded angle, shoulder tooth absent; subapical sinuation moderately deep, the sutural angle narrowly rounded; the striae moderately fine, smooth, more deepened before the

apex, the scutellar striae long, with an umbelical point at its beginning; intervals gently convex, the inner intervals fairly finely and moderately densely punctured, the outer ones more coarsely and compactly punctured, but not confluently punctured in a wrinkled manner, the third with a puncture almost in the back quarter on the second striae, the umbilical row interrupted at most narrowly in front of the middle.

Ventral surface: Episterna long, a little more than 1 1/2 times as long as wide at the front. The last abdominal segments except the normal setae smooth and bare, the anal segment of male and female with two setae on each side. The sides of the prosternum not clearly punctured.

Legs: The tarsi glabrous dorsally, the meso-tarsi of the male not expanded and not scaled underneath, the first segment of the hind tarsi almost like this long than the second and third combined and a little longer than that claw.

Aedeagus: The apical part of the penis moderately long and moderately narrow, gradually narrowing towards the tip and moderately narrow rounded.

Genus 10**: *Liodaptus* Bates, 1889**

Description taken from Noonan, 1985: 61.

Body moderately convex, more so in elytra.

Size: Length Approximately 7 mm.

Color: Frons and pronotum light to dark reddish brown except extreme lateral edges of pronotum somewhat lighter. Elytra with reddish brown inner macula and yellowish sides, apices and bases in most specimens. Venter reddish brown. Appendages yellowish to brown. Dorsal Luster. Shiny. Dorsal Microsculpture. Obsolete.

Punctuation, Pubescence, and Setation: Body impunctate and glabrous except for usual fixed setae and fine short setae present on: prosternum anteriorly; meso-sternum; mesal portions of meta-sternum; beneath hind coxae and trochanters on

abdominal sterna two and three. Tarsal dorsa with scattered setae on front basitarsi, glabrous elsewhere. Posterior margins of hind femora each with two long setae. Elytral intervals three, five, and seven lacking setigerous punctures on disc. Ovipositor, valvifers lacking setae; stylomeres one each with one distal lateral seta on venter; stylomeres two each with large stout seta proximally on venter against scrobe edge.

Head: Frontal foveae each deep, prominent, crescent shaped and continued as clypeo-ocular prolongation to eye. Eyes large, prominently protruded from sides of head. Mentum lacking median tooth. Ligular sclerite broad, slightly widened apically.

Pronotum: Pronotum cordate in shape; anterior angles slight; posterior angles obtusely rectangular; lateral depressions narrow but well delimited internally.

Elytra: Convex in form. Humeri angulate. Scutellar interneurs absent. Subapical sinuations moderate.

Legs: Front and middle tarsi of males not laterally expanded and not with ventral biseriate vestiture. Hind basitarsi approximately 0.7 to 0.9 length of tarsomeres two and three combined.

Aedeagus: Median lobe with dorsal membranous area extended to basal bulb.

1. ***Liodaptus birmanus* Bates, 1889**

Description taken from Bates, 1889a: 102.

Color: Pronotum rufous, lateral edge of elytra, antennae, palpi, legs and labrum yellowish.

Pronotum: Incised at the sides, base very broadly punctured.

Elytra: Deeply striated, intervals punctured.

Ventral surface: Apex of annal segment with single setae on each side.

Genus 11: ***Meroctenus* Gemminger & Harold, 1868**

Description taken from Kataev, 2017: 511.

Head: Smooth or (in *M. exaratus* Dejean, 1829) coarsely punctate. Eyes moderately or rather strongly convex, their ventral margin separated from buccal fissure. Clypeus emarginate and bordered along anterior margin, forming a convex apical bead. Clypeo-ocular furrows present, distinct, reaching supraorbital furrows. Supraorbital pore located slightly before distal margin of eyes. Mentum and submentum separated by complete suture. Mentum in most species very deeply emarginate apically, without median tooth, more rarely (in *M. crenulatus*) with less deep emargination and obtuse median tooth. Epilobes rather narrow, slightly widened apically, often slightly angulate at inner margin. Ligular sclerite narrow, not widened apically, with apex either more or less deeply emarginate, forming two narrow lateral lobes, or straight; two ventro-apical setae. Paraglossae glabrous, very wide, rounded, not separated from ligular sclerite. Labial preapical palpomere with several (usually five) setae at anterior margin; basal palpomere carinate or not carinate. Mandibles stout and rather short, not elongate. Antennae short, in many species not reaching pronotal basal edge.

Pronotum: Transverse, with sides in most species rounded, more rarely (in *M. exaratus*) slightly sinuate in basal half, with one setigerous pore just before middle. Basal angles more or less widely rounded at apices. Basal margin setose at edge, bordered throughout or only laterally. Pronotal surface somewhat coarsely punctate at least in and around basal foveae.

Elytra: Elongate, subparallel-sided. Humeri rounded, without denticle at apex, with inner humeral angle rounded. All striae somewhat coarsely punctate along entire length (punctures usually much smaller in apical portion). Intervals three, five and seven each with row of four to 12 setigerous pores usually along entire length at striae two, five, and seven, respectively; occasionally some pores also present at striae four

and six; pores in intervals five and seven in some specimens located only in apical portion; in some species pores very small and poorly recognizable. Inner intervals (approximately one to seven), except for apex, lacking punctation and pubescence; lateral intervals eight and nine throughout and apices of other intervals finely punctate or impunctate, glabrous or finely pubescent. Marginal series of setigerous pores (umbilicate series) widely interrupted at middle, consisting of six to eight pores in anterior group and of seven to 10 pores in posterior group.

Hind wings fully developed.

Ventral surface: Met-episterna narrow, much longer than wide. Abdominal sternites punctate or impunctate, glabrous or with short pubescence. Last visible abdominal sternite in both sexes with two pairs of marginal setigerous pores, in female of some species hardly thickened along apical margin.

Legs: Meta-coxae lacking a posteromedial pore and any other additional pores, but very finely pubescent in some species. Metafemur with two setae along posterior margin. Pro-tibia sulcate on dorsal surface along entire length, with three to five preapical spines on outer margin and with one to three ventroapical spines. Tarsi densely punctate and pubescent dorsally. Meso-tarsomere one approximately equal to tarsomeres two and three combined. Pro- and meso-tarsomeres one to four in female, and meta-tarsomeres one to four in male and female with dense and rather long setae ventrally. Pro- and meso-tarsi in male dilated and with biseriate adhesive scales ventrally (meso-tarsomere one not dilated and without adhesive scales).

Aedeagus: Median lobe of aedeagus with apical orifice in dorsal position; apical capitulum not developed. Internal sac with or without one or several medium-sized spines.

Female genitalia: Laterotergite (hemisternite) membranous in apical half and

strongly sclerotized in basal half, with two to 12 distal setae. Basal stylomere with two distal setae. Apical stylomere with one to four short and thin proximal setae on external dorsal margin.

Key to the species of the genus *Meroctenus* Gemminger et Harold, 1868

1. Smaller; apex of elytra pubescent……...***M. mediocris*** Andrewes, 1936
- Larger; apex of elytra glabrous.....***M. dabreui*** Andrewes, 1924

1. *Meroctenus dabreui* (Andrewes, 1924)

Description taken from Andrewes, 1924a: 94.

Size: Length 13.0–15.5 mm.

Color: Black, shiny; first article of the antennae below, and the tips of the palpi reddish.

Head: Width: 2.9 mm, large, convex, smooth, antennal segments other than one to three a little shorter, but two is half shorter than the first.

Pronotum: Square (3.0 * 4.1 mm), slightly convex, truncated at the ends, widest a little before the middle, sides slightly rounded, angles rounded, the hind angle a little obtuse; median line thin, basal foveoles broad and shallow, surface smooth, but all the base, especially in foveoles, and lateral grooves densely punctated.

Elytra: Parallel elytra (8.5 * 4.75 mm), a little flattened, little rounded behind the shoulders, which are square; very strongly printed striae. Slightly pitted, intervals smooth, convex; towards the end the intervals eight and nine are finely punctuated, and there are also a series of little wider few points on the intervals three, five and seven.

Ventral surface: Smooth below, but the sides of the meta-sternum and ventral surface are finely punctuated.

2. *Meroctenus mediocris* (Andrewes, 1936)

Description taken from Andrewes, 1936: 205 and Kataev, 2017: 518.

Size: Length 7.4–8.1 mm; width 3.0–3.2 mm.

Color: Body black; legs black or dark brown; antennae slightly infuscate from segment two or three on. Black, shiny, buccal organs and antennae ferruginous, tarsi piceous.

Head: Rather wide, convex, smooth, eyes small, prominent, antennae slender extending rather beyond base of elytra. Mentum with deep incisure apically; medial tooth indistinct, at most only suggested.

Pronotum: Quadrate, convex, a third wider than head, not quite a third wider than long, base truncate, very slightly wider than apex, sides rounded, border reflexed, the seta placed at two-fifths from apex, hind angles obtuse and rounded, though quite evident, not reflexed; median line and transverse impressions rather slight, basal foveae shallow, surface smooth, the whole basal area punctate, closely at sides, sparsely at middle, the punctuation extending forward along the lateral channels. Pronotum on average, narrower, with deeper apical emargination, at most only indistinctly punctate mediobasally.

Elytra: Convex, with parallel sides, a little wider only than prothorax, nearly three-fourths longer than wide, striae deep, finely punctate, intervals smooth and convex, no evident dorsal pores, intervals 8 and 9 finely punctate, and the whole apical area both finely punctate and setulose. Microsculpture of the elytra distinct, formed by very wide meshes, hardly any is visible on either the head or pronotum. Elytral lateral intervals eight and nine or only nine finely punctate and pubescent along entire length. Microsculpture on elytral disc distinct in both sexes, consisting of narrow transverse meshes.

Ventral surface: Sterna more or less punctate, venter very finely and sparsely punctate, slightly setulose at apex.

Legs: Pro-tibia with five preapical spines on outer margin. Pro- and meso-tarsi of male more strongly dilated.

Aedeagus: Median lobe of aedeagus relatively larger, terminal lamella slightly longer than wide, triangular, wide at base, strongly narrowed toward apex; internal sac with eight to 12 spines.

Genus 12: ***Oesyperus*** **Andrewes, 1923**

Description taken from Andrewes, 1923b: 444.

Body covered with a very short, sparse, almost invisible pubescence.

Head: Wide and convex, with a single supra orbital pore, placed at some distance from eye. Eyes glabrous, fiat, separated from buccal fissure. Antennae short, submoniliform, joints one to two more or less pubescent, though less so than the other joints. Labrum six setose, slightly emarginate. Mandibles strong, curved, and pointed, a small tooth at middle of right one, no seta in the strobe. Mentum with a sharp simple tooth and rounded lobes, the epilobes extending a little beyond them. Ligula narrow, free, truncate, and bisetose; paraglossae rather narrow, setulose, extending rather beyond ligula. Maxillae sharp and strongly hooked. Palpi setulose, acuminate but truncate at extreme apex; maxillaries with apical joint half as long again as penultimate, labials with penultimate long and slender, slightly longer than apical joint.

Pronotum: Very finely and narrowly bordered, a single marginal seta before middle, base unbordered.

Elytra: Nine striate, a scutellary striole between one and two, base bordered, no specialized dorsal setae, marginal series irregular.

Ventral surface: Pro-sternal process setulose. Ventral segments with a single seta, apical segment in both sexes with two setae on each side.

Legs: Short, tarsal joints short, rounded, pubescent above, fourth emarginate, in metatarsi first segment equal to the two and three combined, pro- and meso-tarsi in male slightly dilated, in former joints one to four, in latter two to four scaly beneath.

Remarks: Detailed redescription of the genus is available in Kataev, 2006: 44.

Key to the species of the genus *Oesyperus* Andrewes, 1923.

Remarks: Key to the species of the genus is available in Kataev, 2006: 47.

1. ***Oesyperus planus* Andrewes, 1923**

Description taken from Andrewes, 1923b: 446.

Dull, flat, and more elongate.

Size: Length 11.5 mm; width 3.8 mm.

Pronotum: With sides of base more oblique, sides evenly rounded, not sinuate behind, the angles more obtuse and rounded, median line very fine, basal foveae obsolete, surface more finely and closely punctate, especially along base.

Elytra: Much longer and flatter, striole longer, intervals flatter, though moderately convex at sides and behind, interval three with a more evident series of six to eight pores along middle.

Remarks: Detailed redescription of the species is available in Kataev, 2006: 50.

2. ***Oesyperus pygmaeus* Andrewes, 1923**

Description taken from Andrewes, 1923b: 446.

Much smaller in size, narrower, and more convex in form.

Size: Length 6–6.5 mm; width 2.1–2.3 mm.

Color: Palpi, antennae and legs lighter.

Head: Relatively a little wider, eyes smaller and a little more convex, the genae less apparent.

Pronotum: With extremities truncate, sides without sinuation, more contracted behind than in front, so that base is narrower than apex, hind angles more obtuse, but not rounded, median line finer, foveae very shallow and inconspicuous, surface more finely and closely punctate, especially along base.

Elytra: More convex, sides rather less rounded, basal border nearly straight, intervals nearly fiat, hardly more convex at sides and behind than on disk, third without any pores which are evidently larger than those of the general puncturation, which is equally fine and a little closer.

Remarks: Detailed redescription of the species is available in Kataev, 2006: 51.

3. ***Oesyperus unctulus* Andrewes, 1923**

Description taken from Andrewes, 1923b: 445.

Size: Length 9–10 mm; width 3–3.5 mm.

Color: Black, shiny, rather greasy in appearance; palpi, antennae, and legs testaceous.

Head: With shallow foveae, a fairly deep oblique furrow connecting suture with eye, clypeus bisetose, depressed in front, a little strigose at sides, antennae with joint three quite half as long again as two, and a little longer than four, surface irregularly and not closely punctate, neck smooth.

Pronotum: Cordate, quite half as wide again as head, but barely a third wider than long, about equally contracted at extremities, sides of base very slightly oblique, apex widely emarginate, sides nearly evenly rounded and faintly sinuate behind, the hind angles a little obtuse, but not rounded; median line short but clear, transverse impressions rather slight, basal foveae wide and shallow but elongate, diverging

outwards in front, surface not very closely punctate, more sparsely on disk, basal area vaguely strigose.

Elytra: Ovate, sides strongly rounded, distinctly sinuate near apex, which is rather pointed, base bisinuate, the border forming a rounded angle at shoulder ; striae clearly impressed, impunctate, striole short, sometimes obsolete, intervals convex at sides and behind, interval three with several pores behind, which do not bear setae longer than those of the general pubescence, surface rather finely and not closely punctate.

Ventral surface: Finely and sparsely punctate, sides of pro-sternum and the pro-episterna practically smooth, met-episterna not much longer than wide.

Remarks: Detailed redescription of the species is available in Kataev, 2006: 47.

Genus 13: ***Ooidius*** **Chaudoir, 1847**

Description taken from Chaudoir, 1843a: 405

Head: Mentum subtransverse, excavate. Ligula convex, narrow, truncate at apex, bisetose; paraglossae wide, subequal, apex broadly rounded, base truncated, membraneous. Labrum subtransverse, anterior angle rounded, margin ciliate, eyes large, prominent.

Pronotum: Transverse, anterior narrow, posterior corners outwardly prominent, medially subsinuate, both sides rounded-angulate; base dialated,

Elytra: Subovate, straight truncate base, marginate, slightly convex, apex rounded.

1. ***Ooidius advolans*** **(Nietner, 1857)**

Description taken from Nietner, 1857b: 377.

Color: Labrum, antennae and mandibles brown.

Head: Apex of ligula quadrate truncate. Inflated paraglossae slightly surpassing the anterior margin.

Pronotum: One-half as long as wide, dorsally and anteriorly smooth, base wrinkled and punctate.

Elytra: Striated.

Genus 14: ***Ophoniscus*** **Bates, 1892**

Description taken from Kataev, 2005b: 269.

Color: Dark, more or less iridescent on dorsum. Palpi, antennae, and legs ferruginous.

Pubescence, Punctation: Body pubescent and punctate, setae throughout rather short; punctation on elytral disc dense and uniform, on head and pronotal disc usually sparser and irregular.

Head: Clypeo-ocular prolongations present, rather distinct and usually reaching supraorbital grooves. Genae narrow. Mentum separated from submentum by complete suture, without distinct medial tooth (but usually medial part of apical emargination slightly protruding anteriad), with two medial setae; epilobes moderately widened apically; submentum with one or two lateral setae on each side. Ligular sclerite narrow, slightly emarginate at sides and weakly expanded at apex, with two long ventro-apical setae and sometimes with a few short distal dorsal setae. Labial basal palpomere not carinate.

Pronotum: Apical angle of pronotum each with one to two long marginal setae; basal angle lacking long marginal setae. Pronotal base usually without distinct border, but sometimes basal border recognizable medially.

Elytra: Elytra with rounded or obtusely angulate humeri and weak preapical sinuation. Scutellar striole long, with a basal pore. Rows of discal pores present on third, fifth and seventh intervals (pores in anterior half of fifth and seventh interval usually not connected with striae). Hind wings fully developed.

Ventral surface: Met-episterna narrow, much longer than wide, rather strongly narrowed posteriad.

Legs: Meta-coxae without any additional setigerous pores. Apical abdominal sternum with two pairs of setae in both sexes. Pro-tibia ventrally not densely setose, at most with a few additional setae except for a longitudinal row of ventral spines; its apical spur slender, more or less clearly dentate basally at margins (particularly notably in *O. cribrifrons* and less so in *O. iridulus*). All tarsi pubescent dorsally. Pro- and meso-tarsi in male distinctly dilated, with biseriate adhesive vestiture ventrally. First meta-tarsomere slender, approximately as long as second and third together.

Aedeagus: Apical orifice of median lobe of aedeagus (not examined in *O. hypolithoides*) shifted to left side and strongly narrowed to basal bulb. Apex of terminal lamella slightly recurved ventrally, or (in *O. iridulus*) directed ventrad. Internal sac with a number of teeth or spines.

Female genitalia: Apical stylomere narrow, or rather broad, blunt at apex, without setae on external side.

Key to the species of the genus *Ophoniscus* Bates, 1892 (Key modified from Kataev, 2018)

1. Pronotum narrower, with basal angles clearly rounded at apex, punctation rather coarse, restricted to margins, but usually few punctures present also on disc along medial line; larger: body length 8.9–10.2 mm.....***O. iridulus*** Bates, 1892

- Pronotum wider, with basal angles somewhat sharp, at most only slightly blunted at apex, punctation variable, either restricted to margins or distributed throughout; smaller: body length at most 9.2 mm.....2

2. Head in relation to pronotum larger, with wider neck; pronotum punctate in central portion more sparsely than along margins, sides basally more or less straight, at most scarcely sinuate, basal angles obtuse, more or less clearly blunted at apex, basal margin wider than apical margin, at most only vaguely bordered medially, microsculpture on disc strongly obliterate, often invisible; in male, pro-tarsus moderately and meso-tarsus weakly dilated, with adhesive scales on ventral side of meso-tarsomere 1; body length 7.4–9.2 mm.....***O. compositus*** Walker, 1858(3)

- Head in relation to pronotum smaller, with narrower neck …….....***O. puneensis*** Kataev, 2018

3. Frons and pronotum medially nearly impunctate; elytra in relation to pronotum wider and longer, elytral pubescence more or less strongly reduced on inner intervals medially; smaller: body length 7.4–8.7 mm.....***O. compositus compositus*** Walker, 1858

- Frons and pronotum throughout somewhat coarsely punctate; elytra in relation to pronotum narrower and shorter, elytral pubescence not reduced on inner intervals medially; larger: body length 8.4–9.2 mm.....***O. compositus punctidorsis*** Kataev, 2018

1. *Ophoniscus compositus* (Walker, 1858)

Description taken from Kataev, 2005b: 278.

Size: Medium size (body length 7.4–8.7 mm), stout and strongly iridescent on dorsum.

Head: Frons and pronotal disc medially almost impunctate.

Pronotum: Rather broad, its sides almost rectilinearly converging basad; basal angles obtuse, more or less clearly blunt at apex; microsculpture on disc strongly obliterate, often invisible, particularly in males.

Elytra: Densely punctate throughout, in male usually with three, in female with three or four punctures in a transverse row across each interval in its middle portion; pubescence sometimes more or less strongly reduced on disc; sutural angle acutangular, rather sharp at apex.

Aedeagus: Median lobe of aedeagus strongly arcuate, with apical portion directed slightly dorsad and clearly recurved ventrally at apex; terminal lamella somewhat broad, approximately as long as wide basally, its sides almost rectilinearly or hardly sinuately converging to rather sharp, narrowly rounded apex; internal sac with numerous moderately large spines, organized in two to three groups.

***ssp.Ophoniscus compositus compositus* (Walker, 1858)**

Remarks: A short description of the subspecies is available in Kataev, 2018: 324.

2. ***Ophoniscus iridulus* Bates, 1892**

Description taken from Kataev, 2005b: 272.

Size: Large: body length 8.9–10.2 mm.

Head: Frons and vertex smooth or with very sparse and fine punctation.

Pronotum: Comparatively narrow; its basal angles obtuse, narrowly rounded at apex; sides basally very broadly rounded or nearly straight; punctation rather coarse, restricted to margins, but usually a few punctures also present along medial line.

Elytra: Throughout densely punctate and pubescent, with three to four punctures in a transverse row across each interval in its middle portion in the male, and with five to six much finer punctures in the female; sutural angle acutangular, rather sharp at apex.

Aedeagus: Median lobe of aedeagus strongly arcuate, slightly directed ventrad at apex; terminal lamella long, much longer than wide, its sides almost rectilinearly converging to a rather sharp apex; internal sac with numerous large spines.

3. ***Ophoniscus puneensis*** **Kataev, 2018**

Remarks: Detailed species description is available in Kataev, 2018: 321.

Genus 15: ***Ophonus*** **Dejean, 1821**

Description taken from Dejean, 1829: 193 and Tschitschérine, 1901: 234.

Elongated, subpubescens.

Color: The body surface is dark, pitch brown or blackish, or more or less metallic. Head and thorax black- pitch, punctate, elytra darker-green.

Head: Smooth, at most with a few more marked points on its front part and on the sides. Labrum without a clearly marked rim at the anterior border.

Pronotum: Sides of the pronotum are curvilinear to the base, the posterior angles are more or less open, with a more or less rounded apex, pronotum subquadrate, posterior angulate, posterior angle obtuse.

Elytra: Very finely punctated, striated; hairiness of the elytra erect vertically or almost vertically, and almost always fairly extensive (in well-preserved individuals).

1. ***Ophonus chlorizans*** **Solsky, 1874**

Description taken from Kataev, 2001a: 183.

Size: Length 5.4–8.5 mm.

Color: Body color varies from metallic blue, green or violet to black. Dark legs.

Head: Base of mandibles not protruding angularly.

Pronotum: Basal angles widely rounded.

Genus 16: ***Oxycentrus*** **Chaudoir, 1854**

Description taken from Noonan, 1985: 56.

Body cylindrical in most species, subcylindrical in a few species;

Size: Length Approximately 7 to 12 mm.

Color: Body reddish black to dark red; appendages same as body or red to reddish yellow. Dorsal Luster. Dull to slightly shiny.

Dorsal Microsculpture: Mesh obsolete on frons of head; obsolete or fine to very fine transverse mesh elsewhere.

Punctuation, Pubescence, and Setation: Dorsum of head impunctate. Pronotum in *O. rugifrons* nearly impunctate, in other species with dense non-setigerous punctures posteriorly, narrow row of such punctures along each lateral margin and the median longitudinal line. Venter in *O. rugifrons* nearly impunctate and glabrous except for usual ambulatory setae on abdominal sterna. In all species but *O. rugifrons*, moderate size punctures, each with one very short fine seta, present on lateral margins of pro-sternum, anterior margins of pro-episterna, all of meso-sternum and met-episterna, anterior portion of mes-episterna, and all of meta-sternum except median area. Small punctures, each with a short fine seta, present on areas beneath coxae and trochanters on abdominal sterna two to three in all species but *O. rugifrons*; some specimens of some species with fine short setae on all or most sterna. Dorsa of tarsi glabrous except for few very sparse and very short fine setae. Elytral intervals three each with zero to seven setigerous punctures confluent with interneur two. Ovipositor, valvifers each with two or three distal setae on venter; stylomeres one each with three to four distal lateral setae on venter; stylomeres two each with one stout, short proximal seta on venter and in some species with one short proximal seta on dorsum.

Head: Labrum and clypeus in some species with outer distal seta at each side of clypeus situated in depression and with or without ridge and groove on mesal side and with or without groove on lateral side. Frontal foveae each an elongate deep pit near

epistomal suture and with a complete deep sulcus prolonged or not onto clypeus (in *O. rugifrons* foveae surrounded by deep, irregular wrinkles); clypeo-ocular prolongations each extended to eye; deep groove extended from junction of each clypeo-ocular prolongation and eye to base of mandible. Mandibles slender, elongate, in repose projected far beyond anterior margin of labrum. Eyes globular, very strongly projected from head; genae between mouth margins and eyes very narrow. Mentum with prominent acute median tooth. Ligular sclerite broadly expanded at apex in some species.

Pronotum: Pronotum elongate in form, in most species cordate; sides projected outward from anterior margin in approximately anterior 2/3 and then sharply convergent towards base; anterior and posterior beads complete but flattened medially; lateral beads, thick and prominent.

Elytra: Scutellar interneurs very short. Subapical sinuations slight.

Legs: Front tibial apices enlarged. Hind basitarsi varying within some species from slightly shorter to slightly longer than tarsomeres two and three combined.

Aedeagus: Median lobe with button like apical disc in some species; dorsal membranous area long, extended to or nearly to basal bulb. Internal sac with spines or enlarged microtrichia in most species.

Female genitalia: Ovipositor. Valvifers with distal and lateral margins membranous.

Key to the species of the genus *Oxycentrus* Chaudoir, 1854 (Key modified from Kirschenhofer, 1992)

1. Larger species, 8.8–10 mm……...***O. parallelus*** Chaudoir, 1854

- Smaller species, 7–8.1 mm…….……2

2. The margin at the apex of elytra significantly widened and deepened, so that between the 8th and 9th interval a bulge elevated margin is visible, the basal margin is rudimentary……..... ***O. sikkimensis*** Kirschenhofer, 1992

- The margin at the apex of the elytra is not deepened and not clearly offset, basal margin always clearly formed…..….. ***O. assamensis*** Kirschenhofer, 1992

1. *Oxycentrus assamensis* Kirschenhofer, 1992

Description taken from Kirschenhofer, 1992: 37.

Small, elongated oval shape.

Size: Length 7 mm; width 2.9 mm.

Color: Head and pronotum brownish black, lateral margin of pronotum narrowly light brown, pronotum clearly reddish brown, legs reddish brown, femur not darkened.

Head: Smooth, shiny, with big, hemispherical eyes, presence of short, rather sharply narrowed straight line towards the neck, these do not quite reach half the length of the eye diameter when viewed from the side.

Pronotum: Transverse, approximately 1.1 times wider than long, 1.6 times wider than the head, quite strongly arched, shining, the sides more rounded towards the front, rectilinearly narrowed towards the base, front margin about as wide as the base, posterior angle obtuse and sharp at the apex, the area between them clearly distinct, dimple-shaped, weakly depressed small impressions, punctures in the impressions fine and dense, the middle of the base smooth. Median line fine, not reaching the base, the base is almost straight.

Elytra: Sides are slightly rounded towards the apex, slightly sinuate before the apex, the intervals are clearly convex, the striae deep, basal edge straight, humeral teeth short.

Ventral surface: Underside smooth, shiny, black-brown, met-episternum significantly longer than wide in front, significantly narrowed towards back, smooth.

2. *Oxycentrus parallelus* Chaudoir, 1854

Description taken from Chaudoir, 1854: 347.

Color: Very shiny black, both above and below, black or light gray eyes, antennae, mouth parts and edges of the labrum of a ferruginous more or less dark, dark brown legs, femora slightly infuscated.

Head: Small with protruding and hemispherical eyes, head smooth, fairly convex with two fairly short foveae, clypeal suture well marked.

Pronotum: Wider than the head with the eyes, almost as long as wide, a little narrowed towards the base which is cut very squarely and which fits exactly at the base of the elytra, anterior edge slightly emarginated, the front angles distant from the sides of the head and rounded at the top, the sides slightly rounded anteriorly, very slightly sinuous from the middle and falling perpendicularly on the base with which they form a right angle whose summit is very acute; the middle line fine and reaches the two ends, the side edges fine and also raised along their entire length, the space near the posterior angles flattened, the whole base covered with large loose punctures, among which there is a rounded impression on each side which is also punctated, which extends indistinctly to the base, the gutter which runs along the side edges is also a little punctated. Transverse impression at anterior is quite visible and forms an angle on the middle line.

Elytra: Barely wider than the front of the pronotum, longer than head and pronotum combined, very elongated, very parallel, cut very squarely at the base which is provided with a separate bead forming a straight line; the shoulders a little rounded, the end rounded and very slightly sinuous; their shape is semi-cylindrical, ninth striae

deep, almost forming punctated or crenulated furrows, and separated by smooth, very convex intervals; presence of a small puncture in the posterior half of the third interval, and a row, interrupted in the middle on the ninth interval near the eight striae.

Ventral surface: The lower part of the body quite convex, with punctuation weak on the middle of the sides of the pronotum, more distinct on the sides and less strong on the sides of the first segments of the abdomen; the rest very smooth.

3. ***Oxycentrus sikkimensis* Kirschenhofer, 1992**

Description taken from Kirschenhofer, 1992: 39.

Size: Length 7.5 mm; width 2.5 mm.

Color: Shiny black on dorsum, antennae, tibiae and tarsi light brownish.

Head: Smooth with strongly bulging eyes and short temples running straight towards temples.

Pronotum: Transverse, approximately 1.2 times wider than long, approximately 1.5 times wider than the head. The sides more and regularly rounded towards the front, weaker towards the base, slightly narrowed in front of the base, posterior angles sharp, protruding slightly at an acute angle. Base moderately deep, heavily punctured, basal foveae moderately deep, deeply furrowed in front of the base.

Elytra: Subcylindrical, the sides slightly rounded backwards, little broadened, fairly narrowed towards the apex, the sides in front of this slightly flared, ninth interval deeply and clearly deepened near the apex, so that the apical area of the eight interval is slightly raised and clearly set off. Scutellar striae and scutellar pore point rudimentary. Intervals moderately convex, the striae are quite deep, basically heavily punctated, intervals at the base increased more, raised almost like a carina, the first interval at the base slightly protruding in a carina. Basal margin rudimentary, the shoulders obtuse, humeral teeth small and distinct.

Ventral surface: Met-episterna slightly longer than wide, slightly narrowed posteriorly with scattered punctures.

Genus 17: ***Parophonus*** **Ganglbauer, 1891**

Description taken from Noonan, 1985: 19 and Kataev, 2010: 278.

Size: Length 7 to 20 mm.

Color: Body yellowish brown to reddish brown or black and with darker reddish, reddish brown, brown, reddish black or black areas. Dorsal Luster. Dull to iridescent.

Dorsal Microsculpture: Mesh obsolete to isodiametric on frons of head; obsolete irregular to regular and fine, slightly or completely transverse on pronotum and elytra.

Punctuation, Pubescence, and Setation: Frons of head and pronotum with dense, fine, short setae in many species.

Head: Frontal foveae obsolete to punctiform, each with or without c1ypeo-ocular prolongation. Mandible moderately long, unmodified. Mentum with or without median tooth. Ligular sclerite in some species slightly expanded laterally at apex. Submentum in some species with 1short seta laterad to long seta at each side.

Pronotum: Pronotum with anterior and posterior beads present medially in some specimens; anterior angles prominent or not. Pronotal sides with only one lateral seta.

Elytra: Elytral intervals three each with row of approximately eight to 15 setigerous punctures from apex to near base, all or part of such punctures confluent with interneurs two in many species; intervals five each with row of approximately eight to 15 setigerous punctures from apex to near base, most of such punctures not confluent with interneurs; intervals seven each with row of approximately four to 12 setigerous punctures from apex to near base or to near midpoint of interval, most of such punctures not confluent with interneurs. Completely, densely and regularly punctate

with at least external intervals pubescent; third, fifth and seventh intervals with discal pores (in some species pores hardly recognizable).

Ventral surface: Venter with dense, fine, short setae on prosternum and abdomen in all species and on other sclerites in many species. Dorsa of tarsi pubescent or not. Met-episterna longer than wide and hind winds fully developed.

Legs: Hind basitarsi each slightly shorter to slightly longer than two and three combined. Meta-coxa without a posteromedial pore; tarsi pubescent dorsally; pro- and meso-tarsi in male widened and with adhesive vestiture ventrally.

Genitalia: Ovipositor, valvifers each with one or two distal lateral setae on venter; stylomeres one with or without setae; stylomeres two each with proximal short peg-like seta on venter. Apical stylomere with a short proximal seta on venter in most species; and apical orifice of aedeagus in dorsal position or slightly shifted to the right.

Key to the species of the genus *Parophonus* Ganglbauer, 1891 (Key modified from Kataev, 2010)

1. Basal angles of pronotum angularly or rather widely rounded at apices; clypeo-ocular prolongations absent or, if present, very superficial, at eyes usually indistinct; head on frons and vertex and pronotum without microsculpture; anal sternite in male more or less rounded at apex ……..…..2

- Basal angles of pronotum obtuse, sharp at apices, sometimes sub denticulate; clypeo-ocular prolongations distinct, at eyes deepened; head and pronotum with distinct microsculpture (the *javanus* group); anal sternite in male slightly emarginate at apex…….……..***P. acutangulus*** Bates, 1891

2. Body larger (8.8–10.4 mm); head pubescent dorsally; pronotum punctate rather coarsely and uniformly; post-gena wider; eye separated from buccal

fissure ventrally by a distance only slightly shorter than width of 1st antennomere; labial basal palpomere not carinate ventrally; epilobes rather narrow, weakly widened apically (**the *cyaneotinctus* group**)……...3

- Body smaller (6.9–8.5 mm); head glabrous dorsally; pronotum punctate more coarsely along margins and much more finely in central portion; post-gena very narrow; eye separated from buccal fissure by a distance much shorter than width of 1st antennomere; labial basal palpomere with oblique carina ventrally; epilobes notably widened apically (**the *subtilis* group**)... ……5

3. Elytral sutural angle narrowly rounded at apex. ……4

- Elytral sutural angle sharp at apex. ……..***P. indicus*** Andrewes, 1931

4. Elytra with 7–8 punctures across each 3rd interval in its middle portion……...***P. cyaneotinctus*** Bates, 1889

- Elytra with 12–13 punctures across each 3rd interval in its middle portion……..…….***P. rectangulus*** Ito, 1994

5. Tibiae and tarsi slightly infuscate; median lobe of aedeagus moderately and rather evenly curved, its apical portion bent ventrad at middle…….....***P. lividus*** Andrewes, 1923

- Legs entirely pale, tibiae and tarsi not infuscate; median lobe of aedeagus strongly curved, its apical portion bent ventrad notably behind middle……...***P. subtilis*** Bates, 1892

1. *Parophonus acutangulus* (Bates, 1891)

Description taken from Bates, 1891b: 331 and Kataev, 2010: 296.

Size: Length 8 mm.

Color: palpi, antennae and legs are testaceous yellow. Antennae often infuscate from third or fourth antennomere.

Pronotum: Transverse, quadrate, narrowed behind and nearly smooth on the disk (the rest being closely and minutely punctured), hind angles distinct, though not rectangular, are quite sharp at the apex. Pronotal sides before basal angles clearly rounded.

Elytra: Elytra with almost superficial striae and almost flat intervals. Elytral intervals more finely and more densely punctate, usually with six or seven punctures across each third interval in its middle portion. Discal pores on third, fifth and seventh intervals comparatively small, weakly recognized against general elytral punctation.

Aedeagus: Median lobe of aedeagus with extremely short terminal lamella and four or five medium sized spines in internal sac. Ventral side of median lobe convex in apical portion.

Female genitalia: Seta on external margin of apical stylomere not recognized.

2. ***Parophonus cyaneotinctus* (Bates, 1889)**

Description taken from Kataev, 2010: 282.

Size: Length 8.8–9.2 mm in male and 9.4–9.7 mm in female.

Color: Body dark brown, almost black; labrum externally, anterior margin of clypeus and pronotum along lateral borders usually reddish brown. Legs pale, yellowish brown. Palpi and antennae brownish yellow, not infuscate.

Head: Medium-sized, with rather convex eyes: mentum with a distinct, obtuse median tooth; length of labial penultimate palpomere approximately equal to length of apical palpomere; ligular sclerite truncate at apex and slightly sinuate at sides. Punctation of dorsal surface of head rather dense and somewhat regular (distance between punctures approximately equal to their diameter). Dorsal microsculpture visible throughout, very fine, consisting largely of more or less isodiametric meshes; meshes on vertex slightly transverse and obliterate.

Pronotum: Moderately transverse, widest at middle. Sides evenly rounded. Apical margin rather deeply emarginate; basal margin more or less straight, slightly longer than apical margin and slightly shorter than elytral base between humeral angles; pronotal basal edge glabrous, not ciliate. Apical angles notably protruding anteriad, rather narrowly rounded at apices; basal angles widely rounded at apices. Pronotal disc moderately convex, with wide and shallow latero-basal depressions in basal half of pronotum. Punctation rather uniform, only slightly denser and coarser in latero-basal depressions than in central portion and along apical margin. Microsculpture absent.

Elytra: Widest behind middle, with sides in middle portion almost rectilinearly divergent posteriad. Preapical sinuation rather deep. Sutural angle acute, narrowly rounded at apex in both sexes. Striae impunctate, nearly superficial. Intervals largely flat, only weakly convex at apices, very densely punctate, with seven to eight punctures across each third interval in its middle portion; third, fifth and seventh intervals with rows of setigerous pores along respectively second, fourth and sixth striae or located almost in the middle of intervals; pores weakly recognized against general elytral punctation. Posterior group of umbilicate series divided into two subgroups. Microsculpture absent.

Aedeagus: Median lobe of aedeagus “C” shaped, robust, convex on dorsal and ventral sides, clearly curved ventrad apically. Terminal lamella asymmetrical in dorsal view, approximately as long as wide, evenly narrowed apicad and narrowly rounded at apex. Apical orifice more or less in dorsal position. Internal sac with one large medial spine and one smaller apical spine.

Female genitalia: Apical stylomere with a very short proximal seta on external margin.

3. *Parophonus indicus* (Andrewes, 1931)

Description taken from Andrewes, 1931: 516 and Kataev, 2010: 283.

Size: Length 10–11 mm (length 9.7–10.1 mm in male and 9.8–10.4 mm in female). Body shortly and upper surface closely pubescent.

Color: Blue- black or black with faint bluish reflections; joint one of antennae, femora and tibiae flavous; palpi, rest of antennae, and tarsi ferruginous.

Head: Convex, finely and closely punctuate, the frontal foveae rounded and shallow, eyes large and moderately prominent, antennae extending a little beyond base of elytra.

Pronotum: Rather flat, closely punctuate, the punctures a little coarser than those on the head, nearly a half wider than head and as much wider than long, base truncate with its sides faintly oblique, wider than apex, front angles rounded, sides narrowly bordered and fairly strongly rounded from base to apex, the lateral seta placed well before middle, hind angles obtuse and moderately rounded, but not reflexed; median line slight and confined to disk, front transverse impression distinct at middle only, hind one obsolete, basal foveae large, rounded and shallow.

Elytra: Rather flat, the surface, though a little variable, very closely and much more finely punctuate than that of the pronotum, about a third wider than pronotum, not quite a half longer than wide, shoulders square, with the border angulate, sides nearly parallel, a moderate sinuation before apex; striae moderately impressed, finely and vaguely crenulate, intervals flat, three, five and seven with a row of punctures, along the inner margin on three, rather irregular on five and seven. On elytra with four to six punctures across each third interval in its middle portion. Elytral sutural angle sharper.

Ventral surface: Underside finely and sparsely punctuate, met-episterna a half longer than wide, last ventral segment of both male and female with two marginal setae on each side.

Aedeagus: Terminal lamella of median lobe of aedeagus almost symmetrical in dorsal view.

4. ***Parophonus lividus*** **(Andrewes, 1923)**

Description taken from Andrewes, 1923a: 234 and Kataev, 2010: 289.

Size: Length 7.5–9.0 mm; width 2.8–3–1 mm. (7.4–7.6 mm in male and 7.6–8.2 mm in female).

Color: Under surface black, upper surface very dark iridescent blue, shiny; buccal organs, joints one to three of antennae (rest piceous), and legs testaceous, tibia) and tarsi a little darker. Legs pale, brownish yellow or reddish yellow, but tibiae and tarsi usually slightly infuscate.

Head: Convex, with large prominent eyes, clypeal suture very faint, lightly depressed at extremities, between which and eyes there it, almost only a slight indication of an impressed line, surface finely and, faintly punctuate. Dorsal microsculpture on head usually absent.

Pronotum: Quadrate, slightly convex, transverse, noire contracted in front than behind, half as wide again as head and, about a third as wide again as long, base truncate, apex a little emarginate, sides uniformly rounded, a little explanate towards base, not sinuate behind, hind angles obtuse, moderately rounded, and finely bordered; the usual impressions all lightly marked, surface closely punctate, finely on disk, rather more coarsely and also confluently along base, especially near hind angles. Pronotal basal angles rather widely rounded.

Elytra: Elongate, moderately convex, a little wider than pro-thorax, and about two-thirds as long again as wide, border sharply angled at shoulder, sides parallel, lightly sinuate near apex; stria three clearly incised, almost imperceptibly crenulate, intervals nearly flat, but convex near apex, odd ones seriately pit notate, the punctures small and numerous, surface very finely and closely punctate.

Ventral surface: Underside finely but not closely punctuate.

Aedeagus: Median lobe of aedeagus moderately and rather evenly curved, its apical portion weakly convex on ventral side, bent ventrad at middle of median lobe (lateral aspect), rather strongly also bent to the right (dorsal aspect) and just at apex slightly directed ventrad. Terminal lamella triangular, approximately as long as wide, narrowly rounded at apex (dorsal aspect). Apical orifice rather strongly shifted to the right. Internal sac with group of three to five medium-sized spines medially.

5. ***Parophonus rectangulus* Ito, 1994**

Remarks: Detailed species description is available in Ito, 1994c: 245.

6. ***Parophonus subtilis* (Bates, 1892)**

Description taken from Kataev, 2010: 285.

Size: Length 7.3–8.5 mm in male and 7.4–8.4 mm in female.

Color: Body dorsally black, with bluish tinge, clearly iridescent; labrum externally, anterior margin of clypeus and lateral borders of pronotum usually reddish brown; ventral side of body reddish black. Palpi, antennae and legs pale, brownish yellow or reddish yellow; antennae occasionally slightly infuscate from third or fourth antennomeres.

Head: Medium-sized, with large and convex eyes. Clypeo-ocular prolongations very superficial, often indistinct: mentum with a distinct, obtuse median tooth; labial penultimate palpomere slightly longer than apical palpomere; ligular sclerite truncate

at apex and more or less parallel-sided. Punctation of dorsal surface of head very fine, rather dense and somewhat regular (distance between punctures usually slightly longer than their diameter). Dorsal microsculpture visible only in anterior part of clypeus and behind eyes, consisting of obliterate, more or less isodiametric meshes.

Pronotum: Comparatively weakly transverse, widest usually just before middle. Sides rounded along entire length, more widely in basal half than in apical half. Apical margin rather deeply emarginate; basal margin more or less straight, sometimes weakly concave medially, slightly longer than apical margin and slightly shorter than (in some specimens almost equal to) elytral base between humeral angles; pronotal basal edge glabrous, not ciliate. Apical angles notably protruding anteriad, rather narrowly rounded at apices; basal angles widely, but usually angularly, rounded at apices. Pronotal disc moderately convex; lateral depressions beginning from apical angles, very narrow apically, evenly widened posteriad and fused basally with wide and shallow latero-basal depressions. Punctation rather dense and irregular; distance between punctures usually shorter than their diameter, sometimes, mainly in central portion of disc, equal to their diameter; punctures in latero-basal depressions often confluent. Microsculpture on disc absent.

Elytra: Elongate, widest usually behind middle, with weakly rounded sides. Preapical sinuation rather weak. Sutural angle notably less than rectangular, in both sexes slightly blunt at apex. Striae impunctate, slightly impressed. Intervals weakly convex, very densely punctate, with six to eight punctures across each third interval in its middle portion. Posterior group of umbilicate series divided into two subgroups. Microsculpture absent.

Aedeagus: Median lobe of aedeagus strongly curved, its apical portion angularly bent ventrad notably behind middle, convex on ventral side and slightly directed ventrad at

apex (lateral aspect). Terminal lamella asymmetrical, more or less triangular, weakly concave on left side, slightly longer than wide and narrowly rounded at apex (dorsal aspect). Apical orifice slightly shifted to the right. Internal sac with one to three separate, medium-sized spines: usually one or two longer proximal spines and often also one shorter distal spine.

Female genitalia: Apical stylomere with a very short and thin proximal seta on external margin.

Genus 18: ***Platymetopus*** **Dejean, 1829**

Description taken from Habu, 1973: 204.

Body more or less punctate, well pubescent.

Head: Rather wide; post genae rather developed, genae glabrous though postgenae pubescent; frontal impressions not extending posterolaterally; clypeus bisetose; labrum with six setae, densely pubescent, well rounded at apical angles, mandibles fully short, longitudinally carinate and sulcate except at apical area, apical part mostly hidden beneath labrum, apex not prolonged nor hooked, left and right mandibles hardly intersecting, scrobe pubescent, apical segment of palpi more or less tumid; mentum without median tooth; ligula narrow, bisetose, paraglossaemembraneous, pubescent, adnate to ligula, extending anteriorly beyond ligula.

Pronotum: Without posterior setae.

Elytra: with basal pore; scutellarystriole moderately long; intervals three, five and seven without series of pores; dorsal pore on interval three not visible.

Wings normal.

Legs: Hind femora with two setae near hind margin; apical spur of fore tibiae simple; tarsi pubescent on dorsal side; fore and mid tarsi of male with segments one to four weakly dilated; tarsal segment five with some steae on ventral side.

Aaedeagus: Not twisted, apical orifice extending towards basal bulb.

Remarks: Detailed genus description is available in Kataev, 2023: 503.

Key to the species of the genus *Platymetopus* Dejean, 1829.

Remarks: Key to all species and subspecies of the genus known from Asia is available in Kataev, 2023: 504.

***ssp.Platymetopus figuratus pictus* Andrewes, 1923**

Description taken from Andrewes, 1923a: 233 and Jedlička, 1969: 3.

Size: Length: 7.0–8.0 mm; width: 2.4–2.8 mm.

Color: Black, shiny, antennae, palps and legs, the narrow side edge of the pronotum and the drawing of the elytra black. Piceous beneath, lighter along median line; upper surface dark aeneous, palpi, joints one to three of antennae (rest fuscous), labrum, margins and epi-pleurae of pronotum, legs, and a pattern on elytra testaceous. The elytral pattern consists in a broad testaceous stripe on each side, covering intervals six to eight, and extending from base to apex, but more or less interrupted behind middle on seven to eight, with an apical patch joining it; the aeneous colour on interval three extends nearly to apex, on four to five to about a fourth, and on one to two to about a sixth from apex; interval four sometimes, and one to two more rarely in part testaceous. The body is covered with a short, erect pubescence, leaving the surface moderately shiny.

Head: Short, wide, convex, eyes moderately prominent, genea oblique, surface finely but not closely punctate, antennae reaching but little beyond base of pronotum. Head broad with little arched eyes, behind them little narrowed, rather fine and dotted.

Pronotum: Cordate, convex, transverse, a third as wide again as head, and half as wide again as long, base truncate, apex a little emarginate, sides rounded in front and very slightly sinuate before the rectangular hind angles, the short median line, basal

transverse depression and fovea, all lightly impressed, surface finely punctate, more coarsely along base. Slightly wider than the head, almost half wider than long. Front edge straight with somewhat rounded and protruding front corners, rounded on the sides towards the front, narrowed almost straight backwards, posterior corners blunt, base somewhat wider than front edge, each with a shallow rounded impression, the entire surface finely and densely dotted, median line clearly.

Elytra: Moderately convex, nearly parallel, a little wider than pronotum, less than twice as long as wide, shoulders rather square. Margin faintly sinuate before apex; punctate-striate, the punctures fine and close together, the surface finely punctate. It consists of a long humeral blemish on six to eight. Somewhat wider than the neck shield, slightly rounded on the sides, basal margin forms an obtuse angle with the side margin, striae fairly deep to the tip, spaces slightly arched, striae in the second interval fairly long, this fine and densely dotted. **Microsculpture:** Head and neck shield smooth, elytra indistinctly networked.

Remarks: Detailed redescription of the subspecies present in Kataev, 2023: 530.

1. ***Platymetopus flavilabris* (Fabricius, 1798)**

Description taken from Habu, 1973: 205.

Size: Length 7.6–10 mm.

Color: Black, head and pronotum somewhat shiny, elytra mat, dorsal side fairly coppery (sometimes hardly metallic); labrum and mandibles black, antennae and palpi reddish black or dark reddish brown, segments one and two and basal half of segment three of antennae, and segment one of maxillary and labial palpi yellowish brown or pale brown, lateral margins of pronotum and posterior lateral to apical margin of elytra faintly reddish, legs variable, reddish black, tibiae often more reddish (in Individuals of Japan); ventral side black. Pubescence on body silvery, often yellowish.

Head: Convex; punctures distinct, dense, not confluent at posterior half, somewhat less dense on disk, rather confluent, becoming less distinct at anterior half including clypeus, fine, faint and sparse on lateral sides behind eyes (temporae), absent near anterior margin of pronotum; microsculpture absent; eyes not well convex, widely distant from buccal fissures, disparity between genuine and apparent ventral margins distinct; frontal impressions shallow, wide, not well defined; clypeus somewhat emarginate and generally bordered at apex, base of labrum often exposed; antennae extending before basal angles of pronotum in female, reaching basal angles in male. Mentum sparsely pubescent, two setae very widely distant from each other; ligula not dilated at apex, two setae only slightly separated from each other; palpigers faintly, longitudinally carinate.

Pronotum: Gently convex, widest a little before middle, base a little narrower than base of elytra; punctures compact, larger than on head, rather confluent; microsculpture absent; apex fairly emarginate, finely and completely bordered; apical angles protrudent, narrowly rounded, base shallowly emarginate at median area, finely and roundly oblique at lateral areas, completely bordered; basal angles obtuse, slightly, dully prominent laterally; lateral margins finely bordered, gently rounded-contracted anteriorly, generally evenly contracted posteriorly; lateral furrows narrow; marginal setae before middle; median line fine, faint, sometimes rather deep, generally reaching neither extremity; anterior and posterior transverse impressions faint; basal foveae shallow but distinct; outside areas of basal foveae depressed.

Elytra: Convex, widest near middle, fully more than one and one- half to one and three- fifths times as long as wide; surface rough, densely granulate, somewhat rugose (like corroded); microsculpture evident, isodiametric; base ciliate; basal border gently oblique, somewhat sinuate, forming indistinct very obtuse angle or almost rounding at

shoulder; shoulder not dentate or with small dull tooth; lateral margin almost parallel or slightly dilated from behind shoulder to middle; apical sinuation distinct; apex somewhat pointed though narrowly rounded; striae distinct, punctate at basal half; intervals somewhat convex, sometimes interval one, three, five and seven weakly raised, intervals seven and eight without additional pore; marginal series composed of fifteen pores, sometimes interrupted at middle.

Legs: Femora sparsely pubescent, two setae on hind femora comparatively short, fore tibiae with one to three spines at anterior outer margin, without ventro-apical pubescence, with one row of spines ventrally besides marginal row; in midtarsi of male segment one with adhesive hairs at apical half; hind tarsi fully shorter than width of head, segment one one and one-half times as long as segment two, segment five a little longer than segment one in male, slightly longer or shorter in female; segment five with three (in fore and mid tarsi) or four (in hind tarsi) setae on each ventrolateral margin.

Ventral surface: Rather densely punctate and pubescent except on posterior area of head (pubescent area of head faintly rugose-punctate), punctures on sternite very fine; pro-sternal process completely bordered, border sometimes indistinct; met-episterna long; sternite six with two marginal setae on either side in male and female.

Aedeagus: Aedeagus moderately bent near middle, fully deflexed at apex; surface not rugose, without microsculpture; apical lamella almost as long as wide, apex rounded without border.

Female genitalia: Basal segment of styluses narrow, with one distinct seta at outer apical area, apical segment moderately elongate, outer side with one short seta near base; hemisternite hardly reaching base of apical segment of styluses, without seta, apex well rounded, outer margin faintly sinuate before apex.

Remarks: Detailed redescription of the species available in Kataev, 2023: 504.

***ssp.Platymetopus flavilabris flavilabris* (Fabricius, 1798)**

Remarks: A short description of the subspecies present in Kataev, 2023: 509.

2. ***Platymetopus rugosus* (Nietner, 1857)**

Description taken from Nietner, 1857a: 150 and Bates, 1891b: 329.

Smaller, more wrinkled.

Color: A little darker color above, red legs.

Head: Antennal segments five to 11 ovate slightly depressed.

Pronotum: Broad, coarsely rugose- punctuate throughout with sharply ploughed and abbreviated dorsal line in the middle.

Remarks: Detailed redescription of the species available in Kataev, 2023: 524.

***ssp.Platymetopus rugosus rugosus* (Nietner, 1857)**

Remarks: A short description of the subspecies available in Kataev, 2023: 526.

Genus 19: ***Siopelus* Murray, 1859**

Description taken from Noonan, 1976: 44.

Size: Length 6.5 to 14 mm.

Color: Body reddish, reddish brown to reddish black or black, with yellowish areas in some specimens. Dorsal Luster. Dull to iridescent.

Dorsal Microsculpture: Mesh obsolete, isodiametric, slightly transverse, or transverse. **Punctuation, Pubescence, and Setation:** Dorsum with head in some species, pronotal base in all species, other pronotal areas in some species, and elytral intervals in most species with dense non-setigerous punctures. Moderately dense small punctures, each with short fine seta, on elytral intervals eight or nine to 10 and on most of venter. Submentum in most species with one short seta laterad to long seta at each side. Dorsum of tarsi with scattered to dense short fine setae. Elytral intervals

three each with row of setigerous punctures; intervals five and seven each with or without such punctures.

Head: Frontal foveae obsolete, punctiform, to large and basin like, each with or without clypeo-ocular prolongation of varied length and depth. Mentum with or without median tooth. Ligular sclerite slightly to moderately laterally expanded at apex in Oriental species. **Pronotum:** Pronotum with posterior bead present medially in some specimens.

Elytra: Scutellar interneurs short to average in length.

Legs: Middle tarsi of some males not expanded laterally and not with ventral biseriate vestiture. Hind tarsi elongate in appearance; basitarsi approximately 0.8 to 1.1 length of tarsomeres two and three combined.

Aedeagus: Median lobe with dorsal membranous area various, extended to basal bulb in most species.

Female Genitalia: Ovipositor, valvifers with or without distal setae on venter; stylomeres one each in most species with one to three setae on distal lateral margin of venter; stylomeres two of Oriental species of subgenus *Siopelus* each with one seta in scrobe near mid-point by ventral edge.

1. ***Siopelus tamilnadensis* Kataev, 2002**

Description taken from Kataev, 2002b: 248.

Size: Length 7.3–8.0 mm; width 3.1–3.4 mm.

Color: Dark reddish brown to almost piceous, usually labrum at least externally, base of mandibles, narrow margins of pronotum and elytra, scutellum and apical third of suture reddish brown. Palpi, antennae and legs also reddish brown; knees and apex of tibiae hardly infuscated. Upper side shiny, with green bluish metallic lustre on elytra, more intensive in male than in female.

Head: Head, measured across eyes and across neck constriction, correspondingly 0.68–0.72 and 0.56–0.58 times as wide as pronotum, impunctate on dorsum, with large and convex eyes rather narrowly separated from buccal fissure ventrally. Mandibles short, not elongate, left one rather sharp at apex. Tempora short, somewhat flat, sloped to neck, each with few very short setae. Labrum weakly concave anteriorly. Clypeus with one setigerous pore on each side of anterior margin; latter only moderately emarginate but labral base partly visible in emargination in holotype and one paratype. Frontal suture superficial. Clypeo-ocular prolongations present, not reaching supraorbital furrows, deepened at clypeus and very fine posteriorly. Supraorbital pores situated in front of hind margin of eyes. Mentum and submentum separated by complete suture. Mentum lacking median tooth but slightly swollen at anterior margin medially. Epilobes of mentum narrow. Sub- mentum with one lateral setae on each side. Ligular sclerite very narrow, not widened at apex and with two ventroapical setae. Dorsoapical setae absent. Paraglossae glabrous, very broad, rounded at apex, much extended beyond ligular sclerite and not separated distally from it by any notch. Antennae slender, not long, extending slightly beyond basal ridge of elytra, pubescent from apical half of third segment.

Pronotum: Unisetose laterally, somewhat convex, slightly flattened baso-laterally, 1.57–1.63 times as wide as long, widest slightly before middle, rounded throughout at sides (very widely basally). Anterior margin weakly emarginate, bead along it narrow, interrupted medially; posterior margin straight or widely rounded, bordered throughout, notably wider than anterior margin and slightly narrower than elytral base between humeral angles. Apical angles weakly protruding, rounded at apex. Basal angles obtusangular, narrowly rounded at apex. Pronotal basal edge ciliate. Lateral depressions weakly developed, shallow, beginning from lateral pores, widened basally

and fused with wide and shallow baso- lateral depressions. Basal foveae located within baso-lateral depressions, small and superficial. Pronotal surface finely and densely punctate and pubescent baso-laterally and very narrowly along sides. Pubescence short, hardly visible. Punctures in basal foveae larger and usually confluent. Very fine, hardly noticeable punctation usually present also on pronotal disc.

Elytra: Moderately convex, 1.46–1.48 times as long as wide, 2.81–2.88 times as long and 1.18–1.24 times as wide as pronotum, widest behind middle and very widely rounded at sides. Shoulders not prominent, rounded at apex. Subapical sinuation distinct, rather shallow, without denticle at base. Sutural angles, in both sexes narrowly rounded at apex. Basal bead finely and sparsely pubescent, weakly sinuate, meeting lateral margin at very obtuse angle. Intervals rather flat, weakly convex before apex. Two lateral intervals throughout, apices and bases of all other intervals distinctly punctate and pubescent. Other elytral surface more finely and sparsely punctate throughout, without pubescence. Punctures on each discal interval arranged usually in four irregular rows; average distance between pores there notably greater than their diameter. Striae impunctate, slightly impressed. Scutellar stria long, with basal pore. Third, fifth and seventh intervals each with longitudinal row of numerous very small dorsal setigerous pores associated with second, fifth and seventh striae respectively. Marginal series more or less widely interrupted medially.

Microsculpture: On dorsum of head, pronotum and elytra not developed.

Hind wings fully developed.

Ventral surface: Met-episterna much longer than wide and strongly narrowed posteriad. Abdominal sterna, except for standard fixed setae, covered with short and dense pubescence. Anal sternum in male hardly truncate at apex, in female rounded,

in both sexes with two pairs of setigerous pores along apical margin. Apex of anal tergum rounded.

Legs: Meta-coxae without any additional pores, only with two obligatory fixed setigerous pores. In fore tibia, outer distal margin with three to four spines, ventroapical tubercle with one spine. Meta-femur with two, sometimes three, setigerous pores at hind margin. Tarsi very sparsely pubescent dorsally; first meta-tarsomere slender, approximately equal to second and third together. In male, first to fourth pro- and meso-tarsomeres rather weakly dilated; first meso-tarsomere with adhesive vestiture only apically.

Aedeagus: Median lobe of aedeagus rather robust, arcuate, with apex slightly directed ventrad and with large basal bulb. Apical orifice extended to basal bulb. Ventral surface flat. Terminal lamella approximately as wide as long, roundly narrowed to round apex (dorsal aspect). Internal sac with two rows (converging apically) of comparatively small teeth in apical half of median lobe and with a group of several teeth of same size medially.

Female genitalia: Hemisternite of female genitalia with two or three setae distally. Basal stylomere with two setae latero- distally. Apical stylomere arcuate, somewhat long and sharp at apex, with two long and thin proximal setae: one near ventral and another near dorsal margin of scrobe.

Genus 20: ***Trichotichnus*** **Morawitz, 1863**

Description taken from Kataev, 2020: 174.

Head: In most members with fronto-ocular furrows (in some species indistinct or only traces visible). Mentum fused or not fused with submentum, with developed median tooth and narrow epilobes. Paraglossae glabrous. Ligular sclerite with two

ventral setae near apex, its apical margin more or less straight and outer angles not markedly lobed.

Pronotum: Bordered along apical and basal margins; basal edge not ciliate.

Elytra: Glabrous (with at most very fine and sparse setae on lateral intervals apically), smooth or punctate, in most species with one discal setigerous pore on interval three; intervals five and seven without discal pores. Elytral intervals smooth or with microsculpture consisting of transverse meshes or lines.

Legs: Pro-tibia only slightly widened apically, its outer margin with one to four (usually two or three) preapical spines; apical spur slender, not dentate at margins. Meta-femur with two (rarely three) setigerous pores at posterior margin. Tarsi glabrous or setose. Meta-tarsomere one elongate, about as long as or slightly shorter than meta-tarsomeres two and three combined. Male pro- and meso-tarsi with ventral adhesive vestiture biseriate.

Ventral surface: Abdominal sternites mostly without extra setae, in some species with very fine and short setae medially.

Aedeagus: Median lobe of aedeagus with apical orifice in dorsal position or shifted to left, with or without apical capitulum.

Female genitalia: Laterotergite with one to five setae or small spines apically; gonosubcoxite with one to three preapical spines or setae; gonocoxite with or without one or two setae or small spines on ventral and dorsal outer edges.

Key to the species of the genus *Trichotichnus* Morawitz, 1863

1. Elytral marginal umbilicate series more or less continuous or with a short gap at middle…….2
- Elytral marginal umbilicate series continuous…….12
2. Pronotum not depressed latero-basally……..……3

- Pronotum depressed latero-basally……...10

3. Met-episternum short, as wide as long or slightly wider than long……...4

- Met-episternum longer than wide……...7

4. Pro-tibia with or without longitudinal sulcus on dorsal side, pro-femur with 4–7 setae on anterio-ventral margin…….……..5

- Pro-tibia without longitudinal sulcus on dorsal side, pro-femur with 2–4 setae on anterio-ventral margin……...……...***T. opacus*** Ito, 1998

5. Pronotum with sides almost straightly converging basad, not sinuate, and with the basal angles angularly rounded at the tip ……*****.....T. loebli*** Ito, 1998

- Pronotum sides largely rounded, slightly sinuate near basal angles, and basal angles obtuse sharp at apex…….……...6

6. Elytral sutural angle rounded off rather narrow*****.....T. globulipennis*** Schauberger, 1935

- Elytral sutural angle acute, slightly blunted at tip…….....***T. sikkimensis*** Kataev & Schmidt, 2017

7. Elytral preapical sinuation deep……...***T. emarginatus*** Andrewes, 1930

- Elytral preapical sinuation shallow…….……..…….8

8. Apical angle of pronotum protruding anteriad…….……..9

- Apical angle of pronotum not protruding anteriad……..…....***T. hingstoni*** Andrewes, 1930

9. Basal angle of pronotum sharp at apex, sometimes with a small denticle protruding laterad……..……***T. glabellus*** Andrewes, 1930

- Basal angle of pronotum slightly blunted at apex, without denticle*****.....T. aquilo*** Andrewes, 1930

10. Mentum and submentum fused laterally and separated by suture medially……11

- Mentum and submentum separated by complete transverse suture…….***T. liparus*** Andrewes, 1926

11. Large species 9.5 mm ……..…….....***T. formosus*** Schauberger, 1935

- Smaller species 5.9–7.4 mm ……***T. birmanicus*** Bates, 1892

12. Dorsum densely punctate; meta-femur with three setae at posterior margin……..***T. saluki*** Kataev, 2020

- Dorsum finely punctate; meta-femur with two setae at posterior margin……...***T. perforates*** Kataev, 2020

Explanation 2: *Trichotichnus lamprus* is not included in the key due to lack of adequate description.

1. ***Trichotichnus aquilo*** **Andrewes, 1930**

Description taken from Kataev & Schmidt, 2018: 272.

Size: Length 7.2–8.8 mm; width 3.1–4.5 mm.

Color: Dark brown to black, shiny; mandibles basally, labrum, anterior margin of clypeus and very narrow margins of pronotum reddish brown; palpi, antennae, tibiae and tarsi brownish yellow or reddish brown; femora usually more or less strongly infuscate, occasionally almost black.

Head: Medium sized, with large and convex eyes. Mentum and submentum separated by complete transverse suture.

Pronotum: Relatively small, transverse, widest slightly before the middle, almost equally narrowed apically and basally. Apical margin shallowly arcuately emarginate, occasionally almost straight at middle. Apical angles rounded, slightly protruding anteriad. Sides rounded along entire length, more broadly in basal half than in apical

half. Basal angles obtusangular, usually slightly blunted at tip. Basal margin more or less straight, bordered throughout, slightly wider than apical margin. Disc moderately convex, lateral depressions very narrow in apical third, strongly widened from lateral setae posteriad and fused basally with wide basal foveae forming on each side a somewhat shallow common latero-basal depression; punctation fine and dense, mainly restricted to lateral and latero-basal depressions, present also in medio-basal area and occasionally at apical margin.

Elytra: Elongate, oval, widest behind the middle, with sides barely sinuate in basal third; base between humeral angles only slightly wider than pronotal base. Humerus prominent, angularly rounded, usually without denticle, more rarely with a tiny acute denticle recognizable in caudal view. Preapical sinuation shallow. Sutural angle acute, blunted at tip. Basal border almost straight, only slightly arched, forming a very obtuse angle with lateral margin. Striae impunctate, slightly impressed along entire length; intervals almost flat, only slightly convex at apex; parascutellar setigerous pore present; parascutellar striole long; interval 3 with one setigerous pore behind the middle. Dorsal microsculpture present almost throughout but very strongly obliterated, consisting of indistinct isodiametric and transverse meshes.

Ventral surface: Met-episternum much longer than wide, noticeably narrowed posteriad. Apex of last visible abdominal sternite in male subtruncate, with a pair of marginal setae, in female rounded and with two pairs of marginal setae.

Legs: Pro-tibia without longitudinal sulcus on dorsal side. Meso-tarsomere one in both sexes almost as long as two and three combined, in male with adhesive scales at apex.

Aedeagus: Median lobe of aedeagus evenly arcuate in lateral view, almost straight and parallel-sided in dorsal view, with apex slightly curved to the right; terminal

lamella rather short, wider than long, with sides markedly converging to very narrowly rounded apex; apical capitulum small, oblique. Internal sac without sclerotic armature.

2. ***Trichotichnus birmanicus*** **Bates, 1892**

Description taken from Bates, 1892b: 342.

Size: Length 7 mm.

Color: Blackish-black, polished, parts of the mouth, antennae and legs rufous-shelled.

Head: Very smooth, the frontal suture sharp, extending obliquely on both sides to the edge of the eye. Eyes moderately prominent.

Pronotum: Thorax a little transverse, anteriorly strongly rounded, posteriorly sinuous and narrowed, posterior angles straight, basal foveae on both sides scarcely punctuated.

Elytra: Oblong-ovate, sub-opalescent, apex obliquely sinuate, sharply striated, intervals a little convex, a little behind the middle of third interval with a puncture.

Remarks: Detailed redescription of the species is available in Kataev & Schmidt, 2017: 350.

3. ***Trichotichnus emarginatus*** **Andrewes, 1930**

Description taken from Kataev & Schmidt, 2018: 275.

Winged, body size comparatively small for the genus.

Size: Length 6.8–7.8 mm; width 3.0–3.4 mm.

Color: Dark brown to black; mandibles basally, labrum, apical margin of clypeus, occasionally also narrow margins of pronotum reddish or yellowish brown; palpi, antennae and legs brownish yellow; tarsi occasionally slightly infuscate.

Head: Medium-sized, with large and convex eyes. Mentum and submentum separated by complete transverse suture.

Pronotum: Relatively small, transverse, widest in apical third, slightly less strongly narrowed basally than apically. Apical margin very shallowly arcuately emarginate, in some specimens almost straight at middle. Apical angles rounded, slightly protruding anteriad. Sides either rounded along entire length, more broadly in basal half than in apical half, or almost straight basally. Basal angles obtusangular, blunted at tip. Basal margin more or less straight, very narrowly bordered along entire length, slightly wider than apical margin. Disc moderately convex, lateral depressions very narrow in apical third, strongly widened from lateral setae posteriad and fused basally with wide basal foveae forming on each side rather shallow common latero-basal depression; punctation fine and dense, restricted mainly to lateral and latero basal depressions, present also in narrow medio-basal area and occasionally at apical margin.

Elytra: similar to those of the preceding species, but preapical sinuation deeper, sutural angle less acute and humerus in most specimens with a tiny acute denticle visible in caudal view. Dorsal microsculpture very fine, consisting of isodiametric meshes on head, of mixture of isodiametric and transverse meshes on pronotum and of strongly obliterated transverse lines on elytra.

Ventral surface: Met-episternum much longer than wide, narrowed posteriad. Apex of last visible abdominal sternite in male faintly concave, with a pair of marginal setae, in female rounded and with two pairs of marginal setae.

Legs: Pro-tibia without longitudinal sulcus on dorsal side. Meso-tarsomere one in both sexes almost as long as two and three, in male with adhesive scales at apex.

Aedeagus: Median lobe of aedeagus very peculiar, in lateral view almost straight in basal two thirds and slightly curved ventrad in apical third, in dorsal view curved in middle portion; terminal lamella in dorsal view wide and long, rounded at apex, in

lateral view thin, with apex bent ventrad; internal sac with a small spine in apical portion of median lobe.

4. *Trichotichnus formosus* Schauberger, 1935

Description taken from Ito, 1996b: 203.

Size: Length 9.5 mm; width 4.4 mm.

Color: Body more or less oval, thick, pitchy black and slightly brownish, shiny, with iridescent luster on elytra; palpi and antennae yellowish brown, lateral margins of pronotum light reddish brown, labrum and legs dark reddish brown.

Head: Wide, seven-tenths the pronota1width, uniformly and rather well convex on vertex, flattened in triangular portion from vertex to clypeus, without punctures; labrum subsquare, shallowly emarginate at apex; clypeus rather thick, weakly and transversely swollen in basal half, obscurely rugose near each side, with apex shallowly emarginate; clypea1suture clearly impressed, slant at front margin; frontal impressions deeply carved throughout, but slightly shallower than those of usual species of the subgenus; eyes large, rather prominent, though not hemispherical; temple somewhat developed, three-tenths the eye length, rather steeply contracted behind; genuine ventral margin of eye widely separated from buccal fissure; mandibles robust, vertically truncate at tip of left mandible, retinacular tooth of left mandible weakly produced, the tooth of right mandible trapezoidal; antennae submoniliform, short, reaching pronota1base, third segment pubescent in apical two-thirds, a little shorter than the fourth (0.86 in ratio) and a half longer than the second; labial and maxillary palpi missing; ligula triangularly emarginate, with sharp apical corners; paraglossae narrow, rounded at apical external margins, bearing pointed tips, prolonged forwards beyond ligula and separated from ligula by deep incisions; mentum sharply toothed at bottom of apical emargination, epilobes narrow and not

dilated distad, suture with submentum engraved in middle; microsculpture detectable only near supraorbital grooves, composed of obscure transverse meshes

Pronotum: Subsquare, widest at apical two-fifths, three-eighths wider than long, relatively convex, mostly smooth and finely and sparsely punctuate only in lateral furrows and basal foveae; sides clearly arcuate lengthwise, stronger apicad than basad in the arcuation; apex shallowly emarginate, with border complete and obscure in middle; base one- fifth wider than apex, truncate, finely and brokenly bordered; apical angles widely rounded; basal angles angulate and wider than rectangle; lateral furrows wholly carved in a line and isolated from basal foveae which are large, shallow and ill-defined; front transverse impression vaguely engraved like the hind one; median line fine and shallow, not reaching apex and base; surface vaguely micro-lined in part.

Elytra: Subova1, about two-fifths longer than wide, rather convex, very sparsely and microscopically punctate; sides weakly arcuate at humeri, shallowly sinuate before apices; bases shallowly emarginate, very obtuse and angulate at humeral angles; apices rather narrow, more or less prominent behind, narrowly rounded at tips and not separated from each other; striae somewhat wide, deep and finely crenulate, scutellar striole rather long; intervals weakly convex on disc, gently convex laterally and apically, third interval with a setiferous pore a little behind middle along second stria; marginal series interrupted in middle, composed of 8+(10–11) umbilicate pores; microsculpture invisible under 80X magnification.

Hindwings entire.

Ventral surface: Mostly smooth, sparsely and minutely punctate medially on meso-sternum and second to sixth abdominal segments, the punctures bearing very short pubescence; met-episternum rather well contracted behind, three-fifths longer than

wide; abdomen bearing sparse and very short pubescence along middle of second to sixth segments, sixth in bisetose at each side and truncate at apex.

Legs: Hind femur bisetose along hind margin; fore tibia rather expanded distad, unispinous apico-externally, clearly sulcate to near apex on dorsal side, with apex truncate and minutely protuberant in middle, terminal spur short and robust; hind tarsus in male about one- fourth shorter than the width of head including eyes (0.77 in ratio), first segment one-eighth shorter than the second and third together and a half longer than the second, third one and one-third as long as the fourth, claw segment bisetose along each ventral margin.

Aedeagus: Aedeagus thick and gently arcuate, with a small hook at tip; apical lobe triangular, one-fifth longer than wide, narrowly rounded at tip; apical orifice wide and open towards the left, inner sac without sclerites.

5. *Trichotichnus glabellus* Andrewes, 1930

Description taken from Kataev & Schmidt, 2018: 277.

Size: Length 6.4–7.8 mm; width 2.8–3.9 mm.

Color: Black, shiny; mandibles basally and labrum externally brownish; tibiae slightly paler than femora, black brown; palpi, antennae and tarsi brownish yellow; antennomere one more or less distinctly infuscate.

Dorsal microsculpture: Strongly obliterated, consisting of very fine, more or less isodiametric meshes on head laterally behind eyes and on pronotum along sides and of very thin transverse lines on elytral disc.

Head: Comparatively large, with moderately convex eyes. Mentum and submentum largely separated by transverse suture in middle portion and fused very laterally.

Pronotum: Transverse, widest in the anterior third, noticeably narrowed basad. Apical margin arcuately emarginate. Apical angles protruding anteriad. Sides almost

rectilinearly or sinuately converging posteriad in basal half. Basal angles obtusangular, sharp at apex, in many specimens, with a small denticle protruding laterad. Basal margin more or less straight, distinctly bordered along entire length, wider than apical margin. Disc moderately convex, flattened latero-basally; lateral depressions narrow, slightly widened basally; basal foveae elongate, shallow, usually not fused with lateral depressions; punctation dense, fine and irregular, mainly restricted to latero-basal areas, lateral gutters and very narrow medio-basal area.

Elytra: Elongate, oval, widest just behind the middle, moderately convex; their base slightly wider than pronotal base. Humerus prominent, angularly rounded, with a tiny acute denticle recognizable in caudal view. Preapical sinuation shallow. Sutural angle acute. Basal border slightly sinuate laterally, forming a very obtuse angle with lateral margin. Striae impunctate, slightly impressed along entire length; intervals slightly convex, more clearly at apex; parascutellar setigerous pore present; parascutellar striole long; interval 3 with one very small setigerous pore behind the middle.

Ventral surface: Met-episternum markedly longer than wide. Apex of last visible abdominal sternite in both sexes rounded, in male with one pair and in female two pairs of marginal setae.

Legs: Pro-tibia without longitudinal sulcus on dorsal side. Meso-tarsomere one in female almost as long as two and three combined, in male it markedly shorter, with adhesive scales at apex

Aedeagus: Median lobe of aedeagus arcuate in lateral view, almost straight in dorsal view; terminal lamella in dorsal view slightly longer than wide, evenly converging at sides and narrowly rounded at apex; in lateral view, thin, slightly curved dorsad apically, with a tiny apical capitulum slightly prominent dorsally. Internal sac without sclerotic armature.

6. *Trichotichnus globulipennis* Schauberger, 1935

Description taken from Schauberger, 1935: 145.

Size: Length 6.5 mm.

Color: Head pitch black, the rest of the body pitch brown, antennae and legs are reddish yellow, the dorsal side less shining, rather coarse, the net mesh of the head and the anterior edge of the pronotum isodiametric, the pronotum and the elytra are roughly cross-meshed, not fine cross-grooved.

Head: Moderately large, with eyes hardly as wide as the pronotum between the front corners, the eyes moderately large, moderately arched, temples moderately long, sloping; the frontal foveae not raised from the clypeal furrow, the oblique furrow deep, the triangular area in front of it is strong raised and arched; the clypeus unisetose, cut straight at the front edge, behind without a transverse furrow, the clypeal suture between the frontal foveae deep, the mentum tooth strong and pointed; the eyes on the lower side separated from the maxillary section by a fairly wide space.

Pronotum: Fairly transverse, almost narrowed towards the base as forward, widest slightly in front of the middle; the front edge little emarginated, almost straight, the anterior angles broadly rounded; the sides moderately broadly rounded, running with a very slight curve to the base, with a setae in the front third; the lateral margin narrow, not widened towards the posterior, the space between lateral margin and the basal foveae slightly convex, only with a very indistinct oblique impression; the posterior angle obtuse, little sharp; basal edge convex at middle, slightly oblique at the sides, the basal border distinct only near the basal foveae, interrupted in the middle; the basal foveae very shallow, not very clear, the entire basal part impunctate.

Elytra: Very short, ovate and strongly arched, also in front fairly broad, rounded fairly evenly on the sides; the basal edge oblique rather distinctly slightly curved

towards lateral margin and meeting with the lateral margin at obtuse angle, shoulder teeth absent; the subapical sinuation very shallow, suture angle rounded off rather narrow, the suture all over deepened lengthways, the striae moderately fine, moderately deep, deep towards apex, indistinctly punctated, the scutellar striae moderately long; the intervals moderately convex, the third with a pierced point almost in the middle on the second striae, the umbilical row broadly interrupted in the middle.

Not winged.

Ventral surface: All abdominal segments fine and sparsely punctated and short haired; Episterna of hind prothorax short, barely longer than broad in front and broad behind. Prosternum fine in the middle and moderately densely punctated and short hairy, the episterna smooth.

Legs: Tarsi glabrous dorsally, the first tarsomere of the meta-tarsi as long as that of claw; hind femora at the posterior edge with two setae.

7. ***Trichotichnus hingstoni*** **Andrewes, 1930**

Description taken from Andrewes, 1930a: 19.

Size: Length 7–7.5 mm.

Color: Upper surface black, shiny in both sexes, somewhat iridescent; underside brown or piceous; palpi, antennae, legs, lateral borders of prothorax, apical border and epi-pleura of elytra ferruginous.

Head: Convex, clypeal suture moderately impressed at middle, the oblique side parts deeper, eyes rather flat, the genae evident, antennae just reaching base of prothorax.

Pronotum: Convex, about a third wider than head and as much wider than long, base slightly

emarginate, faintly bordered at sides, a little wider than apex, sides very finely bordered, the lateral seta at a fourth from apex, moderately and nearly uniformly rounded from apex to base, hind angles a little obtuse but sharp; median line very fine, transverse impressions obsolete, basal foveae just visible, surface smooth, not depressed near hind angles, a few very minute punctures at each side of base.

Elytra: Convex, ovate, a little pointed at apex, a third wider than prothorax, not quite a half longer than wide, basal border without tooth at shoulder, sides rather strongly rounded, slightly sinuate before apex; striae fine, impunctate, similar throughout, five a little deeper close to base; intervals very slightly convex, three with a pore behind middle, marginal series interrupted at middle, surface smooth.

Microsculpture: Elytra consist of fine, barely visible, transverse lines; that on prothorax forming wide transverse meshes; head quite smooth.

Ventral surface: Smooth; pro-sternal process setose, met-episterna rather longer than wide, third ventral segment minutely punctate and setulose in the middle, apical segment with two marginal setae on each side.

Remarks: Detailed redescription of the species is available in Kataev & Schmidt, 2017: 346.

8. ***Trichotichnus lamprus* (Bates, 1886)**

Description taken from Ito, 1997b: 155.

Body comparatively larger.

Pronotal base straight

9. ***Trichotichnus liparus* Andrewes, 1926**

Description taken from Kataev & Schmidt, 2018: 267.

Size: Length 8.5–10.3 mm; width 3.6–4.2 mm.

Color: Body dark brown to black, shiny; mandibles basally and labrum reddish brown; palpi, antennae and legs brownish yellow.

Head: Comparatively large, with convex eyes. Mentum and submentum separated by complete transverse suture.

Pronotum: Transverse, widest in the anterior third, markedly narrowed basad. Apical margin almost straight in medial portion. Apical angles almost not protruding anteriad. Sides roundly or almost rectilinearly converging posteriad in basal half. Basal angles obtusangular, sharp at apex, with or without a very small obtuse denticle protruding laterad. Basal margin usually widely rounded medially and slightly oblique laterally, more or less distinctly bordered along entire length (border in some specimens interrupted), wider than apical margin. Disc moderately convex, markedly depressed latero-basally; lateral depressions beginning from apical angles, evenly widened posteriad to pronotal basal edge; basal foveae wide, vaguely delimited, fused basally with lateral depressions; punctation fine and dense, mainly restricted to lateral and latero-basal depressions, present also in narrow medio-basal area and occasionally at apical margin.

Elytra: Elongate, oval, widest in posterior third, with sides slightly sinuate in basal third; elytral base slightly wider than pronotal base. Humerus prominent, angularly rounded, with a very small indistinct denticle recognizable in caudal view. Preapical elytral sinuation very shallow. Sutural angle acute, blunted or narrowly rounded at apex. Basal border evenly arched, forming a very obtuse angle with lateral margin. Striae impunctate, slightly impressed along entire length; intervals almost flat, at most slightly convex basally and apically; parascutellar setigerous pore present; parascutellar striole long; discal setigerous pore in interval three usually absent, occasionally present, either on one elytron (usually right) or very rarely on both

elytra. Dorsal microsculpture visible almost throughout, very fine, obliterated, consisting of more or less isodiametric meshes on head and pronotum and of very thin transverse lines on elytral disc.

Ventral surface: Met-episternum narrow, much longer than wide. Apex of last visible abdominal sternite in both sexes rounded, in male with one pair and in female two pairs of marginal setae.

Legs: Pro-tibia without longitudinal sulcus on dorsal side. Meso-tarsomere one in both sexes almost as long as two and three combined, in male with adhesive scales at apex.

Aedeagus: Median lobe of aedeagus stout, arcuate in lateral view, almost straight in dorsal view; terminal lamella in dorsal view slightly wider than long, triangular, with sides strongly, almost rectilinearly converging to subtruncate apex; in lateral view, it narrowed apicad, with a very small, more or less distinct dorso-apical flange. Internal sac with spiny patches apically.

10. *Trichotichnus loebli* Ito, 1998

Remarks: Detailed species description is available in Ito, 1998: 279.

11. *Trichotichnus opacus* Ito, 1998

Remarks: Detailed species description is available in Ito, 1998: 284.

12. *Trichotichnus perforatus* Kataev, 2020

Description taken from Kataev, 2020: 179.

Size: Length 8.9– 9.7 mm; width 3.7–4.1 mm.

Color: Body black, slightly shiny on dorsum, very slightly iridescent on elytra; mandibles except for their apices and narrow margins, labrum and very narrow lateral margins of pronotum reddish brown; palpi, antennae and legs brownish yellow;

femora not infuscate; in some specimens, tarsi slightly infuscate; ventral side with more or less distinct reddish tinge.

Head: Moderately sized. Eyes large, almost hemispherical, in lateral view very wide oval, almost touching buccal fissure ventrally. Tempora very short, slightly convex, abruptly sloped to neck, glabrous. Frons and vertex convex, with very fine micropunctures. Fronto-clypeal suture fine, shallow, straight. Frontal foveae deepened, each with short oblique depression directed inward. Fronto-ocular furrow deep at clypeus, becoming shallow posteriorly, reaching supraorbital furrow. Supraorbital furrow very narrow, touching upper margin of eye. Supraorbital setigerous pore small, located slightly before level of posterior margin of eye, separated from supraorbital furrow by distance approximately equal to one and half diameter of pore. Labrum very shallowly concave anteriorly. Clypeus slightly convex, almost straight along anterior margin, with a pair of setigerous pores located in anterior third of clypeus just at its lateral margins. Mentum completely fused with submentum, with wide, rounded median tooth; epilobes narrow, slightly widened anteriorly; submentum with one pair of long setae. Ligular sclerite markedly narrowed anteriorly, truncate at apex, with one pair of ventroapical setae. Paraglossa moderately wide, rounded apically, markedly longer than ligular sclerite and separated from it by narrow notch. Two apical maxillary palpomeres and one apical labial palpomere densely covered with rather long setae. Labial penultimate palpomere about as long as ultimate palpomere. Apex of left mandible acute. Dorsal microsculpture highly obliterate, recognizable only laterally behind eyes, consisting of transverse meshes. Antennae slender, surpassing pronotal basal edge by two apical antennomeres, with antennomeres four to eight about 2.0–2.5 times as long as wide. Basal antennomere about as long as antennomere three.

Pronotum: Transverse, widest at the end of anterior third, narrowed posteriorly, with one lateral seta inserted in widest point. Sides rounded in apical third and almost straightly converging in basal two thirds. Apical margin shallowly emarginate, very narrowly bordered along entire length, but occasionally border more or less strongly obliterate at middle; apical edge setose. Apical angles widely rounded, slightly protruded ahead, with one to four very short and fine setae (in some specimens extremely short and hardly recognised). Basal margin almost straight in middle portion, oblique laterally, bordered either along entire length or only laterally, markedly longer than apical margin and slightly shorter than base of elytra between humeral angles; basal edge glabrous. Basal angles obtuse, blunted at tip. Pronotal disc moderately convex, strongly sloped to apical angles and moderately sloped to sides in basal portion, slightly flattened at basal angles. Lateral groove very narrow in apical third, slightly widened posteriorly, reaching basal pronotal edge. Basal foveae elongate, shallow, isolated from lateral grooves by convexities. Median line distinct, superficial, almost reaching apical pronotal edge anteriorly and touching basal pronotal edge posteriorly. Surface densely and finely punctate along base, in lateral groove and at middle of apical margin; remaining areas with dense micropunctation. Microsculpture visible only along pronotal margins, consisting of very fine transverse meshes.

Elytra: Moderately convex, elongate oval, widest markedly behind middle, with somewhat acute apex. Humeri angularly rounded, with a tiny denticle visible in caudal view. Subapical sinuation distinct but not deep. Sutural angle in both sexes acute and sharp at tip. Basal edge evenly arched, forming a very obtuse angle with lateral margin. Lateral groove flat throughout, at most with indistinct short elongate convexity at apex. Striae impunctate, moderately wide, rather deep along entire

length, reaching anteriorly basal edge. Intervals convex, strongly narrowed apically, micropunctate. Parascutellar striole long, 0.17–0.20 times as long as elytra, with a small setigerous pore basally. Interval three with a small discal setigerous pore at stria two in the beginning of apical third. Marginal umbilicate series without gap at middle, consisting of 24–27 setigerous pores. Microsculpture on intervals visible throughout, consisting of transverse meshes, in female strongly obliterate; lateral groove and striae at bottom with isodiametric microsculpture. Hindwings fully developed.

Legs: Meta-coxae without additional setae medially. Pro-femur with several (four to six) setae on anterio-ventral margin, in male markedly wider than in female. Pro-tibia on upper surface without longitudinal sulcus, on outer margin with one preapical spine in male and with three such spines in female. Meta-femur ventrally with two setae at posterior margin and without setae at anterior margin. Tarsi dorsally glabrous; tarsomere five with three to five pairs of ventro-lateral setae. Meta-tarsus with tarsomeres markedly widened distally; meta-tarsomere one slightly shorter than meta-tarsomeres two and three combined; meta-tarsomeres one to four moderately densely setose ventrally. In male, pro- and meso-tarsomeres one to four markedly widened and with adhesive scales ventrally. In female, meso-tarsomere one elongate, almost as long as meso-tarsomeres two and three combined. **Ventral surface:** Ventral surface of thorax, pro-sternum, pro-, meso- and met-episterna as well as lateral portions of meta-sternum finely punctate. Pro-sternum almost glabrous, only with few very short setae at anterior margin and at apex of pro-sternal process. Met-episternum markedly longer than wide, strongly narrowed posteriorly. Sternites glabrous; apex of last visible (VII) sternite bordered, subtruncate in male and rounded in female, in both sexes with two pairs of marginal setae.

Aedeagus: Median lobe of aedeagus sclerotized only laterally, with wide membranous areas on dorsal and ventral surfaces from basal bulb to terminal lamella, in lateral view S-shaped, rather strongly bent ventrally just after basal bulb, in dorsal view somewhat parallel-sided basally and apically and widened at middle, with sides there rounded. Apical orifice in dorsal position, prolonged to basal bulb. Terminal lamella in dorsal view wide, slightly wider than long, narrowly rounded at apex, in lateral view thin, with sharp ventral flange at apex. Internal sac with a large curved spine on the right side at middle and with two large spiny formations in left basal and right apical portions of median lobe, respectively.

Female genitalia: Laterotergite symmetrical, longer than wide, with four thick setae apically. Gonosubcoxite shorter than laterotergite, moderately widened posteriorly, with three preapical spines on outer margin. Gonocoxite short, about 0.47 times as long as gonosubcoxite, moderately curved, with relatively wide base and with a tiny, hardly recognizable spine on both ventral and dorsal outer edges.

13. *Trichotichnus saluki* Kataev, 2020

Description taken from Kataev, 2020: 175.

Size: Length in male 7.7 mm, in female 10.0 mm; width 3.3 and 4.0 mm, respectively

Color: Body piceous, shiny on dorsum, very slightly iridescent on elytra; mandibles except for their apices and narrow margins, labrum and very narrow lateral margins of pronotum reddish brown; palpi, antennae and legs light brownish yellow; femora not infuscate in holotype and slightly infuscate in paratype; ventral side with more or less distinct reddish tinge.

Head: Moderately sized. Eyes large, almost hemispherical, in lateral view very wide oval, almost touching buccal fissure ventrally. Tempora very short, slightly convex, abruptly sloped to neck, glabrous. Frons and vertex convex, with dense fine

micropunctures. Fronto-clypeal suture superficial, almost straight. Frontal foveae deepened, wide. Fronto-ocular furrow deep at clypeus, becoming shallow posteriorly, reaching supraorbital furrow. Supraorbital furrow very narrow, touching upper margin of eye. Supraorbital setigerous pore small, located markedly before level of posterior margin of eye, separated from supraorbital furrow by distance approximately equal to two diameters of pore. Labrum very shallowly concave anteriorly. Clypeus somewhat flat, very shallowly arcuate at anterior margin, with a pair of setigerous pores located in anterior third of clypeus just at its lateral margins. Mentum with angulate median tooth, completely fused with submentum; epilobes narrow, slightly widened anteriorly; submentum with one pair of long setae. Ligular sclerite markedly narrowed anteriorly, truncate at apex, with one pair of ventroapical setae. Paraglossa moderately wide, rounded apically, markedly longer than ligular sclerite and separated from it by narrow notch. Two apical maxillary palpomeres and one apical labial palpomere densely covered with rather long setae. Labial penultimate palpomere about as long as ultimate palpomere. Apex of left mandible acute. Dorsal microsculpture highly obliterate, recognizable only on clypeus and laterally in narrow area under and behind eyes, consisting of transverse meshes. Antennae slender, surpassing pronotal basal edge by three apical antennomeres, with antennomeres four to eight about 2.5 times as long as wide. Basal antennomere about as long as antennomere three.

Pronotum: Transverse, widest at the end of anterior third, slightly narrowed posteriorly, with one lateral seta inserted just before widest point. Sides rounded in apical two thirds, slightly sinuate in basal third. Apical margin moderately emarginate, very narrowly but distinctly bordered along entire length; apical edge setose. Apical angles widely rounded, protruded ahead, with a few (four or five) short and fine setae. Basal margin almost straight in middle portion, oblique laterally,

bordered along entire length, markedly longer than apical margin and slightly shorter than base of elytra between humeral angles; basal edge glabrous. Basal angles nearly right, not blunted at tip. Pronotal disc moderately convex, strongly sloped to apical angles and moderately sloped to sides in basal portion, clearly flattened at basal angles. Lateral groove narrows apically, widened in basal half, reaching basal pronotal edge. Basal foveae narrow, shallow, isolated from lateral grooves by convexities, reaching pronotal edge. Median line very fine, reaching apical and basal pronotal edges. Surface densely punctate, more coarsely along base and more finely on other areas, with finest punctures in central portion. Microsculpture strongly obliterate, visible mainly only latero-basally, consisting of transverse meshes, in female more distinct than in male.

Elytra: Moderately convex, oval, widened posteriorly (in female more markedly than in male), with somewhat acute apex. Humeri angularly rounded at tip, with a tiny denticle visible in caudal view. Subapical sinuation distinct but not deep. Sutural angle in both sexes acute, blunted at tip. Basal edge arched, forming an obtuse (in male almost right) angle with lateral margin. Lateral groove narrow and flat throughout, without elongate convexity along groove apically. Striae impunctate, narrow, moderately deep along entire length, anteriorly reaching basal edge. Intervals moderately convex, strongly narrowed apically, finely punctate. Parascutellar striole long, about 0.15 times as long as elytra, with small setigerous pore basally. Interval three with a small discal setigerous pore at stria two slightly behind middle. Marginal umbilicate series without gap at middle, consisting of 27–34 setigerous pores. Microsculpture on intervals visible throughout, consisting of transverse meshes; lateral groove and bottom of striae with isodiametric microsculpture.

Hindwings fully developed.

Legs: Meta-coxae without additional setae medially. Pro-femur with several (six to eight) setae on anterio-ventral margin, in male slightly wider than in female. Pro-tibia on upper surface without longitudinal sulcus, on outer margin in both sexes with one stouter and two very thin preapical spines. Metafemur ventrally with three setae at posterior margin and without setae at anterior margin. Tarsi densely pubescent dorsally; tarsomere five with three or four pairs of ventro-lateral setae. Metatarsus with tarsomeres moderately widened distally; meta-tarsomere one slightly shorter than meta-tarsomeres two and three combined; meta-tarsomeres one to four densely setose ventrally. In male, pro- and meso-tarsomeres one to four very moderately widened, with adhesive scales ventrally. In female, meso-tarsomere one elongate, slightly shorter than meso-tarsomeres two and three combined.

Ventral surface: Ventral surface of thorax, prosternum, pro-, meso- and met-episterna as well as lateral portions of meta-sternum finely punctate. Prosternum finely setose; apex of pro-sternal process with several moderately long setae. Met-episternum markedly longer than wide, strongly narrowed posteriorly. Sternites glabrous; apex of last visible (VII) sternite bordered, in both sexes widely rounded and with two pairs of marginal setae.

Aedeagus: Median lobe of aedeagus (slightly deformed basally in holotype) slender, in lateral view rather strongly bent ventrally just after basal bulb, convex along ventral margin medially and slightly curved ventrally at apex, in dorsal view somewhat parallel-sided. Apical orifice in dorsal position, prolonged to basal bulb. Terminal lamella in dorsal view almost parallel-sided, twice as long as wide basally, narrowly rounded at apex, in lateral view thin, with sharp ventral flange at apex. Internal sac with several groups of narrow moderately sized spines mostly in middle and apical portions of median lobe.

Female genitalia: Laterotergite symmetrical, longer than wide, apically membranous, with five thick setae. Gonosubcoxite shorter than laterotergite, markedly widened posteriorly, with three preapical spines at outer margin. Gonocoxite elongate, about 0.66 times as long as gonosubcoxite, moderately curved, with relatively narrow base and with a tiny, hardly recognizable spine on ventral outer edge.

14. *Trichotichnus sikkimensis* Kataev & Schmidt, 2017

Remarks: Detailed species description is available in Kataev & Schmidt, 2017: 341.

Key to the genera of the tribe Stenolophini Kirby, 1837 (Modified from Habu, 1973 and Jeannel, 1948)

1. Fore tibiae enlarged distally……..……..2
- Fore tibiae not enlarged distally…….3
2. Pro-tibiae with outer edge explanated and furnished with a row of 6–7 serrations armed with strong spines; posterior group of umbilical series formed by two well separated groups (3+4); length 9–10 mm……...…….***Pachytrachelus*** Chaudoir, 1852
- Pro-tibiae with indented external edge with short two or three spines; posterior group of umbilical series formed of 8 setae in almost continuous series; length 5–7 mm…….***Batoscelis*** Dejean, 1836
3. Mentum with distinct median tooth……..…….4
- Mentum without distinct median tooth……..……....…...7
4. Dorsal side pubescent.....***Dicheirotrichus*** Jacquelin Du Val, 1857
- Dorsal side glabrous.....5
5. Paraglossae separated from ligula by a shallow notch.....6
- Paraglossae separated from ligula by a deep incision.....***Psychristus*** Andrewes, 1930

6. Setae on second palpus are two in number; ligula bisetose.....***Bradycellus*** Erichson, 1837
- Setae on second palpus are more than two in number; ligula quadrisetose.....***Parabradycellus*** Ito, 2003
7. Elytra without scutellary striole…….....***Loxoncus*** Schmidt-Göbel, 1846
- Elytra with scutellary striole……..…….8
8. Posterior series of marginal elytral punctures divided into 2 groups of four punctures each…….……..…..9
- Posterior series of marginal elytral punctures form a more or less continuous row.....10
9. Elytral subapical sinuation deep and sharp, with a blunt tooth at their base..….....**.....*Idiomelas*** Tschitschérine, 1900
- Elytral subapical sinuation is either weak or absent, sometimes deeper but not sharp and without a tooth at its base…….**.....*Stenolophus*** Latreille, 1829
10. Pronotum with basal angles not angulate, more or less rounded, median line and basal fovea normal, not well cut; mandibles short ……***Acupalpus*** Latreille, 1829
- Pronotum with basal angles well angulate, median line and basal fovea sulciform, deep and well cut; mandibles long.....***Anthracus*** Motschulsky, 1850

Genus 1: ***Acupalpus*** **Latreille, 1829**

Description taken from Habu, 1973: 325.

Body oblong, elongated, not punctate except at basal area of pronotum, dorsal side glabrous. **Head:** Triangular, sometimes rounded, narrowed posteriorly. Eyes glabrous, large, adjoining buccal fissures. Antennae filiform, pubescent from segment two or three, first segment bigger than others, cylindrical, as long as next two together,

following three segments slightly obconical, second shortest, third little longer than fourth, following segments equal to each other, cylindrical, compressed, corners rounded, last oval and terminated in obtuse point. Mandibles short, arched sharp, scrobe glabrous. Apical segment of palpi elongated, slightly oval and finished in point. Labrum flat, or slightly convex, less square than broad, cut squarely at anterior part. Mentum without median tooth, two setae fully long, separated from each other. Paraglossae separated from ligula by shallow notch, little extending beyond ligula.

Pronotum: Square, cordiform or rounded, without posterior marginal setae, basal angles indistinct, rounded, rarely angulate, median line, basal foveae normal, not well cut.

Elytra: Elongated, parallel, scutellary striole present, shoulder glabrous, lateral margin smooth, interval three with or without dorsal pore, marginal series of pores 5+1+8, posterior eight pores not distinctly separated into groups.

Legs: Elongated. Hind femora with two setae along hind margin. Tarsi glabrous or with a few short setae on dorsal side, segment four emarginate at apex, bilobed, segments one to four of pro-tarsi dilated in male, with adhesive hairs on ventral side, segments one to four of meso-tarsi of male not dilated, with adhesive hairs on ventral side, mid and hind tarsi not carinate or segments one and two of meta-tarsi sulcate on outer lateral side, segment five with or without one seta on each ventrolateral margin.

Ventral surface: Prosternum and sternites pubescent or glabrous, sternites two and three without ciliate fovea at middle.

Key to the species of the genus *Acupalpus* Latreille, 1829 (Key modified from Jaeger, 2013)

1. Elytra with a more or less expanded dark central macula, rarely only two, distinctly delimited yellow patches remains apically.....2

- Elytra more or less uniformly yellowish or blackish brown, sometimes the elytral apex indistinctly pale.....4

2. Microsculpture at apical half of the head with isodiametric meshes which is not transverse.....***A. maculatus*** Schaum, 1860

- Microsculpture at apical half of the head with weakly transverse isodiametric meshes…….....3

3. Left mandible short, thick and markedly truncate apically; labrum markedly asymmetric at right side; pronotum more or less distinctly punctate at apical third.….....***A. rhombotus*** Andrewes, 1936

- Left mandible long and more slender, rather sharp at apex; labrum not or only very weakly asymmetric; prontotum impunctate at apical third……..***A. maculipennis*** Jaeger, 2013

4. Pronotum with sides almost rectilinearly narrowed posteriad, sometimes with an indistinct sinuation in front of posterior angles……...……..5

- Pronotum with sides in front of posterior angles either almost parallel, or with a long, or rather short sinuation……..6

5. Posterior angle of pronotum obtuse……..***A. sinuellus*** Bates, 1892

- Posterior angle of pronotum rounded……***A. sikkimensis*** Andrewes, 1930

6. Pronotum with a short, but distinct and rather abrupt sinuation in front of posterior angles; median lobe of aedeagus rather large, with a distinctly delimited apical plateau and specific internal structures……***A. andrewesi*** Jaeger, 2013

- Pronotum with sides almost parallel, or a with rather long and faint sinuation in front of posterior angles; median lobe of aedeagus smaller, without a

distinctly delimted apical plateau, and internal structures different…….....***A. punctatus*** Jedlička, 1936

1. ***Acupalpus andrewesi*** **Jaeger, 2013**

Description taken from Jaeger, 2013: 315.

Size: Length 3.6–4.6 mm (mean 4.1 in males, 4.3 in females, HT 4.1); width 1.5–1.7 mm.

Color: Blackish brown, with clypeus brown, labrum yellowish-brown and mandibles (inner margin and apices blackish) reddish brown. Pronotum paler than head, dark brown, with lateral and apical margin paler brown. Elytra dark to blackish brown, with lateral margin and first interval paler. Antennae with first two antennomeres yellowish, remaining ones brown. Palpi and legs yellowish. Ventral surface mainly reddish brown with pro-, mes- and met-episterna and sternites laterally somewhat darker, epipleura paler brown. Elytra weakly iridescent.

Head: Including eyes 0.84–0.88 times as wide as pronotum, with eyes rather large and prominent (head 1.61–1.78 times as wide as head between eyes). Labrum with apical margin weakly rounded, sometimes slightly asymmetric with right side bent somewhat backward. Left mandible rather short, markedly obtuse at apex. Antennae moderately long, 2.40–2.68 times as long as pronotum and 0.82–0.89 times as long as elytra. Microsculpture on labrum and clypeus with distinctly impressed isodiametric to weakly transverse meshes, on frons almost smooth or with very lightly impressed isodiametric meshes, on vertex, between and/or posterior to eyes with isodiametric to weakly transverse meshes becoming moderately to strongly transverse in front of pronotal apical margin.

Pronotum: 1.28–1.37 times as wide as long, 1.13–1.19 times as wide as head, widest in second quarter, lateral seta inserted just anterior or posterior to beginning of second

quarter. Apical margin weakly emarginated or almost rectilinear, faintly bordered laterally. Anterior angles narrowly rounded at tips, weakly to moderately projecting forward. Sides convex in anterior half and at posterior half rectilinearly narrowed to base, usually with more or less distinct rather short sinuation just in front of posterior angles. Posterior angles distinct, weakly produced laterad, with tips rather sharp to faintly obtuse at apex. Basal margin between posterior angles a little wider as apical margin between anterior angles, and 0.78-0.83 times as wide as maximum pronotal width, arcuate medially and oblique laterally, not or faintly bordered at sides. Lateral furrows narrow in anterior two thirds, not or only weakly widened at posterior third where they are merged with baso-lateral impressions. The latter distinctly delimited from the convex pronotal disc and median part of base, flattened to basal and lateral margin, the latter sometimes very weakly reflexed. Base with distinct and course punctuation in and sometimes also around lateral impressions, sometimes also somewhat extended forward along sides, between impressions usually with some single punctures. Pronotal surface at anterior quarter without punctation. Median line fine and impunctate, disappearing at basal quarter and before reaching the apical margin. Anterior transverse impression only suggested or obsolete. Microsculpture on pronotum with weakly to moderately transverse meshes on disc, becoming strongly transverse laterally, and almost isodiametric at apical third and pronotal base.

Elytra: With sides weakly widened posteriorly, widest at middle, 1.54–1.64 times as long as wide, 2.80–3.00 times as long and 1.33–1.43 times as wide as pronotum. Basal bead markedly curved to humerus, forming a more or less distinct obtuse angle with lateral margin. Striae, intervals and chaetotaxy as described for the subgenus. Microsculpture on elytral intervals with very lightly impressed fine strongly transverse meshes. Scutellum and its nearest surrounding with isodiametric meshes.

Ventral surface: Met-episterna at inner margin about 1.5–1.6 times as long as wide at basal margin. Prosternum medially with 6–8 longer erect setae. Abdominal sternite three smooth, four with few single hairs, five (at medial third) and six with moderate pubescence. Last visible sternite in males with two and in females with four longer setae at apical margin.

Legs: Pro- and meso-tarsomeres two to four of males with biseriately arranged adhesive hairs on ventral surface.

Aedeagus: Median lobe of aedeagus rather large and elongate with a distinctly delimited apical lamella. The lateral sclerotization is not or less distinctly reduced than in other species and none of the examined males have a reddish lateral swelling or dilatation. The fine structures of the internal sac possess a characteristic composition, which differs from the ground patterns described for *Stenolophidius*. The left spiny group is less distinct and sometimes no more than suggested and the typical central spiny field is not realized.

2. ***Acupalpus maculatus*** **(Schaum, 1860)**

Description taken from Jaeger, 2011: 767.

Head: Eyes are somewhat less prominent; the microsculpture at apical half of the head is more isodiametric, instead of more transversely stretched.

Pronotum: The pronotal margins are more widely reddish yellow. Rarely the pronotum is almost black. The pronotal basal impressions are more distinctly punctate. On pronotum, the meshes are generally somewhat coarser and more distinct.

Elytra: Elytra are reddish yellow with an expanded dark central macula, which typically extends along intervals five to six to elytral base, so that a distinct oval reddish or yellowish patch remain at both sides of suture. Very rarely the elytra are completely dark and immaculate in single specimens occurring within populations of

typically colored specimens. On elytral intervals the meshes are generally somewhat coarser and more distinct.

3. *Acupalpus maculipennis* Jaeger, 2013

Description taken from Jaeger, 2013: 310.

Size: Length 3.7–4.1 mm (mean 3.9 in females, HT 3.8 mm); width 1.3–1.5 mm.

Color: Head blackish to blackish brown, clypeus dark brown, labrum and mandibles paler reddish brown, with inner margin and apices of the latter dark brown, palpi yellowish. Pronotum reddish yellow with disc sometimes indistinctly infuscated. Elytra reddish yellow with a less expanded dark or blackish brown central macula. In some specimens the macula expanding laterally to interval 9, posteriorly to elytral apex and anteriorly to basal quarter. Ventral surface with head (gula reddish) brown, pro-, meso- and meta-sternum reddish, pro-, mes- and met-episterna, and abdomen brown to dark brown, but last two abdominal sternites somewhat paler. Epipleura reddish. Antennae with first two antennomeres yellowish, remaining ones brown. Legs yellowish.

Head: Including eyes 0.84–0.90 times as wide as pronotum, with eyes rather large and prominent (head 1.72–1.82 times as wide as head between eyes). Labrum with apical margin weakly rounded. Left mandible rather long, rather sharp at apex, not thickened or truncate. Antennae moderately long, 2.24–2.46 times as long as pronotum and 0.78–0.84 times as long as elytra. Microsculpture on labrum and clypeus distinct, consisting of isodiametric or weakly transverse meshes, on frons rudimentary with traces of lightly impressed isodiametric meshes, on vertex with moderately impressed isodiametric meshes becoming moderately transverse posteriad.

Pronotum: 1.29–1.31 times as wide as long, 1.11–1.19 times as wide as head, widest in second quarter, lateral seta inserted at beginning of second quarter. Apical margin

almost rectilinear, faintly bordered laterally. Anterior angles narrowly rounded at tips, weakly projecting forward. Sides convex in anterior half and rectilinearly narrowed in posterior half, with a faint sinuation in front of posterior angles. Posterior angles distinct, but obtuse and narrowly rounded at tips, the latter slightly produced laterad. Basal margin between posterior angles a little wider as apical margin between anterior angles, and 0.79–0.83 times as wide as maximum pronotal width, arcuate medially and markedly oblique laterally, faintly bordered at sides. Lateral furrows narrow in anterior half, somewhat widened at posterior half where they are merged with baso-lateral impressions. The latter rather large and moderately deep, delimited from the moderately convex pronotal disc and median part of base, flattened to basal and lateral margin. Base with distinct and close punctation in the lateral impressions, sometimes extending somewhat forward along sides, between impressions impunctate or with only few single punctures. Pronotal surface otherwise impunctate. Median line fine, disappearing before reaching basal and apical margin, with some minute punctures in basal third. Anterior transverse impression obsolete or only suggested. Microsculpture with weakly to moderately transverse meshes on disc, becoming more distinct and somewhat isodiametric in front of apical and basal margin and at baso-lateral impressions.

Elytra: With sides slightly widened posteriorly, widest about at middle, 1.60–1.69 times as long as wide, 2.88–3.00 times as long and 1.31–1.36 times as wide as pronotum. Basal bead moderately curved to humerus, forming are gentle bow with lateral margin. Striae, intervals and chaetotaxy as described for the subgenus. Microsculpture on intervals almost lacking, only here and there some transverse mesh rudiments are visible, scutellum and its nearest surrounding with isodiametric meshes.

Ventral surface: Met-episterna at inner margin 1.5–1.6 times as long as wide at basal margin. Prosternum medially with seven to eight longer erect setae. Abdominal sternite three glabrous, four at medial half and five to six entirely with moderate pubescence. Last visible sternite in males with two and in females with four longer setae at apical margin.

Legs: Pro-tarsomeres two to four and meso-tarsomere three to four of males with biseriately arranged adhesive hairs on ventral surface.

Aedeagus: Median lobe of aedeagus with typical reduced lateral sclerotization as mentioned in the subgenus characteristic. The internal sac shows some modified scales (similar to those in *A. punctatus*) near the left longitudinal spiny group.

4. *Acupalpus punctatus* (Jedlička, 1936)

Description taken from Jaeger, 2013: 299.

Size: Length 3.2–4.1 mm (mean 3.7 in males, 3.8 in females, HT 3.7); width 1.3–1.6 mm.

Color: Dorsal surface mainly paler to darker yellowish or reddish brown, but head usually dark to blackish brown, with clypeus often, and labrum and mandibles always paler reddish brown, with inner margin and apices of the latter blackish brown. Elytra sometimes with an indistinct infuscation in apical half. Palpi yellowish, antennae with first two antennomeres yellowish, remaining ones brown. Ventral surface darker to lighter brown. Epipleura pale brown. Legs yellowish.

Head: Including eyes, comparatively wide, 0.83–0.91 times as wide as pronotum, with eyes large and distinctly prominent (head 1.65–1.86 times as wide as head between eyes). Labrum often somewhat asymmetric, then apical margin slightly bent backwards at right side. Left mandible rather long, sharp to faintly obtuse at apex, not thickened or truncate. Antennae moderately long, 2.38–2.70 times as long as

pronotum and 0.78–0.92 times as long as elytra. Microsculpture on labrum with almost isodiametric, on clypeus with weakly transverse meshes, on frons and apical half of vertex with indistinct and lightly impressed isodiametric meshes, becoming moderately impressed on posterior half of vertex and more transverse in front of pronotal apex.

Pronotum: 1.29–1.41 times as wide as long, 1.10–1.23 times as wide as head, widest in second quarter, lateral seta inserted at beginning of second quarter. Apical margin almost rectilinear, faintly borderd laterally. Anterior angles narrowly rounded at tips, not or very weakly projecting forward. Sides convex in anterior two thirds and at posterior third almost parallel, or rectilinearly narrowed, or faintly sinuate in front of pronotal base. Posterior angles well marked and rather sharp at tips. Basal margin between posterior angles as wide or slightly wider as apical margin between anterior angles, and 0.80–0.84 times as wide as maximum pronotal width, arcuate medially and oblique to posterior angles, not or very faintly bordered at sides. Lateral furrows narrow, becoming confluent with the baso-lateral impression at basal quarter or third. Basolateral impressions rather shallow, distinctly delimited from pronotal disc and median part of base, flattened to basal and lateral margin. Base with rather coarse punctation in the baso-lateral impressions, punctuation sometimes extending somewhat forward along sides; between impressions with single punctures. Pronotal surface at anterior quarter impunctate in Philippine and some Javanese specimens, or with few punctures in continental populations and single Javanese specimens. Median line very fine, disappearing before reaching apical and basal margins, entirely impunctate or faintly punctate at basal area. Anterior transverse impression moderate. Microsculpture in Philippine populations with moderately impressed, almost moderately transverse meshes on disc and base, becoming more faintly and strongly

transverse at sides, rarely smaller patches of almost isodiametric meshes occur within the transverse microsculpture. In continental specimens microsculpture on pronotal disc distinct and almost isodiametric to weakly transverse, becoming strongly transverse at sides. In Javanese specimens on pronotal disc with distinct isodiametric to weakly transverse meshes, becoming strongly transverse at sides.

Elytra: With sides weakly widened posteriad, widest at or just posterior to middle, 1.53–1.63 times as long as wide, 2.80–3.11 times as long and 1.33–1.44 times as wide as pronotum. Basal bead moderately curved to humerus, forming a distinct obtuse angle with lateral margin. Striae, intervals and chaetotaxy as described for the subgenus. Microsculpture on elytral intervals with lightly impressed faint transverse lines, on scutellum and its nearest surrounding with isodiametric meshes

Ventral surface: Met-episterna at inner margin 1.5–1.6 times longer as wide at basal margin. Prosternum medially with six to eight and close to apical margin with a row of four longer setae. Abdominal sternite three sometimes with few shorter setae medially and four to six usually moderately to densely pubescent, but in sternite four pubescence restricted to medial two-thirds. Last visible sternite in males with two and in females with four longer setae at apical margin.

Legs: Pro-tarsomeres two to four and meso-tarsomeres three to four of males with biseriately arranged adhesive hairs on ventral surface.

Aedeagus: Median lobe of aedeagus with lateral sclerotization at medial portion strongly reduced and often replaced by a reddish dilation which varies from completely reduced to strongly developed laterally and dorsally. Internal structures with the typical ground construction described for the subgenus, but the scales near the base of the left spiny group are modified at their apical margin which is trior quadrifid. This modification is in most other species absent or only suggested.

5. ***Acupalpus rhombotus* Andrewes, 1936**

Description taken from Jaeger, 2013: 296.

Size: Length 3.6–4.6 mm (mean 4.0 in males, 4.1 in females, holotype of *A. rhombotus* 3.9); width 1.3–1.7 mm.

Color: dark or blackish brown, with clypeus and mandibles (inner margin and apices blackened) brown, labrum yellowish brown. Palpi yellowish, antennae with antennomeres one to two yellowish, remaining ones infuscated. Pronotum either entirely reddish-yellow in populations from Java and Philippines, and single continental specimens, or with a large dark brown central macula, leaving the margins more or less widely and sometimes the median line narrowly reddish in continental populations. Elytra either mostly dark to blackish brown, leaving only two patches in apical third yellowish, or elytra with a large dark rhombus-like central macula, leaving two spots behind shoulders reddish, and two spots before apex yellowish. Ventral surface reddish to reddish brown, or in continental specimens dark brown, with prosternum and often also sternites, at least in posterior half, lighter yellowish-or pale brown. Epipleura reddish to yellowish. Legs yellowish brown.

Head: Including eyes, comparatively wide, 0.85–0.91 times as wide as pronotum, with eyes large and distinctly prominent (head 1.60–1.80 times as wide as head between eyes). Labrum distinctly asymmetric, its apical margin markedly bent backwards at right side. Left mandible rather short, markedly thickened, and distinctly truncate at apex. Antennae rather short 2.03–2.31 (exceptionally up to 2.43) times as long as pronotum and 0.72–0.86 times as long as elytra. Microsculpture on labrum and clypeus with distinct isodiametric to weakly transverse meshes, on frons meshes either absent or with very lightly impressed isodiametric meshes, on vertex absent or with lightly impressed meshes (Javanese specimens), or with distinctly impressed

isodiametric meshes between and posterior to eyes becoming weakly transverse in front of pronotal apical margin (other populations).

Pronotum: 1.25–1.35 times as wide as long, 1.10–1.17 times as wide as head, widest in second quarter, lateral seta inserted at beginning of second quarter. Apical margin almost rectilinear or weakly arcuate, faintly bordered laterally. Anterior angles narrowly rounded at tips, sometimes weakly projecting forward. Sides convex in anterior two thirds and at posterior third sometimes almost parallel, or rectilinearly narrowed (in some Javanese specimens), or more or less distinctly sinuate in front of pronotal base. Posterior angles well marked, rather sharp to faintly obtuse. Basal margin between posterior angles slightly wider as apical margin between anterior angles, and 0.80–0.86 times as wide as maximum pronotal width, weakly arcuate medially and somewhat oblique to posterior angles, not or faintly bordered at sides. Lateral furrows narrow, becoming confluent with the baso-lateral impressions at basal quarter. Basolateral impressions shallow, distinctly delimited from pronotal disc and median part of base, flattened to basal and lateral margin. Base with coarse punctation in and between impressions, punctation often extending somewhat forward along sides. Pronotal surface also with some single punctures, or rather distinct punctuation at anterior quarter in front of anterior impression. Median line fine and weakly impressed, disappearing before reaching apical and basal margin, punctate in basal third, sometimes also in medial part and apical third. Anterior transverse impression moderate. Microsculpture almost lacking (except for isodiametric meshes in basal impressions) in Javanese specimens, or with distinctly impressed, almost isodiametric to weakly transverse meshes on disc and base, becoming more faintly and strongly transverse at sides in other populations.

Elytra: With sides almost parallel, only weakly widened posteriorly, widest at middle, 1.60– 1.73 times as long as wide, 2.67–2.86 times as long and 1.22–1.34 times as wide as pronotum. Basal bead weakly curved to humerus, forming an indistinct obtuse angle with lateral margin. Striae, intervals and chaetotaxy as described for the subgenus. Microsculpture on intervals with lightly impressed, faint transverse meshes, on scutellum with distinct isodiametric meshes.

Ventral surface: Met-episterna at inner margin 1.5–1.6 times longer as wide at basal margin. Prosternum with six to eight longer setae medially and a row of four to six longer setae close to apical margin. Abdominal sternite three sometimes with few shorter setae medially and four to six usually moderately to densely pubescent, but in sternite four pubescence restricted to medial two-thirds. Last visible sternite in males with two and in females with four longer setae at apical margin.

Legs: Pro-tarsomeres two to four and meso-tarsomeres three to four of males with biseriately arranged adhesive hairs on ventral surface.

Aedeagus: Median lobe of aedeagus with typically reduced lateral sclerotization at medial portion, which is often replaced by a reddish swelling or dilatation that varies from absent to strongly developed laterally and dorsally. Internal sac additionally with a small, but distinct spiny group at right apical half that does not occur in other Oriental species of *Stenolophidius*.

6. *Acupalpus sikkimensis* Andrewes, 1930

Description taken from Andrewes, 1930a: 20.

Size: Length 4–4.75mm.

Color: Black, shiny, underside piceous to brown: palpi, joints one and two of antennae (rest fuscous) and legs flavous, side margins of prothorax and apical margin of elytra more or less ferruginous.

Head: Convex, smooth, clypeal suture lightly impressed, the oblique furrows on each side deep, eyes only moderately prominent, antennae extending a little beyond base of prothorax. **Pronotum**: Convex, subquadrate, a fourth wider than head and about as much wider than long, base arcuate (convex backwards), its sides very oblique, apex slightly emarginate, sides narrowly bordered, gently rounded, nearly straight behind, the seta at apical fourth, just in front of widest part, hind angles evident and reflexed, though obtuse and strongly rounded; median line and transverse impressions very faint, sides of base depressed, coarsely and not very closely punctate, surface otherwise smooth.

Elytra: Convex, subquadrate, with very square shoulders, a third wider than prothorax and two-thirds longer than wide, the margin only faintly sinuate before apex; striae moderately impressed, impunctate, intervals slightly convex, one somewhat raised, three with a pore at apical third, adjoining stria two, marginal series widely interrupted at middle, surface smooth. No appreciable microsculpture.

Ventral surface: Pro-sternum and its process glabrous, met-episterna smooth, bordered, nearly twice as long as wide; ventral segments four and five with one or two additional setae at middle, apical segment setulose, the margin in eight with one seta, in nine with two setae, on each side.

Remarks: Detailed redescription of the species is available in Jaeger, 2010: 148.

7. ***Acupalpus sinuellus*** **Bates, 1892**

Description taken from Jaeger, 2013: 304.

Size: Length 3.4–4.7 mm (mean 3.8 in males, 4.1 in females, ST 3.4 and 3.8); width 1.4–1.9 mm.

Color: Head blackish brown, labrum and mandibles reddish brown, with inner margin and apices of the latter blackish brown, palpi yellowish. Pronotum dark brown, with

lateral margin and sometimes also lateral part of base paler, yellowish. Elytra blackish brown, with margins and apex pale brown, sometimes also first interval somewhat paler. Antennae with the first, or with the first two antennomeres yellowish, remaining ones dark brown. Legs yellowish. Ventral surface darker to lighter brown, with pro-, mes- and met-episterna darker brown, epipleura pale brown. Upper surface shiny, elytra iridescent.

Head: Including eyes 0.83–0.87 times as wide as pronotum, with eyes large and distinctly prominent (head 1.62–1.85 times as wide as head between eyes). Labrum, with apical margin more or less evenly rounded. Left mandible rather long, sharp to faintly obtuse at apex, not thickened or truncate. Antennae comparatively long, 2.67–2.95 times as long as pronotum and 0.84–0.92 times as long as elytra. Microsculpture on labrum and clypeus with moderately impressed weakly transverse to isodiametric meshes, on frons sometimes smooth, or with indistinct, partly reduced isodiametric meshes, on vertex with distinct isodiametric meshes becoming moderately to strongly transverse in front of pronotal apex.

Pronotum: 1.38–1.45 times as wide as long, 1.15–1.20 times as wide as head, widest in second quarter, lateral seta inserted at beginning of second quarter. Apical margin almost rectilinear, faintly borderd laterally. Anterior angles narrowly rounded at tips, not or rarely very weakly projecting forward. Sides convex in anterior two thirds and at posterior third rectilinearly narrowed, or very faintly sinuate in front of pronotal base. Posterior angles distinct, but obtuse and narrowly rounded at tips. Basal margin between posterior angles slightly wider as apical margin between anterior angles, and 0.79–0.86 times as wide as maximum pronotal width, arcuate medially and oblique laterally, not bordered at sides. Lateral furrows narrow in anterior half, becoming wider at posterior half and confluent with the baso-lateral impressions at posterior

third. Baso-lateral impressions rather large and deep, distinctly delimited from the convex pronotal disc and the weekly depressed median part of base, flattened to the markedly reflexed basal and lateral margin. Base with rather distinct and close punctation in the lateral impressions, between impressions impunctate or with only few single punctures. Pronotal surface at anterior quarter impunctate. Median line fine and impunctate, disappearing before reaching apical and basal margins. Anterior transverse impression only suggested. Microsculpture with very faint almost strongly transverse meshes, laterally sometimes reduced.

Elytra: With sides weakly to moderately widened posteriorly, widest at or just behind middle,1.52–1.60 times as long as wide, 3.02–3.33 times as long and 1.41–1.52 times as wide as pronotum. Basal bead moderately curved to humerus, forming a gentle bow with lateral margin. Striae, intervals and chaetotaxy as described for the subgenus. Microsculpture on elytral intervals practically invisible at 112x, sometimes only very lightly impressed transverse lines visible. Scutellum and its nearest surrounding with isodiametric meshes.

Ventral surface: Met-episterna at inner margin 1.4–1.6 times as long as wide at basal margin. Prosternum medially with about eight to 10 longer erect setae. Abdominal sternite three at medial third, four at medial two quarters and five to six entirely with rather dense pubescence. Last visible sternite in males with two and in females with four longer setae at apical margin.

Legs: Pro-tarsomeres two to four and meso-tarsomeres three to four of males with biseriately arranged adhesive hairs on ventral surface.

Aedeagus: Median lobe of aedeagus with typical reduced lateral sclerotization at medial portion which is often replaced by a reddish dilation that varies from completely reduced to markedly developed. The structures of the internal sac agree

with the ground patterns described for the subgenus and show no remarkable specific modification.

Genus 2: ***Anthracus*** **Motschulsky, 1850**

Description taken from Habu, 1973: 337.

Body not punctuate, glabrous on dorsal side.

Head: Eyes glabrous, large, adjoining buccal fissures. Scrobe of mandible glabrous. Antennae pubescent from segment three, segment two sparsely pubescent, apical segment of palpi fusiform. Mentum without median tooth, two setae fully long, separated from each other. Paraglossae separated from ligula by shallow notch, little extending beyond ligula.

Pronotum: With distinctly angulate basal angles, posterior marginal setae absent, median line and basal foveae sulciform, deep, well cut.

Elytra: Elongated, parallel, scutellary striole present, shoulder glabrous, lateral margin smooth, interval three with or without dorsal pore, marginal series of pores 5+1+8, posterior eight pores not distinctly separated into groups. Anterior lateral margin of elytra ciliate and serrate.

Ventral surface: Prosternum with long setae along anterior margin and at median area, pro-sternal process without distinct setae, sternites two and three without ciliate fovea at middle.

Legs: Elongated. Hind femora with two setae along hind margin. Tarsi glabrous or with a few short setae on dorsal side, segment four emarginate at apex, bilobed, segments one to four of pro-tarsi dilated in male, with adhesive hairs on ventral side, segments one to four of meso-tarsi of male not dilated, with adhessive hairs on ventral side, mid and hind tarsi not carinate or segments one and two of meta-tarsi sulcate on outer lateral side. Fifth tarsal segment glabrous on ventral side.

Key to the species of the genus *Anthracus* Motschu, 1850 (Key modified from Jaeger, 2012)

1. Clypeo-ocular furrows and clypeal suture strongly impressed……..2
- Clypeo-ocular furrows and clypeal suture not markedly deepend…….3
2. Head black; elytra with a more or less central macula; abdominal sternite 3 smooth…….***A. horni*** Andrewes, 1923
- Head pale reddish brown; elytra without central macula; abdominal sternite 3 with some single setae in medial portion……..***A. fritzhiekei*** Jaeger, 2016
3. Smaller species; 3.1–3.4 mm; antennae with antennomeres 3–11 not markedly darkened…….***A. indicus* Jaeger, 2012**
- Larger species; mostly 3.5–4.6 mm; antennae with antennomeres 3–11 markedly darkened…….4
4. Pro-sternal process with 2 or 3 distinct setae; pronotal lateral furrows narrow in apical half…….……..5
- Pro-sternal process with at least 1 distinct seta; pronotal lateral furrows moderately wide in anterior half……...….6
5. Pro-sternum medially with 4–5, and in front of apical margin with a row of 7–8 longer setae……..……...***A. nathani*** Jaeger, 2017
- Pro-sternum medially with 5–6 and posterior to apical margin with a row of 6 medium long setae……..……***A. schuhi*** Jaeger, 2012
6. Pro-sternum medially with at least 4 and in front of apical margin with 4 medium long setae……..……***A. anichtchenkoi*** Jaeger, 2015
- Pro-sternum medially with 5–6, and close to apical margin with a row of 7–8 medium long setae……..……7
7. Basolateral impressions fused with lateral margin…….***A. weigeli*** Jaeger, 2015

- Basolateral impressions vaguely separated from lateral margin.....***A. skalei*** Jaeger, 2015

Explanation 3: *Anthracus annamensis* is not included in the key due to insufficient species description.

1. ***Anthracus anichtchenkoi*** **Jaeger, 2015**

Description taken from Jaeger, 2015b: 1367.

Size: Length 3.1–3.7 mm (HT 3.4); width 1.2–1.7 mm.

Color: Shiny, pronotum weakly, elytra moderately iridescent. Head and pronotum paler to darker yellowish brown or reddish yellow, with clypeus, labrum and mandibles somewhat paler (inner margin and apices blackish). Elytra darker to paler reddish yellow or yellowish brown, with each elytron having a more or less distinct dark or blackish brown central macula, expanding laterally to interval five to seven in and leaving the first interval, as well as basal, lateral and apical part reddish yellow or yellowish brown. Legs, palpi and first two antennomeres pale yellowish brown, antennomeres three to 11 moderately infuscated. Ventral surface mainly reddish brown, pro-episterna sometimes somewhat darker, and abdominal sternite four to six sometimes somewhat paler in central part.

Head: Including eyes 0.81–0.86 times as wide as pronotum, with eyes rather large and distinctly prominent (head 1.63–1.72 times as wide as head between eyes). Labrum almost rectilinear at apical margin, sometimes weakly sloped down to the right side. Mandibles medium sized, left mandible rather sharp at apex, not thickened or truncate. Antennae 2.54–2.55 times as long as pronotum and 0.90–0.91 times as long as elytra. Microsculpture on labrum distinct and almost isodiametric, on clypeus isodiametric to weakly transverse, on frons and anterior half of vertex almost lacking or with traces of very lightly impressed isodiametric meshes, and on posterior half of

vertex with lightly impressed isodiametric meshes, becoming weakly transverse in front of pronotal apical margin.

Pronotum: Widest in second quarter, lateral seta inserted at beginning of second quarter. Apical margin almost rectilinear or only faintly emarginated, anterior angles narrowly rounded at tips, not or very weakly projecting forward. Sides convex in anterior half, rectilinearly narrowed to posterior angles, which are obtuse and rather widely rounded. Basal margin almost straight or weakly arcuate medially and oblique to posterior angles. Lateral furrows moderately wide anteriorly, becoming weakly widened at posterior third, where they are fused with the baso-lateral impressions. The latter medium sized and somewhat oblique, distinctly delimited from the pronotal disc and median part of base, fused with basal and lateral margins. Anterior transverse impression obsolete, rarely suggested. Microsculpture on disc with fine, moderately to lightly impressed, moderately to strongly transverse meshes, at baso-lateral impressions and lateral furrows with distinctly impressed, weakly transverse to almost isodiametric meshes.

Elytra: With sides slightly to moderately widened posteriorly, widest just at or slightly posterior to middle, 1.54–1.63 times as long as wide, 2.61–2.85 times as long and 1.29–1.40 times as wide as pronotum. Elytral striae distinctly impressed and impunctate, intervals rather flat, becoming somewhat narrowed and very weakly convex at apex. Microsculpture on scutellum and around basal pore with isodiametric meshes, on elytral intervals only with traces of very lightly impressed transverse lines.

Ventral surface: Met-episterna long and narrowed posteriad, at inner margin about 1.5 times longer than wide at basal margin. Pro-sternum medially with at least four and in front of apical margin with four medium long setae (often broken and then insertion points difficult to observe). Pro-sternal process with at least one distinct seta.

Aedeagus: Median lobe of aedeagus markedly smaller, less distinctly curved in central part, and internal sac with a vertical group of 12–15 medium sized teeth, with the first two teeth in apical part usually somewhat shifted to the right side.

2. ***Anthracus annamensis*** **(Bates, 1889)**

Description taken from Bates, 1889c: 272; id. 1892b: 350.

Size: Length 3.5 mm.

Color: Head and thorax rufo-testaceous, posterior disc of each elytron being black, antennal joints 1–2 (others brown), palpi and legs yellowish.

Head: Smooth.

Pronotum: Smooth. Posterior angle distinct though obtuse and the margin near the angle being explanated and reflexed with the large fovea which is deeply impressed and smooth.

Elytra: With large elongate brown median spot (extended from first striae to the lateral margin). Elytra iridescent to the apex with deeply striated convex intervals. Preapical sinuation less.

3. ***Anthracus fritzhiekei*** **Jaeger, 2016**

Description taken from Jaeger, 2016: 216.

Size: Length 4.8 mm; width 1.7 mm.

Color: Shiny, head and pronotum paler, elytra darker reddish brown becoming lighter reddish yellow at apical quarter. Ventral surface with head, prosternum, pro- and mes-episterna and abdominal sternites (last somewhat lightened) reddish brown, meta-sternum and met-episterna dark brown. Legs and antennae pale yellowish brown, palpi yellowish and mandibles reddish brown, with apex, inner and outer margins darkened.

Head: Including eyes 0.77 times as wide as pronotum, with eyes large and strongly prominent (head 1.94 as wide as head between eyes). Labrum with apical margin linear. Clypeal suture moderately, clypeo-ocular furrows markedly impressed. Mandibles moderately long, left moderately obtuse at apex. Antennae long, 2.66 times as long as pronotum and 0.99 times as long as elytra, antennomere two with few bristles in apical half and antennomeres three to 11 densely pubescent. Microsculpture on labrum distinct and almost isodiametric, on clypeus isodiametric to weakly transverse, on frons with moderately impressed, partly obliterated, isodiametric meshes and on vertex with lightly impressed isodiametric meshes.

Pronotum: Cordate, with surface markedly convex, 1.17 times as wide as long, 1.31 times as wide as head, widest in second quarter, lateral setae inserted at beginning of second quarter. Apical margin weakly convex in medial part, otherwise almost linear, anterior angles narrowly rounded at tips, moderately projecting forward. Sides markedly convex in anterior half and rectilinearly constricted in posterior half. Posterior angles well marked and narrowly rounded at tips. Basal margin weakly convex medially and slightly oblique to posterior angles. Lateral furrows weakly reflexed anteriorly and markedly reflexed posteriorly, rather wide and almost parallel, becoming only slightly wider in posterior quarter where they are fused with baso-lateral impressions. Baso-lateral impressions medium sized and deep, flattened to basal and lateral margins, distinctly delimited from the markedly convex pronotal disc and the somewhat depressed, moderately convex medial part of base. Median line broad and deeply impressed, faintly bordered at sides, disappearing before reaching basal and apical margins. Anterior transverse impression obsolete. Baso-lateral impressions and other surface of pronotum impunctate. Microsculpture on disc with very lightly impressed and partly obliterated isodiametric meshes, becoming

moderately impressed and moderately transverse at sides, and moderately impressed and isodiametric at apical and basal quarter. Baso-lateral impressions and lateral furrows with distinct, almost isodiametric meshes.

Macropterous.

Elytra: Rather long, 1.67 times as long as wide, 2.62 times as long and 1.33 times as wide as pronotum. Sides very weakly widened posteriad, widest somewhat anterior to middle. Subapical sinuation weak. Lateral margin serrate behind shoulders. Elytral striae comparatively wide and deeply impressed, impunctate but shagreened on bottom, intervals rather flat, becoming weakly narrowed and weakly convex at apex. Scutellar striole present and long. Basal pore at beginning of scutellar striole and apical pore in apical half of interval three (adjoining stria two) present. Series umbilicata 5+1–4 (2+2). Microsculpture on scutellum and around basal pore with distinct and isodiametric meshes, on elytral intervals with distinct, moderately impressed, weakly transverse meshes.

Ventral surface: Pro-sternum medially with five and close to apical margin with a row of four longer erected setae in each case. Pro-sternal process with one distinct seta at middle. Met-episterna long and distinctly narrowed posteriad, at inner margin about 1.6 times longer than wide at basal margin. Meta-sternum with 10 shorter setae. Abdominal sternite three with some single setae in medial portion, and sternite four to six with moderately dense pubescence, becoming somewhat scattered laterad. Last sternite in male with four longer setae at apical margin. Pro- and meso-tarsomeres of the holotype male not dilated. Pro-tarsomeres three to four with biseriately arranged adhesive hairs on ventral surface.

Aedeagus: Median lobe of aedeagus small. Internal sac with three medium sized teeth in right apical half, and two smaller teeth in left half.

4. ***Anthracus horni*** **(Andrewes, 1923)**

Description taken from Andrewes, 1923a: 237.

Size: Length 3.5– 4.0 mm; width 1.1–1.3 mm.

Color: Testaceous yellow or red, shiny, disk of elytra (except suture), head darker, sometimes black.

Head: Very convex. Eyes prominent, clypeal suture deep, produced backwards to eye on each side, a distinct ridge along each side of head in front. Antennae thick, reaching a little beyond base of pronotum, surface quite smooth.

Pronotum: Quadrate-cordate, rather flat, a little wider than head, and about a third as wide again as long, extremities truncate, middle of base produced slightly backwards, sides reflexed, more widely behind, slightly rounded in front, with a long faint sinuation to nearly rectangular hind angles, median line entire, deep and comparatively wide, basal fovea short, deep, wide and linear, the side border turning the angles and just reaching their base, the whole basal area rather depressed, surface smooth.

Elytra: Elongate, parallel, depressed, about half as wide again as pronotum, nearly twice as long as wide, apex truncate, striae fairly deep, finely crenulate, intervals moderately convex, three with a single pore behind middle.

Ventral surface: Distinctly pilose.

Legs: Front tarsi of male with joints little dilated scaly beneath.

5. ***Anthracus indicus*** **Jaeger, 2012**

Description taken from Jaeger, 2012: 284.

Size: Length 3.3–3.4 mm (holotype 3.3 mm); width 1.2–1.3 mm.

Color: Head and pronotum reddish brown or brown, the former sometimes slightly darker, elytra dark brown, with lateral margin and first interval reddish brown.

Clypeus, labrum and mandibles (inner margins and apices blackish) pale reddish brown. Legs, palpi and antennae entirely yellowish brown, sometimes antennomeres three to 11 with a suggested infuscation. Ventral surface brown to reddish brown. Pronotum weakly, elytra markedly iridescent.

Head: Including eyes 0.75–0.79 times as wide as pronotum, with eyes small and moderately prominent (head 1.51–1.54 times as wide as head between eyes). Labrum almost rectilinear at apical margin. Mandibles not markedly prolonged and curved, left mandible rather sharp at apex. Antennae 2.32–2.42 times as long as pronotum and 0.88–0.93 times as long as elytra. Microsculpture on labrum and apical half of clypeus distinct and almost isodiametric, on anterior half of head almost obliterated, only traces of isodiametric meshes are visible in females, on posterior half first faintly isodiametric, later, in front of pronotal apical margin, the meshes become transversely stretched.

Pronotum: 1.21–1.27 times as wide as long, 1.27–1.32 times as wide as head, widest in second quarter, lateral seta inserted a little in front of widest point. Apical margin almost rectilinear to faintly emarginate, in one PT moderately emarginate, lateral border reaching medial third. Anterior angles narrowly rounded at tips, only weakly projecting forward. Sides convex in anterior third, rectilinearly or roundly narrowed to the widely rounded posterior angles. Basal margin almost straight or very weakly arcuate medially, obliquely produced to posterior angles. Lateral furrows evenly narrow anteriorly, moderately to distinctly widened posteriorly, where they are fused with the latero-basal impressions. Latero-basal impressions rather small, distinctly delimited from the pronotal disc and median part of base, and fused with basal and lateral margin. Basal impressions and other surface of pronotum impunctate. Median line fine on disc, disappearing before reaching basal and apical margins. Anterior

transverse impression weak or only suggested. Microsculpture on disc with a mixture of very faintly impressed lines and long-transverse meshes, at basal impressions and in lateral furrows with distinctly impressed isodiametric meshes.

Elytra: With sides weakly widened posteriorly, widest at middle, 1.58–1.59 times as long as wide, 2.61–2.69 times as long and 1.34–1.38 times as wide as pronotum. Elytral striae distinctly impressed and impunctate, scutellar striole long. Intervals rather flat, narrowed and very weakly convex at apex. Basal pore at beginning of scutellar striole present, interval 3 in third quarter with one setiferous pore, adjoining stria two. Microsculpture on scutellum isodiametric, on elytral intervals with very lightly impressed transverse lines.

Macropterous.

Ventral surface: Met-episterna long and narrowed posteriad, at inner margin about 1.4 times longer than wide at basal margin. Prosternum medially with 4 and posterior to apical margin with a row of six medium long setae (often broken and then insertion points difficult to observe). Pro-sternal process with at least one seta (others probably broken). Abdominal sternite four in medial two thirds and five to six entirely with distinct, rather long and dense pubescence. Last visible sternite of males very weakly emarginated at apex, at apical margin with two longer setae in males and four setae in females.

Legs: Pro-tarsomeres one to four of males markedly dilated and with distinct, biseriately arranged adhesive hairs on ventral surface. Pro-tarsomere four markedly bilobed. Meso-tarsomeres two to four moderately dilated with adhesive hairs on ventral surface. Meso-tarsomere four moderately bilobed. Pro- and meso-tarsomeres of females unmodified.

Aedeagus: Apex in lateral aspect almost straight, without any hook. Apical lamella (dorsal aspect) rather wide and short, at apical margin widely rounded. The internal sac has only one medium sized subapical tooth.

6. *Anthracus nathani* Jaeger, 2017

Description taken from Jaeger, 2017: 598.

Size: Length 3.2–3.5 mm; width 1.2–1.4 mm.

Color: Shiny, pronotum weakly, elytra moderately to iridescent. Head and pronotum reddish yellow or pale reddish brown, with clypeus, labrum and mandibles (inner margins and apices of the latter brown) and pronotal lateral margins paler. Elytra mainly dark brown, with first interval, lateral margin, sometimes also apex and base paler reddish yellow. Legs, palpi and first or first two antennomeres yellowish or pale yellowish brown, remaining antennomeres slightly infuscated. Ventral surface mainly reddish yellow to yellowish brown with head slightly darker, and prosternum, epipleura and sternites partly paler.

Head: Including eyes rather broad, with eyes markedly prominent (head 1.63–1.76 times as wide as head between eyes). Labrum rectilinear or slightly rounded at apical margin. Mandibles medium sized, not distinctly prolonged and curved, left mandible moderately sharp at apex, not thickened or truncate. Antennae rather long relative to pronotal and elytral length. Microsculpture on labrum almost isodiametric, on clypeus isodiametric to weakly transverse, on anterior half of head partly obliterated, or partly with traces of lightly to very lightly impressed isodiametric meshes, and on posterior half posterior to eyes with lightly impressed isodiametric meshes, becoming moderately transverse in front of pronotal anterior margin.

Pronotum: Moderately transverse, 1.26–1.33 times as wide as long, 1.15–1.23 times as wide as head, widest in second quarter, lateral seta inserted more or less at

beginning of second quarter. Apical margin almost straight or very weakly emarginate. Anterior angles narrowly rounded at tips, not or very slightly projecting forward. Sides moderately rounded to anterior angles, from widest point rectilinearly narrowed to posterior angles, which are rather widely rounded at tips. Basal margin almost rectilinear or weakly arcuate medially, and slightly oblique to posterior angles. Lateral furrows evenly narrow in apical half, becoming weakly widened in posterior third, where they are fused with the baso-lateral impressions. Baso-lateral impressions medium sized, clearly delimited from pronotal disc and median part of base, flattened to basal and lateral margin, the latter sometimes slightly reflexed. Baso-lateral impressions and other parts of pronotal surface impunctate. Median line fine, disappearing before reaching basal and apical margins. Anterior transverse impression obliterated. Microsculpture on disc with traces of lightly impressed moderately transverse meshes, at medial portion of base and apex with more moderately impressed weakly transverse and at baso-lateral impressions with moderately impressed almost isodiametric to weakly transverse meshes.

Elytra: Rather long, 1.56–1.64 times as long as wide, 2.69–2.89 times as long and 1.30–1.38 times as wide as pronotum, with sides weakly widened posteriorly, widest about at middle. Subapical sinuation very weak, apical tip of each elytron moderately sharp, but not denticulate. Elytral striae distinctly impressed and impunctate, scutellar striole long. Intervals rather flat on disc, becoming very slightly narrowed and moderately convex at apex. Basal pore at beginning of scutellar striole present, interval three in third quarter with one setiferous pore, adjoining stria two. Microsculpture on scutellum isodiametric, on elytral intervals almost obsolete, only here and there traces of very lightly impressed transverse lines rudiments visible.

Macropterous.

Ventral surface: Met-episterna at inner margin about 1.5 times longer than wide at basal margin. Prosternum medially with four to five, and in front of apical margin with a row of seven to eight longer setae. Pro-sternal process posteriorly with two longer and distinct setae. Abdominal sternites IV–VI with distinct and rather dense pubescence, in sternite IV often with a small smooth area laterally. Last visible sternite faintly ermarginate at apex, at apical margin with two longer setae in males and four in females.

Legs: Pro-tarsomeres one to four of males moderately dilated and with distinct, biseriately arranged adhesive hairs on ventral surface. Pro-tarsomere four markedly bilobed. Meso-tarsomeres one to four of males weakly dilated and with adhesive hairs on ventral surface. Meso-tarsomere four moderately bilobed. In females pro- and meso-tarsomeres unmodified. Male pro-femora slightly thickened in relation to females, without a row of numerous long and fine setae at upper inner margin.

Aedeagus: Median lobe of aedeagus small, with apical portion rather long and broad, and apex widely rounded in dorsal aspect. In lateral aspect moderately curved ventrad with apical part rather straight and tip of apex with peculiar shape Internal sac composed of one accumulation of three to 10 smaller teeth in upper basal half, sometimes also with one to two smaller teeth in lower apical half, and in apical third with a group of small but distinct spines.

7. *Anthracus schuhi* Jaeger, 2012

Description taken from Jaeger, 2012: 283.

Size: Length 4.0–4.1 mm (holotype 4.0 mm); width 1.5 mm.

Color: Head and pronotum dark brown with lateral margins of the latter somewhat paler, elytra blackish brown, with lateral margin and first interval somewhat lighter. Clypeus, labrum and mandibles (inner margins and apices blackish) reddish brown.

Legs and palpi yellowish brown, antennae brown, with first two antennomeres somewhat paler. Ventral surface mainly brown to dark brown, with head, pro-, mes- and met-episterna somewhat darker. Upper surface shiny, elytra with weak iridescence.

Head: Including eyes 0.77–0.79 times as wide as pronotum, with eyes distinctly prominent (head 1.61–1.63 times as wide as head between eyes). Labrum almost rectilinear at apical margin. Mandibles not markedly prolonged and curved, left mandible weakly obtuse at apex. Antennae 2.38–2.39 times as long as pronotum and 0.86–0.88 times as long as elytra. Microsculpture on labrum and clypeus distinct and almost isodiametric, on anterior half of head almost obliterated, only traces of isodiametric meshes are visible, on posterior half of head first faintly isodiametric, later (in front of pronotal apical margin) the meshes become transversely stretched.

Pronotum: Widest in second quarter, lateral seta inserted a little posterior to beginning of second quarter. Apical margin weakly to moderately emarginate, lateral border reaching medial third. Anterior angles narrowly rounded at tips, weakly projecting forward. Sides convex in anterior third, rectilinearly or roundly narrowed to the widely rounded posterior angles. Basal margin almost straight or very weakly arcuate medially, obliquely produced to posterior angles. Lateral furrows evenly narrow anteriorly, becoming weakly to moderately widened posteriorly, where they are fused with the latero-basal impressions. Latero-basal impressions medium sized, distinctly delimited from the pronotal disc and median part of base, fused with basal and lateral margin. Median line fine on disc, disappearing before reaching basal and apical margins. Anterior transverse impression only suggested. Basal impressions and other surface of pronotum impunctate. Microsculpture on disc with faintly impressed,

long-transverse meshes, at basal impressions and in lateral furrows with distinctly impressed isodiametric meshes.

Elytra: With sides very weakly widened posteriorly, widest about at middle, 1.62–1.63 times as long as wide, 2.63–2.77 times as long and 1.32–1.36 times as wide as pronotum. Elytral striae distinctly impressed and impunctate, scutellar striole long. Intervals rather flat, narrowed and very weakly convex at apex. Basal pore at beginning of scutellar striole present, interval three in third quarter with one setiferous pore, adjoining stria two. Microsculpture on scutellum isodiametric, on elytral intervals with very lightly impressed transverse lines.

Macropterous.

Ventral surface: Met-episterna long and narrowed posteriad, at inner margin about 1.4 times longer than wide at basal margin. Prosternum medially with five to six and posterior to apical margin with a row of six medium long setae (often broken and then insertion points difficult to observe). Pro-sternal process with two to three distinct setae (broken in the holotype). Abdominal sternite four to six with distinct, rather long and dense pubescence. Last visible sternites of males very weakly emarginate at apex, at apical margin with two longer setae in males.

Legs: Pro-tarsomeres one to four of males markedly dilated and with distinct, biseriately arranged adhesive hairs on ventral surface. Pro-tarsomere four markedly bilobed. Meso-tarsomeres one to four moderately dilated with adhesive hairs on ventral surface. Meso-tarsomere four moderately bilobed.

Aedeagus: Apex in lateral aspect without any distinct hook. Apical lamella (dorsal aspect) rather wide and long, at apical margin widely rounded. Internal sac with three to four smaller subapical teeth, and a band of closely arranged medium sized teeth in basal half.

8. *Anthracus skalei* Jaeger, 2015

Description taken from Jaeger, 2015a: 341.

Size: Length 3.6–3.9 mm; width 1.4–1.5 mm.

Color: Head and pronotum reddish to reddish brown, with clypeus, labrum and mandibles (inner margins and apices blackish) reddish yellow. Elytra somewhat paler, reddish yellow, with a more or less expanded dark brown central macula, leaving at least the first interval, the basal quarter and the apical region reddish yellow, and expanding laterally from interval two to six sometimes also to interval seven. Legs and palpi yellowish brown, antennae with first two antennomeres yellowish brown, remaining ones more or less distinctly infuscated. Ventral surface mainly brown or reddish brown, pro-episterna often somewhat darker and last sternites often somewhat paler. Epipleura reddish or reddish yellow. Pronotum sometimes with traces of iridescence, elytra with moderate iridescence.

Head: Including eyes 0.81–0.83 times as wide pronotum, with eyes moderately to distinctly prominent (head 1.59–1.68 times as wide as head between eyes). Labrum almost rectilinear or weakly rounded at apical margin. Mandibles medium sized, left mandible rather sharp at apex, not thickened or truncate. Antennae moderately long, 2.37–2.57 times as long as pronotum and 0.85–0.91 times as long as elytra. Microsculpture on clypeus distinct and almost isodiametric, on labrum weakly transverse, on frons almost lacking, and on vertex with lightly impressed isodiametric meshes becoming weakly transverse in front of pronotal apical margin.

Pronotum: Widest in second quarter, lateral seta inserted a little posterior to beginning of second quarter. Apical margin almost rectangular, faintly bordered laterally. Anterior angles narrowly rounded at tips, not or very weakly projecting forward. Sides convex in anterior half, rectilinearly narrowed to posterior angles, which are obtuse and often only

suggested, sometimes widely rounded. Basal margin rectilinear or weakly convex medially and moderately oblique laterally. Lateral furrows moderately wide anteriorly, becoming weakly widened at posterior third, where they are fused with the baso-lateral impressions. Baso-lateral impressions medium sized, distinctly delimited from the pronotal disc and the weakly depressed median part of base, flattened to basal margin, and vaguely separated from the lateral margin by a suggested convexity. Basal impressions and other surface of pronotum impunctate. Median line very fine and impunctate, disappearing before reaching basal and apical margins. Anterior transverse impression almost obsolete. Microsculpture on disc with very lightly impressed strongly transverse meshes, and at baso- lateral impressions with distinct weakly transverse meshes.

Elytra: Rather long, 1.56–1.62 times as long as wide, 2.74–2.83 times as long and 1.33–1.38 times as wide as pronotum. Sides weakly widened posteriorly, widest just posterior to middle. Subapical sinuation weak. Elytral striae distinctly impressed and impunctate, scutellar striole long. Intervals rather flat, becoming weakly narrowed and moderately convex at apex. Basal pore at beginning of scutellar striole present, interval three in third quarter with one setiferous pore, adjoining stria two. Macropterous. Microsculpture on scutellum and around basal pore isodiametric, on elytral intervals only with traces of very lightly impressed transverse lines.

Ventral surface: Met-episterna long, distinctly narrowed posteriad, at inner margin about 1.5 times longer than wide at basal margin. Prosternum medially with five to six and close to apical margin with a row of seven to eight medium long setae (often broken and then insertion points difficult to observe). Pro-sternal process with one distinct seta. Abdominal sternite four to six with distinct, moderately long

pubescence, in sternite four laterally sometimes with a small smooth area. Last visible sternite at apical margin with two longer setae in males and four setae in females.

Legs: Pro-tarsomeres two to four of males markedly, meso-tarsomeres two to four moderately dilated. Pro-tarsomere four markedly, meso-tarsomere four moderately bilobed. Pro-tarsomeres one to four and meso-tarsomeres two to four with biseriately arranged adhesive hairs on ventral surface.

Aedeagus: Median lobe of aedeagus rather large. Apical lamella rather short, not markedly narrowed (dorsal aspect), the apex abruptly bent upward (lateral aspect). Internal structures composed of two to three large and two to three medium sized teeth in central portion, and two smaller teeth in basal half.

9. *Anthracus weigeli* Jaeger, 2015

Description taken from Jaeger, 2015a: 340.

Size: Length 2.9–3.6 mm; width 1.1–1.3 mm.

Color: Head brown, dark brown or reddish brown, with clypeus, labrum, and mandibles (inner margins and apices blackish) reddish yellow. Pronotum often paler than head, reddish yellow. Elytra reddish yellow, with a more or less expanded dark brown macula, leaving at least the first interval and the basal quarter, sometimes also the apical quarter reddish yellow and expanding laterally from interval two to five, sometimes also to interval seven. Legs and palpi yellowish, antennae with first two antennomeres yellowish, remaining ones more or less distinctly infuscated. Ventral surface mainly reddish yellow or yellowish brown, sometimes first abdominal sternite slightly infuscated. Epipleura yellowish brown. Elytra with moderate iridescence.

Head: Including eyes 0.82–0.88 times as wide as pronotum, with eyes moderately prominent (head 1.55–1.68 times as wide as head between eyes). Labrum almost rectilinear at apical margin, sometimes weakly bent posteriad at right side. Mandibles

medium sized, left mandible rather sharp at apex, not thickened or truncate. Antennae rather long, 2.55–2.75 (males) or 2.41–2.64 (females) times as long as pronotum and 0.89–0.95 (males) or 0.85–0.88 (females) times as long as elytra. Microsculpture on clypeus almost isodiametric, on labrum isodiametric to weakly transverse, on frons almost lacking, and on vertex with lightly impressed isodiametric meshes becoming weakly transverse in front of pronotal apical margin.

Pronotum: Widest in second quarter, lateral seta inserted at beginning of second quarter or a little posterior to. Apical margin almost rectangular, faintly bordered laterally. Anterior angles narrowly rounded at tips, not or very weakly projecting forward. Sides convex in anterior half, markedly and rectilinearly narrowed to the widely rounded posterior angles. Basal margin rectilinear or weakly convex medially and markedly oblique laterally. Lateral furrows moderately wide anteriorly, becoming weakly widened at posterior third, where they are fused with the baso-lateral impressions. Baso- lateral impressions medium sized, distinctly delimited from the pronotal disc and the somewhat depressed median part of base, flattened to basal and lateral margin. Basal impressions and other surface of pronotum impunctate. Median line very fine and impunctate, disappearing before reaching basal and apical margins. Anterior transverse impression obsolete. Microsculpture on disc with very lightly impressed strongly transverse meshes or lines, on medial part of base with more distinctly impressed weakly to moderately transverse meshes, and at baso-lateral impressions with distinct almost isodiametric meshes.

Elytra: Rather long, 1.58–1.68 times as long as wide, 2.79–3.05 times as long and 1.33–1.45 times as wide as pronotum. Sides weakly widened posteriorly, widest just posterior to middle. Subapical sinuation weak. Elytral striae distinctly impressed and impunctate, scutellar striole long. Intervals rather flat, becoming weakly narrowed and

moderately convex at apex. Basal pore at beginning of scutellar striole present, interval 3 in third quarter with one setiferous pore, adjoining stria two. Macropterous. Microsculpture on scutellum and around basal pore isodiametric, on elytral intervals only with traces of very lightly impressed transverse lines.

Ventral surface: Met-episterna long, distinctly narrowed posteriad, at inner margin about 1.5 times longer than wide at basal margin. Pro-sternum medially with five to six, and close to apical margin with a row of seven to eight medium long setae (often broken and then insertion points difficult to observe). Pro-sternal process with one distinct seta. Abdominal sternite four to six with distinct, moderately long pubescence, in sternite four laterally sometimes with a small smooth area. Last visible sternite at apical margin with two longer setae in males and four setae in females.

Legs: Pro-tarsomeres two to four of males markedly, meso-tarsomeres two to four moderately dilated. Pro-tarsomere four markedly, meso-tarsomere four moderately bilobed. Pro-tarsomeres one to four and meso-tarsomeres two to four with biseriately arranged adhesive hairs on ventral surface.

Aedeagus: Median lobe of aedeagus moderately large. Apical plateau moderately long and moderately narrowed to apex (dorsal aspect), the latter with a distinct hook (lateral aspect). Internal structures composed of one to two larger and one smaller subapical teeth, one to three larger teeth in medial portion and zero and three smaller teeth in basal portion.

Genus 3 : ***Batoscelis*** **Dejean, 1836**

Description taken from Lacordaire, 1854: 261 and Jeannel, 1948: 721.

Elongated, very narrow, subcylindrical species.

Head: Small, with large eyes and short antennae, gradually thickened at the apex. Convex forehead, smooth or punctuated, the oculo-frontal furrows well marked. Last

segment of the palps fusiform, short and glabrous. Labrum large, transverse square, middle widely emarginated. mentum dentate, the tooth short and acute. Ligula large, narrowed at its base, truncated at end. Paraglossae broad, arched, truncated.

Pronotum: Elongated, longer than wide or as long as wide, always variable in shape in the same species, its sides more or less rounded, very briefly sinuate immediately before the posterior angles which are pronounced and anterior angles rounded. Disc convex, the basal surface punctuated, the punctures more or less advanced towards the disc on the median line and on two parallel lines. Projecting base, almost as wide as the front edge.

Elytra: Long, parallel, not edged at the base, rounded shoulders, sinuate at end. Striae deep, smooth, the intervals smooth, almost flat. The posterior group of the umbilical series is formed of 8 setae in an almost continuous series.

Winged.

Legs: Pro-tibiae dilated and toothed on the outer edge, the meso-tibiae tibiae very spiny, the hindquarters much less. Pro-tarsi slightly dilated in males, their first two segments dentate inwards, with a short spine at the top of the tooth.

Aedeagus: Short, very slightly chitinized, with large basal bulb and flattened apical part, the apex short, not tapered. Dorsal membranous area very narrowed by the envelopment of the two edges.

Key to the species of the genus *Batoscelis* Dejean 1836

1. Elytral striae finely punctated; large species, length 11 mm……..***B. porosa*** (Putzeys, 1863)
- Elytral striae smooth; smaller species, length 5–7.5 mm…….……..2
2. Elytral striae moderately deep…… .***B. hellmichi*** (Jedlička, 1965)
- Elytral striae markedly deep……..***B. oblonga*** (Dejean, 1831)

1. ***Batoscelis hellmichi*** **(Jedlička, 1965)**

Description taken from Jedlička, 1965: 100.

Size: Length 7–7.5 mm.

Color: First three antennal segments light, rest darkened, legs and palpi yellowish red, front edge of the head and the whole disc of the pronotum reddish yellow.

Head: With strongly bulging eyes, very short temples and deep dimpled fore head furrows.

Pronotum: Quadrangular, slightly wider than the head, slightly wider than long. Anterior edge straight with bent anterior angles, slightly rounded at the sides, slightly narrower towards back than towards the front. Base slightly narrower than the front edge, slightly curved forward. Posterior angles very blunt with very small tooth; clearly punctured along base and anterior margin, disc here and there with scattered punctures.

Elytra: With a wide longitudinal black band, which occupies five intervals. Elytra almost parallel, with prominent shoulders, rounded behind, striae moderately deep, smooth, intervals almost flat, the third with a spot on the second striae behind the middle. Scutellar striae very short. Without microsculpture.

2. ***Batoscelis oblonga*** **(Dejean, 1831)**

Description taken from Dejean, 1831: 813.

Size: Length 5.08 mm; width 2.54 mm.

Color: Little reddish brown above; labrum and the palpi are of a rather pale yellow-testaceous; antennae are with same color; ventral side of the body is reddish brown.

Head: Almost triangular and sparsely punctated. A transverse impression present between the eyes, and in its middle some punctures quite far from each other.

Antennae shorter than the head and pronotum combined. The eyes are quite prominent.

Pronotum: Subquadrate, sparsely punctated. Wider than the head, as long as it is wide, almost square, very slightly rounded at the sides, a little narrowed near the base, and slightly convex; the anterior edge, the base and the edges of the middle line are covered with fairly marked punctures, and it has moreover on each side, towards the middle, a few punctures not very close to each other; the longitudinal line is quite marked; the two transverse impressions are quite distinct; the anterior forms an angle on the line of the middle, and the posterior is a little sinuate and very close to the base;; the anterior edge is cut almost square; the anterior angles are almost rounded; the sides are edged; they rise a little near the base and form an almost right angle with it; the base is cut square in the middle, and a little obliquely on the sides.

Elytra: Elytra parallel, with a thinner margin; a little wider than the pronotum, elongated, parallel and slightly convex; the striae are smooth and well marked; the intervals are flat, and on the third interval, near the second striae, beyond the middle, a rather distinct puncture present.

Legs: On the outer side of the pro-legs with two well distinct teeth, and a third smaller one near the tip.

3. ***Batoscelis porosa*** **(Putzeys, 1863)**

Description taken from Putzeys, 1863: 19.

Size: Length 11 mm.

Color: Black, with the mouth parts, the antennae, the legs, the outer edge of the elytra, two subhumeral spots and the top of the head more or less light brown; centre and sides of the labrum are testaceous brown.

Head: Anterior and posterior margins of the head coarsely punctated; labrum rounded on sides, not depressed longitudinally, widely indented, bordered with six setae. The clypeus is broad, strongly rimmed, depressed in the center, which makes it appear indented. At the top of the head, strewn with large dots interspersed with some roughness, one sees a rounded central fovea deeper behind, and in front of this, on each side, two other large and triangular foveae; behind the eyes is an indistinct transverse impression, the centre of which is reddish-brown. The eyes are prominent.

Pronotum: Half wider than head, very convex, almost square, slightly narrowed behind; its base is by no means prolonged; it is cut almost straight up to the posterior angles. The anterior angles are almost straight with their ends rounded; the sides slightly arched to the posterior angles which are obtuse. The anterior transverse furrow is barely distinct: it is indicated by a few irregular punctures grouped especially in the middle and towards the anterior border. The longitudinal furrow is finely marked. On each side of the base, there is a fairly wide and deep rounded fovea; the posterior edge is with some large points which hardly exceed the two foveae.

Elytra: A quarter wider than the pronotum, slightly elongated oval, slightly sinuate before the end; their shoulders protrude and end in a small tooth. The finely punctuated striae are well marked throughout; the first six start from the base; one and two meet at the end; the second interval is widened towards the base and bears scutellar striae which is very short; the fifth striae forms a hook at its extremity and comes to touch the second a little before the meeting point of the latter with the first. The fifth striae, starting from the shoulder, is at first very greatly enlarged and very deep; beyond the first quarter of the elytron, it again becomes very fine and bears in the first third a fairly wide rounded point; it then widens to the last third where it is

then very close to the margin from which it soon deviates abruptly heading obliquely towards the end of the elytron which it does not reach, however; in its last third, this eight stria has eight large punctures from the center of each of which rises a small tubercle. The second stria bears, in its last third, a puncture. A little below the shoulders, the sixth, seventh and eight intervals are occupied by a transverse spot, of a ferruginous brown, not very distinct. Towards its extremity, the marginal edge of the elytra is brownish testaceous. There are wings under the elytra.

Legs: The fore femora are broad, sub-toothed at their outer end; the tibiae carry, towards the external edge, a small oblique carina; inside, above the indentation, a long, slightly curved spine and, at the end, another shorter spine, but wider at its base. The meso-tibiae are spiny externally, but not spurred. The first article of the pro-tibiae is wide, in an elongated triangle; the second heart-shaped, half as short as the first, but almost as broad; third and fourth are half narrower; the latter is elongated in the middle; all are internally prolonged and the first two bear externally a thick, short and obtuse spine. The hooks are slender and long.

Genus 4: ***Bradycellus*** **Erichson, 1837**

Description taken from Habu, 1973: 305.

Dorsal side glabrous.

Head: Eyes and scrobe of mandibles glabrous; antennal segment three pubescent or glabrous; apical segment of palpi fusiform; mentum with distinct median tooth; paraglossae separated from ligula by shallow notch, extending beyond ligula.

Pronotum: Variable in form; basal angles without marginal setae.

Elytra: Elytral basal pore generally present, sometimes absent; scutellary striole variable, sometimes absent.

Legs: Hind femora with two setae along hind margin; tarsi glabrous or with only a few setae on dorsal side; fore and mid tarsi of male dilated or undilated; mid and hind tarsi not sulcate on lateral sides.

Key to the species of the genus *Bradycellus* Erichson, 1837

1. Scutellary striole absent; posterior angles of pronotum broadly rounded; head with isodiametric meshes…..……..***B. bicolor*** Jaeger, 1998
- Scutellary striole present; posterior angles of pronotum obtuse; microsculpture obscure and partly impressed on head……...***B. picipes*** Ito & Jaeger, 2000

1. *Bradycellus bicolor* Jaeger, 1998

Description taken from Jaeger, 1998: 11.

Size: Length 3.8–4.1 mm.

Color: Top of head, elytra and underside of hind body dark pitch brown, but suture interval, base and lateral margin of elytra lightened reddish yellow. Pronotum, underside of head and prosternum orange-red. Legs, palpi and mandibles (tips and inner edge darkened) yellow-brown. Antennae dark brown except for the first yellow-brown lighter segment. (The holotype is not completely coloured and is therefore lighter overall.)

Head: Medium width in relation to the pronotum. Eyes large and moderately bulged. Mandibles pointed, the left apically not thickened or truncated. Antennae about 1.9–2x as long as the pronotum and finely hairy from the second third of the third segment. Microsculpture (at 135x) isodiametric on the head.

Pronotum: Lateral margins slightly convex rounded anteriorly, slightly rounded from the widest point to the base to almost straight narrowed. Posterior angles broadly rounded. Anterior angle small, rounded and only slightly higher than the level of the anterior rim. Marginal gullet narrow, embracing the posterior angles and reaching the

centre of the basal impressions. Lateral edge bristles turned in at about the end of the first quarter. Basal impressions only indicated, but relatively roughly and densely punctured. Median line moderately deepened, but less dented in the apical half and not quite reaching the anterior margin, very finely punctured. Microsculpture suppressed on the pronotum.

Macropter.

Elytra: Roughly parallel, 1.68–1.70x longer than wide and 1.28–1.30x wider than pronotum. Scutellar stripes absent. Basal (at the beginning of the second stripe) and apical pore point (in the third interval on the second stripe) present. Stripes of elytra clearly incised, intervals slightly convex. Series umbilicata 6 (5+1)–8. Microsculpture irregularly isodiametric to short cross-meshed, less pronounced overall in the male holotype.

Ventral surface: Met-episterna at the inner edge about 1.5x as long as wide at the base. Prosternum and second to sixth abdominal sternite finely and densely hairy, whereby the hairiness of the second sternite is limited to the vicinity of the depression in males and to the median area in females and only widens at the third sternite to the corners of the apical margin of the same. Second and third abdominal sternite in males median with a small hanging and hairy depression. Sixth sternite at the apical edge with two (males) or four (females) longer setae.

Legs: Second to fourth front tarsi segment of the male slightly expanded and covered with biseriate adherent hairs on the underside, central tarsi not expanded, without adherent hairs.

Aedeagus: External shape of the median lobe as shown. Internal sac in the apical half with a row of strongly chitinized spines, otherwise without noticeable structures.

2. ***Bradycellus picipes* Ito & Jaeger, 2000**

Description taken from Ito & Jaeger, 2000: 1220.

Size: Length 5.6–5.9 mm; width 2.7–3.0 mm.

Color: Body oblong, rather thick, pitchy black, very shiny, not iridescent; palpi yellowish brown, tarsi light brown, antennae brown to light brown, tibiae dark brown in apical half.

Head: Relatively wide, 0.70–0.74 times as wide as the pronotal width, moderately elevated, very minutely and sparsely punctate; labrum subquadrate, shallowly emarginate at apex; clypeus weakly protrudent at apical corners, linearly depressed a little behind apex, gently swollen before and behind the depression; clypeal suture clearly carved lengthwise, from each end of which frontal impression arcuately runs behind and is deep throughout; eyes large, gently prominent; temples short, steeply convergent towards neck constriction; antennae submoniliform; apical two segments reaching elytra, third segment sparsely pubescent, as long as the fourth and two-fifths longer than the second; mandibles sharpened apicad, third segment of labial palpus tumid medially, one-fifth longer than the second; ligula parallel sided, truncate at apex; mentum regular-triangularly toothed at apex, epilobes narrow and weakly expanded apicad; microsculpture obscure and partly impressed, observed as square meshes on clypeus and transverse meshes near temples.

Pronotum: Transversely quadrate, moderate in shape, 1.45–1.48 times as wide as long, widest a little behind apical two-fifths, rather steeply declivous apico-laterad, mostly smooth coarsely punctate in basal foveae; sides gently arcuate in front and straightly oblique behind from the widest point, somewhat widely bordered; apex shallowly emarginate, straight at bottom where border is interrupted; base as wide as apex, hardly bisinuate, unbordered in middle half; apical angles narrowly rounded; basal angles fairly larger than right angle and obtuse; lateral furrows each carved in a

line lengthwise, isolated from small and rounded basal fovea by a weak hump; front transverse impression shallow, the hind one obscurer than the front one; median line vague, reaching apex and base; microsculpture mostly invisible, consisting of vague transverse meshes in lateral furrows and basal foveae.

Elytra: Suboval, well convex, very sparsely furnished with extremely minute punctures; sides gently curved in humeri, subarcuate in middle, gradually strongly convergent behind from apical third, preapical sinus very shallow; apices weakly produced behind, rounded at tips which are narrowly separated from each other; bases each shallowly emarginate, not angulate at humeral angles; striae fine and shallow throughout, finely crenulate, fourth to seventh striae brokenly impressed, scutellar striole relatively long; intervals quite flat or slightly convex, a setiferous pore on third interval near apical two-fifths; marginal series divided into three groups, though the hind two groups are narrowly isolated, fore group composed of five to six umbilicate pores, middle one of three to four pores, and hind one of four to five pores; microsculpture invisible or hardly detectable in part as transverse meshes. Hind wings entirely developed.

Ventral surface: Moderately densely pubescent on abdominal sternites; met-episternum strongly contracted behind, elongate, one-third longer than wide; sixth abdominal sternite in males unisetose and in females bisetose at each side, in both sexes widely arcuate at apical margin.

Legs: Hind femur bisetose postero-ventrally; pro-tibia bi- or trispinous apico-externally, without sulcus, terminal spur lanceolate; tarsi comparatively narrow, mid tarsus in male biseriately sqamous on ventral side of first to fourth segments, hind tarsus nearly four-fifths times in males and seven-tenths times in females as long as the width of head, first segment one-fourth shorter than the second and third taken

together, third segment two-sevenths shorter than the second and one-fourth longer than the fourth, claw segment unisetose along each ventral margin.

Aedeagus: In lateral aspect thin, gently curved, weakly bent obliquo-ventrad at apex, in dorsal aspect widely boat-shaped; apical lobe small, as wide as long; apical orifice widely opening, inner sac armed with a series of three spines in right side near apex and with a triangular cluster of microtrichia. Stylus moderately curved outwards, unisipinous at ventro-external margin, with a long seta a little apart from apex.

Genus 4: ***Dicheirotrichus*** **Jacquelin du Val, 1857**

Description taken from Habu, 1973: 305.

Body punctuate and pubescent.

Head: Labrum, eyes and scrobe of mandibles pubescent; apical segment of palpi fusiform; mentum with distinct median tooth; paraglossae separated from ligula by shallow notch, extending beyond ligula.

Pronotum: With two pairs of marginal setae.

Elytra: With basal pore, with dorsal pore on interval three without scutellary striole.

Legs: Tarsi pubescent on dorsal side; fore tarsi of male with segments one to four moderately dilated, with adhesive hairs ventrally, mid tarsi of male not dilated, with or without adhesive hairs ventrally; meso- and meta-tarsi not sulcate on lateral sides.

Ventral surface: Pro-sternal process without setae at apex though pubescent; met-episterna long, fully contracted posteriorly; sternites two and three with ciliate depression at middle in male.

Key to the species of the Genus *Dicheirotrichus* Tschitschérine 1899 (Key modified from Tschitschérine, 1899)

1. Elytral first stria impunctated, sometimes dotted only towards the end, very rarely with an uneven row of loose points along its entire length; pronotum

with a relatively small, subrounded blackish discoid spot…….....***D. roborowskii*** Tschitschérine, 1899

- Elytral first stria completely punctated, biserially or subbiserially, sometimes almost evenly; pronotum with almost always sharp discoid spot, seldom nil……..***D. galsunowi*** Tschitschérine, 1899

1. ***Dicheirotrichus glasunowi* (Tschitschérine, 1899)**

Description taken from Tschitschérine, 1899a: 470.

Size: Length 5–5.5 mm.

Head: Relatively wide, vertex fairly strongly punctated, this punctuation more or less provided, according to the individuals.

Pronotum: Moderately transverse, moderately or slightly narrowed towards the base, posterior angles obtuse, blunt or slightly rounded at the apex; base rather finely, sometimes slightly punctated, usually more distinctly towards the sides, sometimes almost smooth between them; smooth side edges, anterior edge impunctated (sometimes a little wrinkled) in the middle, slightly and more or less distinctly punctated towards the sides.

Elytra: Oblong, eighth stria more or less punctated on full length, others slightly punctated only towards the end and sometimes all at the base.

2. ***Dicheirotrichus roborowskii* (Tschitschérine, 1899)**

Description taken from Tschitschérine, 1899a: 457.

Size: Length 4.4–5 mm.

Color: Sometimes yellow; sternum and abdomen black; yellow legs, femur often infuscated, yellowish tarsi, each article generally more or less obscured at the extremity, the first article red-coloured, sometimes the next two too, or their base, more or less reddish brown; last article of palpi dark at the base.

Head: Quite strongly punctated on the vertex, punctation sometimes less marked in the middle; surface of the head is of a ferruginous red or reddish brown, completely crossed in the middle by a more or less longitudinal black band.

Pronotum: Yellow or reddish brown in color with a relatively small, subrounded blackish discoid spot, moderately transverse pronotum, wider than the head with the eyes (more or less), slightly or moderately narrowed towards base, posterior angle obtuse and more or less rounded at the apex, surface punctated to all edges, sometimes strongly, sometimes more weakly; in some copies punctuation is even not very distinct laterally and at anterior edge; the middle of the disc usually smooth, however one can sometimes distinguish very few and very scattered some small points.

Elytra: Yellow coloured, oblong and diffuse blackish spots. First stria of elytra impunctated, sometimes punctated only towards the apex, very rarely with an uneven row of loose points along its entire length. Elytra oblong, sometimes the five internal striae are only punctated at the apex and a little bit at the base, epipleura of elytra usually obscure at the base.

Genus 5: ***Idiomelas*** **Tschitschérine, 1900**

Description taken from Kataev, 1997b: 240.

Dorsal side of body glabrous.

Head: Clypeo-ocular line distinct and reaching eye. Antennae with short segments, pubescent from third one. Penultimate labial palpomere with two setae at anterior margin and one seta ventrally near apex. Mentum edentate, fully separated from submentum, latter bearing a pair of lateral setigerous pores. Ligular sclerite broad, widened anteriorly, anterior margin angulate. Paraglossae rounded at tip, separated from ligular sclerite by a deep notch.

Pronotum: Bead along anterior margin either complete or interrupted medially.

Elytra: Subapical sinuation rather deep in both sexes, with a blunt tooth at base, sometimes rounded at tip. Scutellar stria present (sometimes rudimentary), posterior series of marginal elytral punctures divided into two groups of four punctures each, third interval in apical quarter with one discal pore near second stria.

Legs: Anterior tibia with two to three apical spines at outer margin. Hind margin of meta-femor with two setigerous pores, metatarsi (in female sometimes also meso-tarsi) with more or less distinct lateral furrow on each side, fifth tarsomere with one to three pairs of setae underneath, fourth pro-tarsomere (in male also fourth meso-tarsomere) bilobed.

Ventral surface: Met-episterna narrow and long, ventral surface of body, except for obligatory setae, glabrous (but prosternum anteriorly and laterally and median part of two to three abdominal sternites with very fine and short pubescence), apical abdominal sternite with one to two pairs of setigerous pores in male and two pairs in female.

1. ***Idiomelas fulvipes*** **(Erichson, 1843)**

Description taken from Kataev, 1997b: 247.

Size: Length 6.7–8.1 mm; width 2.6–3.2 mm.

Color: Palpi, antennae and legs paler, brownish-yellow, unicolorous, much paler than underside of body.

Head: Relatively larger, 0.69–0.77 times as wide as pronotum.

Pronotum: Wider than long (1.40–1.58 times), notably narrowed posteriorly, widest before the middle, with sides either scarcely rounded or straight before broadly rounded (usually more broadly than *I. crenulatus*) hind angles; basal edge ciliate.

Bead along anterior margin of pronotum interrupted medially. Basal area near hind angles flatter; basal foveae separated from lateral furrows less distinctly.

Elytra: Relatively broader, 1.51–1.61 times longer than wide and 2.78–3.03 as long as pronotum; intervals less convex. Dorsal microsculpture thin transverse lines and slightly finer.

Ventral surface: Pro-sternum and proepisterna smooth. Anal sternite in both sexes with two pairs of setae.

Legs: First segment of middle tarsi in male non dilated, without adhesive hairs underneath.

Aedeagus: Penis with a more or less straight terminal lamella (lateral aspect), less strongly narrowed on sides before a comparatively narrow apical capitulum. Teeth in internal sac unpaired.

***ssp.Idiomelas fulvipes indus* Kataev, 1997**

Description taken from Kataev, 1997b: 248; id. 2014a: 249.

Color: This subspecies is characterized by pale, yellowish brown legs (the femora are not darker than the tibiae).

Head and pronotum: Much narrower than in *I. fulvipes fulvipes* (head 0.69–0.70 times as wide as pronotum, pronotum 1.40–1.42 times wider than long); relatively narrow head and pronotum.

Aedeagus: Penis with a comparitively larger apical capitulum; in the inner sac, one of the three spines in the basal half of the median lobe is very long, longer than the largest spine in the apical half.

Genus 6: ***Loxoncus* Schmidt-Göbel, 1846**

Description taken from Kataev, 2003: 352

Size: Length 5.5–9.7 mm (in Asian and Australian species).

Body small to medium size, glabrous. Hind wings fully developed.

Head: With rather large, hemispherical eyes very narrowly separated ventrally from buccal fissures. Tempora very short, abruptly (almost at 90°) descending to neck. Clypeus often with small incision on each side of anterior margin and base of labrum sometimes visible. Clypeo-ocular line usually reaching supraorbital furrow, more or less strongly deepened at clypeus. Left mandible not truncate at apex, rather sharp. Mentum with two medial seta, either edentate or with small obtuse tooth medially, fused with submentum laterally or completely; submentum usually with two lateral setae on each side. Epilobes rather narrow, hardly widened anteriorly. Ligular sclerite narrow, usually more or less widened anteriorly, truncate or widely rounded at apex. Paraglossae narrow, much extended beyond ligular sclerite, each separated from latter by deep notch. Penultimate labial palpomere with two long setae at anterior margin and one to two apical setae. Antennae comparatively long, densely pubescent from third antennomere on; first antennomere with one short seta ventrally and one long seta dorsally; second antennomere with one short ventral seta.

Pronotum: With one lateral seta on each side before middle. Apical bead complete, not interrupted medially, separated from discal portion by deep furrow. Basal margin not bordered and not ciliate along basal edge. Basal angles obtuse usually rounded at apex, rarely sharp. Punctation, if present, restricted usually to pronotal base or only basal foveae.

Elytra: Weakly sinuate before apex. Humeri rounded, without denticle at apex. Striae complete, impunctate; scutellar striole missing. Basal pore present, situated within second interval at base of second stria. Third interval in apical third with one discal pore at second stria. Marginal series widely interrupted medially, consisting of 6 (5+1) humeral and 8 (4+2+2) apical setigerous pores.

Ventral surface: Anal sternite along apical margin with one pair of setigerous pores in male and two pairs in female (outer one somewhat removed from apical margin). Anterior tibia with three (more rarely one to two) apical spines on outer margin and one ventroapical spine under apical margin; spines on outer margin usually forming single row with spines on ventral surface. Meta-femur with two setigerous pores at hind margin. Tarsi glabrous dorsally. Meta- and meso-tarsi (usually only first to third tarsomeres) with distinct lateral furrow on each side. Fifth tarsomere without setae underneath; fourth pro-tarsomere bilobed or deeply emarginate at apex. Male pro- and meso-tarsi either dilated and with adhesive vestiture ventrally or not dilated and lacking such vestiture.

Aedeagus: Median lobe of aedeagus arcuate, either with or without apical capitulum; apical orifice in dorsal position, usually extending to basal bulb.

Female genitalia: Hemisternite with distal and lateral margins membranous, without any spines or setae; basal stylomere membranous along its inner margin and represented in fact by two separate sclerites (dorsal and ventral), its dorsal sclerite with group of short stout spines apically; apical stylomere flat, more or less arcuate, sharp at apex, bearing numerous spines along single outer margin and one setigerous pore on inner margin before apex.

Key to the species of the genus *Loxoncus* Schmidt-Gobel, 1846 (Key modified from Kataev, 2002)

1. Basal angles of pronotum rather sharp at apex, more or less denticulate….....**.....*L. microgonus*** Bates, 1886

- Basal angles of pronotum at least blunt at apex, usually more or less strongly rounded……...2

2. Body throughout, including legs and all antennomeres, dark brown to black……***L. rutilans*** Bates, 1889

- At least tibiae, and or lateral margins of pronotum, and or apices of elytra, and or first to second antennomeres much paler, reddish brown to brownish yellow…….3

3. Lateral beads of pronotum rather broad even apically, strongly widened basad and invisible at basal angles because merged with deep basal foveae forming on each side united latero-basal depression……...……4

- Lateral beads of pronotum rather narrow, at most only scarcely widened basad, visible up to basal angles and not merged with basal foveae, even though latero-basal areas depressed……...……5

4. Sutural angle of each elytron rather sharp at apex; pronotum narrower: in male largely brown, with narrow brownish yellow or reddish yellow lateral margins, in female only medially brown, with very broad reddish yellow lateral margins; larger: body length 6.9–8.4 mm…….***L. discophorus*** Chaudoir, 1852

- Sutural angle of each elytron narrowly rounded at apex; pronotum broader: in both sexes largely brown, with narrow brownish yellow or reddish yellow lateral margins; smaller: 5.7–7.2 mm…..……***L. nagpurensis*** Bates, 1891

5. Larger: body length more than 8 mm……..***L. schmidti*** Kataev, 2002

- Smaller: Body length at most 8 mm……***L. renitens*** (Bates, 1886)

1. *Loxoncus discophorus* (Chaudoir, 1852)

Description taken from Kataev, 2003: 354.

Size: Males- length 6.9–7.8 mm; width 2.8–3.2 mm, females- length 7.8–8.4 mm; width 3.2–3.5 mm.

Color: Upper side dark brown to black, slightly shining, rather weakly iridescent on elytra; base of mandibles and labrum, very narrow lateral margins of pronotum along lateral depression, apex of elytra (more widely towards base on fifth and ninth intervals) brownish yellow; underside dark brown, with brownish yellow median part of pro-sternum, pronotal and elytral epipleura, three last abdominal sternites (mainly in their apical portions) and pro and meso-coxae. By contrast, in female pronotum only medially brown with very broad reddish yellow or brownish yellow lateral margins; elytra with apex and three lateral intervals throughout as well as basal bead reddish yellow; and underneath and abdominal sternites nearly throughout reddish or brownish yellow; antennae beginning from third (sometimes second) antennomere and basal portion of elytral epipleura (in male) more or less strongly infuscated.

Head: Head not large in both sexes. Labrum rounded anteriorly; apical margin of clypeus more or less rectilinear. Frontal suture superficial; frontal foveae moderate, somewhat deep; clypeo-ocular line becoming obsolete just before supraorbital furrow. Mentum without medial tooth. Ligular sclerite slightly widened at apex. Antennae extending approximately to one-sixth of elytra. Dorsal surface of head throughout with distinct microsculpture consisting of isodiametric meshes.

Pronotum: Moderately convex, 1.36–1.44 times as wide as long, widest usually just before middle, sometimes in middle. Sides rather strongly and evenly rounded up to widely rounded basal angles, with lateral pore in anterior third. Apical margin very weakly emarginated; apical angles not protruding, rounded at apex. Basal margin rectilinear medially, oblique laterally. Lateral beads rather broad, strongly widened basad and merged with deep latero-basal depressions. Basal foveae deep, more or less oval, very finely and irregularly punctuate; other surface including convex area

between basal foveae impunctate. Microsculpture developed throughout, consisting of distinct isodiametric meshes.

Elytra: Convex, oblong, slightly rounded at sides, widest behind middle, in males 1.50–1.55 times as long as wide, 2.77–2.87 times as long and 1.32–1.38 times as wide as pronotum (in female these indices 1.51–1.56, 2.91–3.03 and 1.36–1.43, respectively). Sutural angle acutangular, sharp at apex. Basal elytral bead sinuate, arcuately coming to lateral margin. Striae impunctate, comparatively broad, slightly impressed on elytral disc and clearly deepened at apex. Intervals narrowed posteriad, flat on disc and somewhat convex at apex. Microsculpture distinct throughout, consisting of rather weakly transverse meshes.

Ventral surface: Apex of anal sternite in both sexes rounded.

Legs: Pro-tibia slender, hardly widened apically, usually with only one apical spine on outer margin. Male pro-tarsi moderately dilated, meso-tarsi weakly dilated; first to fourth pro-tarsomeres and second to fourth meso-tarsomeres each with adhesive vestiture ventrally. Fourth pro- and meso-tarsomeres in both sexes bilobed, each with long narrow lobes.

Aedeagus: Median lobe of aedeagus comparatively narrow, arcuate, with comparatively large basal bulb and without apical capitulum. Terminal lamella flat and broad, much longer than wide, slightly narrowed before apex and rounded apically (dorsal aspect). Internal sac with several small narrow teeth arranged in two parallel rows medially.

Female genitalia: With very narrow hemisternite; basal and apical stylomere small and narrow; apical one nearly straight, curved only at apex and with lesser number (about seven to 10) of spines than in other species.

2. ***Loxoncus microgonus*** **(Bates, 1886)**

Description taken from Kataev, 2003: 374.

Size: In males body length 7.3–8.3 mm; width 3.0–3.3 mm, in females length 7.1–8.4 mm; width 2.0–3.4 mm respectively.

Color: Brown to dark brown, rarely nearly black; upper side shining, distinctly iridescent on elytra and pronotum; lateral bead and lateral parts of basal margin of pronotum, median part of prosternum, pronotal and elytral epipleura, abdominal sternites and pro and meso-coxae, often also labrum, clypeus and base of mandibles reddish brown or brownish yellow; besides apex of elytra (more widely towards base on one to three external intervals) usually slightly paler than disc. Palpi, antennae and legs brownish yellow to yellow; antennae beginning from third segment on and basal portion of elytral epipleura more or less infuscated.

Head: Comparatively large. Labrum and clypeus anteriorly more or less rectilinear. Frontal suture slightly impressed; clypeo-ocular line reaching supraorbital furrow, very shallow posteriorly. Mentum with very broad and obtuse medial tooth. Ligular sclerite markedly widened apically. Antennae extending to base of elytra. Dorsal surface of head throughout with fine microsculpture consisting of isodiametric meshes.

Pronotum: Moderately convex, rather broad, 1.42–1.51 times as wide as long, widest in anterior third, with sides usually rounded up to sharp, slightly denticulate basal angles; sometimes sides almost rectilinearly converging basally or scarcely sinuate just before basal angles. Apical margin weakly emarginated; apical angle not protruding anteriorly. Basal margin more or less rectilinear medially, oblique laterally. Lateral bead narrow, almost not widened basad, visible nearly up to basal angles. Latero-basal depression somewhat deep, reaching lateral bead, more or less distinctly punctuate; area between them convex, smooth or with few, more finer

punctures. Very fine punctures usually present also at anterior margin. Microsculpture developed throughout, consisting of fine transverse meshes.

Elytra: Convex, oblong, in males 1.48–1.56 times as long as wide, 2.82–3.02 times as long and 1.29–1.36 times as wide as pronotum (in females these indices 1.50–1.55, 2.86–3.01 and 1.29–1.35, respectively), weakly rounded at sides and widest behind middle. Sutural angle acutangular, narrowly rounded at apex in both sexes. Basal elytral edge weakly sinuate, arcuately coming to lateral margin. Striae impunctate, comparatively wide, impressed on disc and slightly deepened at apex. Intervals largely flat, convex before apex. Microsculpture very fine, consisting of narrow and long transverse meshes.

Ventral surface: Apex of anal sternite slightly truncate, in males sometimes scarcely emarginate.

Legs: Pro-tibiae notably widened to apex, each usually with three apical spines on outer margin. Metatarsi rather short, approximately as long as maximum width of head. Male pro- and meso-tarsi not dilated and without adhesive vestiture ventrally. Fourth pro- and meso-tarsomeres in both sexes bilobed but lobes rather short.

Aedeagus: Median lobe of aedeagus somewhat small and robust, arcuate with rather large basal bulb and with apical portion thick, directed dorsad (lateral aspect). Apical capitulum lacking. Terminal lamella triangulate, slightly longer than wide, somewhat sharp at apex (dorsal aspect). Internal sac without any sclerotic elements.

Female genitalia: With broad hemisternite; basal stylomere moderately widened apically; apical stylomere with broad base and sharp outer angle.

3. *Loxoncus nagpurensis* (Bates, 1891)

Description taken from Kataev, 2003: 356.

Size: Smaller than *L. discophorus*: in males body length 5.6–7.0 mm; width 2.3–2.9 mm, in females 5.8–7.2 mm; width 2.4–3.1 mm.

Color: Upper side dark brown to black, shining, iridescent on elytra, with very narrow brownish yellow lateral margins of pronotum along lateral depression; apex of elytra and two to three external intervals (in apical portion or nearly throughout) paler than disc, brown to brownish yellow; often labrum also paler than other portions of head. Underside dark brown, with brownish yellow median part of prosternum, pronotal and elytral epipleura, abdominal sternites and pro and meso coxae. Palpi, antennae and legs brownish yellow; antenna beginning from third (sometimes second) antennomere and often basal portion of elytral epipleura more or less strongly infuscated.

Head: Similar to that of the *L. nagpurensis*, but slightly larger in both sexes. Mentum with very short and wide medial tooth, widely rounded at apex. Ligular sclerite slightly widened at apex.

Pronotum: Broader than in *L. discophorus*, 1.44–1.62 times as wide as long, widest usually in anterior third. Sides less strongly rounded. Microsculpture developed throughout, consisting of distinct transverse meshes.

Elytra: Similar to that of *L. discophorus*, convex, oblong, weakly rounded at sides (nearly rectilinearly diverging medially, widest behind middle, but relatively longer: in males 1.51–1.57 times as long as wide, 3.50–3.30 times as long and 1.33–1.42 times as wide as pronotum (in female these indices 1.46–1.53, 3.13–3.26 and 1.34–1.45, respectively) and sutural angle narrowly rounded at apex. Microsculpture much less distinct, consisting of very fine transverse lines.

Ventral surface: Apex of anal sternite in both sexes subtruncate.

Legs: Slightly shorter than in *L. discophorus*, anterior tibia stouter, usually with three apical spines on outer margin. Male pro- and meso-tarsi less dilated.

Aedeagus: Median lobe of aedeagus comparatively narrow, arcuate, with comparatively large basal bulb and without apical capitulum. Terminal lamella narrow, longer than wide, evenly narrowed to apex (dorsal aspect). Internal sac with narrow teeth of medium size arranged in two parallel rows.

Female genitalia: With broad hemisternite, comparatively large basal stylomere and very broad (broader than in other species) apical one; latter bearing about 10–11 spines along outer margin.

4. ***Loxoncus renitens*** **(Bates, 1886)**

Description taken from Kataev, 2003: 367.

Size: Comparatively small: in males body length 6.1–6.3 mm; width 2.5–2.6 mm, in females 6.8–6.9 mm and 2.8–2.9 mm, respectively.

Color: Upper side dark brown to black, shining, with bluish hue, rather strongly iridescent on pronotum and elytra; lateral bead of pronotum, three lateral intervals (except for humeral area) and apex of elytra brownish yellow; sometimes also base of mandibles and labrum paler. Underside dark brown, with paler median part of pro-sternum, pronotal and elytral epipleura, three last abdominal sternites and pro- and meso-coxae. Palpi, antennae and legs brownish yellow to brown; antennae beginning from third (sometimes second) antennomere and basal portion of elytral epipleura more or less strongly infuscated.

Head: Large. Labrum rounded anteriorly; apical margin of clypeus more or less rectilinear. Frontal suture slightly impressed; frontal foveae large; clypeo-ocular line distinct up to supraorbital furrow. Mentum with very short and wide medial tooth, widely rounded at apex. Ligular sclerite slightly widened at apex. Antennae

comparatively long, extending approximately to one-quarter of elytra. Dorsal surface of head throughout with distinct microsculpture consisting of isodiametric meshes.

Pronotum: Moderately convex, 1.37–1.41 times as wide as long, widest in apical third where lateral setigerous pores located; pronotal sides evenly rounded anteriorly, almost straight or very widely rounded in basal half. Apical margin very weakly emarginate; apical angles not protruding anteriorly, rounded at apex. Basal margin rectilinear or slightly rounded medially, obligue laterally; basal angles obtuse, rather broadly rounded at apex. Lateral beads narrow, not widened basad, continuing slightly to lateral portions of basal margin. Basal foveae shallow and broad, each extended laterally nearly up to lateral furrow forming on each side of pronotal base broad latero-basal depression; latter distinctly and irregularly punctate; other surface including convex area between basal foveae impunctate. Microsculpture developed throughout, consisting of very fine transverse meshes.

Elytra: Convex, oval, widest behind middle, in males 1.51–1.52 times as long as wide, 2.82–2.91 times as long and 1.32–1.40 times as wide as pronotum (in females these indices 1.51–1.55, 2.90–2.97 and 1.36–1.41, respectively). Sutural angle nearly rectangular, sharp at apex. Basal elytral bead sinuate, arcuately coming to lateral margin. Striae impunctate, comparatively broad, slightly impressed on elytral disc and clearly deepened at apex. Intervals narrowed posteriad, flat on disc and somewhat convex at apex. Microsculpture obliterate, consisting of poorly visible transverse meshes.

Ventral surface: Apex of anal sternite in male slightly truncate, in female rounded. Male pro-tarsi moderately dilated, meso-tarsi weakly dilated; first to fourth pro-tarsomeres and second to fourth meso-tarsomeres each with adhesive vestiture ventrally. Fourth pro- and meso-tarsomeres in both sexes bilobed.

Aedeagus: Median lobe of aedeagus comparatively narrow, arcuate, with large basal bulb and apex strongly curved dorsad (lateral aspect). Terminal lamella narrow, much longer than wide, narrowed apically (dorsal aspect). Internal sac with one spine of medium size apically and with four to seven spines of similar size situated in medial and basal portions of median lobe. Bases of spines large and oval, smooth or slightly toothed at margins.

Female genitalia: With broad hemisternite; basal stylomere moderately widened apically; apical one comparatively narrow, with rounded external angle.

5. ***Loxoncus rutilans*** **(Bates, 1889)**

Description taken from Kataev, 2003: 357.

Size: In males body length 8.0–8.7 mm; width 3.2–3.6 mm, in females length 8.4–8.7 mm; width 3.5–3.6 mm.

Color: Entirely black, strongly iridescent on elytra and pronotum; at most underside, palpi, antennae and legs slightly paler, brown to dark brown; first to second antennomeres always infuscated.

Head: Moderate. Labrum rounded anteriorly; apical margin of clypeus only scarcely emarginated, more or less rectilinear in middle. Frontal suture hardly impressed; frontal foveae rather small; clypeo-ocular line becoming very thin near eye but distinct up to supraorbital furrow. Mentum without distinct medial tooth, but medial portion of its anterior margin within incision scarcely roundly protruding. Ligular sclerite somewhat parallel-sided, almost not widened at apex. Penultimate labial palpomere rather long, relatively longer than that in other species. Antennae comparatively long, extending approximately to one- fifth of elytra. Dorsal surface of head throughout with distinct microsculpture consisting of isodiametric meshes.

Pronotum: Moderately convex, rather broad, 1.46–1.57 times as wide as long, widest before middle; sides evenly rounded anteriorly, almost straight or very widely rounded in basal half. Apical margin very weakly emarginated; apical angles not protruding, widely rounded at apex. Basal margin rectilinear medially, oblique laterally; basal angles well marked, obtuse, rounded at apex. Lateral bead rather narrow up to basal angles, not merged with broad latero-basal depressions. Basal foveae slightly deepened, somewhat oval; finely and irregularly punctuate; in some specimens punctuation extended to lateral bead; other surface including convex area between basal foveae impunctate. Microsculpture transverse, strongly obliterate.

Elytra: Convex, oblong, widest behind middle, in males 1.54–1.59 times as long as wide, 2.87–2.91 times as long and 1.23–1.26 times as wide as pronotum (in females these indices 1.50–1.56, 2.95–3.03 and 1.24–1.30, respectively). Sutural angle acutangular, rather sharp at apex. Basal elytral bead weakly sinuate, arcuately coming to lateral margin. Striae impunctate, comparatively broad (particularly at apex), slightly deepened on elytral disc and clearly deepened at apex. Intervals narrowed posteriad, weakly convex on disc and markedly convex before apex. Microsculpture obliterate, consisting of poorly visible transverse lines.

Ventral surface: Apex if anal sternite in male subtruncate, in female rounded.

Legs: Long; pro-tibiae each with three apical spines on outer margin. Male pro-tarsi rather strongly dilated, meso-tarsi weakly dilated; first to fourth pro-tarsomere and second to fourth meso-tarsomeres with adhesive vestiture ventrally. Fourth pro- and meso-tarsomeres in both sexes bilobed, with much longer lobes in male.

Aedeagus: Median lobe of aedeagus comparatively narrow and weakly arcuate, angulate at apex, and with apical capitulum protruding dorsally (lateral aspect). Terminal lamella notably longer than wide, evenly narrowed to apex (dorsal aspect).

Internal sac of aedeagus with two narrow parallel spiny patches basally, with group of small and medium-sized teeth apically and with one larger tooth close to apex (latter sometimes absent).

Female genitalia: With broad hemisternite; basal stylomere moderately widened apically; apical stylomere very long, narrow and weakly arcuate, with rounded outer angle.

6. *Loxoncus schmidti* Kataev, 2002

Description taken from Kataev, 2002: 363.

Size: In male body length 9.1 mm; width 3.8 mm, in females 8.3–9.2 and 3.4–3.8 mm, respectively. Body slenderer.

Color: Brown to black, upper side shining, clearly iridescent on elytra and pronotum; lateral bead of pronotum, apex of elytra, two to three external intervals mainly in apical portion, median part of pro-sternum, pronotal and elytral epipleura, abdominal sternites and pro- and meso-coxae, often also labrum and base of mandibles reddish brown or brownish yellow; besides frons usually with three reddish oval spots arranged in arcuate transverse row. Palpi, antennae and legs brownish yellow to yellow; besides frons usually with three reddish oval spots arranged in arcuate transverse row. Palpi, antennae and legs brownish yellow to yellow; antennae and often basal portion of elytral epipleura infuscated.

Head: Labrum very widely rounded, almost straight anteriorly; apical margin of clypeus only scarcely emarginated, more or less rectilinear in middle. Frontal suture weakly impressed.; frontal foveae rather small, with clypeo-ocular line distinct up to supraorbital furrow. Mentum with extremely short and wide obtuse medial tooth directed ventrad (visible only from behind). Ligular sclerite rather strongly widened at apex. Antennae rather long, extending approximately to one fifth of elytra. Dorsal

surface of head throughout with microsculpture consisting of very fine isodiametric meshes.

Pronotum: Smaller pronotum; latter widest in middle or before it. Sides evenly rounded up to very obtuse, usually well marked basal angles with rounded apex. Apical margin very weakly emarginate. Apical angles not protruding, rounded at apex. Basal margin rectilinear medially, oblique laterally. Lateral bead rather narrow, at most only scarcely widened posteriad, visible up to basal angle. Latero-basal areas slightly flattened, finely punctuate. Basal foveae broad and shallow, usually separated from lateral bead by convexity. Microsculpture on disc obsolete, meshes poorly visible.

Elytra: Moderately convex, oblong, scarcely rounded at sides medially, widest behind middle, in males. Sutural angle acutangular, somewhat sharp at apex. Basal elytral bead weakly sinuate, arcuately coming to lateral margin. Striae impunctate, comparatively broad, superficial on disc and slightly deepened at apex. Intervals narrowed posteriorly, flat on disc and clearly convex before apex. Microsculpture on disc obsolete, meshes poorly visible.

Ventral surface: Apex of anal sternite weakly emarginated in male, rounded in female.

Legs: Pro-tibiae notably widened to apex, each usually with three apical spines on outer margin. Both pro-tarsi and meso-tarsi of male notably dilated (pro-tarsi more strongly than meso-tarsi), with first to fourth tarsomeres bearing adhesive vestiture ventrally (first meso-tarsomere only with a pair of scales apically). Fourth pro- and meso-tarsomeres in both sexes bilobed, with much longer lobes in male.

Aedeagus: Median lobe of aedeagus weakly arcuate. Basal bulb larger, terminal lamella slightly shorter and teeth in internal sac much smaller and more dispersed.

Female genitalia: With broad hemisternite; basal stylomere markedly widened apically; apical stylomere arcuate with broad base and distinct basal angle.

Genus 7: ***Pachytrachelus*** **Chaudoir, 1852**

Description from Chaudoir, 1852: 85 and Lacordaire, 1854: 259.

Body cylindrical.

Head: Medium sized, square, long as wide, two well-marked impressions between antennae. Eyes not prominent, hemispherical. Mandible short, broad, apex slightly arcuate, with an internal, medial obtuse tooth. Labrum flat, square, truncated front. Antennae short, segment one large and long, two to three short, obconic, following segments squares, with rounded corners, last ovate, obtusely rounded apex. Labial palpi medium sized, short, slender, second and third segments equal and cylinder-subovate, apex subacuminate, maxillary palpi slender. Mentum transverse, hollow, deeply emarginated, stretched out, middle tooth advanced, narrow, sharp, lobes diverged. Ligula elongated, squared. Paraglossae membranous, apex rounded, inner side curved.

Pronotum: Large, as long as broad, convex, subcylindrical, straight at sides, truncated back, posterior transverse impression well marked, very close to base and ending on each side with a deep oval fossa, short and a little oblique, base strongly punctated, anterior edge strongly punctated, without vestige of transversal impression.

Elytra: Subcylindrical, elongate, slightly depressed, parallel, rounded at apex, fine striae, smooth, rudiment of tenth striae is placed between first and second striations. Smooth, slightly convex intervals.

Legs: Strong, anterior femur inflated, compressed. Pro-tibia dilated towards apex, triangular, deeply emarginate inwardly, apical spine strongest, with a broad outer edge and a row of six to seven serrations armed with strong spines.

Ventral surface: Underside of body convex, smooth, on the middle of each segment of the abdomen two punctures fairly marked, placed across.

1. ***Pachytrachelus cribriceps* Chaudoir, 1852**

Description taken from Chaudoir, 1852: 86.

Almost cylindrical in shape.

Color: Shiny, blackish-brown above, more reddish below; mandibles ferruginous, with blackish tip and edges; mouth, palps, antennae, legs and trochanters of a ferruginous yellow; basal segment of antennae lighter than the rest.

Head: Medium, square, less long than wide; vertex and frons covered with rather large, closely packed and often merging punctures; frons with two well-marked impressions between the antennae; eyes hemispherical and protruding.

Pronotum: Much wider than the head, as long as it is wide, not narrowed posteriorly; anterior edge very slightly indented, posterior edge squarely cut; sides slightly but very evenly rounded from anterior angle to base; posterior angles more obtuse and more rounded at the apex than anterior, which are almost straight, by no means advanced and a little blunt; the top very smooth, curved like a ball; sides finely edged, not depressed; fine, but well-marked middle line, reaching both edges; well-marked posterior transverse impression, very close to the base and ending on each side in a deep oval foveae, very short and a little oblique; base heavily punctated, with a few punctures in the foveae; anterior edge strongly punctated, with no trace of transverse impression.

Elytra: Elongated, as wide as the pronotum, a little less than twice as long as wide, parallel; squarely truncated base, a little prolonged in the middle in the form of a collar; shoulder with a very small tooth; square shoulders, very slightly rounded at the apex; straight sides; straight suture angle; fine, fairly marked, smooth striae; the

scutellar striae is placed between the first and second striae, quite short; smooth intervals, not very convex, with a pore at posterior part of the third interval; side edges very narrow.

Ventral surface: The underside of the body convex, smooth; anus slightly exceeding the elytra.

Genus 8: ***Parabradycellus* Ito, 2003**

Remarks: Detailed genus description is available in Ito, 2003b: 144.

Key to the species of the genus *Parabradycellus* Ito, 2003

1. Third abdominal sternite densely pubescent; elytral intervals flat.....***P. indicus*** Ito, 2003
- Third abdominal sternite with hairs only in the median part and apical marginal area; elytral intervals slightly convex; ..***P. yunnanus*** (Jedlička, 1931)

1. *Parabradycellus indicus* Ito, 2003

Remarks: Detailed species description is available in Ito, 2003b: 148.

2. *Parabradycellus yunnanus* (Jedlička, 1931)

Description taken from Jaeger & Wrase, 1995: 312.

Size: Length 5.0–6.1 mm.

Color: Head, pronotum, elytra and underside dark red-brown. Lateral margin and base of the pronotum (only indistinct), elytral edge and suture interval (mostly only in the apical third) brightened. Extremities yellowish brown. Antennae except first, second and basal half of the third segments are dark. Apex of mandible blackish brown.

Head: Narrow in relation to the pronotum (pronotum 1.34–1.43 times wider than the head), but eyes are large and clearly bulged. Antennae in the apical half of the second segment thin. Left mandible apically tapered, not truncated. Mentum emarginate with

a short tooth. The second segment of labial palpus bears two long and a few fine and short setae, of which the latter setae are only observed by close examination. The same is true for the two short setae on the dorsal side of ligula besides conspicuous pair. Microsculpture clearly isodiametric on the head.

Pronotum: 1.28–1.37 times longer than wide. Sides of convex, to the base mostly slightly rounded, rarely almost straight. Posterior angle wide, anterior angle slightly rounded or slightly pointed. Anterior angle not the level of the front margin or just imperceptibly protruding. Lateral bead slightly wide. Lateral bristle present at the apical third. Basal impressions rounded, clearly deepened. The whole base strongly and roughly dotted inside and outside of the impressions. Apical third of the pronotum on either side of the median line with single points or longitudinal wrinkles. Median line clearly marked and filled with individual points. Sides of pronotum rounded and distinctly uniform. Posterior angle obtuse and more rounded. The whole base is rather distinctly punctured and also the anterior edge with individual punctures and longitudinal rugae. Microsculpture on the pronotal disc with a mixture of short transversal and almost isodiametric meshes, which merges into almost isodiametric microsculpture on the sides, the front edge and the base.

Elytra: 1.58–1.69 times longer than wide, slightly expanded towards the posterior. Scutellar striae fully developed. Basal (at the beginning of the scutellar striae) and Apical setigerous puncture (in the third interval on the second striae) is present. Elytral and scutellar striae deep, intervals slightly convex. Elytral intervals with short transversal networking.

Winged.

Ventral surface: Pro-sternum and abdominal sternites with fine hairs, the hairiness of the second and third sternites is limited to their median part and in the third also to the

apical marginal area. Sixth sternite of male and female in front of the apical margin with four longer setae. Second and third sternite of the male with median shallow, elongated depression, which extends from the base of the second to the apical margin of the third sternite, however not denser than other parts of the sternite with hairs. Pro-sternal process not rounded.

Legs: Pro-tarsi of the male moderately enlarged, underneath with biseriatly arranged hairs. Meso-tarsi not expanded, underneath without adhesive hair. Meso- and meta-tarsi strikingly slim, relatively long.

Aedeagus: Median lobe with sclerotized globe, apex and sides but dorsally and ventrally membrane-like.

Genus 8: ***Psychristus*** **Andrewes, 1930**

Description taken from Andrewes, 1930a: 21.

Head: Glabrous, eyes glabrous, narrowly divided from buccal fissure, a single supraorbital seta on each side, level with and a little removed from hind margin of eye, frontal foveae very deep, continued obliquely on each side to eye, antennae short, moniliform, pubescent from and including joint four**,** labrum transverse, six setose, mandibles short and wide, slightly hooked at apex, mentum with a fairly deep emargination and a moderately sharp tooth, not quite so long as the lobes, ligula rather narrow, bisetose, paraglossae extending a little beyond it and separated from it by a deep incision on each side, maxillae hooked at apex, apical joint of palpi acuminate, in the maxillaries nearly twice as long as penultimate, in the labials hardly longer than penultimate, which has two setae placed very close together on inner margin.

Pronotum: Subquadrate, a single lateral seta on each side, placed just before middle.

Elytra: Glabrous, without or with only the rudiment of a scutellary striole between striae one and two.

Ventral surface: Pro-sternum glabrous, its process unbordered; met-episterna long and strongly contracted behind. Venter without any punctate and pubescent impression at base, the segments bisetose, apical segment also bisetose and fringed with minute hairs.

Legs: Meta-femur with two setae near hind margin, one dose to base; tarsal joints glabrous on upper surface, meso- and meta-tarsal joints not outwardly grooved, joint four slightly emarginate, joint five glabrous beneath.

Key to the species of the genus *Psychristus* Andrewes, 1930 (Key modified from Jaeger, 1997 and 2009)

1. Elytral striae impunctate, scutellar striole absent; segment 3 of antenna sparsely pubescent, or with some single bristles in apical half (*P. discretus* group) ……..…..2

- Elytral striae finely punctate, scutellar striole present, sometimes represented by punctures only, or entirely reduced on one side; segment 3 of antenna glabrous, except for usual apical setae (*P. liparops* group) ……..5

2. Ground color pale brown; head broad, with large and hemispherically protruding eyes; mandibles markedly prolonged and curved; mentum with epilobes less projecting forward; elytral interval 3 without setiferous pore in apical half; median lobe short and stout with characteristic internal structures…….***P. brunneus*** Jaeger, 2009

- Ground color dark reddish or blackish brown; head narrower, with small and moderately, or large and distinctly protruding eyes; mandibles shorter and less curved; mentum with epilobes moderately to strongly projecting; elytral interval 3 with a setiferous pore in apical half; median lobe and female genitalia different…….....3

3. Head narrower, with small and moderately protruding eyes; pronotum somewhat cordate; elytra in relation to pronotum shorter and narrower, with surface less convex; humeral tooth distinctly developed and projecting; antennae longer relative to elytra.....***P. dentatus*** Jaeger, 2009

- Head broader, with larger and distinctly protruding eyes; pronotum less cordate; elytra in relation to pronotum longer and broader, with surface more convex; humeral tooth finer and less projecting or only suggested; antennae shorter relative to elytra ……..…….....4

4. Larger species, 3.8–4.6 mm; body color darker, blackish brown; head 1.54–1.63 times as wide as head between eyes; pronotum with anterior angles usually more projecting forward, median line impunctate or less punctate at medial third; elytra longer relative to pronotum, with dorsal surface distinctly convex and humeral tooth often only suggested and not projecting; median lobe of aedeagus large and elongate, with different shape and a developed apical lamella; hemisternite of female genitalia distinctly projecting in basal half.....***P. discretus*** Andrewes, 1930

- Smaller species, 3.3–3.7 mm; body colour lighter, usually dark reddish brown (specimens from India darker); head 1.64–1.71 times as wide as head between eyes; pronotum with anterior angles less projecting, median line usually distinctly punctate at medial third; elytra shorter relative to pronotum, with dorsal surface less convex and humeral tooth more distinctly developed and projecting; median lobe smaller, with different shape and without apical lamella; hemisternite of female genitalia less projecting in basal half.....***P. shibatai*** Ito, 1985

5. Pro-femur with 2–3 longer bristles on medial face; pronotum less narrowed toward base; sixth male abdominal sternite quadrisetose..……6

- Pro-femur with two rows of 4–6 longer bristles on medial face; pronotum distinctly narrowed toward base; sixth male abdominal sternite bisetose……...……....7

6. Pro-episterna coarsely and densely punctate; elytra longer and slenderer, in relation to pronotum long, lateral striae of elytra represented by punctures only.…….……***P. liparops*** Andrewes, 1930

- Pro-episterna glabrous, or with some isolated fine punctures; elytra broader and shorter, in relation to pronotum short, lateral striae of elytra clearly impressed...……....***P. andrewesi*** Jaeger, 1997

7. Median lobe of aedeagus smaller, less narrowed toward apex, with apex straight in lateral view ……...……...…….***P. amicorum*** Jaeger, 1997

- Median lobe of aedeagus larger, more narrowed toward apex, with apex distinctly curved dorsally in lateral view.……..***P. consimilis*** Jaeger, 1997

1. *Psychristus amicorum* Jaeger, 1997

Description taken from Jaeger, 1997: 78.

Size: Length 4.4–5 mm.

Color: Dorsal and ventral side predominantly black-brown. Suture interval and lateral margin of the elytra, the middle part of the base and the anterior edge of the pronotum and mandibles (except for the dark tips) usually lightened a bit. Antennal extremities bright yellow-brown.

Head: Head in relation to the pronotum wide. Eyes clearly hemispherically curved. Mandibles normal, left mandible narrowed towards the apex, not thickened and truncated. Antennae about 1.8–2.1 times as long as the pronotum. Antennomere first

to third glabrous except for usual apical setae, four to 11 segments fine and densely hairy. Without microsculpture and iridescent shine.

Pronotum: Average 1.22 (male)–l.24 (female) times wider than long. Anterior edge almost straight, anterior angle round and not protruding. Lateral margin slightly convex, rounded to the front, slightly rounded to the base or narrowed straight. Sides infront of the posterior angle more or less clearly concave curved. Posterior angle sharp with small protruding teeth. Lateral bead small. Setae in lateral margin turned in about the first half of the second quarter. Basal pits moderately deepened. Median line shallow not reaching the anterior edge and only occupied with a few very fine dots. Without microsculpture and iridescent shine.

Elytra: Average 1.53 (male)–1. 55 (female) times longer than wide, slightly widened to the apex. Basal setigerous pore present at the beginning of the second striae. Scutellar striae sometimes shortened on one side. Apical pore point absent in the third interval. All striae clearly dotted. Intervals flat. Series umbelicta 6 (5 + 1)–8 (1 + 3 to 2 + 2). Without microsculpture and iridescent shine.

Macropterous.

Ventral surface: Pro-sternum and Pro-episternum with some single points. Mes- and met-episternum smooth. Sixth sternite of the male bisetose and that of female quadrisetose.

Legs: Inside of the foreleg with two rows of four to five long bristles each and middle legs inside with six to seven longer bristles. Pro-tarsi of the male only very slightly extended, meso tarsi not extended, underneath without adhesive hair.

2. *Psychristus andrewesi* Jaeger, 1997

Description taken from Jaeger, 1997: 76.

Size: Length 4.2–4.8 mm.

Color: Dorsal and ventral side dark red or blackish brown. Mandibles (except tips and base), margin and middle part of base and sometimes also the middle of the anterior edge of the pronotum somewhat lightened. Suture interval and margins of the elytra usually dark. Extremities of antennae yellow-brown.

Head: Head in relation to pronotum of medium width (HB / KB: 0.72–0.79). Eyes moderately to substantially hemispherical bulging. Mandibles normal, left mandible narrowed towards the apex, not thickened and truncated. Antennae about 1.7–1.8 times as long as the pronotum. Antennomere first to third glabrous except for usual apical setae, four to 11 segments fine and densely hairy. No microsculpture on head.

Pronotum: Average 1.21–l. 22 times wider than long. Anterior edge almost straight, not or only very slightly cut. Anterior angle rounded and not protruding. Side edge rounded convex, straight to the base, narrowly concave at the back angles. Posterior angle sharp with small protruding teeth. Lateral margin of the pronotum moderately wide, extinguishing in the posterior angle or encompassing them and reaching the center of the basal impressions. Setae in lateral margin turned in about the first half of the second quarter. Basal impressions only shallowly deepened and not clearly limited to the sides and flat running, roughly dotted. Punctures are present between the basal impressions. Median line shallow not reaching the anterior edge and finely dotted. No microsculpture on pronotum.

Elytra: Average l.48 times longer than wide, slightly widened towards the apex. Basal setigerous pore present at the beginning of the second striae. Scutellar striae clearly formed. Apical setigerous pore present in third interval. All elytra striae moderately deepened and punctured. Intervals flat. Series umbelicata 6 (5 + 1)–8 (4 to 2 + 2). No microsculpture on elytra.

Macropterous.

Ventral surface: Pro-sternum, Pro-, Mes- and Met-episternum mostly smooth, rarely with single occupied small points. Sixth abdominal sternites of both male and female quadrisetos.

Legs: Inner side of the pro and meso femur with two to four lamellae. Pro-tarsi of the male only very slightly dilated, biseriately arranged adhesive hairs present on the underside.

3. *Psychristus brunneus* Jaeger, 2009

Description taken from Jaeger, 2009: 1639.

Size: Length 3.5–4.3 mm (holotype 3.9 mm); width 1.4–1.8 mm.

Color: Ground color of dorsal and ventral surface paler to darker yellowish to pale reddish brown. Head usually, except paler clypeus, labrum and mandibles, and often elytra, except paler sutural interval, darker brown. Apical half or third, often also the base of lateral margin of mandibles blackened. Legs, antennae and palpi yellowish brown.

Head: Including eyes, comparatively broad, 0.82–0.92 times as wide as pronotum, with eyes large and hemispherically prominent (head 1.55–1.65 times as wide as head between eyes). Apical margin of labrum rectilinear or weakly emarginated with a small rounded projection medially. Mentum with epilobes only very weakly projecting forward, without distinctly acuminate apices. Mental tooth large and sharp, as long as or slightly longer than epilobes. Ligula triangularly acuminate at apex, usual pair of setae inserted distinctly posterior to apical margin. Mandibles large and markedly prolonged and curved, not truncate at apices. Antennae 1.74–1.94 times as long as pronotum and 0.64–0.70 times as long as elytra, with antennomere one and two glabrous, except for usual setae, three moderately pubescent and four to 11

distinctly pubescent. Microsculpture obsolete, except for isodiametric meshes on labrum.

Pronotum: Somewhat cordate, 1.23–1.34 times as wide as long and 1.09–1.22 times as wide as head, widest just behind anterior third, lateral seta inserted somewhat anterior to this. Surface somewhat convex on disc, weakly bent downward to anterior angles and somewhat depressed at basal area. Anterior margin arcuate, faintly bordered at sides, angles not or weakly projecting forward and relatively broadly rounded at tips. Sides convex in anterior two-thirds and at posterior third rectilinear and weakly constricted, or almost parallel, or slightly sinuated in front of pronotal base. Posterior angles obtuse, but comparatively sharp, usually with a small denticle at tip. Base about as wide as or slightly wider than apical margin between anterior angles and 0.79–0.86 times as wide as maximum pronotal width, arcuate medially and somewhat oblique to posterior angles. Lateral furrows distinct, confluent with lateral basal impressions at basal quarter. Basal foveae varies in shape, somewhat roundly or linearly impressed, sometimes separated by a shallow convexity from lateral margin, sometimes flattened to basal and lateral margin, the latter somewhat reflexed. Base in, around and between basal foveae moderately punctured; punctation often somewhat extended laterally by a few punctures at sides and in lateral furrows. Apical area before anterior impressions also with few scattered punctures. Median line moderately impressed, reaching basal margin and disappearing just in front of anterior margin, faintly to moderately punctate in basal quarter and finely punctate or impunctate in medial and apical part. Anterior transverse impression moderate. Microsculpture almost obsolete, rarely with few mesh rudiments in basal foveae.

Elytra: 1.51–1.64 times as long as wide, 2.67–2.88 times as long and 1.32–1.45 times as wide as pronotum. Surface weakly convex. Sides slightly diverging posteriorly,

widest at about middle or just behind this. Subapical sinuation moderate. Humeri distinctly developed, with a small, usually slightly projecting humeral tooth. Basal bead arcuately turning into humerus and forming a distinct angle with lateral margin. Scutellar pore puncture present, scutellar striae lacking. Elytral striae moderately impressed and impunctate, intervals flat to very lightly convex, intervals two and three comparatively flat and wide at apex, interval two sometimes somewhat dilated. Interval three in posterior half without a setiferous pore at stria two. Series umbelicata 6 (5+1)–8 (4 to 2+2). Microsculpture almost obsolete except isodiametric meshes on scutellum, and on base of elytra anterior to basal margin.

Macropterous.

Ventral surface: Without pubescence and almost impunctate, rarely prosternum and pro-episterna with few punctures (at pro-episterna very shallow). Pro-sternal process with two longer setae. Met-episterna distinctly narrowed posteriad, at inner margin about 1.7 times as long as basal margin. Abdominal sternites three to five with usual pair of setae, sternite six at apical margin with two setae at each side in males and females.

Legs: Pro- and meso-tarsi somewhat wider than in other species of *P. discretus* group, but in this respect without differences between males and females. Pro-tarsomeres two to three of males ventrally each with one inner pair of longer modified setae (long and narrow, but somewhat flattened/widened), which probably have adhesive function, but differ distinctly from typical adhesive hairs known from other species of the genus. Pro-tarsomeres of females and meso-tarsomeres in both sexes without adhesive hairs ventrally, but in pro-tarsomere four the apical setae sometimes somewhat flattened in both sexes. Pro-tarsomeres one to four and sometimes also meso-tarsomeres three to four medially with a distinct (in pro-tarsi) or only suggested (in

meso-tarsi) dentiform process. Pro- and meso-tibiae with spines at outer margins relatively large and usually more numerous than in other species (e.g. three, rarely four larger spines in pro-tibiae and six to eight medium to large sized spines in meso-tibiae).

Aedeagus: Median lobe of aedeagus small and stout, apex widely rounded without apical lamella. Internal sac with characteristic fine structures, consisting of patches of fine triangular spines medially and apically.

4. *Psychristus consimilis* Jaeger, 1997

Description taken from Jaeger, 1997: 80.

Size: Length 4.4–4.9 mm.

Elytra: Slightly wider and shorter and more expanded towards the apex than *P. amicorum*.

Aedeagus: Median lobe of aedeagus larger, more narrowed toward apex, with apex distinctly curved dorsally in lateral view.

5. *Psychristus dentatus* Jaeger, 2009

Description taken from Jaeger, 2009: 1637.

Size: Length 4.1 mm; width 1.6 mm.

Color: Ground color of dorsal surface dark reddish brown (holotype) to blackish brown (paratype), with elytral interval one, pronotal base and apex medially and lateral margins of elytra and pronotum somewhat reddish. Labrum reddish, mandibles reddish brown, with outer margins and apex blackish brown, palpi yellowish. Ventral surface except paler mouthparts reddish brown (holotype) or dark reddish brown to blackish brown (paratype). Legs and antennae dark yellowish, femora slightly infuscated.

Head: Including eyes, comparatively narrow, only 0.73 times as wide as pronotum, with eyes small and moderately prominent (head 1.42–1.43 times as wide as head between eyes). Apical margin of labrum distinctly emarginated. Mentum with epilobes moderately to distinctly projecting forward and distinctly acuminate at apices. Ligula narrowly rounded at apex, usual pair of setae inserted somewhat posterior to apical margin. Mental tooth sharp, more than half as long as epilobes. Mandibles of average size, not distinctly prolonged and curved, apices not truncate. Antennae 1.77–1.89 times as long as pronotum and 0.66–0.70 times as long as elytra, with antennomere one and two glabrous, except for usual setae, three moderately pubescent and four to 11 distinctly pubescent. Microsculpture restricted to distinct isodiametric meshes on labrum and less distinct meshes at sides behind eyes.

Pronotum: Somewhat cordate, 1.23–1.25 times as wide as long, 1.38 times as wide as head, widest in first half of second third, lateral seta inserted just anterior to widest point. Surface somewhat convex on disc, distinctly bent downward to anterior angles and somewhat depressed at basal area. Anterior margin almost rectilinear to weakly arcuate, faintly bordered laterally, angles only slightly projecting forward and narrowly rounded at tips. Sides convex in anterior three-quarters and at posterior quarter almost straight and parallel, or slightly constricted in front of pronotal base. Posterior angles sharp and somewhat obtuse, with a small denticle at tip. Base about 1.17–1.19 times as wide as apical margin between anterior angles and 0.84 times as wide as maximum pronotal width, arcuate medially and somewhat oblique to posterior angles. Lateral furrows distinct, confluent with lateral basal impressions at basal quarter. Basal foveae distinctly impressed, not separated by convexities from basal and lateral margin, the latter somewhat reflexed. Base in and between impressions coarsely punctate. Pronotal surface also in lateral furrows and along

sides, and at anterior quarter with few scattered punctures. Median line distinctly to moderately impressed, reaching basal margin and disappearing in front of anterior margin, distinctly punctate in basal third and moderately punctate in remaining parts. Anterior transverse impression moderate to distinct. Microsculpture represented only by mesh rudiments in basal foveae, remaining surface smooth.

Elytra: 1.57–1.58 times as long as wide, 2.69–2.71 times as long and 1.37–1.39 times as wide as pronotum. Surface moderately convex. Sides almost parallel or slightly diverging posteriorly, widest at about middle. Humeri distinctly angulate, with a large, sharp and somewhat projecting humeral tooth. Basal bead arcuately turning into humerus and forming a distinct angle with lateral margin. Scutellar pore puncture present, scutellar stria lacking. Elytral striae distinctly impressed and impunctate, intervals relatively flat to moderately convex, interval two and three at apex moderately convex, narrow and parallel or somewhat constricted. Interval three in posterior half with a setiferous pore at stria two. Subapical sinuation moderate. Series umbelicata 6 (5+1 or 3+2 to 1)–8 (4-2+2 or 1+3 to 2+2). Microsculpture anterior to basal margin and on scutellum quite distinct, consisting mostly of isodiametric meshes; behind basal margin distinct and almost transverse, becoming obsolete on disc, at outer intervals eight to nine with moderately impressed faintly transverse meshes, becoming very lightly impressed and somewhat isodiametric at intervals five to seven and almost obsolete at intervals one to four (in the holotype the elytral microsculpture is generally less distinct and restricted to basal area and intervals seven to nine).

Macropterous.

Ventral surface: Without pubescence. Pro-episterna with a few single shallow punctures, pro-sternum laterally, meso-sternum and mes-episterna with some coarser

punctures, meta-sternum and abdomen impunctate. Pro-sternal process with two longer setae. Met-episterna distinctly narrowed posteriad, at inner margin about 1.6 times as long as basal margin. Abdominal sternites three to five with the usual pair of setae, sternite six at apical margin with two setae at each side in females (character state of male unknown).

Legs: Female pro- and meso-tarsi not dilated, without a dentiform process and adhesive hairs ventrally, except pro- and meso-tarsomere four each with two pairs of elongated, somewhat widened and flattened seta, which probably have adhesive function. Pro- and meso-tibiae with average number and size of spines at outer margins (two smaller and one larger spine in pro-tibiae and five to six smaller to medium sized spines in meso-tibiae).

6. *Psychristus discretus* Andrewes, 1930

Description taken from Jaeger, 2009: 1642.

Size: Length 3.8–4.6 mm; width 1.6–1.9 mm.

Color: Ground color of dorsal surface usually blackish brown, sometimes dark reddish brown, with elytral interval one (often indistinct or partly), pronotal base and apex medially, and lateral margins of elytra and pronotum paler reddish. Clypeus, labrum and mandibles reddish (with inner and partly outer margins, and apex of mandibles blackish), palpi yellowish. Ventral surface dark reddish- to blackish brown. Legs and antennae yellowish to pale reddish brown.

Head: Including eyes of medium width, 0.75–0.81 times as wide as pronotum, with eyes distinctly prominent (head 1.54–1.63 times as wide as head between eyes). Apical margin of labrum usually weakly emarginated, sometimes almost rectilinear. Mentum with epilobes strongly projecting forward and distinctly acuminate at apices. Mental tooth sharp, usually about half as long as epilobes. Ligular sclerite with apex,

narrowly or widely rounded, sometimes somewhat acuminate. Mandibles of average size, not markedly prolonged and curved in apical half. Antennae 0.56–0.64 times as long as elytra and 1.70–2.04 times as long as pronotum, with antennomere three with scattered pubescence in apical half, at least with few additional setae.

Pronotum: 1.23–1.35 times as wide as long and 1.24–1.33 times as wide as head. Base about 1.1–1.2 times as wide as apical margin between anterior angles and 0.83–0.91 times as wide as maximum pronotal width. Median line distinctly punctate in basal third, impunctate, or rarely very faintly punctuate in medial third, and moderately punctate in apical third. Macropterous.

Elytra: Elytra 1.48–1.60 times as long as wide, 3.00–3.25 times as long and 1.51–1.63 times as wide as pronotum, with surface strongly convex. Humeri less angulate than in other species, with humeral tooth very small, usually no more than suggested. Setiferous pore in posterior half of interval three present. Elytral intervals two to three comparatively wide and flat at apex, three often somewhat dilated. Microsculpture almost absent, except for isodiametric mesh patterns on scutellum and anterior to basal margin.

Legs: Pro- and meso-tarsomeres in both sexes ventrally without a dentiform process, pro-tarsomeres one to four of males only very weakly dilated, with typically dilated adhesive hairs beneath. Number and size of spines in pro- and meso-tibiae unmodified.

Aedeagus: Median lobe of aedeagus large, and elongate, with a distinctly developed apical lamella.

7. *Psychristus liparops* Andrewes, 1930

Description taken from Jaeger, 1997: 74.

Size: Length 3.8–4.4 mm.

Color: Upper and lower side predominantly black-brown. Suture interval of the elytra, margins and usually the middle part of the base and the front edge of the pronotum and labrum and clypeus dark red brown brightened. Extremities of antenna and mouth parts except the darkened Mandible apex bright yellow or red yellow.

Head: Relatively wide in relation to the pronotum. Eyes moderately bulge. Mandibles formed normally, left mandible narrowed towards the apex, not thickened and truncated. Antennae about 1.7–1.8 times as long as the pronotum. Antennomere first to third glabrous except for usual apical setae, four to 11 segments fine and densely hairy. No microsculpture on head.

Pronotum: The pronotum averages 1.23 or 1.27 times as long. Anterior edge almost straight, anterior angle rounded and not protruding. Lateral margin slightly convex, rounded toward the front, slightly rounded towards the base or just narrowed, and faintly sinuate before the hind angles, which are a little obtuse, but hardly rounded. Posterior angle sharp with a small protruding teeth. Lateral bead small, narrowing the hind corners and mostly reaching the middle of the basal impressions. Basal pits deep and heavily punctured and between the impressions more or less strong punctures present. Median line shallow not reaching the anterior edge and finely dotted. No microsculpture on pronotum.

Elytra: Long, oval and slightly widened towards the apex, on average 1.56 times longer than wide. Basal setigerous pore present at the beginning of the second striae. Scutellar striae represented only by fine row of dots. Setigerous pore on the apical half of the third interval absent or present on both sides or unilaterally present. First to fourth elytral striae clearly or moderately distinctly punctured, although rarely even the third and usually the fourth striae before the apex is formed only as a fine, not

recessed rows of points. Intervals flat. Series umbelicta 6 (5+l)–8 (4+4 or 4 to 2+2). No microsculpture on elytra.

Macropterous.

Ventral surface: Pro- and Mes-episternum coarsely and densely punctured, met-episternum with a few individual punctures.

Legs: Pro- and meso-tarsomeres with two to four long setae at inner side.

8. *Psychristus shibatai* (Ito, 1985)

Description taken from Jaeger, 2009: 1644.

Size: Length 3.4–3.7 mm; width 1.6 mm.

Color: Ground color of dorsal surface dark reddish brown (one non-type specimen from Taiwan, darker but not yet blackish brown as in *P. discretus* or *P. dentatus*), with elytral interval 1, pronotal base and apex medially, lateral margins of pronotum and elytra, labrum, mandibles (base of lateral margin, inner margin and apex blackish) paler reddish. Ventral side, particularly abdomen, sometimes somewhat paler reddish. Legs, antennae and palpi yellowish brown or pale brown.

Head: Including eyes, of medium width, 0.75–0.80 times as wide as pronotum, with eyes distinctly prominent (head 1.64–1.71 times as wide as width between eyes). Apical margin of labrum very weakly emarginated, with a weakly suggested projection medially. Mentum with epilobes strongly projecting forward and distinctly acuminate at apices. Mental tooth sharp, its size varies from as long as to half as long as epilobes. Ligular sclerite narrowly rounded at apex. Mandibles of average size, not distinctly prolonged and curved. Antennae 1.72–1.80 times as long as pronotum and 0.60–0.63 times as long as elytra, with antennomere 3 moderately pubescent.

Pronotum: 1.25–1.32 times as wide as long, 1.25–1.33 times as wide as head. Base about 1.17–1.20 times as wide as apical margin between anterior angles and 0.86–

0.90 times as wide as maximum pronotal width. Median line moderately to distinctly punctate along its entire length, sometimes in basal third more distinct.

Elytra: 1.47–1.52 times as long as wide, 2.81–2.92 times as long and 1.46–1.58 times as wide as pronotum, with dorsal surface moderately convex. Humeri more distinctly angulate than in *P. discretus*, but less than in other species, with humeral tooth small and weakly projecting. Setiferous pore in apical half of interval three present. Elytral intervals two and three relatively flat and almost parallel or faintly dilated in front of apex. Microsculpture on dorsal surface mostly absent, except for isodiametric meshes on labrum, scutellum and on base of elytra anterior to basal margin.

Macropterous.

Legs: Pro- and meso-tarsomeres in both sexes ventrally without a dentiform process, pro-tarsomeres two to four (perhaps, also one, but difficult to observe) of males ventrally with typically dilated adhesive hairs. Number and size of spines in pro- and meso-tibiae unmodified.

Aedeagus: Median lobe of aedeagus short, without apical lamella.

Genus 11: ***Stenolophus*** **Dejean, 1821**

Description taken from Habu, 1973: 341.

Body almost impunctate, glabrous.

Head: Eyes and scrobe of mandibles glabrous; antennae densely pubescent from segment three; apical segment of palpi fusiform; mentum without median tooth, two setae fully long, fairly separated from each other; paraglossae separated from ligula by deep notch, generally extending beyond ligula.

Pronotum: With basal angles more or less widely rounded, without posterior marginal setae. Wings developed.

Elytra: With basal pore and scutellary striole; shoulder with a few vestigial dusty cilia; interval three with one dorsal pore adjoining stria two; posterior eight pores of marginal series separated into two to three groups.

Legs: Hind femora with two setae along hind margin; tarsi glabrous on dorsal side, segments one to four of fore tarsi and often of mid tarsi in male dilated, with adhesive hairs (sometimes absent in segment one of mid tarsi) on ventral side, segments one to three of mid and hind tarsi sulcate on outer and inner lateral sides, carinate at outer dorsal and inner dorsal margins, segment four of fore and mid tarsi fully bilobed in male, not in female, segment five glabrous or with one to two setae on each ventrolateral margin.

Ventral surface: Pro-sternum glabrous, pro-sternal process with some distinct setae at apex. Sternites two and three without ciliate depression, sternites glabrous or pubescent.

Key to the species of the genus *Stenolophus* Dejean, 1821

1. Elytra with spots…….2
- Elytra without spots……6
2. Elytra without apical spots…….3
- Elytra with apical spots……..5
3. Elytra with spots on humerus……4
- Elytra with black spot on the middle which not extends further……***S. discophorus*** Fischer, 1824
4. Pronotum narrowed posteriorly; black color; elytra almost parallel……..…….***S. charis*** Bates, 1892
- Pronotum same width posteriorly; bluish- green color; elytra oval……***S. nitens*** Motschulsky, 1864

5. Elytra with apical spot and without humeral spot……***S. smaragdulus*** Fabricius, 1798

- Elytra with apical and humeral spots..***S. quinquepustulatus*** Wiedemann, 1823

6. Elytral interval 3 with a setigerous pore.....7

- Elytral interval 3 without a setigerous pore.....10

7. Femora darker than tibiae; length 5 mm……***S. bajaurae*** Andrewes, 1924

- Femora not darker than tibiae; length 6.5–7.9 mm……8

8. Basal foveae of pronotum broad and deep……...***S. rectifrons*** Bates, 1892

- Basal foveae of pronotum round and scarcely marked……..9

9. Sides of pronotum towards base almost straight……..***S. splendidus*** (Motschulsky, 1864)

- Sides of pronotum towards base rounded.....***S. lucidus*** Dejean, 1829

10. Elytral interval convex; humeri prominent…….***S. ovchinnikovi*** Kataev & Wrase, 2013

- Elytral intervals flat; humeri blunt……...***S. nepalensis*** (Jedlička, 1965)

1. *Stenolophus bajaurae* Andrewes, 1924

Description taken from Andrewes, 1924a: 95

Size: Length 5.0 mm; width 2.0 mm.

Color: Rather dark pitch color, dorsally dark coppery, male somewhat silky. Antennal segments one to two, pro-sternal projection, elytral apex are testaceous red. Presence of large spot on femora and extremities of the leg, edges of pronotum and elytra slightly padded. Less glossy, coppery rather than black, with less yellow on the sides and extremity of the elytra, femora usually infuscated.

Head: Fairly small, convex, smooth. Clypeal suture and frontal foveoles well-marked, pointed palpi.

Pronotum: Transverse, slightly convex, a third wider than the head, sides slightly rounded, posterior angles rounded but visible, posterior transverse impression strongly marked, basal foveoles fairly indicated and well punctated. The wider pronotum, the more imprinted across, the base more punctated.

Elytra: Fairly short, parallel, flattened, abruptly rounded at the apex without appreciable sinuation, not very fine striae, third and fifth striae fairly imprinted at the apex. Scuttellar striae very short, intervals flat, third interval with a large piliferous point towards the apex. The elytra more flattened, the striae shallower, the point of the interval three much larger.

Ventral surface: The pro-sternal process glabrous, but setose at the end, ventral surface also glabrous.

Legs: Meta-tarsus furrowed on the external side, the first segment only a little shorter than the following three combined.

2. ***Stenolophus charis* Bates, 1892**

Description taken from Bates, 1892b: 349.

Size: Length 6.5 mm.

Color: Antennae brown, articles one to two yellowish.

Head: Palps with a slender apical joint and a truncated tip.

Pronotum: More narrowed posteriorly, the posterior angles more or less distinct, near the angles above more concave and punctate; with a yellow-shelled lateral margin, broadly interrupted by an antero-marginal furrow.

Elytra: Dark-black, opalescent elytra, apex less sinuous, large humeral spot, posterior limb indefinite, apex and suture, rufous-shelled.

3. ***Stenolophus discophorus* Fischer von Waldheim, 1824**

Description taken from Fischer von Waldheim, 1824: 141 and Dejean, 1829: 409.

Color: Pronotum red, testaceous elytra; ventral surface brown, base of antennae and the legs testaceous.

Head: Prominent, black, shiny. Mouth parts are brown and furnished with hair.

Pronotum: Red, light, shiny, thinly reflexed, posteriorly printed with oblique lines; sub square, posteriorly sub narrowed, furrowed on both sides, punctate foveae, posterior angles obtuse.

Elytra: Oblong, shiny, testaceous and striated. A black round spot, common to the two elytra, sometimes continues with the suture towards the base. The intervals impressed and third with a puncture.

4. ***Stenolophus lucidus* Dejean, 1829**

Description taken from Dejean, 1829: 419.

Size: Length 7.87 mm.

Color: Blackish brown, with a rather brilliant bluish reflection, base of antennae pale brown.

Pronotum: Shorter, rounded on sides, has small longitudinal grooves along anterior border and in middle of base, sides of latter slightly punctated, impression large, rounded, scarcely marked.

Elytra: Little wider, parallel, striated, punctated; depressed point of third interval placed about two-thirds of elytra.

5. ***Stenolophus nepalensis* (Jedlička, 1965)**

Description taken from Jedlička, 1965: 99.

Size: Length 4.5 mm.

Color: Pitch black, glossy, elytra with a slight greenish color, two antennal segments bright, rest darkened, palpi and legs yellow-red.

Head: With little arched eyes, with punctiform frontal furrows, which are elongated on the outside obliquely, otherwise smooth.

Pronotum: Significantly wider than the head, almost 2/3 wider than long, front edge straight with bent anterior angle, rounded on the sides, posterior angle broadly rounded, basal foveae flat and almost the whole base with dense fine punctures, median line very fine.

Elytra: Slightly wider than the pronotum, on the sides very much slightly rounded, very slightly sinuate, emarginated in front of the apex, blunt shoulders, fine, smooth striae, intervals flat, the third without punctures. Scutellar striae short, second interval without microsculpture.

6. ***Stenolophus nitens*** **(Motschulsky, 1864)**

Description taken from Motschulsky, 1864: 205 and Bates, 1889a: 103.

Color: Elytra changing to blue without small apical spots, simply bordered with testaceous color. Blue color on upper surface, two basal segments of antennae brick red, apex of palpi yellow, antennae and legs of very clear testaceous.

Pronotum: Posterior angle of the pronotum obtuse, pronotum lateral side rounded, base punctated.

Elytra: Elytra iridescent, without apical spots, spotted subhumeri, suture attenuated at apex, with an irregular great spot, apex barely sinuated, interval three posteriorly unipunctated.

7. ***Stenolophus ovchinnikovi*** **Kataev & Wrase, 2013**

Description taken from Kataev & Wrase, 2013: 264.

Size: Length 3.6–4.5 mm; width 1.6–2.0 mm (in holotype, 4.2 and 1.8 mm, respectively).

Color: Dark brown to almost black (in most specimens head slightly darker than pronotum and elytra), upper side moderately shining, not iridescent; pronotal margins along lateral furrows (in few specimens more widely) lighter, elytral interval one in apical half, elytral epipleurae in apical half, palpi, two basal antennomeres, and base of antennomere three brownish yellow; Body more slender. Antennae in most specimens paler, antennomeres three to 11 only slightly infuscate dark brown or brown; legs brown or brownish yellow, femora usually more or less infuscate.

Pronotum: Slightly narrower, widest slightly before middle, narrowed basad usually more markedly; lateral furrows prolonged to basal margin up to inner margins of basal foveae.

Elytra: Narrower and longer, with deeper striae and more convex intervals; interval three without discal setigerous pore.

Legs: Metatarsus slightly shorter, with distinctly shorter tarsomere one. Pro- and meso-tarsi in male more strongly widened.

Aedeagus: Median lobe of aedeagus more robust, arcuate in lateral aspect, with almost straight apical portion slightly directed dorsad; terminal lamella in dorsal aspect triangular, approximately as long as wide, narrowly rounded at tip. Internal sac with two large, slender spines in middle portion of median lobe and with a row of medium-sized spines on left side in apical portion of median lobe.

Female genitalia: With larger basal stylomere and slightly wider apical stylomere.

8. ***Stenolophus quinquepustulatus*** **(Wiedemann, 1823)**

Description taken from Habu, 1973: 382.

Size: Length 5.3–6.5 mm; width 2.1–2.7 mm.

Color: Black, shiny, pronotum fairly iridescent, elytra more iridescent than pronotum; labrum and mandibles reddish brown, dorsal outer margin and apex of mandibles

black, palpi brownish yellow, basal part of apical segment more brownish, antennae dark brown, segments one and two yellowish, lateral margins to lateral areas of base of pronotum and lateral to apical margin of elytra yellowish (basal half of lateral margin of elytra yellowish brown), apex and base of pronotum more or less brownish, legs brownish yellow; elytra with one humeral patch and one to three apical patches, rarely immaculate, humeral patch generally on intervals four to seven, sometimes extending onto interval eight, or somewhat reduced, sometimes restricted only on interval six as small spot, apical patches more variable, median apical patch generally reaching apex, sometimes isolated or absent, often extending onto intervals two to four, lateral apical patch sometimes coalescent with median patch or reduced to small spot on interval nine, forms with well-developed apical patches having larger humeral patch, but in forms with reduced patches humeral patch and apical patches not necessarily correlative; ventral side black, hardly or slightly iridescent, reddish or brownish in part, hypomera more or less yellowish brown, epipleurae yellowish except dark reddish brown basal area.

Head: Rather convex; microsculpture distinct, isodiametric; temporae sparsely ciliate along hind margin of eyes, strongly oblique behind eyes; eyes well convex, disparity between genuine and apparent ventral margins indistinct, so apparent ventral margin reaching buccal fissures, frontal impressions distinctly reaching frontal lateral furrows; antennae a little extending beyond shoulders; apical seta on penultimate segment of labial palpi fully long, as long as apical segment.

Pronotum: Rather convex, widest before middle, surface punctate at basal area, punctures dense in and near basal foveae, basal punctate area generally interrupted at median area, sometimes faint punctures visible at median area, some punctures visible near basal angles; apex only slightly emarginate, bordered at lateral areas, apical

angles not protrudent, but obtuse and rounded, finely sparsely ciliate, base almost straight (sometimes weakly rounded) at median area, not bordered; basal angles well rounded off; lateral margins not or obsoletely bordered at basal half, rounded towards apex and base; lateral furrows rather wide, terminating at or a little before basal angles; lateral setae behind one-fourth median line fine, faint, reaching neither extremity; anterior and posterior transverse impressions faint; basal foveae shallow; outside areas of basal foveae lightly convex.

Elytra: Convex, elliptic ovate, widest near middle, more than one and one-half times as long as wide; surface not punctate; basal border level at inner part, moderately slanting outward, rounding at shoulder; lateral margin moderately, evenly dilated from behind shoulder to middle; apical sinuation very shallow; apex almost rectangular or a little less than 90°, not or slightly rounded; striae distinct, not punctate; scutellary striole free at apex; intervals almost flat, interval six narrower than interval five or seven at subapical area, pore on interval one four-fifths, marginal series 5+1+4+4.

Legs: Apical spur of fore tibiae finely denticulate, apical spurs of m and hind tibiae vestigially denticulate; segment one of mid tarsi of male with adhesive hairs at apical area; hind tarsi as long as to slightly longer than width of head female, a little shorter to as long as width of head in male, segment one a little shorter than segments two and three combined (at most nine-tenths), segment five slightly shorter than segment one.

Ventral surface: Sternites two and three sparsely and finely ciliate at middle, otherwise glabrous; sternite six with small but somewhat distinct emargination at apex in male, with one seta in male, two setae in female, on either side.

Aedeagus: Somewhat stout, moderately curved, slightly twisted to left side, so apical orifice open on left laterodorsal area, ventral side carinate longitudinally in middle from before basal bulb to before middle; apical lamella fully long, sinuate on both lateral margins, more sinuate on left margin, apex truncate, with obscure border on dorsal side.

Female genitalia: Basal segment of styluses with two to three fine and short setae (pores distinct) at outer apical area, apical segment moderately bent before apex, with one stout short spine on ventral outer margin near middle, hemistermites with several short fine setae (pores well visible) at subapical area, with smaller pores (setae not descriable) at apical membranous area.

9. *Stenolophus rectifrons* Bates, 1892

Description taken from Bates, 1892b: 348.

Size: Length 6.5–7.5 mm.

Color: Aenescens black-refined, elytra opalescente, antennal segments one to two (others sometimes reddish brown), palpi and lateral margin of thorax brownish-yellow, darker legs.

Head: Margin of labrum straight or slightly arched, last segment of palpi less attenuated at apex, slightly obtuse.

Pronotum: Narrowing slightly posteriorly, sides and posterior angle rounded, lateral foveoles broad and deep.

Elytra: Apex oblique sinuated, deeply striated.

Legs: Male anterior tarsal segments one to three strongly dilated, elongated, fourth bilobed.

10. *Stenolophus smaragdulus* (Fabricius, 1798)

Description taken from Habu, 1973: 377.

Size: Length 5.7–6.8 mm; width 2.3–2.7 mm.

Color: Black, shiny, head with greenish metallic tinge except clypeus, pronotum well iridescent, elytra more iridescent than pronotum; labrum dark reddish brown, with black apex, palpi and antennal segments one and two brownish yellow, remaining segments of antennae reddish brown, lateral margins to lateral areas of base of pronotum yellowish, apical and basal areas of pronotum often somewhat reddish, basal half of lateral margin of elytra reddish black, apical half of lateral margin to apical margin of elytra brownish yellow; femora and tarsi yellowish brown, tarsi slightly reddish, tibiae brownish yellow, with reddish apex; elytra with yellowish apical patch, sometimes with obscure reddish spot at humeral area on interval six, interval one more or less reddish at apical area, sometimes interval two faintly reddish, apical patch mainly on intervals five to seven, a little prolonged interiorly on interval seven, sometimes interrupted on interval six, sometimes extending onto interval four or interval eight, or faintly extending onto interval three and adjoining reddish part of interval two; ventral side reddish brown to dark reddish brown, faintly iridescent, hypomera dark yellowish brown, epipleurae somewhat yellowish at apical half.

Head: Rather convex, microsculpture distinct, isodiametric; temporae with some fine faint cilia along hind margin of eyes, strongly oblique behind eyes; eyes well convex, genuine ventral margin reaching buccal fissures, disparity between genuine and apparent ventral margins very small; frontal impressions distinctly reaching frontal lateral furrows; antennae extending beyond shoulders; apical seta on penultimate segment of labial palpi fully long, as long as apical segment.

Pronotum: Rather convex, widest a little before middle, surface densely punctuate at basal area, punctures sparse and minute at median area, some punctures visible near

posterior part of lateral furrows; microsculpture absent, apex slightly emarginated, border interrupted at middle; apical angles slightly protrudent, rounded, almost glabrous or with only a few vestigial cilia; base almost straight, at median area, rounded at lateral areas, not bordered; basal angles well rounded off; lateral margins not or obsoletely bordered at basal half, uniformly rounded; lateral furrows rather wide, terminating at basal angles; lateral setae behind one-fourth; median line fine and faint, reaching neither extremity; anterior and posterior transverse impressions obscure; basal foveae shallow; outside areas of basal foveae slightly convex.

Elytra: Convex, elliptic to elliptic-ovate, widest near middle, less than one and three fifths times as long as wide; surface without punctures; basal border sinuate, gently slanting outwards, forming indistinct angle or rounding at shoulder; lateral margin moderately and evenly dilated from behind shoulder to middle; apical sinuation faint; apex almost rectangular or a little less than 90 degree, hardly rounded; striae distinct, not punctuate; scutellary striole free at apex; intervals almost flat, intervals five and seven well dilated at apical patch, interval six narrowed, almost one half as wide as interval five or seven at subapical area, pore on interval three at or behind three fourths; marginal series 5+1+4+4.

Legs: Apical spur of fore tibiae denticulate at basal half (almost smooth in older individuals) apical spurs of mid and hind tibiae densely and minutely denticulate; segment one of mid tarsi of male with adhesive hairs at apical area; hind tarsi slightly shorter to slightly longer than width of head, segment one slightly shorter to as long as segments two and three combined, segment five a little shorter than segment one (as long as segment one in Thailand and Cambodian examples).

Ventral surface: Sternite glabrous except for a few faint cilia at median area of sternites two and three; met-episterna rather long, sternite six faintly emarginated at apex in male, with two setae on either side in male and female.

Aedeagus: Aedeagus gently convex, fully slender at apical one-third, weakly bent ventrally at apex, not twisted, apical orifice on dorsal side, ventral side, longitudinally expanded and carinate at middle; apical lamella very elongate and narrow, lateral margins almost parallel, apex rounded, bordered in horse-shoe shape on dorsal side and transversely on ventral side.

Female genitalia: Basal segment of styluses with three setae at apical area, apical segment with one short spine on ventral outer margin near middle; hemisternites with three to four short but distinct spinous setae at subapical area.

11. *Stenolophus splendidus* (Motschulsky, 1864)

Description taken from Motschulsky, 1864: 205 and Bates, 1892b: 347.

Size: Length 7 mm.

Color: Elytra opalescent, changing to blue; antennal segments one to two, palpi, and legs red testaceous.

Head: Apex of maxillae shortly truncate.

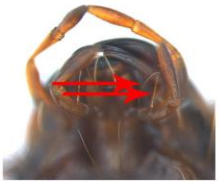
Pronotum: Pronotum transverse, quadrate, slightly narrower posteriorly, sides slightly rounded, posterior angle obtuse, but apex rounded, both basal foveae weakly depressed.

Elytra: Small, deeply striate, striae near the apex broad, intervals almost flat, posterior side in general obscure reddish.

4.1.3.2. Pictorial key to the Harpalinae species of south India

Pictorial key to the Harpalinae species of south India

1. Penultimate segment of labial palpi with two setae.....(Stenolophini) 2



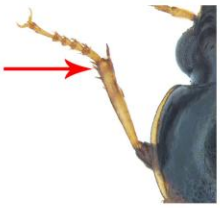
- Penultimate segment of labial palpi with more than two setae.....23



2. Foretibiae enlarged distally.....***Batoscelis oblonga***



- Foretibiae not enlarged distally.....3



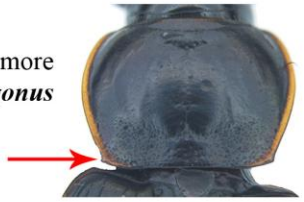
3. Elytra without scutellary striole.....(*Loxoncus*) 4



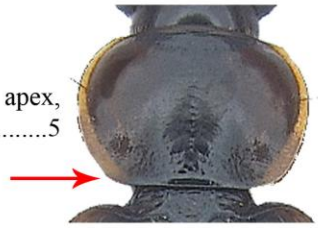
- Elytra with scutellary striole.....8



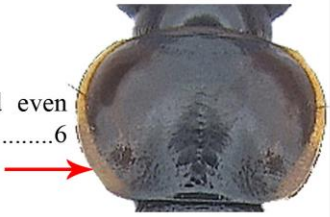
4. Basal angle of pronotum rather sharp at apex, more or less angulate.....***L. microgonus***



- Basal angle of pronotum at least blunt at apex, usually more or less strongly rounded.....5



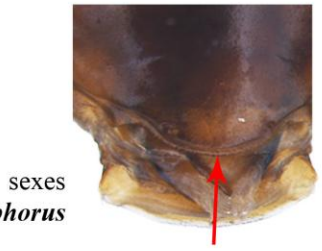
5. Lateral beads of pronotum rather broad even apically, strongly widened basad.....6



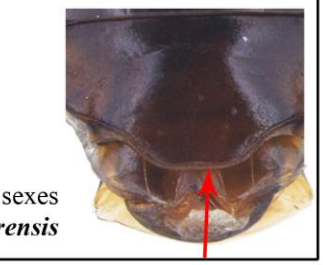
- Lateral beads of pronotum rather narrow, at most only scarcely widened basad.....7



6. Apex of anal sternite in both sexes rounded.....***L. discophorus***



- Apex of anal sternite in both sexes subtrunctae.....***L. nagpurensis***



7. Pronotum is widest at anterior side.....***L. renitens***



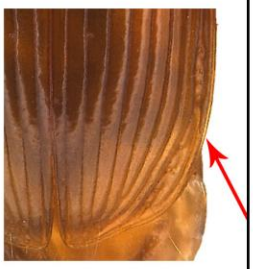
- Pronotum is widest at middle.....***L. schmidti***



8. Posterior series of marginal elytral punctures divided into two groups of four punctures each.....9



- Posterior series of marginal elytral punctures form a more or less continuous row.....15



9. Elytral subapical sinuation deep and sharp, with a blunt tooth at their base.....***Idiomelas fulvipes indus***



- Elytral subapical sinuation either weak or absent without a tooth at its base.....(*Stenolophus*) 10



10. Elytra with spots.....11



- Elytra without spots.....13



11. Elytra without humeral spots.....***S. smaragdulus***



- Elytra with humeral spots.....12



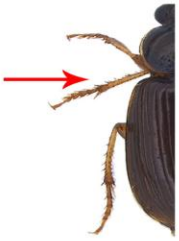
12. Posterior angle of pronotum rounded.....***S. quinquepustulatus***



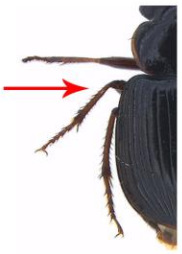
- Posterior angle of pronotum obtuse.....***S. nitens***



13. Legs pale.....***S. bajaurae***



- Legs dark.....14



14. Basal foveae of pronotum broad and deep.....***S. rectifrons***



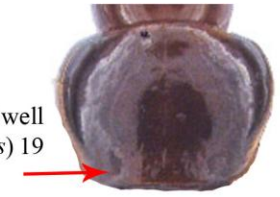
- Basal foveae of pronotum round and scarcely marked.....***S. lucidus***



15. Basal foveae normal, not well cut.....(*Acupalpus*) 16



- Basal foveae of pronotum sulciform, deep and well cut.....(*Anthracus*) 19



16. Elytra with a more or less expanded dark central macula, distinctly delimited yellow patches remains apically.....***A. rhombotus***



- Elytra more or less uniformly blackish brown, sometimes the elytral apex indistinctly pale.....17



17. Pronotum with sides almost rectilinearly narrowed posteriad, sometimes with an indistinct sinuation infront of posterior angles.....***A. sinuellus***



- Pronotum with sides infront of posterior angles either almost parallel, or with a long or rather short sinuation.....18



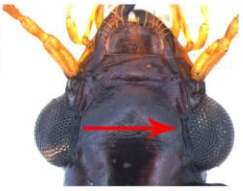
18. Elytra black to blackish brown.....
.....***A. andrewesi***



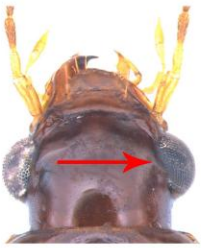
- Elytra paler brown.....***A. punctatus***



19. Clypeo-ocular furrows and clypeal suture strongly impressed.....***A. horni***



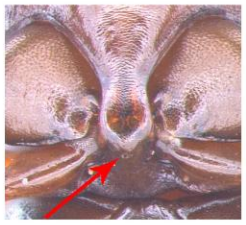
- Clypeo-ocular furrows and clypeal suture not markedly deepened.....20



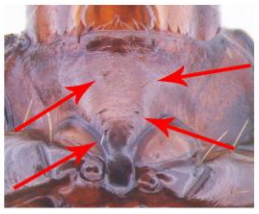
20. Pro-sternal process with two or three distinct setae.....***A. nathani***



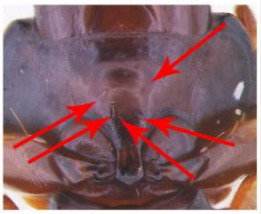
- Pro-sternal process with at least one distinct seta.....21



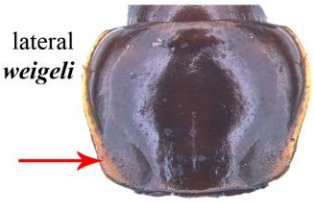
21. Pro-sternum medially with at least four medium long setae.....***A. anichtchenkoi***



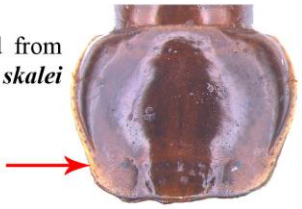
- Pro-sternum medially with five to six medium long setae.....22



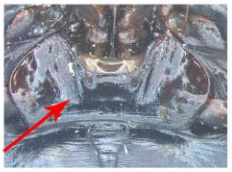
22. Basolateral impressions fused with lateral margin.....***A. weigeli***



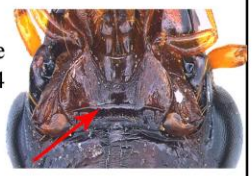
- Basolateral impressions vaguely separated from lateral margin.....***A. skalei***



23. Mentum and submentum completely fused.....(Anisodactylini) .....***Pseudognathaphanus punctilabris***



- Mentum and submentum separated by complete transverse suture.....(Harpalini) 24



24. Scutellary striole present between elytral suture and first striae.....(Amblystomina) 25



- Scutellary striole present between first and second striae.....(Harpalina) 32



25. Elytra truncate at apex.....(*Anomostomus*) 26



- Elytra obliquely truncate at apex.(*Amblystomus*) 27



26. Elytral striae crenulate.....***A. orientalis***



- Elytral striae punctate.....***A. devagiriensis***



27. Elytra with spots.....28



- Elytra without spots.....31



28. Elytra without humeral spots.....***A.vulneratus***



- Elytra with humeral spots.....29



29. Posterior spot on elytra large and present closer to elytral suture.....***A. indicus***



- Posterior spot on elytra small and present away from elytral suture.....30



30. Elytra convex.....***A. quadriguttatus***



- Elytra parallel.....***A. resectus***



31. Elytra less striated.....***A. punctatus***



- Elytra strongly striated.....***A. fuscescens***



32. Elytra pubescent.....33



- Elytra glabrous.....48



33. Elytra completely pubescent.....34



- Elytral external intervals pubescent.....42



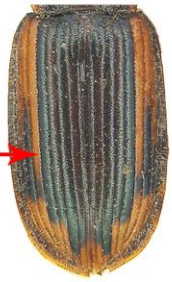
34. Elytral interval three without row of setigerous punctures.....(*Platymetopus*) 35



- Elytral interval three with row of setigerous punctures.....37



35. Elytra brown to black, with a yellow pattern.....***P. figuratus pictus***



- Elytra blackish brown to black, unicolorous.....36



36. Elytral lateral margin slightly seriate basally.....***P. rugosus rugosus***



- Elytral lateral margin smooth along entire length.....***P. flavilabris flavilabris***



37. Pronotum with one to two long marinal setae at apex.....(*Ophoniscus*) 38



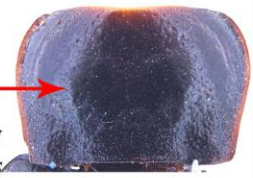
- Pronotum without marginal setae at apex.....39



38. Surface of pronotum throughout irregularly and coarsely punctate.....***O. puneensis***



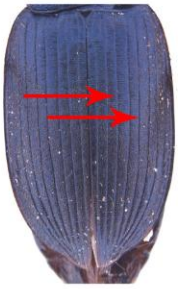
- Pronotum punctate in central portion more sparsely than along margins.....***O. compositus compositus***



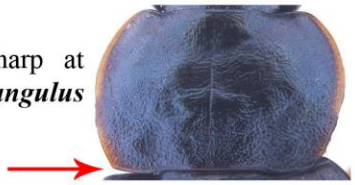
39. Interval five and seven without row of setigerous punctures.....***O. unctulus***



- Elytral interval five and seven with row of setigerous punctures.....(*Parophonus*) 40



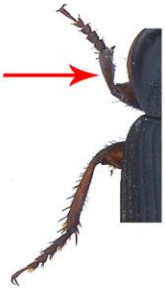
40. Basal angle of pronotum obtuse, sharp at apices.....***P. acutangulus***



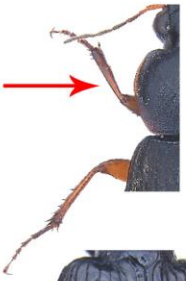
- Basal angle of pronotum angularly or rather widely rounded at apices.....41



41. Tibiae and tarsi slightly infuscate.....***P. lividus***



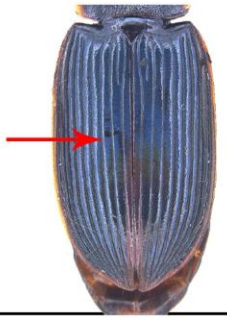
- Legs entirely pale, tibiae and tarsi not infuscate.....***P. subtilis***



42. Striae punctate.....***Meroctenus mediocris***



- Striae impunctate.....43



43. Elytral intervals finely punctate.....(*Dioryche*) 44



- Elytral intervals densely punctate.....
.....***Siopelus tamilnadensis***



44. Intervals of elytra near apex of approximately the same width.....***D. solida***



- Intervals three and five near apex clearly wider than the adjoining ones.....45



45. Intervals flat; upper surface cupreous or brassy.....***D. torta***



- Intervals convex; upper surface black with greenish reflections.....46



46. Meshes of the microsculpture slightly transverse on elytra.....***D. convexa***



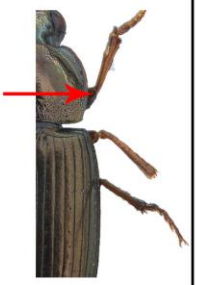
- Meshes of the microsculpture distinclty isodiametric on elytra.....47



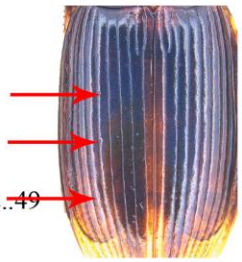
47. Femora pale, brownish yellow, not darker than tibiae.....***D. cuprina***



- Femora dark, notably darker than tibiae.....***D. lucidula***



48. Interval three with row of setigerous punctures..49



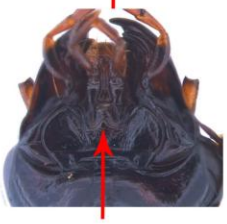
- Interval three with one setigerous puncture.....***T. saluki***



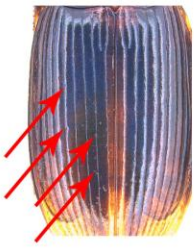
49. Mentum without tooth.....***Bradybaenus festivus***



- Mentum with tooth.....50



50. Elytral interval three and five with row of punctures.....(*Allosiopelus*) 51



- Elytral interval three with row of punctures..... .....(*Coleolissus)* 52



51. Body black; elytra densely and coarsely punctate.....***A. punctatipennis***



- Body yellowish light brown; elytra more sparsely punctate.....***A. fulvicollis***



52. Head impunctate.....***C. perlucens***



- Head punctate.....53



53. Pronotum narrowed apically than basally.....***C. iris***



- Pronotum narrowed basally than apically.....***C. nakajimai***



4.1.4. Checklist of Indian Harpalinae Bonelli, 1810

Symbols and abbreviations used

@ First report from south India

* Specimens identified by the author

† Untraceable references and full paper not in hand

ssp. Subspecies

AUR Australian Region

AFR Afrotropical region

NAR Nearctic Region

ORR Oriental Region

PAR Palearctic Region

1. Tribe Anisodactylini Lacordaire, 1854

1.1. Genus *Anisodactylus* Dejean, 1829

Type species: *Carabus binotatus* Fabricius, 1787.

Anisodactylus Dejean, 1829: 132; Hope, 1838: 84; Lacordaire, 1854: 278; Gemminger & Harold, 1868: 254; Péringuey, 1896: 424; Tschitschérine, 1900c: 370; id. 1901: 251; id. 1906: 289; Andrewes, 1930b: 27; Habu, 1973: 19; Noonan, 1973: 348; id. 1976: 13; Ito, 2003c: 360; Lorenz, 2005: 351; Park et al., 2006: 95; Kataev& Wrase, 2017a: 503.

1.1.1. Subgenus *Anisodactylus* Dejean, 1829

Type species: *Carabus binotatus* Fabricius, 1787.

Anisodactylus Dejean, 1829: 132; Lacordaire, 1854: 278; Noonan, 1973: 349; id. 1976: 13; Ito, 2003c: 360; Lorenz, 2005: 351; Kataev & Wrase, 2017a: 503.

Cephalogyna Casey, 1918.

Pseudhexatrichus Puel, 1931.

Pseudhexatrichus Noonan, 1973.

1. *Anisodactylus karennius* (Bates, 1892)

Harpalus karennius Bates, 1892b: 341; Andrewes, 1930b: 177; Saha & Halder, 2000: 15.

Anisodactylus karennius (Bates, 1892b); Lorenz, 2005: 351; Kataev, 2015a: 91; Kataev & Wrase, 2016b: 256; id. 2017a: 503.

ssp. *karennius* Bates, 1892b: 341; Ito, 2003c: 361; Lorenz, 2005: 351.

hauseri Schauberger, 1929.

Distribution. ORR- India [Assam; Manipur: Yambung (Andrewes, 1930b: 177); Meghalaya: Ri-Bhoi, Shillong, Khasi Hills (Andrewes, 1930b: 177; Saha & Halder, 2000: 15)]; PAR- India [Himachal Pradesh: Shimla (Andrewes, 1930b: 177); Sikkim (Kataev & Wrase, 2016b: 256); Arunachal Pradesh: Mishmi Hills (Kataev, 2015a: 91), Rotung (Andrewes, 1930b: 177); West Bengal: Gopaldhara (Andrewes, 1930b: 177); Darjeeling (Ito, 2003c: 361)]; ORR- Cambodia; Laos; Myanmar; Thailand; Vietnam; PAR- Bhutan; China.

1.2. Genus *Chydaeus* Chaudoir, 1854

Type species: *Chydaeus obscurus* Chaudoir, 1854.

Chydaeus Chaudoir, 1854: 343; Andrewes, 1924a: 29; id. 1930b: 109; Habu, 1973: 48; Saha, 1995: 57; Noonan, 1973: 345; id. 1976: 12; Ito, 2003c: 361; Lorenz, 2005: 351; Kataev et al., 2012: 71; Kataev & Wrase, 2017a: 505.

Acrogeniodon Tschitschérine, 1897.

Hayekius Habu, 1955.

2. *Chydaeus andrewesi* Schauberger, 1932

Chydaeus andrewesi Schauberger, 1932b: 52; Lorenz, 2005: 351; Kataev et al., 2012: 67.

ssp. *andrewesi* Schauberger, 1932b: 52; Ito, 2003c: 361; Lorenz, 2005: 351; Kataev & Schmidt, 2006: 143; Kataev et al., 2012: 67; Kataev & Wrase, 2016b: 258.

Trichotichnus niger Jedlička, 1962 (nec Louwerens, 1951).

Trichotichnus gerni Noonan, 1985 (nomen novum pro *T. niger* Jedlička, 1962).

Distribution. PAR- India [Arunachal Pradesh: Subansiri, Hapoli (Ziro) (Kataev & Wrase, 2016b: 258); Sikkim (Schauberger, 1932b: 52)]; ORR- Myanmar; PAR- Bhutan; China; Nepal.

3. *Chydaeus bedeli* (Tschitschérine, 1897)

Acrogeniodon bedeli Tschitschérine, 1897: 66.

Chydaeus bedeli (Tschitschérine, 1897): Andrewes, 1924a: 29; id. 1926a: 68; id. 1930b: 110; Saha, 1995: 57; Kataev & Schmidt, 2002: 394; Ito, 2003c: 361; Lorenz, 2005: 351; Kataev et al., 2012: 79.

ssp. *longipennis* Kataev & Schmidt, 2002: 398; Lorenz, 2005: 351; Kataev & Wrase, 2017a: 505.

Distribution. ORR- India [Uttar Pradesh: Mou-Pin (Tschitschérine, 1897: 66), Chamoli, Joshimat (Kataev & Schmidt, 2002: 398)]; PAR- India [Himachal Pradesh: Spiti, Pulga, Kulu (Andrewes, 1924a: 29), Pir Pangal range, Rohtang Pass, Mahri environment (Kataev & Schmidt, 2002: 398); Uttarakhand: Gori River Gorge, Sunderdhunga, Pindar Valleys, Almora (Andrewes, 1930b: 110); Sikkim: Lachung (Andrewes, 1930b: 110); West Bengal: Darjeeling, Mungphu, Gopaldhara (Andrewes, 1930b: 110)]; ORR- Indochina; Sri Lanka; Vietnam; PAR- Bhutan; China; Nepal.

4. *Chydaeus obscurus* Chaudoir, 1854

Chydaeus obscurus Chaudoir, 1854: 344; Andrewes, 1926a: 68; id. 1930b: 110; Saha, 1995: 58; Ito, 2003c: 362; Lorenz, 2005: 351; Kataev & Schmidt, 2006: 136; Kataev & Wrase, 2017a: 506.

Chydaeus planicollis Andrewes, 1931.

Distribution. PAR- India [Sikkim (Andrewes, 1926a: 68); West Bengal: Darjeeling (Andrewes, 1930b: 110; Kataev & Schmidt, 2006: 136), Tiger Hill (Kataev & Schmidt, 2006: 136)]; PAR- Nepal.

5. *Chydaeus obtusicollis* Schauberger, 1932

Chydaeus obtusicollis Schauberger, 1932b: 53; Gusenleitner, 1990: 769; Ito, 2003c: 362; Lorenz, 2005: 351; Kataev & Schmidt, 2006: 148; Kataev et al., 2012: 62; Kataev & Wrase, 2017a: 506.

Distribution. PAR- India [Arunachal Pradesh (Kataev & Wrase, 2017: 506); Sikkim (Gusenleitner, 1990: 769); West Bengal: Darjeeling, Tiger Hill (Kataev & Schmidt, 2006: 148)]; PAR- China Nepal.

6. *Chydaeus salvazae* Schauberger, 1934

Chydaeus salvazae Schauberger, 1934a: 9; Lorenz, 2005: 351; Kataev & Schmidt, 2006: 153; Kataev et al., 2012: 77; Kataev & Wrase, 2017a: 506.

Chydaeus nigricans Ito, 2002.

Chydaeus oblongulus Ito, 2003a.

Distribution. PAR- India [Sikkim (Kataev & Schmidt, 2006: 153)]; ORR- Vietnam; PAR- China; Nepal.

7. *Chydaeus semenowi* (Tschitschérine, 1899)

Acrogeniodon semenowi Tschitschérine, 1899b: 660.

Chydaeus semenowi (Tschitschérine, 1899b): Kataev & Schmidt, 2002: 391; Ito, 2003c: 362; Lorenz, 2005: 351; Kataev & Schmidt, 2006: 248; Kataev et al., 2012: 66; Kataev & Wrase, 2017a: 506.

Harpalus dierli Jedlička, 1966.

Chydaeus taichii Ito, 1992.

Distribution. ORR- India [Uttar Pradesh (Kataev & Wrase, 2017: 506)]; PAR- India [Uttarakhand: Joshima-Auli, Kumaon, Gori River Gorge (Kataev & Schmidt, 2002: 391); Arunachal Pradesh (Kataev & Wrase, 2017a: 506); Sikkim (Tschitschérine, 1899b: 660); West Bengal: Darjeeling (Tschitschérine, 1899b: 660), Tiger Hill (Kataev & Schmidt, 2006: 248)]; PAR- Bhutan; China; Nepal.

Remarks. This species was incorrectly synonymized (synonymized by Andrewes, 1924d: 590) with Chydaeus obscurus and was formerly known under this name (Kataev & Schmidt, 2002).

1.3. Genus *Crasodactylus* Guérin-Méneville, 1847

Type species: *Crasodactylus punctatus* Guérin-Méneville, 1847.

Crasodactylus Guérin-Méneville, 1847: 258; Lacordaire, 1854: 279; Gemminger & Harold, 1868: 257; Tschitschérine, 1900c: 369; id. 1901: 251; Andrewes, 1930b: 132; Noonan, 1973: 286; id. 1976: 8; Ito, 2003c: 362; Lorenz, 2005: 348; Kataev & Wrase, 2017a: 506.

8. *Crasodactylus indicus* Andrewes, 1933

Crasodactylus indicus Andrewes, 1933b: 103; Lorenz, 2005: 348; Kataev & Wrase, 2017a: 506.

Distribution. ORR- India [Uttar Pradesh: Harra; Madhya Pradesh: Rewa; Karnataka: Belagavi, Parleh, Tavargatti, Dharwad, Mysore, Kadur, Kemmangundi, Kalhattigiri, Bababudan Hills (Andrewes, 1933b: 103)]; PAR- Afghanistan.

1.4. Genus Gnathaphanus MacLeay, 1825

Type Species: *Trechus vulneripennis* MacLeay, 1825.

Gnathaphanus MacLeay, 1825: 20; Lacordaire, 1854: 299; Gemminger & Harold, 1868: 286; Chaudoir, 1878: 503; Sloane, 1898: 456; Andrewes, 1920: 106; Sloane, 1920a: 131; Andrewes, 1924a: 30; id. 1930b: 170; id. 1933c: 349; Habu, 1973: 56;

Noonan, 1973: 289; id. 1976: 9; Saha, 1995: 58; Saha & Halder, 2000: 16; Ito, 2003c: 362; Kataev, 2005a: 134; Lorenz, 2005: 348; Kataev & Wrase, 2017a: 507.

Iwosiopelus Nakane & Ishida, 1959.

Mirosarus Bates, 1878a.

Pachauchenius Macleay, 1864.

Phyrometus Basilewsky, 1946b.

9. *Gnathaphanus philippensis* (Chevrolat, 1841)

Amblygnathus philippensis †Chevrolat, 1841: 221; †Desmarest, 1841: 299 t. 2. ff. 5–10.

Gnathaphanus philippensis (†Chevrolat, 1841): Bates, 1892b: 327; Andrewes, 1919a: 207; id. 1920: 107; Sloane, 1920b: 320; Andrewes, 1930b: 171; id. 1933c: 349; Moore, 1963: 440; Lorenz, 2005: 348.

Pachauchenius laeviceps Macleay, 1864.

Distribution. ORR- India [Bihar: Purnea (Andrewes, 1930b: 171); Maharashtra: Mumbai, Nagpur (Andrewes, 1930b: 171); Karnataka: Belaguam, Kanara (Andrewes, 1919a: 207)]; ORR- Indonesia; Malaysia; Myanmar; Philippines; AFR- New Guinea; AUR- Australia; New Zealand; NAR- USA.

10. *Gnathaphanus vulneripennis* (MacLeay, 1825)

Trechus vulneripennis MacLeay, 1825: 20.

Gnathaphanus vulneripennis (MacLeay, 1825): Hope, 1838: 2; Gemminger & Harold, 1868: 286; Chaudoir, 1878: 508; Bates, 1889c: 267; id. 1892b: 327; Andrewes, 1919a: 149; id. 1920: 107; id. 1921a: 180; id. 1930b: 172; id. 1933c: 349; Ito, 2003c: 362; Lorenz, 2005: 349; Kataev & Wrase, 2017a: 507.

Gnathaphanus chujoi Habu, 1973.

Harpalus subcostatus Dejean, 1829.

Platymetopus melanarius Boheman, 1858.

Distribution. ORR- India [Uttar Pradesh: Chanda (Andrewes, 1930b: 172); Bihar: Kanpa, Manbhum, Purnea, Pusa (Andrewes, 1930b: 172); Madhya Pradesh: Balaghat (Andrewes, 1930b: 172)]; PAR- India [Uttarakhand: Almora, Kumaon (Andrewes, 1930b: 172)]; ORR- Bangladesh; Indochina; Indonesia; Malaysia; Myanmar; Philippines; Sri Lanka; Vietnam; PAR- China; Japan; Nepal.

1.5. Genus *Progonochaetus* Müller, 1938

Type species: *Anisodactylus xanthopus* Dejean, 1829.

Progonochaetus Müller, 1938: 245; Noonan, 1973: 340; id. 1976: 11; Ito, 2003c: 363; Lorenz, 2005: 350; Kataev & Wrase, 2017a: 508; Serrano et al., 2017: 217.

1.5.1. Subgenus *Progonochaetus* Müller, 1938

Type species: *Anisodactylus xanthopus* Dejean, 1829.

Progonochaetus Müller, 1938: 245; Noonan, 1973: 342; 1976: 11; Ito, 2003c: 363; Lorenz, 2005: 350; Kataev & Wrase, 2017a: 508.

Dichaetochilus Basilewsky, 1946a.

Dichaetochilus Jeannel, 1948 [preocc.].

Oligoxemus Basilewsky, 1948b.

11. *_Progonochaetus indicus_ Kataev, 2002

Progonochaetus indicus Kataev, 2002b: 241; Lorenz, 2005: 350; Wrase, 2005: 841; Kataev, 2015a: 92; Kataev & Wrase, 2017a: 508.

Specimen examined: 1 ex. 'India: Chhattisgarh, Bilaspur, Karidongri Forest rest house, 19.IX.2012, A. Raha & Party'; 1 ex. 'India: Madhya Pradesh, Raisen, Bamhori Village, 08.IX.2011, Sambath & Party'.

Distribution. ORR- India [New Delhi (Kataev, 2002b: 241); Uttar Pradesh: Jhansi (Kataev, 2015a: 92); Rajasthan: Bharatpur, Kaelodeo Nature Reserve (Kataev, 2002b:

241); Madhya Pradesh: Pachmarhk, Satpura Hills (Kataev, 2015a: 92); Gujarat: Kathiawar, Mandvi (Kataev, 2015a: 92); Maharashtra: Nagpur, Ratnagiri (Kataev, 2002b: 241), Deccan, Mumbai; Karnataka: Bangalore, Bandipur Reserve, Bellary; Tamil Nadu: Chennai (Kataev, 2015a: 92)]; PAR- India [Uttarakhand: Corbett Nature Park (Kataev, 2002b: 241)]; PAR- Nepal; Pakistan.

12. *Progonochaetus laevistriatus* (Sturm, 1818)

Harpalus laevistriatus Sturm, 1818: 80 t. 91. f. B; Andrewes, 1927: 99.

Gnathaphanus laevistriatus (Sturm, 1818); Andrewes, 1930b: 171; Saha, 1995: 58.

Progonochaetus laevistriatus (Sturm, 1818); Kataev, 2002b: 243: Ito, 2003c: 363; Lorenz, 2005: 350; Wrase, 2005: 841; Kataev & Wrase, 2017a: 508.

Gnathaphanus acutipennis Bates, 1892b.

Selenophorus orientalis Dejean, 1829.

Distribution. ORR- India [Meghalaya: Darugiri, Garo Hills (Wrase, 2005: 841); West Bengal: Birbhum, Murshidabad, South 24 Parganas (Saha, 1995: 58)]; ORR- Myanmar; PAR- China; Iran; Nepal.

1.6. Genus *Pseudognathaphanus* Schauberger, 1932

Type species: *Harpalus punctilabris* MacLeay, 1825.

Pseudognathaphanus Schauberger, 1932b: 57; Habu, 1973: 62; Noonan, 1973: 344; id. 1976: 12; Ito, 2003c: 363; Lorenz, 2005: 351; Park et al., 2006: 96; Kataev & Wrase, 2016a: 224; Kataev & Wrase, 2017a: 508; id. 2018: 359; Sruthi & Sabu, 2022: 21622.

Hiekea Ito, 1997d.

Protognathus Basilewsky, 1950.

13. *Pseudognathaphanus dekkanus* Andrewes, 1933

Pseudognathaphanus dekkanus Andrewes, 1933b: 102; Lorenz, 2005: 351; Kataev & Wrase, 2016a: 233.

Hiekea picipes Ito, 1997d.

Distribution. ORR- India [Maharashtra: Panchgani, Kasara, Satara (Andrewes, 1933b: 102), Mumbai, Khandala (Andrewes, 1933b: 102; Kataev & Wrase, 2016a: 233); Karnataka: Parleh, Kanara (Andrewes, 1933b: 102), Talewadi, Belagavi (Andrewes, 1933b: 102, Kataev & Wrase, 2016a: 233)].

14. *Pseudognathaphanus exaratus* (Bates, 1892)

Gnathaphanus exaratus Bates, 1892b: 329; Andrewes, 1920: 108; id. 1930b: 170.

Pseudognathaphanus exaratus (Bates, 1892b); Ito, 2003c: 363; Lorenz, 2005: 351; Kataev & Wrase, 2016a: 230; id. 2017a: 508.

Distribution. ORR- India [Assam: Sorbhog, Golakganj (Andrewes, 1930b: 170); Nagaland: Naga Hills (Andrewes, 1930b: 170); Karnataka: Mudigere (Kataev & Wrase, 2016a: 230)]; PAR- India [Arunachal Pradesh: Dafla Hills (Andrewes, 1930b: 170); West Bengal: Darjeeling (Kataev & Wrase, 2017a: 508)]; ORR- Laos; Myanmar; Thailand.

15. *_Pseudognathaphanus punctilabris_ (MacLeay, 1825)

Harpalus punctilabris MacLeay, 1825: 20.

Gnathaphanus punctilabris (MacLeay, 1825); Andrewes, 1919a: 150; id. 1920: 107; id. 1924a: 30; id. 1930b: 171; Saha, 1995: 58.

Pseudognathaphanus punctilabris (MacLeay, 1825); Habu, 1973: 62; Ito, 2003c: 363; Lorenz, 2005: 351; Park et al., 2006: 96;

Kataev & Wrase, 2016a: 226; id. 2017a: 508.

Anisodactylus javanus Dejean, 1829.

Platymetopus (?) *gnathaphanoides* Bates, 1892b.

Specimens examined: 7 ex. 'India: Kerala: Kannur, Chambad, 28.VIII.2019, K Shigina'.

Distribution. India [Assam: Kohara (= Kaziranga) (Kataev & Wrase, 2016a: 226); West Bengal: Murshidabad (Saha, 1995: 58); Odisha: Ganjam, Surada (Andrewes, 1924a: 30); Tamil Nadu: Karaikal, Anamalai Hills; Pondicherry (Kataev & Wrase, 2016a: 226)]; PAR- India [Himachal Pradesh: Kulu (Kataev & Wrase, 2016a: 226); West Bengal: Darjeeling (Kataev & Wrase, 2017a: 508)]; ORR- Andaman Nicobar Islands; Indochina; Indonesia; Laos; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; PAR- China; Japan; Nepal; Spain, Taiwan.

16. ****Pseudognathaphanus rusticus* **(Andrewes, 1920)

Gnathaphanus rusticus Andrewes, 1920: 107; id. 1924a: 30; id. 1930b: 172; Kushwaha & Hegde, 2015: 403.

Pseudognathaphanus rusticus (Andrewes, 1920); Ito, 2003c: 363; Lorenz, 2005: 351; Kataev & Wrase, 2016a: 232; id. 2017a: 508; Sruthi & Sabu, 2022: 21622.

Specimens examined: 2 ex. 'India: Chhattisgarh, Raipur, Barnwapara, 18.VIII.2011, Sunil & Party'; 1 ex. 'India: Chhattisgarh, Kawardha, Chilpi Rest house, 31.VIII.2011, Sunil & Party'.

Distribution. ORR- India [Uttar Pradesh: Lucknow (Andrewes, 1930b: 172); Bihar: Pusa, Chapra, Muzaffarpur, Purnea, Patna, Samstipur (Andrewes, 1930b: 172); Madhya Pradesh: Pachmarhi (Kataev & Wrase, 2016a: 232); Gujarat: Surat (Andrewes, 1930b: 172); Odisha: Ganjam, Surada (Andrewes, 1924a: 30); Maharashtra: Nagpur, Chikalda (Andrewes, 1930b: 172), Mumbai, Pune (Kataev & Wrase, 2016a: 232); Goa: Südgoa; Karnataka: Belagavi; Kanara (Kataev & Wrase, 2016a: 232); Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21622)]; PAR- India

[Uttarakhand: Dehra Dun, Haridwar, Roorkee, Bhaiwar (Andrewes, 1930b: 172), Rhishikesh (Kataev & Wrase, 2016a: 232)]; ORR- Sri Lanka; PAR- Nepal; Pakistan.

1.7. Genus *Pseudorhysopus* Kataev & Wrase, 2001

Type species: *Pseudorhysopus kabakovi* Kataev & Wrase, 2001.

Pseudorhysopus Kataev & Wrase, 2001: 638; Lorenz, 2005: 351; Kataev & Wrase, 2017a: 508.

17. *Pseudorhysopus kabakovi* Kataev & Wrase, 2001

Pseudorhysopus kabakovi Kataev & Wrase, 2001: 640; Kataev, 2002b: 246; Lorenz, 2005: 351; Kataev, 2015a: 92; Kataev & Wrase, 2017a: 508.

Distribution. ORR- India [Assam; Nagaland: Naga Hills (Kataev, 2002b: 246)]; ORR- Vietnam; PAR- China.

2. Tribe Stenolophini Kirby, 1837

2.1. Genus *Acupalpus* Latreille, 1829

Type species: *Carabus meridianus* Linnaeus, 1760.

Acupalpus Latreille, 1829: 391; Dejean, 1829: 435; Lacordaire, 1854: 302; Motschulsky, 1864: 205; Gemminger & Harold, 1868: 287; Péringuey, 1896: 462; Tschitschérine, 1900c: 365; id. 1901: 246; Andrewes, 1930b: 9; Jeannel, 1948: 714; Basilewsky, 1956: 461; Habu, 1973: 325; Noonan, 1976: 23; Jaeger & Kataev, 2003: 397; Lorenz, 2005: 359; Jaeger &

Kataev, 2017: 562.

2.1.1. Subgenus *Acupalpus* Latreille, 1829

Type species: *Carabus meridianus* Linnaeus, 1760.

Acupalpus Latreille, 1829: 391; Habu, 1973: 326; Noonan, 1976: 23; Jaeger & Kataev, 2003: 397; Lorenz, 2005: 359; Jaeger & Kataev, 2017: 562.

Manicellus Motschulsky, 1864.

18. *Acupalpus maculatus* (Schaum, 1860)

Stenolophus maculatus Schaum, 1860: 619.

Acupalpus maculatus (Schaum, 1860): Jaeger, 1992: 225; id. 1999: 960; Jaeger & Kataev, 2003: 398; Lorenz, 2005: 359; Austin et al., 2008: 68; Jaeger, 2011: 767; Jaeger et al., 2016: 1260; Jaeger & Ahmed, 2017: 610; Jaeger & Kataev, 2017: 563.

Acupalpus ephippiger †Schauberger, 1930.

Acupalpus immundus Reitter, 1900.

Acupalpus melanotus †Puel, 1923.

Acupalpus muelleri †Schauberger, 1930.

Acupalpus obscuratus Halbherr, 1908.

Acupalpus plagifer †Schauberger, 1930.

Acupalpus submaculatus †Fiori, 1903.

Stenolophus maculatus †Schaum, 1860.

Stenolophus salinus Baudi di Selve, 1864.

Distribution. PAR- India [Jammu & Kashmir: Sri Nagar (Jaeger, 2011: 767)]; PAR- Afghanistan; Albania; Algeria; Armenia; Austria; Azerbaijan; Bosnia Herzegovina; Bulgaria; Canary Islands; Croatia; Cyprus; Czech Republic; France; Georgia; Germany; Greece; Hungary; Iran; Iraq; Israel; Italy; Jordan; Kazakhstan; Lebanon; Libya; Macedonia; Moldova (Moldavia); Montenegro; Morocco; Pakistan; Poland; Portugal; Russia: South European

Territory; Serbia; Slovakia; Slovenia; Spain; Switzerland; Syria; Tajikistan; Tunisia; Turkey, Turkmenistan; Ukraine; Uzbekistan; Yugoslavia; AUR- Australia.

2.1.2. Subgenus *Stenolophidius* Jeannel, 1948

Type species: *Stenolophus terminalis* Chaudoir, 1843.

Stenolophidius Jeannel, 1948: 708; Jaeger & Kataev, 2003: 398; Jaeger, 2013: 293; Jaeger & Kataev, 2017: 565.

Pseudanthracus Habu, 1973.

Palcuapus Habu, 1973.

19. ****Acupalpus andrewesi* **Jaeger, 2013

Acupalpus andrewesi Jaeger, 2013: 315; Jaeger et al., 2016: 1261.

Specimens examined: 7 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'; 5 ex. 'India: Kerala, Kannur, Odakkad, 22.XII.2021, K Shigina'.

Distribution. ORR- India [Madhya Pradesh: Khawasa, Seoni (Jaeger, 2013: 315); Maharashtra: Savatvadi, Nagpur, Telinkheri (Jaeger, 2013: 315); Karnataka: Kerwadi (Jaeger et al., 2016: 1261); Kerala: Thekkady, Periyar (Jaeger, 2013: 315)]; ORR- Sri Lanka.

20. ***Acupalpus maculipennis*** **Jaeger, 2013**

Acupalpus maculipennis Jaeger, 2013: 310; Jaeger et al., 2016: 1261; Jaeger & Ahmed, 2017: 611; Jaeger & Kataev, 2017: 565.

Distribution. ORR- India [Rajasthan: Jaisalmer (Jaeger et al., 2016: 1261); Tamil Nadu (Jaeger, 2013: 310)]; PAR- Pakistan.

21. ****Acupalpus punctatus* **(Jedlička, 1936)

Anthracus punctatus Jedlička, 1936c: 135.

Acupalpus punctatus (Jedlička, 1936c); Lorenz, 2005: 360; Jaeger, 2013: 299; Jaeger et al., 2016: 1261.

Acupalpus sinuellus sensu Habu, 1961 (partim, nec A. sinuellus Bates).

Specimens examined: 3 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Karnataka: Kerwadi (Jaeger et al., 2016: 1261)]; ORR- Cambodia; Indonesia; Laos; Philippines; Sri Lanka; Thailand; Vietnam.

22. *_Acupalpus rhombotus_ Andrewes, 1936

Acupalpus rhombotus Andrewes, 1936: 219; Lorenz, 2005: 360; Jaeger, 2013: 296; Jaeger et al., 2016: 1261.

Anthracus coloratus Jedlička, 1936b.

Acupalpus (Anthracus) guttiger Schauberger, 1938.

Acupalpus sinuellus sensu Habu, 1961 (partim, nec *A. sinuellus* Bates).

Specimens examined: 2 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Meghalaya: Khasi Hills, Mawsynram (Jaeger, 2013: 296); West Bengal: Sarda (Jaeger, 2013: 296); Karnataka: Kerwadi (Jaeger et al., 2016: 1261)]; ORR- Cambodia; Indonesia; Laos; Philippines; Thailand; Vietnam.

23. *@_Acupalpus sinuellus_ Bates, 1892

Acupalpus sinuellus Bates, 1892b: 350; Andrewes, 1930b: 10; Habu, 1978b: 9: Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger, 2013: 304; Jaeger et al., 2016: 1261; Jaeger & Kataev, 2017: 565.

Specimens examined: 9 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'; 6 ex. 'India: Kerala, Kannur, Odakkad, 22.XII.2021, K Shigina'.

Distribution. ORR- India [Uttarakhand: Jaspur (Jaeger et al., 2016: 1261); Assam (Jaeger, 2013: 304); Nagaland: Naga Hills (Jaeger, 2013: 304); Meghalaya: Khasi Hills, Mawsynram (Jaeger, 2013: 304); Rajasthan: Sarda (Jaeger, 2013: 304); West Bengal (Jaeger, 2013: 304)]; ORR- Indonesia; Laos; Myanmar; Vietnam; PAR- China.

2.1.3. Subgenus _Subacupalpus_ Habu, 1978

Type species: *Acupalpus sikkimensis* Andrewes, 1930.

Subacupalpus Habu, 1978b: 9; Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger, 2010: 147; Jaeger & Kataev, 2017: 565.

24. *Acupalpus sikkimensis* Andrewes, 1930

Acupalpus sikkimensis Andrewes, 1930a: 20; Habu, 1978b: 8; Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger, 2010: 148; Jaeger et al., 2016: 1262; Jaeger & Kataev, 2017: 565.

Distribution. ORR- India [Meghalaya: Shillong (Jaeger, 2010: 148); Maharashtra: Mahabaleshwar, Panchgani (Jaeger, 2010: 148); Tamil Nadu: Nilgiri Hills (Jaeger, 2010: 148)]; PAR- India [Uttarakhand: Bhimtal, Almora, Kumaon, Haldwani, Gumti (Jaeger, 2010: 148); Sikkim: Rongli (Andrewes, 1930a: 20); West Bengal: Darjeeling, Gopaldhara (Andrewes, 1930a: 20)]; ORR- Vietnam; PAR- Nepal.

2.2. Genus *Anthracus* Motschulsky, 1850

Type species: *Carabus consputus* Duftschmid, 1812.

Anthracus Motschulsky, 1850: Key VII and p. 21; id. 1864: 207; Andrewes, 1930b: 9; Habu, 1973: 337; Noonan, 1976: 24; Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger & Kataev, 2017: 565.

Balius Schiødte, 1861.

25. **Anthracus anichtchenkoi* Jaeger, 2015

Anthracus anichtchenkoi Jaeger, 2015b: 1367; id. 2017: 606; Jaeger & Ahmed, 2017: 611; Jaeger & Kataev, 2017: 565.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'; 2 ex. 'India: Kerala, Kannur, Odakkad, 22.XII.2021, K Shigina'.

Distribution. ORR- India [West Bengal: Sarda (Jaeger, 2015b: 1367); Tamil Nadu: Coimbatore (Jaeger, 2017: 606)]; PAR- India [Uttarakhand: Jaspur (Jaeger, 2015b: 1367)]; PAR- Nepal; Pakistan.

26. *Anthracus annamensis* (Bates, 1889)

Acupalpus annamensis Bates, 1889c: 272; id. 1892b: 350; Andrewes, 1926b: 346; id. 1930b: 9; id. 1933c: 326.

Anthracus annamensis (Bates, 1889c); Jaeger & Kataev, 2003: 399; Lorenz, 2005: 360; Jaeger & Kataev, 2017: 565.

Distribution. ORR- India [Madhya Pradesh: Korai (Seoni) (Andrewes, 1930b: 9); Chhattisgarh: Tumgaon (Raipur) (Andrewes, 1930b: 9); Tamil Nadu: Kodaikanal (Andrewes, 1930b: 9)]; PAR- India [Himachal Pradesh: Kulu (Andrewes, 1930b: 9); Uttarakhand: Almora, Ranikhet (Andrewes, 1930b: 9)]; ORR- Indonesia; Myanmar; Philippines; Sri Lanka; Vietnam; PAR- China; Taiwan.

27. *Anthracus fritzhiekei* Jaeger, 2016

Anthracus fritzhiekei Jaeger, 2016: 216.

Distribution. ORR- India [Tamil Nadu: Karikal; Pondicherry (Jaeger, 2016: 216)].

28. *_Anthracus horni_ (Andrewes, 1923)

Acupalpus horni Andrewes, 1923a: 237; id 1930b: 10.

Anthracus horni (Andrewes, 1923a); Jaeger & Kataev, 2003: 400; Lorenz, 2005: 360; Jaeger, 2016: 218; Jaeger & Kataev, 2017: 566.

Specimens examined: 3 ex. 'India: Kerala, Kannur, Chalode, 18.XII.2021, K Nijisha'.

Distribution. ORR- India [Uttar Pradesh: Sitapur (Andrewes, 1923a: 237); Maharashtra: Mumbai (Andrewes, 1923a: 237); Karnataka: Belagavi (Andrewes, 1923a: 237); Tamil Nadu: Chennai (Andrewes, 1930b: 10)]; PAR- India [Uttarakhand: Dehra Dun (Andrewes, 1930b: 10)]; ORR- Malaysia; Myanmar; Sri Lanka; PAR- Japan; Nepal.

29. *Anthracus indicus* Jaeger, 2012

Anthracus indicus Jaeger, 2012: 284.

Distribution. ORR- India [Maharashtra: Lonvala (Jaeger, 2012: 284)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity. Because the species has fully developed hind wings it is probably more widely distributed (Jaeger, 2012).

30. ****Anthracus nathani* **Jaeger, 2017

Anthracus nathani Jaeger, 2017: 598.

Specimens examined: 2 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Tamil Nadu: Kurumbagaram, Karikal, Mettukuppam, Neyveli, Cudalore (Jaeger, 2017: 598)].

Remarks. Known only from the Tamil Nadu state in southern India, but it is obviously more widely distributed, at least in southern India (Jaeger, 2017).

31. ***Anthracus schuhi*** **Jaeger, 2012**

Anthracus schuhi Jaeger, 2012: 283.

Distribution. ORR- India [Maharashtra: Lonvala (Jaeger, 2012: 283)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity. Because the species has fully developed hind wings it is probably more widely distributed (Jaeger, 2012).

32. ***Anthracus skalei*** **Jaeger, 2015**

Anthracus skalei Jaeger, 2015a: 341.

Distribution. ORR- India [Meghalaya: Cherrapunjee (Jaeger, 2015a: 341)]; PAR- India [Himachal Pradesh: Shorang (Jaeger, 2015a: 341); West Bengal: Darjeeling, Kurseong, Algarah (Jaeger, 2015a: 341)]; ORR- Bangladesh; PAR- Bhutan; Nepal; Pakistan.

33. ***Anthracus weigeli*** **Jaeger, 2015**

Anthracus weigeli Jaeger, 2015a: 340.

Distribution. ORR- India [West Bengal: Sarda (Jaeger, 2015a: 340); Odisha: Similipal, Lulung (Jaeger, 2015a: 340)]; PAR- India [Uttarakhand: Almora, Kumaon, Haldwani (Jaeger, 2015a: 340)]; PAR- Nepal.

2.3. Genus *Batoscelis* Dejean, 1836

Type species: *Agonoderus oblongus* Dejean, 1831.

Batoscelis Dejean, 1836: 46; Lacordaire, 1854: 261; Gemminger & Harold, 1868: 249; Andrewes, 1930b: 256; Jeannel, 1948: 721; Noonan, 1976: 25; Jaeger & Kataev, 2003: 400; Lorenz, 2005: 361; Jaeger & Kataev, 2017: 566.

Leptocellus Müller, 1942.

Systenognathus Putzeys, 1863.

34. *Batoscelis hellmichi* (Jedlička, 1965)

Pachytrachelus hellmichi Jedlička, 1965: 100; Jaeger & Kataev, 2003: 400; Lorenz, 2005: 361; Jaeger et al., 2016: 1269; Jaeger & Kataev, 2017: 566.

Distribution. PAR- India [Uttarakhand: Corbett Nature Park (Jaeger et al., 2016: 1269)]; PAR- Nepal.

35. **Batoscelis oblonga* (Dejean, 1831)

Agonoderus oblongus Dejean, 1831: 813.

Batoscelis oblonga Gemminger & Harold, 1868: 249.

Pachytrachelus oblongus (Dejean, 1831); Bates, 1892b: 343; †Yuillet, 1912: 19; Heller, 1916: 276; Sloane, 1920b: 320; Andrewes, 1924a: 39; id. 1930b: 256; Moore, 1963: 440; Saha, 1995: 66.

Batoscelis oblonga (Dejean, 1831); Jaeger & Kataev, 2003: 400; Lorenz, 2005: 361; Jaeger et al., 2016: 1269; Baehr & Reid, 2017: 438; Jaeger & Kataev, 2017: 566.

Batoscelis ceylonica Motschulsky, 1861.

Batoscelis polita Schmidt-Göbel, 1846.

Carabus angulata Fabricius, 1801.

Specimens examined: 3 ex. 'India: Kerala, Kannur, Chalode, 01.V.2021, K Nijisha'; 2 ex. 'India: Kerala, Kannur, Odakkad, 22.XII.2021, K Shigina'; 1 ex. India: Chhattisgarh, Raipur, Barnawapara Wildlife Sanctuary, 06.XI.2012, S. Gupta & Party'.

Distribution. ORR- India [West Bengal: Kharagpur, Calcutta, Murshidabad, Maldah, Purulia, Medinipur (Saha, 1995: 66); Odisha: Ganjam, Surada (Andrewes, 1924a: 39); Tamil Nadu: Chennai (Bates, 1892b: 343)]; ORR- Indonesia; Malaysia; Myanmar; Philippines; Thailand; PAR- China; Nepal; AFR- New Guinea; AUR- Australia.

36. *Batoscelis porosa* (Putzeys, 1863)

Systenognathus porosus Putzeys, 1863: 19.

Pachetrachelus porosus Andrewes, 1930b: 257.

Batoscelis porosa (Putzeys, 1863); Lorenz, 2005: 361.

Distribution. India [Without locality (Putzeys, 1863: 19; Andrewes, 1930b: 257)].

2.4. Genus *Bradycellus* Erichson, 1837

Type species: *Carabus collaris* Paykull, 1798.

Bradycellus Erichson, 1837: 64; Gemminger & Harold, 1868: 263; Tschitschérine, 1897: 62; id. 1901: 248; Habu, 1973: 305; Noonan, 1976: 19; Gueorguiev & Gueorguiev, 1995: 178; Ito, 2003b: 143; Jaeger & Kataev, 2003: 400; Lorenz, 2005: 356; Park et al., 2006: 95; Jaeger & Kataev, 2017: 566.

2.4.1. Subgenus *Bradycellus* Erichson, 1837

Type species: *Carabus collaris* Paykull, 1798.

Bradycellus Erichson, 1837: 64; Noonan, 1976: 19; Jaeger & Kataev, 2003: 400; Lorenz, 2005: 356; Jaeger & Kataev, 2017: 566.

Tetraplatypus Tschitschérine, 1897.

37. *Bradycellus bicolor* Jaeger, 1998

Bradycellus bicolor Jaeger, 1998: 11; Jaeger & Kataev, 2003: 400; Lorenz, 2005: 356; Jaeger & Kataev, 2017: 567.

Distribution. PAR- India [West Bengal: Darjeeling (Jaeger, 1998: 11)].

Remarks. Endemic to the Himalayan Hotspot of Biodiversity.

2.4.2. Subgenus *Tachycellus* Morawitz, 1862

Type species: *Tachycellus curtulus* Motschulsky, 1860.

Tachycellus Morawitz, 1862a: 261; Noonan, 1976: 20; Jaeger & Kataev, 2003: 401; Lorenz, 2005: 357; Jaeger & Kataev, 2017: 568.

38. *Bradycellus picipes* Ito & Jaeger, 2000

Bradycellus picipes Ito & Jaeger, 2000: 1220; Lorenz, 2005: 357; Jaeger & Kataev, 2017: 569.

Distribution. PAR- India [West Bengal: Darjeeling, Singalia (Ito & Jaeger, 2000: 1220)]; PAR- Nepal.

2.5. Genus *Dicheirotrichus* Jacquelin du Val, 1857

Type species: *Harpalus obsoletus* Dejean, 1829.

Dicheirotrichus Jacquelin du Val, 1857: 35; Gemminger & Harold, 1868: 262; Habu, 1973: 305; Noonan, 1976: 22; Gueorguiev & Gueorguiev, 1995: 179; Jaeger & Kataev, 2003: 402; Lorenz, 2005: 358; Jaeger & Kataev, 2017: 569.

2.5.1. Subgenus *Trichocellus* Ganglbauer, 1891

Type species: *Harpalus placidus* Gyllenhal, 1827.

Trichocellus Ganglbauer, 1891: 365; Tschitschérine, 1897: 63; id. 1899a: 444; id. 1900a: 52; id. 1901: 249; Andrewes, 1924a: 40; id. 1930b: 351; Noonan, 1976: 22; Gueorguiev & Gueorguiev, 1995: 179; Jaeger & Kataev, 2003: 402; Lorenz, 2005: 358; Jaeger & Kataev, 2017: 570.

39. *Dicheirotrichus glasunowi* (Tschitschérine, 1899)

Trichocellus glasunowi Tschitschérine, 1899a: 470.

Dicheirotrichus glasunowi (Tschitschérine, 1899a): Jaeger & Kataev, 2003: 403; Lorenz, 2005: 358; Jaeger et al., 2016: 1281; Jaeger & Ahmed, 2017: 612; Jaeger & Kataev, 2017: 570.

Distribution. PAR- India [Jammu & Kashmir (Jaeger et al., 2016: 1281)]; PAR- Afghanistan; Kazakhstan; Kyrgyzstan; Pakistan; Tajikistan.

40. *Dicheirotrichus roborowskii* (Tschitschérine, 1899)

Trichocellus roborowskii Tschitschérine, 1899a: 457; Andrewes, 1924a: 41; id. 1930b: 351.

Dicheirotrichus roborowskii (Tschitschérine, 1899a); Jaeger & Kataev, 2003: 403; Lorenz, 2005: 358; Jaeger & Kataev, 2017: 571.

Dicheirotrichus lissonotus (Andrewes, 1924a).

Distribution. PAR- India [Jammu & Kashmir: Baltal, Ladak (Andrewes, 1924a: 41)]; PAR- China; Kyrgyzstan; Mongolia; Russia; West Siberia.

2.6. Genus *Idiomelas* Tschitschérine, 1900

Type species: *Stenolophus morio* Ménétriés, 1832.

Idiomelas Tschitschérine, 1900c: 364; Noonan, 1976: 23; Kataev, 1997b: 240; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 361; Jaeger & Kataev, 2017: 571.

2.6.1. Subgenus *Egaploa* Alluaud, 1916

Type species: *Stenolophus crenulatus* Dejean, 1829.

Egaploa Alluaud, 1916: 64; Andrewes, 1924a: 39; id. 1930b: 162; Jeannel, 1948: 694; Noonan, 1976: 28; Saha, 1995: 70; Kataev, 1997b: 246; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 361; Jaeger & Kataev, 2017: 571.

41. **Idiomelas fulvipes* (Erichson, 1843)

Stenolophus fulvipes Erichson, 1843: 216; Gemminger & Harold, 1868: 291; Saha, 1995: 70.

Egaploa fulvipes †Gerst, 1862: 172; Kolbe, 1910: 18; Scott, 1912: 249; Andrewes, 1927: 102; id. 1930b: 162.

Idiomelas fulvipes (Erichson, 1843); Kataev, 1997b: 247; Lorenz, 2005: 361; Kataev, 2014a: 247.

*ssp. *indus* Kataev, 1997b: 248; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 361; Kataev, 2014a: 249; Jaeger & Kataev, 2017:

572.

Specimens examined: 3 ex. 'India: Kerala, Kannur, Aralam Wildlife Sanctuary, 22.II.2021, K Shigina'; 1 ex. 'India: Chhattisgarh, Jagdalpur, Forest rest house, 14.VII.2011, R.P. Gupta'.

Remarks. Previous authors like Alluaud (1916), Jeannel (1948) and Andrewes (1924) misidentified *I. fulvipes* as *I. crenulatus* (Kataev, 1997b).

ssp. *himalayensis* Della Beffa, 1931: 178; Lorenz, 2005: 361; Kataev, 2014a: 248; Jaeger & Ahmed, 2017: 612; Jaeger & Kataev, 2017: 572.

Distribution. ORR- India [New Delhi (Kataev, 2014a: 248); Rajasthan: Jodhpur (Kataev, 2014a: 248); Odisha: Surada, Ganjam (Andrewes, 1924a: 39); Goa: Südgoa, Canacona Raj Baga Beach (Kataev, 2014a: 249); Karnataka: Bangalore (Kataev, 2014a: 249); Tamil Nadu: Chennai, Coimbatore (Kataev, 2014a: 249), Kodaikanal (Alluaud, 1916: 73; Jeannel, 1948: 695), Tiruchirappalli (Kataev, 2014a: 249)]; ORR- Myanmar; PAR- Nepal; Oman; Pakistan; Saudi Arabia; AFR- Angola; Burkina Faso; Botswana; Cape Verde Is; Comoros; Djibouti; Madagascar; Mauritius; Mozambique; Seychelles; Yemen; Tanzania; Sudan.

2.7. Genus *Loxoncus* Schmidt-Göbel, 1846

Type species: *Loxoncus elevatus* Schmidt-Göbel, 1846.

Loxoncus Schmidt-Göbel, 1846: Plate 3; Motschulsky, 1864: 201; Andrewes, 1930b: 28; Habu, 1973: 395; Noonan, 1976: 18; Kataev, 2003: 352; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 355; Jaeger & Kataev, 2017: 572; Akhil, 2020: 89.

2.7.1. Subgenus *Loxoncus* Schmidt-Göbel, 1846

Type species: *Loxoncus elevatus* Schmidt-Göbel, 1846.

Loxoncus Schmidt-Göbel, 1846: Plate 3; Kataev, 2003: 354; Lorenz, 2005: 355; Jaeger & Kataev, 2017: 572.

Anoplogenius Chaudoir, 1852.

Lepithrix Nietner, 1857a.

Megrammus Motschulsky, 1858b.

Metagrammus † Motschulsky, 1857.

Neolissus Landin, 1955.

42. **Loxoncus discophorus* (Chaudoir, 1852)

Anoplogenius discophorus Chaudoir, 1852: 90; Andrewes, 1930b: 29; Habu, 1978b: 10.

Loxoncus discophorus (Chaudoir, 1852); Kataev, 2003: 354; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 355; Jaeger & Ahmed, 2017: 612; Jaeger & Kataev, 2017: 572.

Anoplogenius bottcheri Jedlička, 1935b.

Anoplogenius patinalis Bates, 1892b.

Anoplogenius philippinus Jedlička, 1936a.

Lepithrix foliolosa Nietner, 1857a.

Specimens examined: 3 ex. ‘India: Kerala, Kannur, Chambad, Odakkad, 22.II.2021, K Shigina’; 1 ex. ‘India: Chhattisgarh, Koriya, Rewala Talab, 13.VIII.2012, A. Parida & Party’.

Distribution. ORR- India [New Delhi: Pusa (Andrewes, 1930b: 29); Assam: Kaziranga, Bagori (Kataev, 2003: 354)]; PAR- India [Himachal Pradesh: Shimla (Chaudoir, 1852: 90; Andrewes, 1930b: 29); Uttarakhand: Haldwani (Andrewes, 1930b: 29)]; ORR- Indochina; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; PAR- China; Nepal; Pakistan; Taiwan.

43. ****Loxoncus nagpurensis* **(Bates, 1891)

Anoplogenius nagpurensis Bates, 1891b: 333; Andrewes, 1930b: 30.

Loxoncus nagpurensis (Bates, 1891b); Kataev, 2003: 356; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 356; Jaeger et al., 2016: 1283; Jaeger & Kataev, 2017: 572.

Anoplogenius discophorus sensu Habu, 1978b (non Chaudoir, 1852).

Specimens examined: 4 ex. 'India: Kerala, Kannur, Chambad, Odakkad, 22.II.2021, K Shigina'; 1 ex. 'India: Bihar, Muzzafarpur, 20–22.VIII.1949, A.P. Kapur'.

Distribution. ORR- India [Jharkhand: Chota Nagpur (Tetara) (Bates, 1891b: 333; Andrewes, 1930b: 30); West Bengal: Calcutta; Chhattisgarh: Bilaspur (Andrewes, 1930b: 30); Maharashtra: Nagpur (Andrewes, 1930b: 30); Tamil Nadu: Chennai (Andrewes, 1930b: 30)]; ORR- Sri Lanka; Thailand; Vietnam; PAR- Nepal.

44. ***Loxoncus rutilans*** **(Bates, 1889)**

Anoplogenius rutilans Bates, 1889a: 103; id. 1889c: 272; id. 1892b: 345; Andrewes, 1930b: 31; Lesne, 1904: 76.

Loxoncus rutilans (Bates, 1889a); Kataev, 2003: 357; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 356; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 572.

Distribution. PAR- India [Sikkim (Kataev, 2003: 357)]; ORR- Bangladesh; Cambodia; Myanmar; Thailand; Vietnam.

45. ****Loxoncus schmidti* **Kataev, 2002

Loxoncus schmidti Kataev, 2002: 363; Lorenz, 2005: 356; Jaeger et al., 2016: 1284; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 572.

Specimen examined: 1 ex. 'India: Assam, Kaziranga, 07.X.1961, R.N. Katiyar'.

Distribution. ORR- India [New Delhi (Jaeger et al., 2016: 1284)]; ORR- Sri Lanka; PAR- Nepal; Pakistan.

2.7.2. Subgenus *Xoloncus* Kataev, 2002

Type species: *Anoplogenius microgonus* Bates, 1886.

Xoloncus Kataev, 2003: 374; Lorenz, 2005: 356; Jaeger & Kataev, 2017: 572.

46. **Loxoncus microgonus* (Bates, 1886)

Anoplogenius microgonus Bates, 1886: 78; id. 1889c: 272; id. 1891b: 333; id. 1892b: 345; Andrewes, 1930b: 29; Saha, 1995: 70.

Loxoncus microgonus (Bates, 1886); Jaeger & Kataev, 2003: 404; Kataev, 2003: 374; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 572; Akhil, 2020: 89.

Anoplogenius andrewesi Jedlička, 1935b.

Anoplogenius renitens Bates, 1889c (non Bates, 1886).

Specimens examined: 14 ex. 'India: Kerala, Kannur, Chalode, 17.IX.2021, K Nijisha'; 13 ex. 'India: Kerala, Kannur, Aralam Wildlife Sanctuary, 22.II.2021. K Shigina'; 3 ex. India: Tamil Nadu, Nagarkoil, Pechiparai lake, 21.IX.2018, Dr. R V & Party'.

Distribution. ORR- India [Bihar (Saha, 1995: 70); Jharkhand: Chota Nagpur (Tetara) (Bates, 1891b: 333); Barkuda Island (Chilika Lake); West Bengal: Calcutta, Sunderbans, Diamond Harbour, Surajabuggi, Sarda (Andrewes, 1930b: 29); Odisha (Saha, 1995: 70); Maharashtra: Nagpur (Kataev, 2003: 374); Tamil Nadu: Nilgiri Hills (Akhil, 2020: 89), Kerala: Malabar (Kataev, 2003: 374)]; PAR- India [Himachal

Pradesh: Shimla (Kataev, 2003: 374)]; ORR- Bangladesh; Indonesia; Laos; Malaysia; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; PAR- China; Nepal; Pakistan.

2.8. Genus *Pachytrachelus* Chaudoir, 1852

Type species: *Pachytrachelus cribriceps* Chaudoir, 1852.

Pachytrachelus Chaudoir, 1852: 85; Lacordaire, 1854: 259; Gemminger & Harold, 1868: 248; Péringuey, 1896: 419; Andrewes, 1924a: 39; id. 1930b: 256; Noonan, 1976: 26; Saha, 1995: 66; Lorenz, 2005: 361; Jaeger & Kataev, 2017: 573.

47. *Pachytrachelus cribriceps* Chaudoir, 1852

Pachytrachelus cribriceps Chaudoir, 1852: 86; Bates, 1891b: 333; Gemminger & Harold, 1868: 248; Andrewes, 1930b: 256; Saha, 1995: 66; Lorenz, 2005: 361.

Distribution. ORR- India [Bihar: Danapur, Pusa (Andrewes, 1930b: 256); Jharkhand: Konbir (Bates, 1891b: 333; Andrewes, 1930b: 256), Chota Nagpur, Ranchi (Andrewes, 1930b: 256); Madhya Pradesh: Gwalior (Andrewes, 1930b: 256); West Bengal: Kurseong (Bates, 1891b: 333; Andrewes, 1930b: 256), Murshidabad (Andrewes, 1930b: 256); Odisha: Brahmpur (Andrewes, 1930b: 256); Maharashtra: Nagpur, Ratnagiri (Andrewes, 1930b: 256); Karnataka: Belagavi (Andrewes, 1930b: 256)]; PAR- India [Himachal Pradesh: Shimla (Chaudoir, 1852: 86); West Bengal: Darjeeling (Saha, 1995: 66)]; ORR- Bangladesh.

2.9. Genus *Parabradycellus* Ito, 2003

Type species: *Parabradycellus convexus* Ito, 2003.

Parabradycellus Ito, 2003b: 144; Park et al., 2006: 95; Jaeger & Kataev, 2017: 573.

48. *Parabradycellus indicus* Ito, 2003

Parabradycellus indicus Ito, 2003b: 148.

Distribution. ORR- India [Madhya Pradesh: Jabalpur (Ito, 2003b: 148)].

49. *Parabradycellus yunnanus* (Jedlička, 1931)

Tachycellus yunnanus Jedlička, 1931: 103; id. 1953: 143.

Bradycellus yunnanus (Jedlička, 1931); Jaeger & Wrase, 1994: 489; id. 1995: 312; Ito, 2003b: 145; Lorenz, 2005: 358.

Parabradycellus yunnanus (Jedlička, 1931); Jaeger et al., 2016: 1284; Jaeger & Kataev, 2017: 573.

Distribution. ORR- India [West Bengal: Darjeeling, Kalimpong, Kurseong (Jaeger et al., 2016: 1284)]; ORR- Myanmar; Laos; Vietnam; PAR- Afghanistan; China; Nepal.

2.10. Genus *Psychristus* Andrewes, 1930

Type species: *Psychristus liparops* Andrewes, 1930.

Psychristus Andrewes, 1930a: 21; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 358; Jaeger, 2009: 1635; Jaeger & Kataev, 2017: 573.

2.10.1. Subgenus *Psychristus* Andrewes, 1930

Type species: *Psychristus liparops* Andrewes, 1930.

Psychristus Andrewes, 1930a: 21; Noonan, 1976: 21; Jaeger, 1997: 65; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 358; Jaeger & Kataev, 2017: 573.

Taiwanobradycellus Ito, 1985.

50. *Psychristus amicorum* Jaeger, 1997

Psychristus amicorum Jaeger, 1997: 78; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 358; Jaeger & Kataev, 2017: 573.

Distribution. PAR- India [West Bengal: Darjeeling, Beguna (Jaeger, 1997: 78)]; PAR- Bhutan; Nepal.

51. *Psychristus andrewesi* Jaeger, 1997

Psychristus andrewesi Jaeger, 1997: 76; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 358; Jaeger et al., 2016: 1284; Jaeger & Kataev, 2017: 573.

Distribution. PAR- India [Sikkim (Jaeger, 1997: 76); West Bengal: Darjeeling (Jaeger, 1997: 76)]; ORR- Thailand; PAR- Bhutan; Nepal.

52. *Psychristus brunneus* Jaeger, 2009

Psychristus brunneus Jaeger, 2009: 1639; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 573.

Distribution. ORR- India [Uttar Pradesh: Rishikesh (Jaeger, 2009: 1639); Odisha: Similipal, Lulung (Jaeger, 2009: 1639)]; ORR- Indonesia; Laos; Thailand; PAR- Pakistan.

53. *Psychristus consimilis* Jaeger, 1997

Psychristus consimilis Jaeger, 1997: 80; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 358; Jaeger & Kataev, 2017: 573.

Distribution. PAR- India [West Bengal: Darjeeling, Tiger Hill (Jaeger, 1997: 80)]; PAR- Nepal.

54. *Psychristus dentatus* Jaeger, 2009

Psychristus dentatus Jaeger, 2009: 1637; Jaeger et al., 2016: 1284; Jaeger & Kataev, 2017: 573.

Distribution. ORR- India [Meghalaya: West Garo hills, Nokrek National Park (Jaeger, 2009: 1637)]; ORR- Thailand; PAR- China.

55. *Psychristus discretus* Andrewes, 1930

Psychristus discretus Andrewes, 1930a: 22; Jaeger, 1997: 70; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 358; Jaeger, 2009: 1642; Jaeger et al., 2016: 1285; Jaeger & Kataev, 2017: 573.

Bradycellus ponderosus †Lindroth, 1939.

Distribution. ORR- India [Uttar Pradesh (Jaeger, 1997: 70)]; PAR- India [Uttarakhand: Kumaon, Almora (Andrewes, 1930a: 22); Sikkim: Phadamchen

(Andrewes, 1930a: 22); Arunachal Pradesh: Bomdila (Jaeger, 1997: 70)]; ORR- Myanmar; Vietnam; PAR- Bhutan; China; Nepal; Russia.

56. *Psychristus liparops* Andrewes, 1930

Psychristus liparops Andrewes, 1930a: 21; Jaeger, 1997: 74; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 358; Jaeger & Kataev, 2017: 573.

Distribution. ORR- India [Jharkhand: Choka (Jaeger, 1997: 74)]; PAR- India [Sikkim: Lachung (Andrewes, 1930a: 21); West Bengal: Gopaldhara (Andrewes, 1930a: 21)]; PAR- China; Nepal.

57. *Psychristus shibatai* (Ito, 1985)

Bradycellus shibatai Ito, 1985: 62.

Psychristus shibatai (Ito, 1985): Jaeger, 1997: 72; Jaeger & Kataev, 2003: 404; Lorenz, 2005: 358; Jaeger, 2009: 1644; Jaeger & Kataev, 2017: 573.

Distribution. PAR- India [Uttarakhand: Bhimtal (Jaeger, 1997: 72)]; PAR- Taiwan.

2.11. Genus *Stenolophus* Dejean, 1821

Type species: *Carabus vaporariorum* Linné sensu Fabricius, 1787.

Stenolophus Dejean, 1821: 15; id. 1829: 405; Lacordaire, 1854: 303; Gemminger & Harold, 1868: 290; Péringuey, 1896: 457; Sloane, 1898: 456; Tschitschérine, 1900c: 364; id. 1901: 246; Lesne, 1904: 76; Andrewes, 1924a: 40; id. 1930b: 316; id. 1933c: 371; Habu, 1973: 341; Noonan, 1976: 17; Saha, 1995: 67; Saha & Halder, 2000: 15; Jaeger & Kataev, 2003: 404;

Lorenz, 2005: 353; Park et al., 2006: 96; Jaeger & Kataev, 2017: 573; Serrano et al., 2017: 218; Akhil, 2020: 89; Sruthi & Sabu, 2022: 21623.

2.11.1. Subgenus *Egadroma* Motschulsky, 1855

Type species: *Carabus smaragdulus* Fabricius, 1798.

Egadroma Motschulsky, 1855: 43; id. 1864: 201; Tschitschérine, 1900c: 364; id. 1901: 246; Andrewes, 1930b: 316; Jeannel, 1948: 696; Basilewsky, 1956: 458; Habu, 1973: 376; Noonan, 1976: 18; Bruneau de Miré, 1976: 275; Saha, 1995: 68; Jaeger & Kataev, 2003: 405; Larochelle & Larivière, 2005: 72; Lorenz, 2005: 354; Kataev & Wrase, 2013: 258; Jaeger & Kataev, 2017: 574.

Amphibia Perroud & Montrouzier, 1864.

58. *Stenolophus bajaurae* Andrewes, 1924

Stenolophus bajaurae Andrewes, 1924a: 95; id. 1926a: 69; id. 1930b: 316; Jedlička, 1967: 73; Kataev, 2002d: 724; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 354; Wrase, 2005: 852; Kataev, 2015a: 93; Kushwaha & Hegde, 2015: 401; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 574; Sruthi & Sabu, 2022: 21623.

Distribution. ORR- India [Punjab (Andrewes, 1926a: 69); New Delhi (Wrase, 2005: 852); Uttar Pradesh: Fyzabad (Andrewes, 1930b: 316); Bihar (Andrewes, 1926a: 69); Jharkhand: Sarju Valley (Andrewes, 1926a: 69); Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21623)]; PAR- India [Jammu & Kashmir (Andrewes, 1926a: 69); Himachal Pradesh: Bajaura, Kangra, Spiti, Manikaran (Andrewes, 1924a: 95); Uttarakhand: Kumaon (Andrewes, 1930b: 316)]; PAR- Afghanistan; Nepal; Pakistan; Tajikistan; Turkmenistan; Uzbekistan.

59. *Stenolophus* lucidus Dejean, 1829

Stenolophus lucidus Dejean, 1829: 419; Andrewes, 1930: 317; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Jaeger & Kataev, 2017: 574; Sruthi & Sabu, 2022: 21623.

Distribution. ORR- India [Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21623)]; ORR- East Indies; PAR- Bhutan; China; Japan; Nepal; Taiwan.

60. *Stenolophus nepalensis* (Jedlička, 1965)

Egadroma nepalensis Jedlička, 1965: 99.

Stenolophus nepalensis (Jedlička, 1965): Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Jaeger et al., 2016: 1286; Jaeger & Kataev, 2017: 574.

Distribution. ORR- India [Uttar Pradesh: Benares (Varanasi) (Jaeger et al., 2016: 1286)]; PAR- Nepal.

61. *@*Stenolophus nitens* (Motschulsky, 1864)

Egadroma nitens Motschulsky, 1864: 205.

Stenolophus nitens (Motschulsky, 1864): Andrewes, 1928: 8; id. 1930b: 318; Kataev, 2002d: 724; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Jaeger et al., 2016: 1287; Jaeger & Ahmed, 2017: 613; Jaeger & Kataev, 2017: 574.

Stenolophus cyanellus Bates, 1889a.

Acupalpus viriditinctus Schauberger, 1938.

Specimens examined: 2 ex. 'India: Kerala, Kannur, Chambad, 10.XII.2021, K Shigina'; 8 ex. 'India: Tamil Nadu, Nagarkoil, Pechiparai lake, 21.IX.2018, Dr. R V & Party'.

Distribution. ORR- India [West Bengal: Calcutta (Schauberger, 1938: 49); Maharashtra: Mumbai (Motschulsky, 1864: 205)]; PAR- India [Uttarakhand: Kumaon, Ramnagar (Jaeger et al., 2016: 1287)]; ORR- Indonesia; Myanmar; PAR- China; Nepal; Pakistan.

Remarks. Andrewes (1928: 8; id. 1930b: 318) erroneously considered the species as synonym of *S. smaragdulus*.

62. *Stenolophus ovchinnikovi* Kataev & Wrase, 2013

Stenolophus ovchinnikovi Kataev & Wrase, 2013: 264; Jaeger & Ahmed, 2017: 614; Jaeger & Kataev, 2017: 574.

Distribution. ORR- India [Punjab: Hoshiarpur, Rormazara (Kataev & Wrase, 2013: 264); Madhya Pradesh: Mandu; Goa: Palolem (Kataev & Wrase, 2013: 264)]; PAR- India [Jammu & Kashmir (Kataev & Wrase, 2013: 264); Uttarakhand: Dehra Dun, Nainital, Khairna bridge (Kataev & Wrase, 2013: 264)]; PAR- Pakistan.

63. ****Stenolophus quinquepustulatus* **(Wiedemann, 1823)

Badister 5 pustulatus Wiedemann, 1823: 58.

Stenolophus 5- pustulatus (Wiedemann, 1823); Bates, 1886: 79; id. 1892b: 350; Jedlička, 1963: 9.

Stenolophus quinque-pustulatus (Wiedemann, 1823); Bates, 1873a: 270; Sloane, 1920b: 321.

Stenolophus quinquepustulatus (Wiedemann, 1823); Dejean, 1829: 414; Putzeys, 1875: 49; Bates, 1889c: 272; id. 1891b: 333; Bouchard, 1903: 172; Lesne, 1904: 76; Andrewes, 1921a: 171; id. 1924e: 469; id. 1930b: 319; id. 1933c: 371; Habu, 1973: 382; Saha, 1995: 68; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Park et al., 2006: 96; Jaeger & Ahmed, 2017: 614;

Jaeger & Kataev, 2017: 574; Pepito et al., 2020: 38; Sruthi & Sabu, 2022: 21623.

Stenolophus apicalis Jedlička, 1952.

Stenolophus conjunctus Jedlička, 1956.

Stenolophus connexus Schauberger, 1928.

Stenolophus tripustulatus Jedlička, 1952.

Stenolophus unipustulatus Jedlička, 1952.

Specimens examined: 110 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, 01.V.2021, 10.XII.2021, 18.XII.2021, K Nijisha'; 55 ex. 'India: Kerala, Kannur, Odakkad, 22.XII.2021, K Shigina'; 33 ex. 'India: Kerala, Kannur, Chambad, 28.VIII.2019, K Shigina'; 14 ex. 'India: Kerala, Kannur, Aralam Wildlife Sanctuary,

22.II.2021, K Shigina'; 4 ex. 'India: Madhya Pradesh, Jabalpur, ZSI Res. Colony, 27.VII.2010, Devanshu Gupta'; 7 ex. 'India: Chhattisgarh, Raipur, Barnawapara, 19.VII.2011, Sunil & Party'; 3 ex. 'India: Maharashtra, Kolhapur, Amba-Kerle, 28.VIII.2013, K. Chandra'; 9 ex. 'India: Tamil Nadu, Thirukkurinjudi, Vaalaiyathu odai, 24.IX.2018, Dr. R V & Party'; 3 ex. 'India: Tamil Nadu, Nagarkoil, Pechiparai lake, 21.IX.2018, Dr. R V & Party'.

Distribution. ORR- India [Rajasthan: Tetara (Bates, 1891b: 333); West Bengal: Singur, Hooghly (Saha, 1995: 68); Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21623)]; ORR- Cambodia; Indochina; Indonesia; Malaysia; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; PAR- China; Japan; Nepal; Pakistan; South Korea; Taiwan; AUR- Australia; Samoa; AFR- New Guinea.

64. *Stenolophus rectifrons* Bates, 1892

Stenolophus rectifrons Bates, 1892b: 348; Bouchard, 1903: 172; Lesne, 1904: 76; Andrewes, 1930b: 317; id. 1933c: 371; Saha, 1995: 69; Lorenz, 2005: 355; Akhil, 2020: 89.

Distribution. ORR- India [Bihar (Saha, 1995: 69); Jharkhand: Chotta Nagpur (Andrewes, 1930b: 317); West Bengal: Calcutta (Andrewes, 1930b: 317; Saha, 1995: 69), South 24 Parganas (Saha, 1995: 69); Odisha: Puri; Tamil Nadu: Chennai, Nilgiri Hills (Akhil, 2020: 89); Kerala: Malabar, Thrissur ((Andrewes, 1930b: 317)]; PAR- India [West Bengal: Darjeeling, Sukna (Saha, 1995: 69)]; ORR- Bangladesh; Indo-China; Indonesia; Malaysia; Myanmar; Singapore; Sri Lanka; Thailand; PAR- China.

65. *_Stenolophus smaragdulus_ (Fabricius, 1798)

Carabus smaragdulus Fabricius, 1798: 60; id. 1801: 209.

Egadroma smaragdula Motschulsky, 1864: 205.

Stenolophus smaragdulus (Fabricius, 1798); Dejean, 1829: 418; Hope, 1838: 93; Schaum, 1847: 49; Motschulsky, 1855: 43; Gemminger & Harold, 1868: 292; Bates, 1891b: 333; id. 1892b: 349; Bouchard, 1903: 172; Sloane, 1920b: 321; Andrewes, 1921a: 160; id. 1924a: 40; id. 1930b: 318; id. 1933c; 371; Habu, 1973: 377; Saha, 1995: 69; Saha & Halder, 2000: 16;

Jaeger & Kataev, 2003: 405; Lorenz, 2005: 355; Park et al., 2006: 96; Jaeger & Ahmed, 2017: 614; Jaeger & Kataev, 2017: 575; Sruthi & Sabu, 2022: 21623.

Egadroma apicalis Motschulsky, 1864.

Harpalus stolidus Walker, 1858.

Stenolophus transmutans Bates, 1886.

Harpalus trechoides Hope, 1845.

Specimens examined: 14 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, 01.V.2021, 10.XII.2021, 18.XII.2021, K Nijisha'; 9 ex. 'India: Kerala, Kannur, Odakkad, 22.XII.2021, K Shigina'; 15 ex. 'India: Kerala, Kannur, Chambad, 28.VIII.2019, K Shigina'; 4 ex. 'India: Kerala, Kannur, Aralam Wildlife Sanctuary, 22.II.2021, K Shigina'; 6 ex. 'India, Chhattisgarh, Raipur, Barnawapara, 19.VII.2011, Sunil & Party'; 6 ex. 'India: Tamil Nadu, Nagarkoil, Pechiparai lake, 21.IX.2018, Dr. R V & Party'; 2 ex. 'India: Tamil Nadu, Thirukkurinjudi, Vaalaiyathu odai, 24.IX.2018, Dr. R V & Party'.

Distribution. ORR- India [Punjab (Andrewes, 1924a: 40); Haryana: Kalka (Andrewes, 1924a: 40); Rajasthan: Tetara (Bates, 1891b: 333); Meghalaya: Khasi Hills, Jayantia Hills (Saha & Halder, 2000: 16); Jharkhand: Konbir (Bates, 1891b: 333); West Bengal: Calcutta, Midnapur, Kharagpur, Purulia (Saha, 1995: 69); Kerala: Idukki, Kootar (Sruthi & Sabu, 2022: 21623)]; PAR- India [Himachal Pradesh: Bajaura, Kangara (Andrewes, 1924a: 40); West Bengal: Darjeeling, Siliguri (Saha,

1995: 69)]; ORR- Indonesia; Malaysia; Myanmar; Sri Lanka; Philippines; Thailand; Vietnam; PAR- China; Denmark; Indochina; Japan; Pakistan; AUR- Australia; AFR- New Guinea.

2.11.2. Subgenus *Stenolophus* Dejean, 1821

Type species: *Carabus vaporariorum* Linnaeus sensu Fabricius, 1787.

Stenolophus Dejean, 1821: 15; Habu, 1973: 342; Noonan, 1976: 17; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 353; Jaeger & Kataev, 2017: 575.

Notiocharis Gistel, 1856.

66. *Stenolophus charis* Bates, 1892

Stenolophus charis Bates, 1892b: 349; Andrewes, 1930b: 317; Saha, 1995: 69; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 353;

Kataev, 2015a: 93; Jaeger & Kataev, 2017: 575.

Distribution. ORR- India [Uttar Pradesh (Saha, 1995: 69); West Bengal (Andrewes, 1930b: 317)]; PAR- India [Uttarakhand: Haldwani (Andrewes, 1930b: 317)]; ORR- Indonesia; Myanmar; Timor-Leste; PAR- China; Nepal.

67. *Stenolophus discophorus* Fischer von Waldheim, 1824

Stenolophus discophorus Fischer von Waldheim, 1824: 141; Dejean, 1829: 409; Gemminger & Harold, 1868: 290; Andrewes, 1924a: 40; id. 1930b: 317; Gueorguiev & Gueorguiev, 1995: 172; Jaeger & Kataev, 2003: 405; Lorenz, 2005: 353; Kataev & Kabak, 2014: 250; Jaeger & Kataev, 2017: 575.

Stenolophus bipartitus Puel, 1937.

Stenolophus flavicornis Jedlička, 1961.

Stenolophus flaviusculus Motschulsky, 1864.

Stenolophus trinotatus Puel, 1923.

Stenolophus unicolor Paulino d'Oliveira, 1876.

Distribution. PAR- India [Jammu & Kashmir: Sri Nagar (Andrewes, 1930b: 317)] ; PAR- Azerbaijan; Albania; Armenia; Austria; Belgium; Bosnia and Herzegovina; Bulgaria; Belarus; China; Croatia; Czech Republic; France; Germany; Georgia; Greece; Hungary; Iran; Iraq; Italy; Kazakhstan; Kyrgyzstan; Lebanon; North Macedonia; Moldova; Montenegro; Poland; Romania; Russian Federation; Serbia; Slovakia; Slovenia; Switzerland; Syria; Turkey; Ukraine; Uzbekistan.

68. *Stenolophus splendidus* (Motschulsky, 1864)

Egadroma splendida Motschulsky, 1864: 205.

Stenolophus splendidus (Motschulsky, 1864); Andrewes, 1928: 8; id. 1930b: 319; Saha, 1995: 68; Lorenz, 2005: 354.

Stenolophus harpaloides Bates, 1892b.

Distribution. ORR- India [West Bengal: Calcutta (Andrewes, 1930b: 319; Saha, 1995: 68), Sunderbans (Andrewes, 1930b: 319), South 24 Parganas (Saha, 1995: 68)]; ORR- Malaysia; Myanmar.

3. Tribe Harpalini Bonelli, 1810

3.1. Subtribe Amblystomina Fauvel, 1889

3.1.1. Genus *Amblystomus* Erichson, 1837

Type species: *Acupalpus mauritanicus* Dejean, 1829.

Amblystomus Erichson, 1837: 59; Lacordaire, 1854: 301; Wollaston, 1867: 13; Reitter, 1883: 139; Péringuey, 1896: 466; Tschitschérine, 1900c: 348; Lesne, 1904: 73; Sloane, 1920a: 131; Andrewes, 1924a: 33; id. 1930b: 17; id. 1939: 130; Jeannel, 1948: 727; Habu, 1973: 15; Noonan, 1976: 54; Saha, 1995: 56; Jaeger & Wrase, 2003: 360; Lorenz, 2005: 384; Park et al., 2006: 95; Wrase, 2017: 502; Akhil, 2020: 86; Sruthi & Sabu, 2022: 21624.

Artizoum Gistel, 1857.

Entomorrhinus Jeannel, 1948.

Hispalis Rambur, 1838.

Megaristerus Nietner, 1858.

Notophilus Blackburn, 1888.

Psilonothus Sloane, 1900.

Thenarotidius Sloane, 1898.

69. *Amblystomus aenescence* (Motschulsky, 1858)

Hispalis aenescence Motschulsky, 1858: 23; Andrewes, 1928: 21; id. 1930: 17; id. 1933: 7; Lorenz, 2005: 384; Sruthi & Sabu, 2022: 21624.

Distribution. ORR- India [Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21624)]; ORR- East Indies.

70. *Amblystomus bivittatus* Andrewes, 1919

Amblystomus bivittatus Andrewes, 1919b: 474 [RN]; id. 1924a: 34; id. 1930b: 18; Saha, 1995: 57; Jaeger & Wrase, 2003: 360; Lorenz, 2005: 384; Wrase, 2017: 502; Ghosh et al., 2020: 225.

Amblystomus vittatus Bates, 1892a [HN].

Distribution. ORR- India [Haryana (Ghosh et al., 2020: 225); West Bengal: Calcutta (Saha, 1995: 57); Maharashtra: Mumbai (Bates, 1892a: 231)]; PAR- India [Himachal Pradesh: Nalagarh (Andrewes, 1919b: 1924a: 34); Uttarakhand (Ghosh et al., 2020: 225)]; ORR- Sri Lanka; AFR- Angola.

71. *Amblystomus femoralis* (Motschulsky, 1858)

Hispalis femoralis Motschulsky, 1858: 24.

Amblystomus femoralis (Motschulsky, 1858): Bates, 1892b: 334; id. 1892a: 231; Andrewes, 1928: 21; id. 1930b: 18; id. 1933a: 8; Lorenz, 2005: 384.

Distribution. ORR- India [Jharkhand: Chota Nagpur (Andrewes, 1930b: 18)]; ORR- Myanmar.

72. ****Amblystomus fuscescens* **(Motschulsky, 1858)

Hispalis fuscescens Motschulsky, 1858: 23.

Amblystomus fuscescens (Motschulsky, 1858): Bates, 1892b: 334; Andrewes, 1919a: 198; id. 1928: 21; id. 1930b: 18; Lesne, 1904: 73; Kapur, 1954: 316, 326; Lorenz, 2005: 384; Sruthi & Sabu, 2022: 21624.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'; 3 ex. 'India: Kerala: Kannur, Chambad, 28.VIII.2019, K Shigina'.

Distribution. ORR- India [Assam (Kapur, 1954: 316); Manipur: Imphal Valley (Kapur, 1954: 326); Karnataka: Mysore (Kapur, 1954: 316); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21624))]; ORR- Cambodia; East Indies; Laos; Myanmar; Sri Lanka; Thailand.

73. ***Amblystomus guttatus*** **Bates, 1873**

Amblystomus guttatus Bates, 1873b: 327; id. 1892b: 336; id. 1892a: 231; Sloane, 1920b: 321; Andrewes, 1930b: 18; Jaeger & Wrase, 2003: 360; Lorenz, 2005: 384; Wrase, 2017: 502.

Distribution. ORR- India [Jharkhand: Chota Nagpur (Andrewes, 1930b: 18); Odisha: Ganjam, Rambha, Barkuda Island (Chilika Lake) (Andrewes, 1930b: 18); Tamil Nadu: Palni Hills (Andrewes, 1930b: 18)]; ORR- Cambodia; Myanmar; Philippines; PAR- China; AUR- Australia.

74. ****Amblystomus indicus* **(Nietner, 1858)

Megaristerus indicus Nietner, 1858: 428; Gemminger & Harold, 1868: 286.

Amblystomus indicus (Nietner, 1858); Bates, 1886: 76; id. 1889c: 271; id. 1891b: 331; id. 1892b: 336; id. 1892a: 231; Sloane, 1920b: 321; Andrewes, 1927: 103; id. 1930b:

19; Lorenz, 2005: 384; Kushwaha & Hegde, 2015: 402; Wrase, 2017: 502; Sruthi & Sabu, 2022: 21624.

Specimens examined: 2 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Uttar Pradesh: Jalaun, Chilli, Jhansi, Barua sagar (Kushwaha & Hegde, 2015: 402); Jharkhand: Chota Nagpur (Tetara) (Bates, 1891b: 331); Madhya Pradesh: Pathrora (Kushwaha & Hegde, 2015: 402); West Bengal (Bates, 1892b: 336); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21624)]; ORR- Myanmar; Sri Lanka; Vietnam; AUR- Australia.

75. *Amblystomus punctatus* Bates, 1892

Amblystomus punctatus Bates, 1892b: 335; id. 1892a: 231; Andrewes, 1921b: 344; id. 1924a: 34; id. 1930b: 19; Lorenz, 2005: 384; Akhil, 2020: 86.

Distribution. ORR- India [Assam: Koka, Bhandara (Andrewes, 1930b: 19); Jharkhand: Chota Nagpur (Andrewes, 1930b: 19); West Bengal (Andrewes, 1921b: 344); Odisha: Ganjam, Surada, Barkuda Island (Chilika Lake) (Andrewes, 1924a: 34); Maharashtra: Mumbai (Andrewes, 1924a: 34); Andhra Pradesh: Visakhapatnam (Andrewes, 1930b: 19); Karnataka: Belagavi, Gadak, Dharwad, Mysore, Nandidurg, Chikkaballapur (Andrewes, 1930b: 19); Tamil Nadu: Chennai, Madura, Nilgiri Hills, Bhavani Valley (Andrewes, 1930b: 19); Kerala: Malabar, Calicut, Malappuram, Nilambur (Andrewes, 1930b: 19)]; ORR- Myanmar; Sri Lanka.

76. *_Amblystomus quadriguttatus_ (Motschulsky, 1858)

Hispalis quadriguttatus Motschulsky, 1858: 24.

Amblystomus quadriguttatus (Motschulsky, 1858): Bates, 1891b: 331; id. 1892b: 336; Andrewes, 1928: 21; id. 1930b: 20; id. 1933a: 10; Kapur, 1954: 316, 326; Moore, 1963: 440; Habu, 1973: 16; Jaeger & Wrase, 2003: 360; Lorenz, 2005: 384; Park et al., 2006: 95; Baehr & Reid, 2017: 438; Wrase, 2017: 502.

Acupalpus ornatus Macleay, 1888.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'; 2 ex. 'India: Kerala: Kannur, Chambad, 28.VIII.2019, K Shigina'.

Distribution. ORR- India [Assam (Kapur, 1954: 316); Manipur: Imphal (Kapur, 1954: 326); Karnataka: Mysore (Kapur, 1954: 316)]; ORR- East Indies; Indochina; Myanmar; Philippines; Sri Lanka; Thailand; Timor-Leste; Vietnam; PAR- China; Japan; AUR- Australia; New Zealand.

77. *Amblystomus resectus* Andrewes, 1924

Amblystomus resectus Andrewes, 1924a: 91; id. 1930b: 20; Lorenz, 2005: 385.

Distribution. ORR- India [Odisha: Ganjam (Andrewes, 1924a: 91), Surada (Andrewes, 1930b: 20); Karnataka: Mysore, Chikkaballapur (Andrewes, 1930b: 20)].

78. *Amblystomus rotundiceps* Bates, 1892

Amblystomus rotundiceps Bates, 1892a: 231; Andrewes, 1930b: 20; Lorenz, 2005: 385.

Distribution. ORR- India [Jharkhand: Chota Nagpur (Andrewes, 1930b: 20)].

79. **Amblystomus vulneratus* (Dejean, 1831)

Acupalpus vulneratus Dejean, 1831: 852; Schaum, 1847: 49; Motschulsky, 1855: 43.

Amblystomus vulneratus (Dejean, 1831); Bates, 1892b: 336; Andrewes, 1924a: 34; id. 1930b: 20; Lorenz, 2005: 385.

Hispalis biguttatus Motschulsky, 1858.

Amblystomus tetrastigma Bates, 1892b.

Specimens examined: 2 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'; 2 ex. 'India: Kerala, Kannur, Odakkad, 22.XII.2021, K Shigina'; 1 ex. 'India: Kerala, Kannur, Chambad, 28.VIII.2019, K Shigina'.

Distribution. ORR- India [Odisha: Ganjam, Surada (Andrewes, 1924a: 34); Tamil Nadu: Tharangambadi (Motschulsky, 1858: 25)]; ORR- Laos; Myanmar; Sri Lanka.

3.1.2. Genus *Anomostomus* LaFerté-Sénectère, 1853

Type species: *Anomostomus torridus* LaFerté-Sénectère, 1853.

Anomostomus LaFerté-Sénectère, 1853: 376; Gemminger & Harold, 1868: 286; Andrewes, 1923a: 235; id. 1930: 27; Jeannel, 1948: 725; Noonan, 1976: 54; Lorenz, 2005: 385.

80. ****Anomostomus orientalis* **Andrewes, 1923

Anomostomus orientalis Andrewes, 1923a: 237; id. 1930b: 27; Lorenz, 2005: 385; Azadbakhsh & Rafi, 2017: 6.

Specimen examined: 1 ex. 'India, Chhattisgarh, Raigarh, Gomarda Wildlife Sanctuary, Mathopathi Pond, 24.XI.2012, S. Gupta & Party'.

Distribution. ORR- India [Odisha: Puri (Andrewes, 1923a: 237); Karnataka: Mysore, Chikkaballapur (Andrewes, 1923a: 237), Ramdurg (Andrewes, 1930b: 27); Tamil Nadu: Chennai, Madura (Andrewes, 1923a: 237), Tiruchirappalli (Andrewes, 1930b: 27)]; ORR- Sri Lanka; PAR- Pakistan.

3.1.3. Genus *Oosoma* Nietner, 1857

Type species: *Oosoma arenaria* Nietner, 1857.

Oosoma Nietner, 1857a: 144; id. 1857b: 368; Andrewes, 1930b: 37; Schauberger, 1933a: 73; Noonan, 1976: 55; Lorenz, 2005: 385; Wrase, 2017: 503; Akhil, 2020: 87.

81. *Oosoma gyllenhalli* (Dejean, 1829)

Barysomus gyllenhalli Dejean, 1829: 59; Bates, 1886: 77; Andrewes, 1930b: 37.

Oosoma gyllenhalli (Dejean, 1829); Lorenz, 2005: 385; Akhil, 2020: 87.

Oosoma arenarius Nietner, 1857a.

Distribution. ORR- India [West Bengal: Calcutta (Andrewes, 1930b: 37); Odisha: Chilka Lake (Andrewes, 1930b: 37); Karnataka: Kanara (Andrewes, 1930b: 37); Kerala: Malabar (Andrewes, 1930b: 37)]; ORR- Sri Lanka.

82. Oosoma semivittatum (Fabricius, 1798)

Carabus semivittatus Fabricius, 1798: 59.

Barysomus semivittatus (Fabricius, 1798); Dejean, 1829: 60; Motschulsky, 1855: 44; Redtenbacher, 1867: 14; Bates, 1889c: 269; Andrewes, 1921b: 344; id. 1921a: 160; id. 1924c: 467; id. 1930b: 38.

Oosoma semivittatum (Fabricius, 1798); Schauberger, 1933a: 74; Lorenz, 2005: 385; Wrase, 2017: 503.

Oosoma gerstaeckeri Nietner, 1857a.

Distribution. ORR- India [Bihar: Pusa (Andrewes, 1930b: 38); Jharkhand: Madhupur (Andrewes, 1930b: 38); West Bengal (Andrewes, 1921b: 344); Odisha: Balighai, Chandipur, Barkuda Island (Chilka Lake) (Andrewes, 1930b: 38); Karnataka: Devaraya Durg (Andrewes, 1930b: 38); Tamil Nadu: Chennai, Tiruchirappalli (Andrewes, 1930b: 38)]; ORR- Indo- China; Sri Lanka; Vietnam; PAR- China.

3.2 Subtribe Ditomina Bonelli, 1810

3.2.1. Genus *Indocarterus* Kataev & Wrase, 2018

Type species: *Indocarterus inexspectatus* Kataev & Wrase, 2018.

Indocarterus Kataev & Wrase, 2018: 354.

Remarks. Endemic to India and includes only one species, I. inexspectatus Kataev & Wrase, 2018 from western India.

83. *Indocarterus inexspectatus* Kataev & Wrase, 2018

Indocarterus inexspectatus Kataev & Wrase, 2018: 355.

Distribution. ORR- India [Maharashtra: Pune, Mulshi environment, Lonvala (Kataev & Wrase, 2018: 355)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity.

3.2.2. Genus *Panagrius* Andrewes, 1933

Type species: *Panagrius hystrix* Andrewes, 1933.

Panagrius Andrewes, 1933b: 104; Kataev, 2005b: 266; Lorenz, 2005: 385.

Indiophonus Ito, 1996c.

84. *Panagrius hystrix* Andrewes, 1933

Panagrius hystrix Andrewes, 1933b: 105; Kataev, 2005b: 268; Lorenz, 2005: 385.

Indiophonus pilosus Ito, 1996c.

Distribution. ORR- India [Bihar: Pusa (Andrewes, 1933b: 105); Maharashtra: Nagpur (Andrewes, 1933b: 105)].

85. *Panagrius nigricans* (Ito, 1996)

Indiophonus nigricans Ito, 1996c: 224; Lorenz, 2005: 375.

Panagrius nigricans (Ito, 1996); Kataev, 2005b: 268.

Distribution. ORR- India [Tamil Nadu: Karikal (Ito, 1996c: 224); Pondicherry (Ito, 1996c: 224)].

3.3 Subtribe Harpalina Bonelli, 1810

3.3.1. Genus *Acinopus* Dejean, 1821

Type species: *Carabus megacephalus* Rossi, 1794.

Acinopus Dejean, 1821: 13; Dejean, 1829: 31; Lacordaire, 1854: 287; Gemminger & Harold, 1868: 259; Tschitschérine, 1900c: 358; id. 1901: 230; Andrewes, 1924a: 30; id. 1930b: 8; Noonan, 1976: 52; Kataev et al., 2003: 367; Lorenz, 2005: 383; Kataev & Wrase, 2017b: 515.

3.3.1.1. Subgenus *Acinopus* Dejean, 1821

Type species: *Carabus megacephalus* Rossi, 1794; Noonan, 1976: 52; Kataev et al., 2003: 367; Lorenz, 2005: 383; Kataev & Wrase, 2017b: 515.

Pachacinopus Jeanne, 1971.

86. *Acinopus laevigatus* Ménétriés, 1832

Acinopus laevigatus Ménétriés, 1832: 128; Andrewes, 1930b: 8; Lorenz, 2005: 383; Wrase & Kataev, 2016: 1803; Kataev & Wrase, 2017b: 515; Keikhosravi et al., 2020: 58.

laevigatus kashmirensis Schauberger, 1927.

Distribution. PAR- India [Jammu & Kashmir: Sind Valley, Srinagar, Sonemarg (Andrewes, 1930b: 8), Ladakh, Khalsi, Ganderbal, Zabarwan, Pari Mahal (Wrase & Kataev, 2016: 1803); Himachal Pradesh: Bashahr, Pooh, Lahaul and Spiti, Kyelang, Kinnaur, Shimla (Wrase & Kataev, 2016: 1803)]; PAR- Afghanistan; Azerbaijan; Armenia; Bulgaria; China; Croatia; Egypt; Georgia; Greece; Israel; Iran; Iraq; Kazakhstan; Kyrgyzstan; Moldava; Pakistan; Romania; Russia- South European Territory; Tajikistan; Turkmenistan; Turkey; Ukraine; Uzbekistan.

3.3.2. Genus *Allosiopelus* Ito, 1995

Type species: *Allosiopelus punctatipennis* Ito, 1995.

Allosiopelus Ito, 1995: 153; Lorenz, 2005: 376; Kataev, 2021: 453; Sruthi & Sabu, 2022: 21624.

Remarks. Genus Endemic to India with two species from southern India.

87. *Allosiopelus fulvicollis* Ito, 2016

Allosiopelus fulvicollis Ito, 2016: 365; Kataev, 2021: 453.

Distribution. ORR- India [Tamil Nadu: Coimbatore, Chennai (Ito, 2016: 365)].

88. *Allosiopelus punctatipennis Ito, 1995

Allosiopelus punctatipennis Ito, 1995: 154; Lorenz, 2005: 376; Sruthi & Sabu, 2022: 21624.

Specimen examined: 1 ex. 'India: Tamil Nadu, Srivilliputhur, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Tamil Nadu: Tharangambadi (Tranquebar) (Ito, 1995: 154); Pondicherry (Ito, 1995: 154); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21624)].

3.3.3. Genus *Bradybaenus* Dejean, 1829

Type species: *Carabus scalaris* Olivier, 1808.

Bradybaenus Dejean, 1829: 160; Hope, 1838: 84; Lacordaire, 1854: 292; Gemminger & Harold, 1868: 261; Péringuey, 1896: 427; Andrewes, 1930b: 54; Jeannel, 1948: 667; Bruneau de Miré, 1976: 274; Noonan, 1976; 50; Facchini & Sciaky, 2004: 11; Lorenz, 2005: 382; Facchini & Giachino, 2020: 9.Calodromus Nietner, 1858.

89. **Bradybaenus festivus* Dejean, 1829

Bradybaenus festivus Dejean, 1829: 163; Bates, 1886: 77; id. 1891b: 333; Andrewes, 1930b: 54; Lorenz, 2005: 382; Kushwaha et al., 2015: 22.

Calodromus exornatus Nietner, 1858.

Bradybaenus ornatus Redtenbacher, 1867.

Specimen examined: 1 ex. 'India: Tamil Nadu, Srivilliputhur, 15.X.2015, S. V. Akhil & V. A. Jithmon'; 1 ex. 'India: Madhya Pradesh, Raisen, Badi, Forest rest house, 04.IX.2009, Dr. D. K. Harshey'.

Distribution. ORR- India [Rajasthan: Ajmer (Andrewes, 1930b: 54); Jharkhand: Konbir (Bates, 1891b: 333; Andrewes, 1930b: 54), Chota Nagpur (Andrewes, 1930b: 54); Chhattisgarh: Raipur, Barnawapara (Kushwaha et al., 2015: 22); Karnataka: Mysore, Chikkaballapur (Andrewes, 1930b: 54); Tamil Nadu: Chennai (Bates, 1891b:

333), Madura, Coimbatore (Andrewes, 1930b: 54)]; PAR- India [West Bengal: Panighatta (Andrewes, 1930b: 54)]; ORR- Sri Lanka; AFR- Senegal.

3.3.4. Genus *Coleolissus* Bates, 1892

Type species: *Hypolithus perlucens* Bates, 1878.

Coleolissus Bates, 1892b: 338; Lesne, 1904: 74; Andrewes, 1930b: 119; id. 1939: 132; Habu, 1973: 215; Noonan, 1976: 47; id. 1985: 54; Saha, 1995: 67; Kataev et al., 2003: 369; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517; Baehr, 2018: 46; Kataev & Wrase, 2018: 359; Kataev, 2021: 452; Kataev, 2022: 286.

Tenuistilus Habu, 1978c.

3.3.4.1. Subgenus *Coleolissus* Bates, 1892

Type species: *Hypolithus perlucens* Bates, 1878.

Coleolissus Bates, 1892b: 338; Habu, 1973: 216; Kataev et al., 2003: 369; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517; Akhil, 2020: 86.

Tenuistilus Habu, 1978c.

90. *Coleolissus brevis* Kataev & Wrase, 2023

Coleolissus brevis Kataev & Wrase, 2023: 284.

Distribution. PAR- India [Sikkim: Khecheoparin (Khecheopalri) lake (Kataev & Wrase, 2023: 284)].

Remarks. Endemic to the Himalaya Hotspot of Biodiversity.

91. *Coleolissus deformipenis* Kataev, 2022

Coleolissus deformipenis Kataev, 2022: 292.

Distribution. ORR- India [Kerala: Eravikulam (Kataev, 2022: 292)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity.

92. *Coleolissus inessae* Kataev, 2021

Coleolissus inessae Kataev, 2021: 449.

Distribution. ORR- India [Karnataka: Jog Falls (Kataev, 2021: 449)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity.

93. ****Coleolissus iris* **Andrewes, 1924

Coleolissus iris Andrewes, 1924b: 135; id. 1930b: 119; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517; Akhil, 2020: 86; Kataev, 2022: 294.

Hyphaereon iris (Andrewes, 1924b); Noonan, 1985: 55.

Coleolissus andrewesi Alluaud, 1932 [RN].

Calathomimus splendens Ito, 1997.

Coleolissus turturensis Ito, 2016.

Specimens examined: 2 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021. K Nijisha'; 2 ex. 'India: Kerala, Kannur, Odakkad, 22.XII.2021. K Shigina'; 1 ex. 'India: Tamil Nadu, Srivilliputhur, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- India [Punjab: Hoshiarpur, Rormazara (Kataev, 2022: 294), Chandigarh (Ito, 1997: 518); Madhya Pradesh: Mhow (Dr. Ambedkar Nagar), Balaghat (Andrewes, 1930b: 119); Odisha: Khorda (Andrewes, 1924b: 135); Maharashtra: Khandesh, Nagpur, Mumbai (Andrewes, 1930b: 119); Karnataka: Mysore, Nandidurg (Andrewes, 1930b: 119); Tamil Nadu: Vilupparam (Andrewes, 1930b: 119; Kataev, 2022: 294), Auroville (Kataev, 2022: 294), Chennai (Andrewes, 1930b: 119; Ito, 1997: 518), Kodaikanal, Nilgiri Hills, Palni Hills (Andrewes, 1924b: 135), Karikal, Coimbatore (Ito, 1997: 518);; Pondicherry (Ito, 1997: 518); Kerala: Eravikulam, Kallar, Munnar (Kataev, 2022: 294));, PAR- India (Uttarakhand: Dehra Dun (Andrewes, 1930b: 119), Kumaon (Andrewes, 1924b: 135)]; ORR- Sri Lanka; PAR- Nepal; Pakistan.

94. *Coleolissus kejvali* Kataev, 2022

Coleolissus kejvali Kataev, 2022: 290.

Distribution. ORR- India [Kerala: Kallar (Kataev, 2022: 290)].

95. *Coleolissus monstrosipenis* Kataev, 2022

Coleolissus monstrosipenis Kataev, 2022: 296.

Distribution. ORR- India [Maharashtra: Mulshi environment, Pune (Kataev, 2022: 296)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity.

96. *_Coleolissus nakajimai_ Ito, 2016

Coleolissus nakajimai Ito, 2016: 362.

Specimen examined: 1 ex. 'India: Tamil Nadu, Srivilliputhur, 15.X.2015, S. V. Akhil & V. A. Jithmon'.

Distribution. ORR- [India: Tamil Nadu: Anamalai Hills, Valparai (Ito, 2016: 362)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity.

97. *Coleolissus noeli* Andrewes, 1930

Coleolissus noeli Andrewes, 1930a: 18; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517.

Hyphaereon noeli (Andrewes, 1930a); Noonan, 1985: 55.

Distribution. PAR- India [West Bengal: Kalimpong (Andrewes, 1930a: 18)].

Remarks. Endemic to the Himalayan Hotspot of Biodiversity.

98. *Coleolissus perlucens* (Bates, 1878)

Hypolithus perlucens Bates, 1878b: 715; id. 1892b: 339.

Coleolissus perlucens (Bates, 1878b); Andrewes, 1930b: 120; id. 1939: 132; Saha, 1995: 67; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 517; Kataev, 2022: 286.

Hyphaereon perlucens (Bates, 1878b); Noonan, 1985: 55.

Distribution. ORR- India [West Bengal: Birbhum (Saha, 1995: 67)); PAR- India (Jammu & Kashmir (Bates, 1892b: 339); Uttarakhand: Karnaprayas (Kataev, 2022: 286)]; PAR- Pakistan.

3.3.5. Genus *Dioryche* MacLeay, 1825

Type species: *Harpalus torta* MacLeay, 1825.

Dioryche MacLeay, 1825: 21; Lacordaire, 1854: 300; Gemminger & Harold, 1868: 287; Bates, 1873: 271; †Baer, 1886: 102; Péringuey, 1896: 455; Alluaud, 1917: 321; Andrewes, 1919a: 156; id. 1924a: 32; id. 1930b: 146; id. 1933c: 344; Schauberger, 1935: 93; Noonan, 1976: 47; id. 1985: 34; Saha, 1995: 62; Kataev et al., 2003: 369; Lorenz, 2005: 376; Kataev, 2012a: 112; Kushwaha & Hegde, 2015: 402; Kataev & Wrase, 2017b: 518; id. 2018: 359; Akhil, 2020: 87; Kataev & Wrase, 2020: 837; Sruthi & Sabu, 2022: 21624.

Hypodioryche Schauberger, 1935.

99. *Dioryche chinnada* Andrewes, 1921

Dioryche chinnada Andrewes, 1921b: 342: id. 1930b: 146; Shauberger, 1935: 93; †Dobler, 1975: 107; Noonan, 1985: 35; Saha, 1995: 62; Kataev et al., 2003: 369; Kushwaha & Hegde, 2015: 402; Kataev & Wrase, 2017b: 518.

Distribution. ORR- India [Uttar Pradesh: Gorakhpur (Andrewes, 1930b: 146); Bihar: Pusa (Andrewes, 1930b: 146); Madhya Pradesh (Kushwaha & Hegde, 2015: 402); West Bengal (Andrewes, 1930b: 146); Chhattisgarh: Bilaspur, Janjgir, Tumgaon (Raipur) (Andrewes, 1921b: 342); Odisha: Ganjam, Barkuda Island (Chilka Lake) (Andrewes, 1921b: 342); Maharashtra: Mumbai, Satara, Medha, Ratnagiri, Pimple, Nagpur (Andrewes, 1921b: 342);

Karnataka: Kanara, Belagavi, Bangalore (Andrewes, 1921b: 342); Tamil Nadu: Chennai, Coimbatore (Andrewes, 1921b: 342); Pondicherry (Andrewes, 1921b: 342); Kerala: Malabar (Andrewes, 1921b: 342)]; ORR- Sri Lanka.

100. ****Dioryche convexa* **Andrewes, 1924

Dioryche convexa Andrewes, 1924a: 90; id. 1930b: 147; Schauberger, 1935: 93; Noonan, 1985: 35; Kataev et al., 2003: 370; Kataev & Wrase, 2017b: 518.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Assam: Majgaon (Andrewes, 1924a: 90); Madhya Pradesh: Jabalpur (Andrewes, 1924a: 90); Maharashtra: Mumbai (Andrewes, 1924a: 90); Karnataka: Belagavi, Nagargali (Andrewes, 1924a: 90)]; PAR- Nepal.

101. ****Dioryche cuprina* **(Dejean, 1829)

Selenophorus cuprinus Dejean, 1829: 96.

Dioryche cuprina (Dejean, 1829); Kataev, 2012a: 114; Kataev & Wrase, 2017b: 518; Sruthi & Sabu, 2022: 21624.

Cardiaderus scitus Walker, 1858.

Dioryche colombensis Andrewes, 1921b.

Dioryche colombensis Nietner, 1857b.

Harpalus colombensis Nietner, 1857b.

Platymetopus colombensis Bates, 1886.

Specimen examined: 1 ex. 'India: Tamil Nadu, Srivilliputhur, 15.X.2015, S. V. Akhil & V. A. Jithmon'; 5 ex. 'India: Tamil Nadu, Thirukkurinjudi, Vaalaiyathu odai, 24.IX.2018, Dr. R V & Party'; 2 ex. 'India: Tamil Nadu, Iron bridge, 29.IX.2018, R. Venkiteshan'.

Distribution. ORR- India [Goa (Kataev, 2012a: 114); Karnataka: Kanara (Kataev, 2012a: 114); Tamil Nadu: Karikal, Coimbatore, Chennai (Kataev, 2012a: 114);

Pondicherry (Kataev, 2012a: 114); Kerala: Thiruvananthapuram, Kallar, Calicut, Malabar (Kataev, 2012a: 114), Idukki, Alampetty (Sruthi & Sabu, 2022: 21624); Mahi (Kataev, 2012a: 114)]; ORR- Maldives; Sri Lanka; Thailand; PAR- Nepal.

102. *Dioryche dravidana* Kataev, 2012

Dioryche dravidana Kataev, 2012a: 123; Sruthi & Sabu, 2022: 21625.

Distribution. ORR- India [Karnataka: Mysore, Shivamogga (Kataev, 2012a: 123); Tamil Nadu: Shambaganur, Madura (Kataev, 2012a: 123); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625)].

103. *Dioryche lucidula* (Dejean, 1829)

Selenophorus lucidulus Dejean, 1829: 95.

Dioryche lucidula (Dejean, 1829); Lorenz, 2005: 376; Kataev, 2012a: 119; Kataev & Wrase, 2017b: 518.

Platymetopus colombensis var. *braccatus* Bates, 1891b.

Dioryche colombensis var. *braccatus* Andrewes, 1926a.

Dioryche braccatus Schauberger, 1934a.

Distribution. ORR- India [New Delhi (Kataev, 2012a: 119); Rajasthan: Jodhpur (Kataev, 2012a: 119); Uttar Pradesh: Jhansi, Babina (Kataev, 2012a: 119); Jharkhand: Konbir, Chota Nagpore (Tetara) (Bates, 1891b: 330); Madhya Pradesh: Panna National Park, Khujuraho (Kataev, 2012a: 119); West Bengal: Gangani (Kataev, 2012a: 119); Maharashtra: Nagpur (Kataev, 2012a: 119); Tamil Nadu: Karikal (Kataev, 2012a: 119); Pondicherry (Kataev, 2012a: 119)]; PAR- India [Uttarakhand: Karnaprayag, Haridvar-Chila, Rishikesh, Dehra Dun, Uttarkashi, Bageshwa, Khati, Mussoori, Dakpatthar, Nainital, Khairna Bridge, Ramganga valley (Kataev, 2012a: 119)]; ORR- Maldives; PAR- Bhutan; China; Nepal; Pakistan.

104. *Dioryche nagpurensis* (Bates, 1891)

Platymetopus nagpurensis Bates, 1891b: 329.

Dioryche nagpurensis (Bates, 1891b): Andrewes, 1921b: 342; id. 1924a: 116; id. 1930b: 147; Schauberger, 1935: 93; Noonan, 1985: 35; Saha, 1995: 62; Kataev et al., 2003: 370; Lorenz, 2005: 376; Kataev & Wrase, 2017b: 518.

Distribution. ORR- India [Uttar Pradesh (Saha, 1995: 62); Bihar (Andrewes 1930b: 147); Jharkhand: Konbir (Bates, 1891b: 329), Chota Nagpur (Andrewes, 1921b: 342), Sarda, Tinpahar, Rajmahal (Andrewes 1930b: 147); Odisha: Barkuda Island (Chilka Lake), Cuttack, Brahmapur, Saran, Manbhum (Andrewes 1930b: 147); West Bengal: Calcutta, Sunderbans, Murshidabad, Kharagpur, Midnapore (Medinipur) (Saha, 1995: 62)]; PAR- India [Uttarakhand: Kumaon (Andrewes, 1924a: 116), Dehra Dun, Almora, Mussoori (Andrewes, 1930b: 147)]; ORR- Sri Lanka; PAR- Nepal; Pakistan.

105. *Dioryche nitidula* Kataev, 2012

Dioryche nitidula Kataev, 2012a: 125.

Distribution. ORR- India [Rajasthan: Jodhpur (Kataev, 2012a: 125)].

106. *Dioryche solida* Andrewes, 1933

Dioryche solida Andrewes, 1933d: 32; Schauberger, 1935: 93; Noonan, 1985: 35; Lorenz, 2005: 376.

Distribution. ORR- India [Maharashtra: Mumbai (Andrewes, 1933d: 32); Karnataka: Kanara (Andrewes, 1933d: 32)].

107. *Dioryche subrecta* Kataev, 2012

Dioryche subrecta Kataev, 2012a: 127; Kataev & Wrase, 2017b: 518.

Distribution. ORR- India [West Bengal: Gangani (Kataev, 2012a: 127)]; PAR- India [Uttarakhand: Haridwar, Chilla, Uttarkashi (Kataev, 2012a: 127)]; PAR- Nepal; Pakistan.

Remarks. Hind wings fully developed (Kataev, 2012a).

108. ****Dioryche torta* **MacLeay, 1825

Dioryche torta MacLeay, 1825: 21; Hope, 1838: t. 2; Gemminger & Harold, 1868: 287; Bates, 1873a: 271; Andrewes, 1919a: 154; id. 1926a: 68; id. 1930b: 148; id. 1933c: 344; Schauberger, 1934a: 10; id. 1935: 93; Noonan, 1985: 35; Saha, 1995: 63; Lorenz, 2005: 376

ssp. formosensis Schauberger, 1934a: 12; Kataev et al., 2003: 369; Lorenz, 2005: 376; Kataev & Wrase, 2017b: 518; Sruthi & Sabu, 2022: 21625.

ssp. *timorensis* Schauberger, 1934a: 12; Lorenz, 2005: 376.

ssp. *torta* MacLeay, 1825: 21; Schauberger, 1934a: 10; Kataev et al., 2003: 369; Lorenz, 2005: 376; Kataev & Wrase, 2017b: 518.

Platymetopus amoena Dejean, 1829.

Platymetopus laetula Bates, 1889c.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021. K Nijisha'.

Distribution. ORR- India [West Bengal: Murshidabad (Saha, 1995: 63); Tamil Nadu: Nilgiri Hills (Andrewes, 1922: 291); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625)]; PAR- India [Uttarakhand: Gori Valley (Andrewes, 1926a: 68)]; ORR- Indochina; Indonesia; Myanmar; Philippines; Sri Lanka; PAR- Taiwan.

3.3.6. Genus *Harpalus* Latreille, 1802

Type species: *Carabus proteus* Paykull, 1790.

Harpalus Latreille, 1802: 92; Dejean, 1829: 190; Hope, 1838: 84; Lacordaire, 1854: 295; Motschulsky, 1864: 209; Gemminger & Harold, 1868: 272; Péringuey, 1896: 441; Tschitschérine, 1900c: 360; id. 1901: 233; Andrewes, 1924a: 36; id. 1930b: 176; Jeannel, 1948: 674; Habu, 1973: 67; Noonan, 1976: 31; Kirschenhofer, 1992: 21; Saha, 1995: 60; Kataev, 1997a: 123; Saha & Halder, 2000: 15; Kataev et al., 2003:

369; Lorenz, 2005: 363; Park et al., 2006: 95; Kataev, 2014b: 258; Kataev & Wrase, 2017b: 519; Serrano et al., 2017: 219.

3.3.6.1. Subgenus *Cryptophonus* Brandmayr & Zetto Brandmayr, 1982

Type species: *Harpalus tenebrosus* Dejean, 1829.

Cryptophonus Brandmayr & Zetto Brandmayr, 1982: 81; Kataev et al., 2003: 370; Lorenz, 2005: 364; Kataev, 2012b: 803; id. 2013: 372; Kataev & Wrase, 2017b: 519.

109. *Harpalus grilli* Kataev, 2002

Harpalus grilli Kataev, 2002c: 373; Lorenz, 2005: 368; Kataev, 2012b: 814; id. 2013: 382; id. 2015a: 94; 2015b: 539; Kataev & Wrase, 2017b: 519.

Distribution. PAR- India [Uttarakhand: Uttarkashi, Dharali (Kataev, 2013: 382)]; PAR- Nepal; Pakistan.

110. *Harpalus idiotus* Bates, 1889

Harpalus idiotus Bates, 1889b: 213; Andrewes, 1927: 111; id. 1930b: 178; Kataev, 1997a: 156; Kataev et al., 2003: 370; Lorenz, 2005: 364; Wrase, 2005: 844; Kataev, 2012b: 813; id. 2013: 380; Kataev & Wrase, 2017b: 519.

Selenophorus quadricollis Redtenbacher, 1844.

Distribution. PAR- India [Jammu & Kashmir: Gurais Valley (Bates, 1889b: 213), Srinagar, Ladak, Kharbu, Baltal, Sonamarg, Sind Valley (Kataev, 1997a: 156); Sumdo (Kataev, 2013: 380); Himachal Pradesh: Rohtang Pass, Khoksar, Lahaul, Sissu, Kyelang, Tandi, Jahalman, Zingzingbar, Patseo, Spiti, Pulga, Bushahr, Poo (Kataev, 2013: 380); Uttarakhand: Kumaon, Sundherdhunga Valley, Kali Valley, Ranikhet (Andrewes, 1930b: 178)]; PAR Afghanistan; Pakistan.

3.3.6.2. Subgenus *Harpalus* Latreille, 1802

Type species: *Carabus proteus* Paykull, 1790.

Harpalus Latreille, 1802: 92; Noonan, 1976: 35; Habu, 1973: 144; Kataev et al., 2003: 371; Lorenz, 2005: 365; Kataev & Wrase, 2017b: 520.

Acardystus Reitter, 1908.

Actephilus Stephens, 1833.

Amblystus Motschulsky, 1864.

Artabas Gozis, 1882.

Baeticoharpalus Serrano & Lecina, 2008.

Bioderus Motschulsky, 1848.

Brachypangus Tschitschérine, 1898.

Cephalotypsis Tschitschérine, 1901.

Conicus Motschulsky, 1844.

Cordoharpalus Hatch, 1949.

Epiharpalus Reitter, 1900.

Euharpalops Casey, 1924.

Euxenus Gistel, 1856.

Haploharpalus Schauberger, 1926.

Harpalellus Lindroth, 1968.

Harpalobius Reitter, 1900.

Harpaloderus Reitter, 1900.

Harpalomerus Casey, 1914.

Harpalophonus Ganglbauer, 1891.

Harpaloxys Reitter, 1900.

Hypsinephus Bates, 1878b.

Lasioharpalus Reitter, 1900.

Licinoderus Sainte-Claire Deville, 1905.

Loxophonus Reitter, 1894.

Neoharpalus Mateu, 1954.

Nephoharpalus Huang et al., 1996.

Ooistus Motschulsky, 1864.

Pharalus Casey, 1914.

Pheuginus Motschulsky, 1844.

Proteonus Fischer von Waldheim, 1829.

Rapahlus Lutshnik, 1922.

Smirnovia Lutshnik, 1922.

111. *Harpalus amarellus* Bates, 1891

Harpalus amarellus Bates, 1891a: 10; Andrewes, 1927: 111; id. 1930b: 176; Kataev, 1989: 261; id. 2002c: 383; Kataev et al., 2003: 372; Lorenz, 2005: 365; Wrase, 2005: 844; Kataev & Wrase, 2017b: 522.

Harpalus andrewesi Schauberger, 1932c [RN].

Harpalus anxius var. a*ndrewesi* Schauberger in Csiki, 1932: 1169 (nom pro *H. amarellus* sensu Andrewes, 1924).

Harpalus confinalis Andrewes, 1932.

Distribution. PAR- India [Jammu & Kashmir (Kataev, 2002c: 383); Himachal Pradesh: Kulu (Andrewes, 1930b: 176); Uttarakhand: Garhwal, Govind Pashu Vihar National Park, Taluka (Wrase, 2005: 844)]; PAR- Afghanistan; Nepal; Pakistan.

112. *Harpalus fuscipalpis* Sturm, 1818

Harpalus fuscipalpis Sturm, 1818: 66; Gemminger & Harold, 1868: 277; Kataev, 1989: 219; †Guèorguiev, 2000: 74; Kataev, 2002a: 193; Esdek & Ylldirim, 2003: 1150; Kataev et al., 2003: 376; Lorenz, 2005: 367; Marggi et al., 2010: 12; Kataev & Wrase, 2017b: 528.

Carabus contristatus Duftschmid, 1812.

Harpalus basilaris Kirby, 1837.

Harpalus celioides Ménétriés, 1848 [Ménétriés, 1848b].

Harpalus durescans Casey, 1924.

Amara extensus Walker, 1866.

Harpalus fulvipennis Motschulsky, 1844 [HN].

Harpalus furviculus Casey, 1924.

Harpalus narynensis Jedlička, 1958.

Harpalus obesulus LeConte, 1852.

Harpalus oblongus Casey, 1914.

Harpalus renoicus Casey, 1914.

Harpalus sejunctus Casey, 1914.

Harpalus semicastaneus Reitter, 1900.

Harpalus stocktonensis Casey, 1924.

Harpalus subenormis Casey, 1924.

Harpalus taphrioides Motschulsky, 1844.

Harpalus turculus Bates, 1878b.

Harpalus varicornis LeConte, 1847.

Harpalus ventricosus Casey, 1924.

Distribution. PAR- India [Jammu & Kashmir: Karakoram Range (Guèorguiev, 2000: 74)]; PAR- Afghanistan; Armenia; Austria; Azerbaijan; China; Czech Republic; France; Georgia; Hungary; Iran; Kazakhstan; Kyrgyzstan; Macedonia; Moldova; Mongolia; Pakistan; Russia- Central European Territory; Russia: East Siberia; South European Territory; Russia: Switzerland; Russia: West Siberia; Slovakia; Tajikistan; Turkey; Turkmenistan; Ukraine; Uzbekistan.

113. *Harpalus indicola* Bates, 1878

Harpalus indicola Bates, 1878b: 714; id. 1891a: 10; Andrewes, 1926a: 68; id. 1930b: 177; Schauberger, 1933a: 71; Kirschenhofer, 1992: 28; Saha, 1995: 61; Kataev, 1997a: 154; Saha & Halder, 2000: 15; Kataev, 2002c: 359; Lorenz, 2005: 368; Kataev, 2014b: 258.

ssp. *indicola* Bates, 1878b: 714; Kataev, 2002c: 361; Kataev et al., 2003: 377; Lorenz, 2005: 368; Kataev & Wrase, 2017b: 530.

ssp. *kashmirensis* Bates, 1889b: 213; Andrewes, 1930b: 177; Schauberger, 1933a: 71; Kirschenhofer, 1992: 29; Kataev, 2002c: 363; Kataev et al., 2003: 377; Lorenz, 2005: 368; Kataev & Wrase, 2017: 530.

ssp. *uriensis* Schauberger, 1933a: 72; Kataev, 2002c: 363; Kataev et al., 2003: 377; Lorenz, 2005: 368; Kataev & Wrase, 2017: 530.

Distribution. ORR- India [Uttar Pradesh (Saha & Halder, 2000: 15); Bihar (Saha, 1995: 61); Meghalaya: Khasi Hills, Jayantia Hills (Saha & Halder, 2000: 15); Jharkhand: Chota Nagpur, Konbir (Andrewes, 1930b: 177)]; PAR- India [Jammu & Kashmir: Poonch (Kataev, 2002c: 361), Gurais Valley (Andrewes, 1930b: 177), Baramula, Kangan, Neelum [=Kishenganga] Valley (Kataev, 2002c: 359); Pir Panjal (Andrewes, 1930b: 177; Kataev, 2002c: 359); Uri (Schauberger, 1933a: 72); Himachal Pradesh: Kulu (Bates, 1891a: 10); Uttarakhand: Gori River Gorge (Andrewes, 1926a: 68); West Bengal: Darjeeling (Andrewes, 1930b: 177; Saha, 1995: 61); Sikkim (Kirschenhofer, 1992: 28)]; ORR- Myanmar; PAR- Afghanistan; China; Iran; Nepal; Pakistan.

114. *Harpalus melaneus* Bates, 1878

Harpalus melaneus Bates, 1878b: 714; id. 1891a: 10; Andrewes, 1924a: 36; id. 1926a: 68; id. 1930b: 177; Kataev, 1989: 244; Kirschenhofer, 1992: 30; Kataev, 2002c: 379; Lorenz, 2005: 369.

ssp. *melaneus* Bates, 1878b: 714; Kataev, 1989: 244; id. 2002c: 379; Kataev et al., 2003: 379; Lorenz, 2005: 369; Kataev & Wrase, 2017b: 532.

Harpalus iskerensis Jedlička, 1964.

Harpalus kohistanicus Kirschenhofer, 1992.

ssp. *sherpicus* Kataev, 2002c: 382; Lorenz, 2005: 369; Kataev & Wrase, 2017b: 532.

Distribution. ORR- India [Andhra Pradesh: Gandla (Andrewes, 1924a: 36); Maharashtra: Chimur (Andrewes, 1924a: 36), Kaygaon (Kirschenhofer, 1992: 30)]; PAR- India [Jammu & Kashmir: Baltal, Sonamarg (Bates, 1891a: 10; Andrewes, 1924a: 36; Kataev, 2002c: 382), Goorais Valley (Bates, 1891a: 10; Andrewes, 1924a: 36), Yusmarg, Gulmarg, Pir Panjal, Uri, Ladak, Pahalgam, Lidderwat, Daksum, Sind River (Bates, 1891a: 10; Andrewes, 1924a: 36), Chenab River, Margan-Pass, Kharbu, Dras River (Andrewes, 1924a: 36); Himachal Pradesh: Chamba, Dalhousie, Shimla (Andrewes, 1924a: 36; Kataev, 2002c: 382), Fagu, Baghi, Kufri, Narkanda, Spiti, Pulga, Lahoul, Zingzinbar, Patseo, Sissu, Kyelang (Andrewes, 1924a: 36), Kulu (Bates, 1891a: 10; Andrewes, 1924a: 36), Rohtang Valley (Andrewes, 1924a: 36; Kataev, 2002c: 382), Bushahr, Chini, Manali (Andrewes, 1924a: 36); Uttarakhand: Mundali, Dehra Dun, Burphu, Almora (Andrewes, 1930b: 177)]; PAR- Afghanistan; China; Mongolia; Nepal; Netherlands; Pakistan; AUR- New Zealand.

115. *Harpalus salinus* Dejean, 1829

Harpalus salinus Dejean, 1829: 341; Gemminger & Harold, 1868: 283; Kataev, 1984: 81; Lorenz, 2005: 370; Kataev & Wrase, 2016: 252.

ssp. *agonus* Tschitschérine, 1894: 259; Kataev, 1984: 82; †Guèorguiev, 2000: 74; Kataev et al., 2003: 381; Lorenz, 2005: 370; Kataev & Wrase, 2016: 269; id. 2017b: 536.

Hypsinephus ellipticus Bates, 1878b [HN].

Distribution. PAR- India [Jammu & Kashmir: Pangong valley (Bates, 1878: 716)]; PAR- Afghanistan; China; Kyrgyzstan; Mongolia; Pakistan; Russia; Tajikistan.

3.3.6.3. Subgenus *Pseudoophonus* Motschulsky, 1844

Type species: *Carabus ruficornis* Fabricius, 1775.

Pseudoophonus Motschulsky, 1844: 196; id. 1864: 208; Tschitschérine, 1901: 236; Andrewes, 1930b: 243; Habu, 1973: 75; Noonan, 1976: 33; Kataev, 2001b: 391; Kataev et al., 2003: 384; Lorenz, 2005: 364; Moon & Paik, 2006: 66; Kataev & Liang, 2015: 3; Kataev & Wrase, 2017b: 540.

Cephalomorphus Tschitschérine, 1897.

Empeirus Motschulsky, 1844 [RN].

Erpeinus Motschulsky, 1844.

Holosus Fischer von Waldheim, 1829 [nom. obl.].

Megapangus Casey, 1914.

Migadophonus Tschitschérine, 1897.

Neopardileus Habu, 1954.

Pardileus Gozis, 1882.

Platus Motschulsky, 1844.

Pseudophonus Motschulsky, 1844 [incorr. subs. spell].

116. *Harpalus indicus* Bates, 1891

Harpalus indicus Bates, 1891b: 332; Kataev, 2001b: 394; id. 2002c: 373; id. 2002d: 725; Kataev et al., 2003: 385; Lorenz, 2005: 364; Kataev, 2014b: 259.

Pardilieus indicus (Bates, 1891b); Andrewes, 1924a: 35; id. 1926a: 68.

Ophonus indicus (Bates, 1891b); 1930b: 244.

ssp. *indicus* Bates, 1891b: 332: Kataev, 2014b: 259.

Harpalus perlucidus Schauberger, 1929.

Harpalus indicus andrewesianus Schauberger, 1932a.

Harpalus eberti Jedlička, 1966.

Gnathaphanus dierli Jedlička, 1966.

Harpalus janetscheki Jedlička, 1970.

Distribution. ORR- India [Assam (Bates, 1891b: 332); Meghalaya: Jantia Hills, Jowai (Kataev, 2001b: 394); West Bengal: Gopaldhara (Kataev, 2014b: 259); Jharkhand: Konbir, Tetara (Bates, 1891b: 332)]; PAR- India [Jammu & Kashmir: Poonch (Kataev, 2002d: 725); Himachal Pradesh: Spiti, Pulga, Kothi Village (Andrewes, 1924a: 35; Kataev, 2014b: 259), Bajaura, Kangara, Kulu, Baddi (Andrewes, 1924a: 35); Uttarakhand: Gory River Gorge (Andrewes, 1926a: 68), Almora, Kumaon, Bageschwar, Khati village (Kataev, 2014b: 259)]; ORR- Laos; Myanmar; Sri Lanka; Vietnam; PAR- Bhutan; China; Italy; Nepal; Pakistan; Taiwan; AFR- Democratic Republic of Congo.

117. *Harpalus meghalayensis* Kataev, 2001

Harpalus meghalayensis Kataev, 2001b: 403; Lorenz, 2005: 364; Kataev & Liang, 2015: 8.

Distribution. ORR- India [Meghalaya: Shillong, Mawphlang (Kataev, 2001b: 403)].

Remarks. Endemic to the Indo- Burma Hotspot of Biodiversity.

118. *Harpalus meridianus* Andrewes, 1923

Harpalus meridianus Andrewes, 1923b: 443; Kataev, 2001b: 406; Kataev et al., 2003: 385; Lorenz, 2005: 364; Kataev & Wrase, 2017b: 542.

Ophonus meridianus (Andrewes, 1923); Andrewes, 1930b: 244; Akhil, 2020: 88.

Harpalus indicola sensu Schauberger, 1930 (non Bates, 1878).

Distribution. ORR- India [Maharashtra: Mumbai, Nasik (Kataev, 2001b: 406); Tamil Nadu; Chennai, Nilgiri Hills, Palni Hills, Utacamand (Andrewes, 1923b: 443), Kodaikanal, Madura (Andrewes, 1930b: 244)]; PAR- India [Jammu & Kashmir: Daksum, Pahalgam (Kataev, 2001b: 406); Uttarakhand: Kumaon, Nainital, Bhimtal (Kataev, 2001b: 406)]; PAR- Mongolia; Pakistan.

3.3.6.4. Subgenus *Zangoharpalus* Huang, 1998

Type species: *Harpalus yadongensis* Huang, 1998.

Zangoharpalus Huang, 1998: 201; Kataev et al., 2003: 386; Lorenz, 2005: 372; Kataev & Wrase, 2017b: 543.

119. *Harpalus praticola* Bates, 1891

Harpalus praticola Bates, 1891b: 332; Andrewes, 1930b: 177; Kataev, 1997a: 152; id. 2002c: 373; Kataev et al., 2003: 386; Lorenz, 2005: 372; Kataev, 2014b: 258; Kataev & Wrase, 2017b: 543.

Harpalus birmanus Andrewes, 1947.

Harpalus finitimus Schauberger, 1934d.

Harpalus himalayicus Jedlička, 1966.

Harpalus lepcha Andrewes, 1930a.

Harpalus nepalensis Jedlička, 1966.

Harpalus yadongensis Huang, 1998.

Distribution. ORR- India [Assam (Kataev, 2002c: 373); Jharkhand: Konbir (Bates, 1891b: 332)]; PAR- India [Jammu & Kashmir: Muzaffarabad (Kataev, 2002c: 373); Himachal Pradesh: Kulu (Bates, 1891b: 332), Bashisht (Kataev, 1997a: 152); Uttarakhand: Corbet Nature Park (Kataev, 1997a: 152); West Bengal: Kurseong,

Darjeeling (Kataev, 1997a: 152)]; ORR- Indochina; Myanmar; PAR- China; Nepal; Pakistan.

3.3.7. Genus *Harpaliscus* Bates, 1892

Type species: *Harpaliscus birmanicus* Bates, 1892.

Harpaliscus Bates, 1892b: 340; Andrewes, 1930b: 175; Noonan, 1976: 44; id. 1985: 27; Saha, 1995: 61; Saha & Halder, 2000: 15; Kataev et al., 2003: 393; Lorenz, 2005: 375; Kataev & Wrase, 2017b: 518.

120. *Harpaliscus andrewesianus* (Schauberger, 1934)

Trichotichnus andrewesianus Schauberger, 1934c: 100.

Siopelus andrewesianus (Schauberger, 1934c): Noonan, 1985: 28; Lorenz, 2005: 375; Akhil, 2020: 89.

Harpaliscus andrewesianus (Schauberger, 1934): Kataev & Wrase, 2017b: 518.

Harpaliscus punctulatus Andrewes, 1923.

Distribution. ORR- India [West Bengal: Calcutta (Schauberger, 1934c: 100); Tamil Nadu: Chennai, Madura, Shembaganur, Tiruchirappalli, Nilgiri Hills (Schauberger, 1934c: 100), Pillur, Ouchterlony Valley, Palni Hills, Kavunji, Kookal, Ootacamund, Kodaikanal Lake, Shevaroy Hills, Naduvattam, Yercaud (Andrewes, 1923: 447); Pondicherry (Schauberger, 1934c: 100)]; PAR- China; Nepal.

121. *Harpaliscus birmanicus* (Bates, 1892)

Harpaliscus birmanicus Bates, 1892b: 341; Andrewes, 1926a: 68; id. 1930b: 175; Saha, 1995: 62; Kataev & Wrase, 2017b: 519.

Siopelus birmanicus (Bates, 1892b): Noonan, 1985: 28; Lorenz, 2005: 375.

Distribution. ORR- India [Uttar Pradesh (Saha, 1995: 62); Assam: Sadiya, Margherita (Andrewes, 1930b: 175); Bihar (Saha, 1995: 62); Meghalaya: Shillong (Andrewes, 1930b: 175), Khasi Hills (Andrewes, 1930b: 175); Manipur (Andrewes,

1926a: 68); Jharkhand: Sarju Valley (Andrewes, 1926a: 68)]; PAR- India [Uttarakhand: Garhwal, Kumaon (Andrewes, 1926a: 68), Almora (Andrewes, 1930b: 175); Sikkim (Andrewes, 1930b: 175); West Bengal: Gopaldhara (Andrewes, 1930b: 175)]; ORR- Indochina; Laos; Myanmar; Vietnam; PAR- China; Japan; Nepal.

122. *Harpaliscus stevensi* (Schauberger, 1934)

Trichotichnus stevensi Schauberger, 1934c: 99.

Siopelus stevensi (Schauberger, 1934c): Noonan, 1985: 28; Kataev et al., 2003: 394; Lorenz, 2005: 375.

Harpaliscus stevensi (Schauberger, 1934): Kataev & Wrase, 2017b: 519.

Distribution. ORR- India [West Bengal: Rungbong-Valley (Schauberger, 1934c: 99); PAR- India (Sikkim (Schauberger, 1934c: 99); West Bengal: Buxa Dooars (Schauberger, 1934c: 99)]; PAR- China; Nepal.

3.3.8. Genus *Kareya* Andrewes, 1919

Type species: *Platymetopus erebius* Bates, 1892.

Kareya Andrewes, 1919b: 473; id, 1924a: 32; id. 1930b: 186; Jedlička, 1957: 91; Noonan, 1976: 44; id. 1985: 33; Saha, 1995: 65; Saha & Halder, 2000: 16; Kataev et al., 2003: 387; Lorenz, 2005: 374; Kataev, 2010: 279; id. 2012a: 113; id. 2015b: 348; Kushwaha & Hegde, 2015: 402; Kataev & Wrase, 2017b: 544.

Pseudokareya Schauberger, 1933a.

Paratheles Basilewsky, 1950.

123. *Kareya edentata* (Bates, 1892)

Platymetopus (?) *edentatus* Bates, 1892b: 331.

Kareya edentatus (Bates, 1892b): Andrewes, 1919b: 473.

Kareya edentata (Bates, 1892b): Andrewes, 1924a: 32; id. 1930b: 186; Schauberger, 1933a: 78; Jedlička, 1957: 91; Saha, 1995: 65; Saha & Halder, 2000: 16; Lorenz, 2005: 373; Kataev, 2015b: 360; Kataev & Wrase, 2017b: 544.

Distribution. ORR- India [Uttar Pradesh (Saha, 1995: 65); Assam: Mandia (Andrewes, 1930b: 186); Bihar: Chapra, Pusa (Andrewes, 1930b: 186); Meghalaya: Shillong, Khasi Hills (Andrewes, 1930b: 186; Saha & Halder, 2000: 16), Ri-Bhoi (Saha & Halder, 2000: 16); Manipur (Andrewes, 1930b: 186); Jharkhand: Sahibganj, Rajmahal (Andrewes, 1930b: 186); Madhya Pradesh: Pachmarhi, Satpura Hills (Kataev, 2015b: 360); Maharashtra: Satara, Koyna River (Andrewes, 1930b: 186)]; PAR- India [Himachal Pradesh: Bajaura, Kangra (Andrewes, 1924a: 32); Uttarakhand: Kumaon, Nainital, Bhimtal (Kataev, 2015b: 360), Almora (Andrewes, 1930b: 186); Sikkim (Kataev, 2015b: 360); West Bengal: Gopaldhara, Kalimpong (Andrewes, 1930b: 186), Darjeeling (Saha, 1995: 6)] ; ORR- Laos; Myanmar; Vietnam; PAR- China; Nepal.

124. *Kareya erebia* (Bates, 1892)

Platymetopus (?) *erebius* Bates, 1892b: 331.

Kareya erebius (Bates, 1892b): Andrewes, 1919b: 473.

Parophonus erebia (Bates, 1892b): Lorenz, 2005: 374.

Kareya erebia (Bates, 1891b): Andrewes, 1930b: 187; Jedlička, 1957: 91; Noonan, 1985: 34; Kataev et al., 2003: 387; Kataev, 2015b: 351; Kataev & Wrase, 2017b: 544.

Distribution. ORR- India [Assam: Kaziranga Nature Reserve (Kataev, 2015b: 351); Jharkhand (Kataev, 2015b: 351); Madhya Pradesh: Mhow, Jabalpur (Andrewes, 1930b: 187); Odisha: Puri, Surada (Andrewes, 1930b: 187); Maharashtra: Nagpur (Kataev, 2015b: 351); PAR- India (West Bengal: Darjeeling (Kataev & Wrase, 2017: 544)]; ORR- Bangladesh; Myanmar; PAR- China; Nepal.

125. *Kareya grandiceps* (Bates, 1892)

Platymetopus (?) *grandiceps* Bates, 1892b: 332.

Parophonus grandiceps (Bates, 1892b): Lorenz, 2005: 374.

Kareya sublaevis var. *grandiceps* (Bates, 1892b): Andrewes, 1930b: 187.

Kareya grandiceps (Bates, 1892b): Andrewes, 1919b: 473; Jedlička, 1957: 93; Noonan, 1985: 34; Kataev et al., 2003: 387; Kataev, 2015b: 358; Kataev & Wrase, 2017b: 544.

Distribution. PAR- India [West Bengal: Darjeeling (Kataev & Wrase, 2017: 544)]; ORR- Myanmar; PAR- China; Nepal.

126. *Kareya major* (Bates, 1891)

Platymetopus (?) *major* Bates, 1891b: 330.

Kareya major (Bates, 1891b): Andrewes, 1919b: 473; id. 1930b: 188; Noonan, 1985: 34; Kataev et al., 2003: 387; Lorenz, 2005: 374; Kataev, 2015b: 355; Kataev & Wrase, 2017b: 545.

Distribution. ORR- India [Uttar Pradesh: Lucknow (Andrewes, 1930b: 188); Jharkhand: Konbir, Chota Nagpur (Tetara) (Bates, 1891b: 330; Andrewes, 1930b: 188), Chaibasa, Ranchi, Lohardaga (Kataev, 2015b: 355); Madhya Pradesh: Balaghat (Andrewes, 1930b: 188); Andhra Pradesh: Visakhapatnam (Kataev, 2015b: 355); Goa: Mollem (Kataev, 2015b: 355)]; PAR- India [Uttarakhand: Kumaon, Nainital, Bhimtal (Kataev, 2015b: 355)]; PAR- Nepal.

127. *Kareya sublaevis* (Bates, 1891)

Platymetopus (?) *sublaevis* Bates, 1891b: 330; id. 1892b: 331.

Kareya sublaevis (Bates, 1891b): Andrewes, 1919: 473; id. 1930b: 187; Jedlička, 1957: 91; Noonan, 1985: 34; Lorenz, 2005: 374; Kataev, 2015b: 354; Kushwaha & Hegde, 2015: 402; Kataev & Wrase, 2017b: 545.

Distribution. ORR- India [Uttar Pradesh: Lucknow (Andrewes, 1930b: 187); Assam: Kaziranga Nature Reserve (Kataev, 2015b: 354); Bihar: Purnea (Andrewes, 1930b: 187); Jharkhand: Konbir (Bates, 1891b: 330; Andrewes, 1930b: 187), Chota Nagpur (Andrewes, 1930b: 187); Madhya Pradesh: Mandla, Baihar (Andrewes, 1930b: 187); Maharashtra: Nagpur (Andrewes, 1930b: 187; Kataev, 2015b: 354); Andhra Pradesh: Visakhapatnam (Andrewes, 1930b: 187); Karnataka: Castlerock (Andrewes, 1930b: 187)]; PAR- India [Uttarakhand: Kumaon, Almora (Andrewes, 1930b: 187); Arunachal Pradesh: Rotung (Andrewes, 1930b: 187)]; ORR- Cambodia; Indochina; Laos; Myanmar; Thailand; Vietnam; PAR- China.

3.3.9. Genus *Lampetes* Andrewes, 1940

Type species: *Lamprophonus lucens* Bates, 1889.

Lampetes Andrewes, 1940: 536; Noonan, 1976: 47; id. 1985: 60; Kataev et al., 2003: 387; Lorenz, 2005: 382; Kataev & Wrase, 2017b: 545.

Lamprophonus Bates, 1889a.

128. *Lampetes assamensis* (Schauberger, 1935)

Lamprophonus assamensis Schauberger, 1935: 107; Gusenleitner, 1990: 749.

Axinotoma assamensis (Schauberger, 1935); Noonan, 1985: 60.

Trichotichnus assamensis (Schauberger, 1935); Lorenz, 2005: 382.

Lampetes assamensis (Schauberger, 1935); Kataev et al., 2003: 387; Kataev & Wrase, 2017b: 545.

Distribution. ORR- India [Meghalaya: Garo-hills, Tura (Schauberger, 1935: 107); PAR- India [West Bengal: Darjeeling (Kataev & Wrase, 2017: 545)].

129. *Lampetes lucens* (Bates, 1889)

Lamprophonus lucens Bates, 1889a: 102; id. 1892b: 329; Andrewes, 1930b: 189; Saha, 1995: 59.

Axinotoma lucens (Bates, 1889a); Noonan, 1985: 60.

Trichotichnus lucens (Bates, 1889a); Lorenz, 2005: 382.

Lampetes lucens (Bates, 1889a); Kataev et al., 2003: 387; Kataev & Wrase, 2017b: 545.

Distribution. ORR- India [Uttar Pradesh: Fyzabad (Andrewes, 1930b: 189); Bihar: Pusa, Chapra, Patna, Barwa (Andrewes, 1930b: 189); Jharkhand: Madhupur, Chota Nagpur (Andrewes, 1930b: 189); Madhya Pradesh: Chhindwara (Andrewes, 1930b: 189); West Bengal: North 24 Parganas (Saha, 1995: 59); Odisha: Barkuda Island (Chilka Lake) (Andrewes, 1930b: 189); Maharashtra: Khandesh, Berar (Andrewes, 1930b: 189); Telangana:

Kunavaram (Andrewes, 1930b: 189); Tamil Nadu: Chennai (Andrewes, 1930b: 189)]; ORR- Bangladesh; Indonesia; Myanmar; Sri Lanka; PAR- China; Nepal; Pakistan; Taiwan.

130. *Lampetes marginalis* (Walker, 1859)

Drimostoma ? *marginale* Walker, 1859: 51; Chaudoir, 1872: 13; Bates, 1886: 212; Tschitschérine, 1900b: 264.

Lamprophonus marginale (Walker, 1859); Andrewes, 1919a: 193; id. 1930b: 190.

Axinotoma marginalis (Walker, 1859); Noonan, 1985: 60.

Trichotichnus marginalis (Walker, 1859); Lorenz, 2005: 382.

Distribution. ORR- India [Tamil Nadu: Nilgiri Hills (Andrewes, 1919a: 193)]; ORR- Sri Lanka.

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity.

131. *Lampetes pseudolucens* (Schauberger, 1935)

Lamprophonus pseudolucens Schauberger, 1935: 95.

Axinotoma pseudolucens (Schauberger, 1935); Noonan, 1985: 60.

Trichotichnus pseudolucens (Schauberger, 1935); Lorenz, 2005: 382.

Lampetes pseudolucens (Schauberger, 1935); Kataev & Wrase, 2017b: 545.

Distribution. ORR- India [Tamil Nadu: Chennai (Schauberger, 1935: 95)]; PAR- India [Uttarakhand (Kataev & Wrase, 2017b: 545)]; ORR- Sri Lanka; PAR- Nepal.

3.3.10. Genus *Liodaptus* Bates, 1889

Type species: *Liodaptus birmanus* Bates, 1889.

Liodaptus Bates, 1889a: 102; Lesne, 1904: 75; Andrewes, 1930b: 201; Noonan, 1976: 40; id. 1985: 61; Saha, 1995: 65; Lorenz, 2005: 380; Kataev & Wrase, 2017b: 545.

132. *Liodaptus birmanus* Bates, 1889

Liodaptus birmanus Bates, 1889a: 102; id. 1892b: 344; Lesne, 1904: 75; †Chaudoir, 1912: 19; Andrewes, 1930b: 201; Noonan, 1985: 62; Saha, 1995: 65; Lorenz, 2005: 380; Kataev & Wrase, 2016b: 264; Kataev & Wrase, 2017b: 545.

Distribution. ORR- India [Assam: Guwahati (Kataev & Wrase, 2016b: 264); Bihar: Pusa (Andrewes, 1930b: 201); Jharkhand: Rajmahal (Andrewes, 1930b: 201); Gujarat (Kataev & Wrase, 2016b: 264); West Bengal: Calcutta, Sunderbans, Diamond Harbour (Andrewes, 1930b: 201); PAR- India (Uttarakhand: Corbett Nature Park, Nainital, Khairna Bridge (Kataev & Wrase, 2016b: 264)]; ORR- Bangladesh; Cambodia; Indo-China; Myanmar; Thailand; Vietnam; PAR- China; Pakistan.

3.3.11. Genus *Meroctenus* Gemminger & Harold, 1868

Type species: *Ctenomerus crenulatus* Chaudoir, 1843.

Meroctenus Gemminger & Harold, 1868: 262; Noonan, 1976: 60; Lorenz, 2005: 387; Kataev, 2017: 511.

3.3.11.1. Subgenus *Meroctenus* Gemminger & Harold, 1868

Type species: *Ctenomerus crenulatus* Chaudoir, 1843.

Meroctenus Gemminger & Harold, 1868: 262; Kataev, 2017: 514.

Ctenomerus Chaudoir, 1843.

Paregaploa Müller, 1947.

133. *@*Meroctenus mediocris* (Andrewes, 1936)

Xenodus mediocris Andrewes, 1936: 205.

Xenodochus mediocris (Andrewes, 1936); Noonan, 1985: 52; Lorenz, 2005: 379.

Meroctenus mediocris (Andrewes, 1936); Kataev, 2017: 518.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Aralam Wildlife Sanctuary, 22.II.2021, K Shigina'.

Distribution. ORR- India [Maharashtra: Nagpur (Andrewes, 1936: 205)]; ORR- Sri Lanka.

3.3.11.2. Subgenus *Xenodochus* Andrewes, 1941

Type species: *Xenodus dabreui* Andrewes, 1924.

Xenodochus Andrewes, 1941: 317; Basilewsky, 1956: 457; Noonan, 1976: 45; id. 1985: 51; Kataev et al., 2003: 397; Lorenz, 2005: 379; Kataev, 2017: 520; Kataev & Wrase, 2017b: 562

Xenodus Andrewes, 1924a.

Afropangus Jeannel, 1946.

134. *Meroctenus dabreui* (Andrewes, 1924)

Xenodus dabreui Andrewes, 1924a: 94; id. 1930: 357.

Xenodochus dabreui (Andrewes, 1924a): Noonan, 1985: 52; Kataev et al., 2003: 397; Lorenz, 2005: 379; Kataev & Wrase, 2016b: 265; Kataev & Wrase, 2017b: 562.

Meroctenus dabreui (Andrewes, 1924a): Kataev, 2017: 520.

Distribution. ORR- India [Punjab (Andrewes, 1924a: 94); New Delhi (Andrewes, 1930: 357; Kataev & Wrase, 2016b: 265); Uttar Pradesh: Manikpur (Andrewes, 1924a: 94), Jhansi (Kataev & Wrase, 2016b: 265); Bihar: Chapra (Andrewes, 1930:

357); Madhya Pradesh: Jabalpur (Andrewes, 1924a: 94); Maharashtra: Nagpur, Mumbai, Kasara, Ratnagiri (Andrewes, 1924a: 94); Telangana: Hyderabad, Secunderabad (Andrewes, 1924a: 94), Kunavaram (Andrewes, 1930: 357); Goa: Mormugao (Andrewes, 1930: 357); Tamil Nadu: Chennai (Andrewes, 1930: 357)]; PAR- India [Uttarakhand: Roorkee (Andrewes, 1924a: 94)]; ORR- Maldives; PAR- Nepal; Pakistan.

3.3.12. Genus *Oesyperus* Andrewes, 1923

Type species: *Oesyperus unctulus* Andrewes, 1923.

Oesyperus Andrewes, 1923b: 444; id. 1930b: 233; id. 1939: 136; Noonan, 1976: 48; id. 1985: 19; Kataev et al., 2003: 392; Lorenz, 2005: 374; Kataev, 2006: 44.

Merklia Ito, 2004.

Merklophonus Ito, 2005.

135. *Oesyperus planus* Andrewes, 1923

Oesyperus planus Andrewes, 1923b: 446; id. 1930b: 233; Kataev, 2006: 50.

Parophonus planus (Andrewes, 1923b); Noonan, 1985: 22; Lorenz, 2005: 374.

Distribution. ORR- India [Tamil Nadu: Chennai, Madura, Shembaganur (Andrewes, 1923b: 446)].

136. *Oesyperus pygmaeus* Andrewes, 1923

Oesyperus pygmaeus Andrewes, 1923b: 446; id. 1930b: 233; Kataev, 2006: 51.

Parophonus pygmaeus (Andrewes, 1923b); Noonan, 1985: 22; Lorenz, 2005: 374.

Distribution. ORR- India [Tamil Nadu: Chennai, Palni Hills, Marian Shola (Andrewes, 1923b: 446)].

137. **Oesyperus unctulus* Andrewes, 1923

Oesyperus unctulus Andrewes, 1923b: 445; id. 1930b: 233; Kataev, 2006: 47.

Parophonus unctulus (Andrewes, 1923b); Noonan, 1985: 22; Lorenz, 2005: 374.

Specimen examined: 1 ex. 'India: Tamil Nadu, Kavu malai, Valpari range near Balaji temple, 19.VII.2013, S. Prabhakaran & Party'.

Distribution. ORR- India [Tamil Nadu: Palni Hills, Kodaikanal (Andrewes, 1923b: 445)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity.

3.3.13. Genus *Ooidius* Chaudoir, 1847

Type species: *Ooidus suturalis* Chaudoir, 1847.

Ooidius Chaudoir, 1847: 2; Noonan, 1976: 51; Gemminger & Harold, 1868: 262; Facchini & Sciaky, 2004: 11; Lorenz, 2005: 383; Facchini & Giachino, 2020: 9.

Pteroglossus Chaudoir, 1843.

138. *Ooidius advolans* (Nietner, 1857)

Harpalus advolans Nietner, 1857b: 377; Andrewes, 1921b: 344; id. 1927: 106; id. 1930b: 176.

Ooidius advolans (Nietner, 1857b): Schauberger, 1933b: 136; Lorenz, 2005: 383; Facchini & Giachino, 2020: 10.

Distribution. ORR- India [Odisha: Barkuda Island (Lake Chilka), Chatrapur (Andrewes, 1930b: 176); Tamil Nadu: Tiruchirappalli, Manaparai, Ramanathapuram, Pamban, Chennai, Dindigul (Andrewes, 1930b: 176); Pondicherry (Andrewes, 1930b: 176); Mahe (Andrewes, 1930b: 176)]; ORR- Sri Lanka.

3.3.14. Genus *Ophoniscus* Bates, 1892

Type species: *Ophoniscus iridulus* Bates, 1892.

Ophoniscus Bates, 1892b: 337; Andrewes, 1923b: 446; id. 1930b: 242; id. 1939: 136; Noonan, 1976: 46; id. 1985: 31; Ito, 1994a: 81; Saha, 1995: 63; Kataev et al., 2003: 388; Kataev, 2005b: 269; Lorenz, 2005: 376; Kataev & Wrase, 2012: 215; Kataev &

Wrase, 2017b: 546; Kataev, 2018: 319; Kataev & Wrase, 2018: 359; Sruthi & Sabu, 2022: 21625.

139. *_Ophoniscus compositus_ (Walker, 1858)

Curtonotus compositus Walker, 1858: 204; Bates, 1886: 211; Andrewes, 1923b: 446.

Siopelus compositus (Walker, 1858): Andrewes, 1919a: 189.

Ophoniscus compositus (Walker, 1858); Andrewes, 1930b: 242; Kataev, 2005b: 278; Lorenz, 2005: 373; Kataev & Wrase, 2012: 218; Kataev, 2018: 324.

Parophonus compositus (Walker, 1858); Noonan, 1985: 22.

Siopelus ferreus Bates, 1886.

Ophoniscus insulicola Ito, 1994a.

ssp. *compositus* (Walker, 1858): 204; Kataev, 2018: 324.

Specimens examined: 4 ex. 'India: Tamil Nadu, Nilgiri Hills, 13.XII.2016, S. Prabhakaran & Party'.

ssp. *punctidorsis* Kataev, 2018: 324.

Distribution. ORR- India [West Bengal (Kataev, 2005b: 278); Maharashtra: Mahabaleshwar, Panchgani (Kataev, 2005b: 278; id. 2018: 324), Bhushi Dam, Lonavala, Mulshi environment, Pune (Kataev, 2018: 324); Goa: Calangute (Kataev, 2018: 324); Tamil Nadu: Chennai, Madura, Palni Hills (Andrewes, 1923b: 446), Kodaikanal, Tiruchirappalli (Andrewes, 1930b: 242), Shembaganur (Kataev, 2005b: 278)]; ORR- Sri Lanka.

140. _Ophoniscus iridulus_ Bates, 1892

Ophoniscus iridulus Bates, 1892b: 337; Andrewes, 1930b: 243; Noonan, 1985: 32; Ito, 1994a: 81; Saha, 1995: 63; Kataev et al., 2003: 388; Kataev, 2005b: 272; Lorenz, 2005: 376; Kataev & Wrase, 2012: 218; Kataev & Wrase, 2017b: 546; Kataev, 2018: 326.

Distribution. ORR- India [Uttar Pradesh: Benares (Kataev, 2005b: 272); Assam: Kamrup (Andrewes, 1930b: 243); Bihar: Purnea (Andrewes, 1930b: 243); Jharkhand: Parasnath (Andrewes, 1930b: 243)]; PAR- India [Uttarakhand: Dehra Dun (Andrewes, 1930b: 243); West Begal: Siliguri (Andrewes, 1930b: 243), Darjeeling (Saha, 1995: 63; Kataev & Wrase, 2012: 218), Kalimpong, Pedong (Kataev & Wrase, 2012: 218)]; ORR- Laos; Myanmar; Vietnam; PAR- China; Nepal.

141. ****Ophoniscus puneensis* **Kataev, 2018

Ophoniscus puneensis Kataev, 2018: 321; Sruthi & Sabu, 2022: 21625.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Maharashtra: Mulshi environment, Pune (Kataev, 2018: 321); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625)].

3.3.15. Genus *Ophonus* Dejean, 1821

Type species: *Carabus sabulicola* Panzer, 1796.

Ophonus Dejean, 1821: 13; id. 1829: 193; Hope, 1838: 84; Lacordaire, 1854: 297; Gemminger & Harold, 1868: 269; Tschitschérine, 1901: 234; Andrewes, 1930b: 243; Noonan, 1976: 31; Wrase, 1991: 197; Gueorguiev & Gueorguiev, 1995: 180; Saha, 1995: 60; Wrase, 1995: 343; Kataev, 2001a: 161; Kataev et al., 2003: 388; Lorenz, 2005: 362; Kataev & Wrase, 2017b: 546.

3.3.15.1. Subgenus *Hesperophonus* Antoine, 1959

Type species: *Harpalus rotundatus* Dejean, 1829.

Hesperophonus Antoine, 1959: 362; Noonan, 1976: 33; Kataev et al., 2003: 388; Lorenz, 2005: 362; Kataev & Wrase, 2017b: 547.

142. *Ophonus chlorizans* Solsky, 1874

Ophonus chlorizans Solsky, 1874: 78; Kataev, 2001a: 183; Kataev et al., 2003: 388; Kataev & Wrase, 2017b: 547.

Ophonus pungoides Reitter, 1913.

Ophonus chlorizans hissariensis Lutshnik, 1922.

Distribution. PAR- India [Jammu & Kashmir (Kataev, 2001a: 183); Himachal Pradesh: Poo (Kataev, 2001a: 183)]; PAR- Afghanistan; China; Kazakhstan; Kyrgyzstan; Pakistan; Tajikistan; Turkmenistan; Uzbekistan.

3.3.16. Genus *Oxycentrus* Chaudoir, 1854

Type species: *Oxycentrus parallelus* Chaudoir, 1854.

Oxycentrus Chaudoir, 1854: 345; Gemminger & Harold, 1868: 249; Bates, 1876: 3; Tschitschérine, 1901: 245; Lesne, 1904: 75; Andrewes, 1930b: 250; id. 1933c: 360; Habu, 1973: 220; Noonan, 1976: 49; Habu, 1978d: 103; Noonan, 1985: 56; Kirschenhofer, 1987 : 56; id. 1992: 35; Saha, 1995: 64; Ito, 1994b: 119; id. 1996d: 457; id. 1996a: 31; id. 1997a: 39; id. 2000: 13; id. 2001: 31; Kataev et al., 2003: 392; Lorenz, 2005: 379; Ito, 2013: 1; Kataev & Wrase, 2017b: 552.

3.3.16.1. Subgenus *Oxycentrus* Chaudoir, 1854

Type species: *Oxycentrus parallelus* Chaudoir, 1854.

Oxycentrus Chaudoir, 1854: 345; Kataev et al., 2003: 392; Lorenz, 2005: 379; Kushwaha & Hegde, 2015: 403; Kataev & Wrase, 2017b: 552.

Agreuter Schmidt-Göbel, 1846 [HN].

Oxycentropis Schauberger, 1934c.

143. *Oxycentrus assamensis* Kirschenhofer, 1992

Oxycentrus assamensis Kirschenhofer, 1992: 37; Kataev et al., 2003: 392; Lorenz, 2005: 379; Kataev & Wrase, 2017b: 552.

Distribution. ORR- India [Assam: Patkai (Kirschenhofer, 1992: 37)]; PAR- India [West Bengal: Darjeeling (Kataev et al., 2003: 392; Kataev & Wrase, 2017b: 552)].

144. *Oxycentrus parallelus* Chaudoir, 1854

Oxycentrus parallelus Chaudoir, 1854: 347; Gemminger & Harold, 1868: 249; Andrewes, 1930b: 251; †Kushwaha, 1960: 177; Noonan, 1985: 57; Kirschenhofer, 1992: 52; Saha, 1995: 64; Kataev et al., 2003: 392; Lorenz, 2005: 380; Kataev & Wrase, 2016b: 264; id. 2017b: 552.

Oxycentrus richterianus Kirschenhofer, 1987.

Distribution. ORR- India [Uttar Pradesh: Rishikesh, Sitapur (Kirschenhofer, 1992: 52), Prayagraj (Allahabad), Chatham lines (†Kushwaha, 1960: 177); Assam: Haflong (Andrewes, 1930b: 251); Bihar: Pusa, Chapra (Andrewes, 1930b: 251); West Bengal: Calcutta, Kharagpur, Saraighata, Medinipur (Saha, 1995: 64), Sunderbans (Kirschenhofer, 1992: 52); Odisha: Saran (Andrewes, 1930b: 251), Siripur (Saha, 1995: 64)]; PAR- India [Uttarakhand: Dehra Dun (Andrewes, 1930b: 251), Haldwani (Andrewes, 1930b: 251), Haridvar, Chilla (Kataev & Wrase, 2016b: 264)]; PAR- Nepal; Pakistan.

145. *Oxycentrus sikkimensis* Kirschenhofer, 1992

Oxycentrus sikkimensis Kirschenhofer, 1992: 39; Kataev et al., 2003: 392; Lorenz, 2005: 380; Kataev & Wrase, 2017b: 552.

Distribution. PAR- India [West Bengal: Darjeeling (Kirschenhofer, 1992: 39)].

Remarks. Endemic to the Himalayan Hotspot of Biodiversity.

3.3.17. Genus *Parophonus* Ganglbauer, 1891

Type species: *Carabus maculicornis* Duftschmid, 1812.

Parophonus Ganglbauer, 1891: 340; Jeannel, 1942: 625; id. 1948: 648; Noonan, 1976: 45; id. 1985: 19; Kataev et al., 2003: 392; Lorenz, 2005: 373; Kataev, 2010: 278; Kataev & Wrase, 2017b: 553; Serrano et al., 2017: 219; Sruthi & Sabu, 2022: 21625.

3.3.17.1. Subgenus *Hyparpalus* Alluaud, 1930

Type species: *Carabus saponarius* Olivier, 1795.

Hyparpalus Alluaud, 1930: 162; Noonan, 1976: 46; Bruneau de Miré, 1976: 273; Noonan, 1985: 19; Kataev et al., 2003: 392; Lorenz, 2005: 373; Kataev, 2010: 279; Kataev & Wrase, 2017b: 553.

Hypolithus Dejean, 1829.

? *Orphanixus* Clarke, 1971b.

146. ****Parophonus acutangulus* **(Bates, 1891)

Hypolithus acutangulus Bates, 1891b: 331; Andrewes, 1930b: 184.

Hyparpalus acutangulus Andrewes, 1933c: 351; Lorenz, 2005: 364.

Parophonus acutangulus (Bates, 1891b); Kataev, 2010: 296; Kataev & Wrase, 2017b: 553; Sruthi & Sabu, 2022: 21625.

Hyparpalus gracilis Andrewes, 1947.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Aralam Wildlife Sanctuary, 22.II.2021, K Shigina'; 3 ex. 'India: Kerala, Wayanad, 26.IV.2016, S. V. Akhil & V. A. Jithmon'; 1 ex. 'India: Bihar, Muzzafarpur, 20–22.VIII.1949, A. P. Kapur'.

Distribution. ORR- India [New Delhi: Pusa (Andrewes, 1930b: 184); Uttar Pradesh: Prayagraj (Allahabad), Sitapur (Andrewes, 1930b: 184); Jharkhand: Chota Nagpur (Tetara) (Bates, 1891b: 331); Madhya Pradesh: Mhow (Dr. Ambedkar Nagar) (Andrewes, 1930b: 184); Gujarat: Surat (Andrewes, 1930b: 184); Maharashtra: Mumbai (Andrewes, 1930b: 184); Tamil Nadu: Tharangambadi (Tranquebar) (Andrewes, 1930b: 184), Coimbatore (Kataev, 2010: 296); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625)]; PAR- India [Jammu & Kashmir (Kataev, 2010: 296); Uttarakhand: Dehra Dun (Kataev, 2010: 296); West Bengal: Barodabri (Kataev, 2010: 296)]; ORR- Indonesia; Malaysia; Myanmar; Sri Lanka; Nepal; Pakistan.

147. *Parophonus cyaneotinctus* (Bates, 1889)

Hypolithus cyaneotinctus Bates, 1889c: 269; Andrewes, 1922: 288; id. 1930b: 184.

Parophonus cyaneotinctus (Bates, 1889c); Noonan, 1985: 22; Lorenz, 2005: 374; Kataev, 2010: 282; Kataev & Wrase, 2017b: 553.

Distribution. ORR- India [Bihar: Barwa (Andrewes, 1930b: 184); Jharkhand: Chota Nagpur (Tetara), Ranchi (Andrewes, 1922: 288); West Bengal (Andrewes, 1922: 288); Karnataka: Mysore (Andrewes, 1922: 288), Chikkaballapur, Nandidurg, Bangalore (Andrewes, 1930b: 184)]; PAR- India [Uttarakhand: Dehra Dun (Andrewes, 1930b: 184)]; ORR- Sri Lanka; Vietnam; PAR- China.

148. *Parophonus indicus* (Andrewes, 1931)

Hyparpalus indicus Andrewes, 1931: 516.

Parophonus indicus (Andrewes, 1931): Noonan, 1985: 22; Lorenz, 2005: 374; Kataev, 2010: 283; Kataev & Wrase, 2017b: 553; Sruthi & Sabu, 2022: 21625.

Hypolithus cyaneotinctus Bates, 1891b [non Bates, 1889].

Distribution. ORR- India [Uttar Pradesh: Rishikesh (Kataev, 2010: 283); Bihar: Barwa, Munger (Andrewes, 1931: 516); Jharkhand: Konbir, Chota Nagpur (Tetara), Ranchi (Andrewes, 1931: 516); Madhya Pradesh: Balaghat, Baihar, Mandla, Seoni, Khawasa (Andrewes, 1931: 516), Motinala (Kataev, 2010: 283); Karnataka: Mysore, Chikkaballapur, Nandidurg, Bangalore (Andrewes, 1931: 516); Kerala: Idukki, Alampetty (Sruthi & Sabu, 2022: 21625)]; PAR- India [Jammu & Kashmir (Kataev, 2010: 283); Uttarakhand: Dehra Dun (Andrewes, 1931: 516); Sikkim (Kataev, 2010: 283); West Bengal: Darjeeling (Kataev & Wrase, 2017: 553)]; PAR- Pakistan.

149. *Parophonus lividus* (Andrewes, 1923)

Hypolithus lividus Andrewes, 1923a: 234; id. 1930b: 184; Saha, 1995: 65.

Parophonus lividus (Andrewes, 1923a); Noonan, 1985: 22; Lorenz, 2005: 374; Kataev, 2010: 289; Kataev & Wrase, 2017b: 553.

Hyparpalus hiekei Ito, 1993.

Distribution. ORR- India [Uttar Pradesh: Sitapur, Lucknow (Andrewes, 1923a: 234); Bihar: Chapra, Muzaffarpur, Pusa, Katithar (Andrewes, 1923a: 234); Gujarat: Surat (Andrewes, 1923a: 234); West Bengal: Calcutta (Andrewes, 1923a: 234 ; Saha, 1995: 65); Odisha: Sarda, Siripur (Andrewes, 1923a: 234 ; Saha, 1995: 65), Saran (Saha, 1995: 65); Maharashtra: Mumbai, Nagpur (Andrewes, 1923a: 234); Karnataka: Belagavi (Andrewes, 1923a: 234); Tamil Nadu: Coimbatore (Kataev, 2010: 289)]; PAR- India [Uttarakhand: Haridwar, Roorkee (Andrewes, 1923a: 234)]; ORR- Bangladesh; Sri Lanka; PAR- Pakistan.

150. *Parophonus rectangulus* Ito, 1994

Parophonus rectangulus Ito, 1994c: 245; Lorenz, 2005: 373; Kataev & Wrase, 2012: 221.

Distribution. ORR- India [Deccan (Kataev & Wrase, 2012: 221)]; ORR- Bangladesh.

151. *Parophonus subtilis* (Bates, 1892)

Hypolithus subtilis Bates, 1892b: 338; Andrewes, 1930b: 185.

Parophonus subtilis (Bates, 1892b); Noonan, 1985: 22; Lorenz, 2005: 374; Kataev, 2010: 285; Kataev & Wrase, 2017b: 553.

Hyparpalus iridicolor Landin, 1955.

Hyparpalus nagpurensis Ito, 1993.

Hyparpalus nagpurensis curvatus Ito, 1993.

Hyparpalus pakistanensis Ito, 2008.

Distribution. ORR- India [New Delhi (Kataev, 2010: 285); Uttar Pradesh: Rampur (Kataev, 2010: 285); Assam (Kataev, 2010: 285); Rajasthan: Jodhpur, Ganganagar (Kataev, 2010: 285); Maharashtra: Nagpur (Ito, 1993: 164); Tamil Nadu: Coimbatore,

Chennai (Kataev, 2010: 285)]; PAR- India [Jammu & Kashmir: Punch (Kataev, 2010: 285)]; ORR- Myanmar; Sri Lanka; PAR- Nepal; Pakistan.

3.3.18. Genus *Platymetopus* Dejean, 1829

Type species: *Platymetopus vestitus* Dejean, 1829.

Platymetopus Dejean, 1829: 68; Lacordaire, 1854: 300; Bates, 1892b: 332; Tschitschérine, 1901: 232; Lesne, 1904: 73; Alluaud, 1917 (1918): 321; Andrewes, 1919a: 156; id. 1924a: 31; id. 1930b: 280; id. 1933c: 367; id. 1939: 137; Jeannel, 1948: 644; Habu, 1973: 204; Noonan, 1976; 46; Bruneau de Miré, 1976: 274; Noonan, 1985: 7; Saha, 1995: 66; Kataev et al., 2003: 393; Lorenz, 2005: 373; Kataev & Wrase, 2017b: 554; Serrano et al., 2017: 219; Akhil, 2020: 88.

152. *Platymetopus flavilabris* (Fabricius, 1798)

Carabus flavilabris Fabricius, 1798: 59; Hope, 1838: 90; Schaum, 1847: 48; Motschulsky, 1855: 43; Andrewes, 1921a: 160; id. 1921b: 344; id. 1924a: 31; id. 1930b: 280; id. 1933c: 367; †Kushwaha, 1960: 177; Louwerence, 1967: 199; Habu, 1973: 205; Noonan, 1976: 46; Saha, 1995: 67; Sato & Kasahara, 1991: 56; Kataev et al., 2003: 393; Lorenz, 2005: 373; Park et al., 2006: 95; Kushwaha & Hegde, 2015: 403; Kataev & Wrase, 2017b: 554.

Platymetopus corrosus Bates, 1873a.

Dioryche formosanus Dupuis, 1912.

Platymetopus cobscuripes Schaufuss, 1887.

Harpalus punctulatus MacLeay, 1825.

Platymetopus punctulicollis Bates, 1889c.

Harpalus senilis Nietner, 1857b.

Harpalus thunbergi Quensel, 1806.

Distribution. ORR- India [Uttar Pradesh: Prayagraj (Allahabad), Chatham lines (†Kushwaha, 1960: 177), Hardoi (Kushwaha & Hegde, 2015: 403); West Bengal: Calcutta, Murshidabad (Saha, 1995: 67)]; PAR- India [Himachal Pradesh: Bajaura, Kangra (Andrewes, 1924a: 31); West Bengal: Darjeeling (Kataev et al., 2003: 393; Kataev & Wrase, 2017: 554)]; ORR- Andaman Nicobar Islands; Myanmar; Philippines; Sri Lanka; Thailand; Vietnam; Indochina; Indonesia; Malaysia; PAR- Bhutan; China; Japan; Nepal; Pakistan; South Korea; Taiwan.

153. *Platymetopus figuratus* Boheman, 1848

Platymetopus figuratus Boheman, 1848: Basilewsky, 1948a: 27; id. 1968a: 4.

ssp. *pictus* Andrewes, 1923a; Kataev & Wrase, 2016b: 262; Kataev & Wrase, 2017b: 554

Platymetopus pictus Andrewes, 1923a.

Platymetopus figuratus somalicus Basilewsky, 1948c.

Platymetopus indicus Jedlička, 1969.

Distribution. ORR- India [Uttar Pradesh: Sitapur (Andrewes, 1923: 233); Rajasthan: Jodhpur (Kataev & Wrase, 2016b: 262); Maharashtra: Mumbai (Andrewes, 1923: 233); Karnataka: Belagavi, Gunji, Ballari, Mysore, Bangalore (Andrewes, 1923: 233); Andhra Pradesh: Yemmiganur (Andrewes, 1930: 281); Tamil Nadu: Chennai, Coimbatore (Jedlička, 1969: 3)]; ORR- Sri Lanka; PAR- Pakistan; Saudi Arabia; Yemen.

154. *Platymetopus rugosus* (Nietner, 1857)

Harpalus rugosus Nietner, 1857a: 150; id. 1857b: 373.

Platymetopus rugosus (Nietner, 1857b); Bates, 1891b: 329; Andrewes, 1921b: 343; id. 1927: 106; id. 1930b: 281; Kataev et al., 2003: 393; Lorenz, 2005: 373; Kushwaha & Hegde, 2015: 403; Kataev & Wrase, 2017b: 55; Akhil, 2020: 88.

Distribution. ORR- India [Uttar Pradesh: Faizabad (Andrewes, 1930b: 281); Jharkhand: Konbir (Bates, 1891b: 329; Andrewes, 1930b: 281), Chota Nagpur (Andrewes, 1930b: 281); Odisha: Rambha (Ganjam), Barkuda Island (Chilka Lake) (Andrewes, 1930b: 281); Karnataka: Mangalore, Mysore (Andrewes, 1930b: 281); Andhra Pradesh: Visakhapatnam, Nagalapuram (Chingleput) (Andrewes, 1930b: 281); Tamil Nadu: Ennore, Chennai (Andrewes, 1930b: 281), Nilgiri Hills (Andrewes, 1930b: 281; Akhil, 2020: 88)]; PAR- India [Uttarakhand: Almora (Andrewes, 1930b: 281); West Bengal: Panighatta (Andrewes, 1930b: 281), Darjeeling (Kataev & Wrase, 2017b: 55)]; ORR- Sri Lanka; AUR- Australia.

3.3.19. Genus *Siopelus* Murray, 1859

Type species: *Siopelus calabaricus* Murray, 1859.

Siopelus Murray, 1859: 27; Péringuey, 1896: 439; Noonan, 1976: 44; id. 1985: 24; Kataev et al., 2003: 393; Lorenz, 2005: 375; Kataev, 2012a: 113; Kataev & Wrase, 2017b: 555; Serrano et al., 2017: 221; Akhil, 2020: 88.

3.3.19.1. Subgenus *Siopelus* Murray, 1859

Type species: *Siopelus calabaricus* Murray, 1859.

Siopelus Murray, 1859: 27; Noonan, 1976: 44; id. 1985: 27; Lorenz, 2005: 375; Kataev & Wrase, 2017b: 555.

Harpalidium Kolbe, 1883.

Liosepus Basilewsky, 1950.

155. *Siopelus tamilnadensis* Kataev, 2002

Siopelus tamilnadensis Kataev, 2002b: 248; Lorenz, 2005: 375; Kataev & Wrase, 2016b: 262; Kataev & Wrase, 2017b: 555.

Distribution. ORR- India [Punjab: Hoshiarpur, Rormazara (Kataev & Wrase, 2016b: 262); Uttar Pradesh: Jhansi (Kataev & Wrase, 2016b: 262); Karnataka: Bangalore,

Silvepoora (Kataev & Wrase, 2016b: 262); Tamil Nadu: Chennai, Manapakkam (Kataev, 2002b: 248); Pondicherry (Kataev & Wrase, 2016b: 262)]; ORR- Myanmar; PAR- Nepal.

3.3.20. Genus *Trichotichnus* Morawitz, 1863

Type species: *Trichotichnus longitarsis* Morawitz, 1863.

Trichotichnus Morawitz, 1863: 63; Tschitschérine, 1900c: 362; id. 1901: 244; Andrewes, 1930b: 351; Habu, 1973: 223; Noonan, 1976: 43; id. 1985: 65; Saha, 1995: 64; Kataev et al., 2003: 394; Lorenz, 2005: 380; Ito, 2009: 599; Kataev, 2016: 69; Morita, 2016: 171; Kataev & Schmidt, 2017: 304; Kataev & Wrase, 2017b: 555; Kataev & Schmidt, 2018: 263; Ghosh et al., 2020: 227; Kataev, 2020: 174.

3.3.20.1. Subgenus *Bottchrus* Jedlička, 1935

Type species: *Bottchrus philippinus* Jedlička, 1935.

Bottchrus Jedlička, 1935a: 8; Noonan, 1976: 59; Kataev, 2016: 69; Kataev & Schmidt, 2017: 304; Kataev & Wrase, 2017b: 557; Kataev, 2020: 191.

Bellogenus Clarke, 1971a.

Pseudotrichotichnus Habu, 1973.

156. *Trichotichnus birmanicus* Bates, 1892

Trichotichnus birmanicus Bates, 1892b: 342; Andrewes, 1930b: 351; Schauberger, 1935: 110; Ito, 1991: 160; Kirschenhofer, 1992: 35; Saha, 1995: 64; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Schmidt, 2017: 350; Kataev & Wrase, 2017b: 557.

Trichotichnus batesi Csiki, 1932.

Trichotichnus probsti Kirschenhofer, 1992.

Distribution. ORR- India [Uttar Pradesh (Saha, 1995: 64); Meghalaya: Tura (Kataev & Schmidt, 2017: 350)]; PAR- India [Uttarakhand: Mussoorie (Kataev & Schmidt,

2017: 350); Sikkim: Dzongri (Kataev & Schmidt, 2017: 350); West Bengal: Darjeeling (Saha, 1995: 64), Lebong (Kataev & Schmidt, 2017: 350)]; ORR- Laos; Malaysia; Myanmar; Thailand; Vietnam; PAR- Bhutan; China; Nepal.

157. *Trichotichnus formosus* Schauberger, 1935

Trichotichnus formosus Schauberger, 1935: 148; Noonan, 1985: 68; Kirschenhofer, 1992: 32; Ito, 1996b: 203; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Schmidt, 2017: 302; Kataev & Wrase, 2017b: 557.

Distribution. PAR- India [Sikkim (Schauberger, 1935: 148 ; Ito, 1996b: 203); West Bengal: Darjeeling (Kataev et al., 2003: 395; Kataev & Wrase, 2017b: 557)].

Remarks. Endemic to the Himalayan Hotspot of Biodiversity.

158. *Trichotichnus globulipennis* Schauberger, 1935

Trichotichnus globulipennis Schauberger, 1935: 145; Noonan, 1985: 68; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Schmidt, 2017: 302; Kataev & Wrase, 2017b: 557.

Distribution. ORR- India [Tamil Nadu: Madura (Schauberger, 1935: 145)]; PAR- Nepal.

159. *Trichotichnus hingstoni* Andrewes, 1930

Trichotichnus hingstoni Andrewes, 1930a: 19; Noonan, 1985: 70; Kirschenhofer, 1992: 32; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Schmidt, 2017: 346; Kataev & Wrase, 2017b: 557.

Trichotichnus curvatus Ito, 1996.

Distribution. PAR- India [Sikkim: Gangtok (Andrewes, 1930a: 19), Khecheopalri Lake (Kataev & Schmidt, 2017: 346); West Bengal: Darjeeling (Andrewes, 1930a: 19; Ito, 1996: 205; Kataev & Schmidt, 2017: 346), Mane Bhanjang, Singalila (Kataev & Schmidt, 2017: 346)]; PAR- Nepal.

Remarks. Endemic to Himalayan Hotspot of Biodiversity.

160. *Trichotichnus lamprus* (Bates, 1886)

Tachycellus lamprus Bates, 1886: 80.

Trichotichnus lamprus (Bates, 1886): Andrewes, 1919b: 475; id. 1930b: 351; Noonan, 1985: 70; Ito, 1997b: 155; Lorenz, 2005: 380.

Distribution. ORR- India [Tamil Nadu: Kodaikanal, Tiruchirappalli, Shembaganur (Andrewes, 1930b: 351); Pondicherry (Andrewes, 1930b: 351)]; ORR- Sri Lanka.

161. *Trichotichnus loebli* Ito, 1998

Trichotichnus loebli Ito, 1998: 279; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Schmidt, 2017: 302; Kataev & Wrase, 2017b: 558.

Distribution. PAR- India [West Bengal: Darjeeling (Ito, 1998: 279; Kataev & Schmidt, 2017: 302)].

Remarks. Endemic to the Himalayan Hotspot of Biodiversity.

162. *Trichotichnus opacus* Ito, 1998

Trichotichnus opacus Ito, 1998: 284; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Schmidt, 2017: 302; Kataev & Wrase, 2017b: 558; Kataev & Schmidt, 2018: 266.

Distribution. PAR- India [West Bengal: Darjeeling (Ito, 1998: 284; Kataev & Schmidt, 2018: 266].

Remarks. Endemic to Himalayan Hotspot of Biodiversity.

163. *Trichotichnus sikkimensis* Kataev & Schmidt, 2017

Trichotichnus sikkimensis Kataev & Schmidt, 2017: 341.

Distribution. PAR- India [Sikkim: Pelling, Geyzing (Kataev & Schmidt, 2017: 341)]

Remarks. Endemic to the Himalayan Hotspot of Biodiversity.

3.3.20.2. Subgenus *Parairidessus* Kataev, 2020

Type species: *Trichotichnus saluki* Kataev, 2020.

Parairidessus Kataev, 2020: 174.

164. *Trichotichnus perforatus* Kataev, 2020

Trichotichnus perforatus Kataev, 2020: 179.

Distribution. ORR- India [Maharashtra: Mulshi Environment, Pune, Satara (Kataev, 2020: 179)].

Remarks. Endemic to the Western Ghats Hotspot of Biodiversity.

165. *_Trichotichnus saluki_ Kataev, 2020

Trichotichnus saluki Kataev, 2020: 175.

Specimen examined: 1 ex. 'India: Kerala, Kannur, Chalode, 22.II.2021, K Nijisha'.

Distribution. ORR- India [Karnataka: Jog Falls (Kataev, 2020: 175)].

3.3.20.3. Subgenus *Trichotichnus* Morawitz, 1863

Type species: *Trichotichnus longitarsis* Morawitz, 1863.

Trichotichnus Morawitz, 1863: 36; Habu, 1973: 233; Noonan, 1976: 43; id. 1985: 67; Saha, 1995: 64; Kataev et al., 2003: 395; Lorenz, 2005: 381; Kataev & Wrase, 2017b: 558; Ghosh et al., 2020: 227; Kataev, 2020: 190.

Asmerinx Tschitschérine, 1898.

Pteropalus Casey, 1914.

Velimius Jedlička, 1952.

166. *Trichotichnus aquilo* Andrewes, 1930

Trichotichnus aquilo Andrewes, 1930a: 18; Noonan, 1985: 68; Kirschenhoffer, 1992: 32; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Wrase, 2017b: 559; Kataev & Schmidt, 2018: 272; Kataev, 2020: 186.

Distribution. ORR- India [Assam (Andrewes, 1930a: 18)]; PAR- China (Yunnan); India (Arunachal Pradesh: Rotung, Bank of Dihang River (Andrewes, 1930a: 18); West Bengal: Darjeeling (Andrewes, 1930a: 18)]; ORR- Myanmar; PAR- Nepal.

167. *Trichotichnus emarginatus* Andrewes, 1930

Trichotichnus emarginatus Andrewes, 1930a: 20; Noonan, 1985: 68; Kirschenhoffer, 1992: 32; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Wrase, 2017b: 559; Kataev & Schmidt, 2018: 275.

Distribution. PAR- India [Uttarakhand: Nainital, Govind Ghat (Kataev & Schmidt, 2018: 275); Arunachal Pradesh: Subansiri River, Hapoli (Ziro) (Kataev & Schmidt, 2018: 275); West Bengal: Darjeeling (Andrewes, 1930a: 20)]; PAR- Nepal.

168. *Trichotichnus glabellus* Andrewes, 1930

Trichotichnus glabellus Andrewes, 1930a: 20; Noonan, 1985: 68; Kirschenhoffer, 1992: 32; Kataev et al., 2003: 395; Lorenz, 2005: 380; Kataev & Wrase, 2017b: 559; Kataev & Schmidt, 2018: 277.

Trichotichnus bousqueti Ito, 1998.

Distribution. PAR- India [Sikkim: Lachen (Andrewes, 1930a: 20); Arunachal Pradesh: Bomdila, Sela Pass (Kataev & Schmidt, 2018: 277); West Bengal: Drajeeling, Tonglu (Kataev & Schmidt, 2018: 277)]; PAR- Bhutan; China; Nepal.

169. *Trichotichnus liparus* Andrewes, 1926

Trichotichnus liparus Andrewes, 1926a: 69, 74; id. 1930b: 352; Noonan, 1985: 68; † Yadav et al., 1989; Kirschenhoffer, 1992: 32; Kataev et al., 2003: 396; Lorenz, 2005: 381; Kataev & Wrase, 2017b: 560; Kataev & Schmidt, 2018: 267; Ghosh et al., 2020: 227.

Trichotichnus petercatei Kirschenhofer, 1992.

Trichotichnus distinctus Ito, 2016.

Distribution. ORR- India [Haryana: Kurukshetra (†Yadav et al., 1989)]; PAR- India [Uttarakhand: Gori River Gorge, Almora, Nainital, Sunderdhunga (Andrewes, 1926a: 69, 74), Kumaon (Kirschenhoffer, 1992: 32); Sikkim; West Bengal: Darjeeling (Kataev et al., 2003: 396; Kataev & Wrase, 2017: 560)]; PAR- Nepal; Pakistan.

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Chapter 5

DISCUSSION

5. Discussion

Taxonomic reports of Harpalinae (Coleoptera: Carabidae) from south India with a checklist of Indian Harpalinae which provides details of the revisions by modern workers, literature, and distribution patterns of Indian Harpalinae species, taxonomic key and descriptions of Indian tribes, subtribes, genera and species, pictorial key to studied species from south India and species images are provided. The study of Indian Carabidae, specifically the Harpalinae subfamily, presents considerable challenges due to gaps in historical data and revisions. The classic works of Andrewes laid foundational knowledge, but omissions in these works, coupled with the lack of acknowledgment of subsequent taxonomic revisions like those outlined by Lorenz in 2005, have made it difficult to achieve clarity in this area. As a result, understanding and classifying many Indian Carabidae subfamilies remained complex and uncertain. The results of the present work provide valuable insights into these discontinuities within Indian Harpalinae. Keys, descriptions, and a comprehensive checklist of Indian Harpalinae, based on modern classification provided in the present effort will help to streamline and clarify the taxonomy of Indian Harpalinae.

Ninety-two Harpalinae species under 32 genera (*Anisodactylus*, *Chydaeus*, *Gnathaphanus*, *Progonochaetus*, *Pseudognathaphanus*, *Acupalpus*, *Anthracus*, *Batoscelis*, *Dicheirotrichus*, *Idiomelas*, *Loxoncus*, *Pachytrachelus*, *Stenolophus*, *Amblystomus*, *Anomostomus*, *Oosoma*, *Acinopus*, *Bradybaenus*, *Coleolissus*, *Dioryche*, *Harpalus*, *Harpaliscus*, *Kareya*, *Lampetes*, *Liodaptus*, *Oesyperus*, *Ooidius*, *Ophoniscus*, *Oxycentrus*, *Parophonus*, *Platymetopus*, *Trichotichnus*) were reported from India till 1930 and 83 species under 38 genera were detailed out in *Catalogue of Indian Insects. Part 18: Carabidae* (Andrewes, 1930b). Thirty-eight genera under

tribe Harpalini listed by Andrewes (1930b) in *Catalogue of Indian Insects* are the following- *Acinopus*, *Acupalpus*, *Amaroschesis*, *Amblystomus*, *Anisodactylus*, *Anomostomus*, *Anoplogenius*, *Barysomus*, *Bradybaenus*, *Calathomimus*, *Chydaeus*, *Coleolissus*, *Crasodactylus*, *Dioryche*, *Egaploa*, *Gnathaphanus*, *Harpaliscus*, *Harpalus*, *Hemiaulax*, *Hyphaereon*, *Hypharpax*, *Hypolithus*, *Hypsinephus*, *Iridessus*, *Kareya*, *Lamprophonus*, *Liodaptus*, *Oesyperus*, *Ophoniscus*, *Ophonus*, *Oxycentrus*, *Pachytrachelus*, *Platymetopus*, *Prakasha*, *Stenolophus*, *Trichocellus*, *Tricliotichnus* and *Xenodus*. Andrewes (1929 and 1935) classified Indian Carabidae under two broad subfamilies- subfamily Carabinae in *Fauna of British India, Volume I* (1929) and Harpalinae in *Volume II* (1935). *Fauna of British India, Volume I*, Andrewes (1929) is about subfamily Carabinae with ten tribes (Carabini, Cychrini, Loricerini, Nebrini, Notiophilini, Omopronini, Ozaenini, Opisthiini, Scaritini, and Siagonini). In the *Fauna of British India, Volume II- Harpalinae* (Andrewes, 1935), subfamily Harpalinae is classified into 33 tribes (Agonini, Amarini, Anthini, Apotomini, Bembidini, Brachinini, Broscini, Chlaenini, Cymbionotini, Disphaericini, Dryptini, Galeritini, Harpalini, Helluonini, Hexagonini, Idiomorphini, Lebini, Licinini, Masoreinini, Melaenini, Miscelini, Odacanthini, Oodini, Orthogonini, Panagini, Pentagonicini, Perigonini, Physocrotaphini, Platismatini, Pogonini, Tetragonoderini, Trechini and Zuphini) and tribe Harpalini is one among them. Descriptions and keys are provided for eight tribes (Hexagoniini, Cymbionotini, Melaenini, Apotomini, Broscini, Trechini, Bembidiini, and Pogonini) in *Fauna of British India, Volume II-Harpalinae* (Andrewes, 1935) however, the tribe Harpalini with the 83 species listed in *Catalogue of Indian Insects. Part 18: Carabidae* (Andrewes, 1930b) was not included. Tribe Harpalini with 83 species under 38 genera listed in *Catalogue of Indian Insects* (Andrewes, 1930b) are not in the *Fauna of British India, Harpalinae* in

Volume II (Andrewes, 1935) and (these 83 species under 38 genera) are currently under the tribes Anisodactylini, Harpalini and Stenolophini of the subfamily Harpalinae by the modern classification in Lorenz (2005). *Fauna of British India*, *Harpalinae* in Volume II (Andrewes, 1935) contains the eight tribes of 33 tribes of the subfamily Harpalinae and Andrewes (1935) did not provide the key and descriptions for the remaining 25 tribes including tribe Harpalini. Nine species (*Chydaeus semenowi*, *Dicheirotrichus glasunowi*, *Dioryche cuprina*, *D. lucidula*, *Harpalus fuscipalpis*, *H. salinus*, *Meroctenus dabreui*, *Ophonus chlorizans*, *Platymetopus figuratus*) missed out in the *Catalogue of Indian Insects. Part 18: Carabidae* (Andrewes, 1930b) were added to the updated checklist of Indian Harpalinae (Nijisha & Sabu, 2023).

The eight tribes (Hexagoniini, Cymbionotini, Melaenini, Apotomini, Broscini, Trechini, Bembidiini, and Pogonini) under the subfamily Harpalinae with keys and descriptions in Andrewes (1935) are not under the subfamily Harpalinae and are tribes of other subfamilies (tribe Hexagonini under subfamily Ctenodactylinae; Cymbionotini and Melaenini under the subfamily Melaeninae; Apotomini under the subfamily Apotominae; Broscini under the subfamily Broscinae; Trechini, Bembidiini and Pogonini under the subfamily Trechinae) as per the systematic list of extant ground beetles of the world (Lorenz, 2005). The number of genera has come down from 38 in Andrewes (1930b) to 29 genera, subsequent to the synonymizations and status changes as per the systematic list of extant ground beetles of the world (Lorenz, 2005). The tribe Harpalini in Andrewes (1930b) was revised as subfamily Harpalinae and the 38 genera and the 83 species placed under a single tribe Harpalini in Andrewes (1930b) were currently placed under three tribes (tribe Anisodactylini, Stenolophini and Harpalini) of the subfamily Harpalinae as per the systematic list of

extant ground beetles of the world (Lorenz, 2005). As per Lorenz (2005), five genera (*Anisodactylus*, *Chydaeus*, *Crasodactylus*, *Gnathaphanus* and *Hypharpax*) of the 38 genera discussed by Andrewes (1930b) were placed within the tribe Anisodactylini, 27 genera (*Acinopus*, *Amaroschesis*, *Amblystomus*, *Anomostomus*, *Barysomus*, *Bradybaenus*, *Calathomimus*, *Coleolissus*, *Dioryche*, *Harpaliscus*, *Harpalus*, *Hyphaereon*, *Hypolithus*, *Hypsinephus*, *Iridessus*, *Kareya*, *Lamprophonus*, *Liodaptus*, *Oesyperus*, *Ophoniscus*, *Ophonus*, *Oxycentrus*, *Pachytrachelus*, *Platymetopus*, *Prakasha*, *Trichotichnus* and *Xenodus*) within tribe Harpalini and six genera (*Acupalpus*, *Anoplogenius*, *Egaploa*, *Hemiaulax*, *Stenolophus* and *Trichocellus*) within the tribe Stenolophini under the subfamily Harpalinae. Of these 38 genera, three genera (*Anoplogenius*, *Xenodus and Lamprophonus*) are now synonyms (of subgenera *Loxoncus*, *Xenodochus* and genera *Lampetes* respectively) and six genera (*Amaroschesis*, *Calathomimus*, *Egaploa*, *Hypsinephus*, *Iridessus* and *Trichocellus*) are now subgenus (of the genera *Trichotichnus*, *Hyphaereon*, *Idiomelas*, *Harpalus*, *Trichotichnus* and *Dicheirotrichus* respectively). As per the systematic list of extant ground beetles of the world (Lorenz, 2005), the 33 tribes mentioned in *Fauna of British India, Volume II- Harpalinae* (Andrewes, 1935) are now under 15 subfamilies (3 tribes in Anthinae; 1 in Apotominae; 1 in Brachininae; 1 in Broscinae; 1 in Ctenodactylinae; 3 in Dryptinae; 1 in Harpalinae; 7 in Lebinae; 3 in Licininae; 2 in Melaeninae; 2 in Orthogoninae; 2 in Panaginae; 1 in Platyninae; 1 in Pterostichinae; 4 tribes in trichinae). Eight tribes (Hexagoniini, Cymbionotini, Melaenini, Apotomini, Broscini, Trechini, Bembidiini, and Pogonini) with key and descriptions available in *Fauna of British India, Volume II- Harpalinae* (Andrewes, 1935) are now under five subfamilies (Apotominae, Broscinae, Ctenodactylinae, Melaeninae and Trechinae). Remaining 25 tribes now as ten subfamilies (Anthinae, Brachininae, Dryptinae,

Harpalinae, Lebinae, Licininae, Orthogoninae, Panaginae, Platyninae and Ptrostichinae) without keys and descriptions are referred as the lesser-known subfamilies from India (Sabu, 2022) and subfamily Harpalinae is one among them.

The tribe Harpalini was historically classified under the subfamily Harpalinae, as outlined by Andrewes (1935) in *Fauna of British India*, *Volume II- Harpalinae*. However, it notably omits discussion of the 83 species previously placed under tribe Harpalini in the earlier work, *Catalogue of Indian Insects* (Andrewes, 1930b). Subsequent taxonomic revisions have led to significant reclassification within this group. According to Lorenz (2005), in his systematic list of extant ground beetles of the world, the former tribe Harpalini has been elevated to the rank of subfamily Harpalinae. Within this revised framework, Harpalinae now comprises three distinct tribes from India: Anisodactylini, Harpalini, and Stenolophini.

Among the 169 Harpalinae species recorded from the Indian mainland, 77 Harpalinae species were reported from India after the publication of the *Catalogue of Indian Insects* Andrewes (1930b) during 1930–2023 period [Andrewes (1930a, 1933d, 1936), Schauberger (1932b, 1934a, c, 1935); Jedlička (1931, 1936c, 1965, 1966); Kirschenhofer (1992); Ito (1985, 1994c, 1995, 1996c, 1998, 2003b, 2016); Kataev & Schmidt (2017); Jaeger (1997, 1998, 2009, 2012, 2013, 2015a, b, 2016, 2017); Kataev & Wrase (2001, 2013, 2018); Kataev (2001b, 2002b, c, 2003, 2012a, 2018, 2020, 2021, 2022)] and the updated checklist of Indian Harpalinae (Nijisha & Sabu, 2023) provide the details of 169 species of subfamily Harpalinae recorded from the Indian mainland, along with details of the revisions by modern workers [Kataev (1997b, 2003, 2006, 2010, 2015b, 2017 and 2023a) and Jaeger (2012 and 2013)], literature and distribution patterns. Out of the 169 Harpalinae species recorded from the Indian mainland, 39 species are endemic to the Indian mainland, 11 species to the

Western Ghats Hotspot of Biodiversity, one to the Indo-Burma Hotspot of Biodiversity and eight to the Himalaya Hotspot of Biodiversity. Four genera, *Allosiopelus*, *Indocarterus*, *Oesyperus* and *Panagrius* are endemic to the Indian mainland. Out of the 39 Indian endemic species, distribution record of one Indian species (*Batoscelis porosa*) is not available. Among the remaining 38 species, eight species (seven Harpalini and one Stenolophini) are endemic to eastern Himalaya (West Bengal and Sikkim) in the Palearctic realm (Himalayan belt) in India, 28 species (one Anisodactylini, 22 Harpalini and five Stenolophini) are endemic to the Deccan Peninsula [Maharashtra, Tamil Nadu, Karnataka, Madhya Pradesh, Jharkhand, Odisha), Semi-Arid Zone (Rajasthan) and North-East India (Meghalaya)] in the Oriental realm (Non-Himalayan belt) in India and two species (Harpalini) are known from both the eastern Himalayas (West Bengal) in the Palearctic and north-east (Meghalaya) in the Oriental realms in India (Nijisha & Sabu, 2023).

Among the 169 Harpalinae species from Indian mainland, 82 species belonging to 26 genera were reported from south India till 2023 which shows a substantial representation of south Indian species. Although there are limited taxonomic works on south Indian Harpalinae [Andrewes (1923b, 1933b and 1933d); Schauberger (1935); Ito (1995, 1996c and 2016); Jaeger (2013, 2016 and 2017); Kataev (2002b, 2012a, 2020, 2021 and 2022); Nijisha et al., (2023)]. Taxonomic analysis of Indian Harpalinae is difficult due to lack of taxonomic keys for many subtribes, genera and species (keys to the subtribes of the tribe Harpalini, genera of the subtribe Amblystomina, Ditomina and Harpalina, species to the genera *Progonochaetus*, *Amblystomus*, *Anomostomus*, *Oosoma*, *Allosiopelus, Coleolissus*, *Meroctenus*, *Trichotichnus*, *Batoscelis*, *Bradycellus*, *Parabradycellus* and *Stenolophus*) and also the placements of the 33 tribes in the *Fauna of British India,*

Volume II- Harpalinae (Andrewes, 1935) under subfamily Harpalinae in the classic work of Indian Carabidae, which on the basis of Lorenz (2005) is with three tribes and the 83 species discussed by Andrewes (1930) in the single tribe Harpalini are now within these three tribes.

Four old generic (*Harpaliscus*, *Ooidius*, *Bradycellus Dicheirotrichus*) and 25 species (*Amblystomus aenescence*, *A. bivittatus*, *A. guttatus*, *A. indicus*, *A. punctatus*, *A. rotundiceps*, *A. vulneratus*, *Acinopus laevigatus*, *Anthracus annamensis*, *Dioryche nagpurensis, Harpaliscus birmanicus*, *Harpalus praticola*, *H. fuscipalpis*, *Lampetes lucens*, *L. marginalis*, *Liodaptus birmanus*, *Ooidius advolans*, *Ophonus chlorizans*, *Stenolophus charis*, *S. discophorus*, *S. lucidus*, *S. nitens*, *S. rectifrons*, *S. splendidus* and *Trichotichnus lamprus*) descriptions were with brief details [Sturm (1818); Fischer von Waldheim (1824); Dejean (1829); Dejean (1831); Ménétriés (1832); Erichson (1837); Chaudoir (1847); Jacquelin du Val (1857); Motschulsky (1858 and 1864); Nietner (1857b and 1858); Walker (1859); Solsky (1874); Bates (1886, 1873b, 1889a, c, 1891b, 1892a and b); Andrewes (1919b)] and the difficulty in translating literatures from Latin, German and French languages made the preparation of taxonomic keys a challenging task for workers in India and probably in the Oriental region.

Taxonomic keys for the tribes of subfamily Harpalinae, generic key for the tribes Anisodactylini and Stenolophini and species key for the genera *Chydaeus*, *Dioryche*, *Harpalus*, *Acupalpus*, *Anthracus*, *Psychristus*, *Gnathaphanus*, *Pseudognathaphanus*, *Harpaliscus*, *Dicheirotrichus*, *Loxoncus*, *Ophoniscus*, *Oxycentrus*, *Parophonus* were provided by earlier workers [Tschitschérine (1899a); Andrewes (1920); Shauberger (1932b); Andrewes (1933d); Schauberger (1934c); Jeannel (1948); Habu (1973); Kirschenhofer (1992); Jaeger (1997); Kataev (2002c,

2005b, 2003, 2010 and 2012a); Kataev & Wrase (2001); Kataev & Schmidt (2006); Jaeger (2009, 2012 and 2013); Kataev & Wrase (2016a)] but the keys were incomplete for the following reasons. Addition of further genera (*Parabradycellus*) and species (*Chydaeus salvazae*, *Anthracus fritzhiekei*, *A. nathani*, *A. anichtchenkoi*, *A. weigeli* and *A. skalei*) to the existing Indian species list and non-inclusion of the genera *Idiomelas* and *Parabradycellus* by Habu (1973) and species *Harpalus meghalayensis*, *H. meridianus*, *H. salinus*, *H. idiotus*, *H. fuscipalpis* by Kataev (2002c) and *Acupalpus maculatus*, *A. sikkimensis* and *A. horni* by Jaeger (2013) to the keys which are already known necessitated modifications in the taxonomic keys. Modified key to the genera of the tribe Stenolophini is prepared by combining the keys provided by Habu (1973) and Jeannel (1948) and adding genera *Parabradycellus* and *Idiomelas* which were not included by both authors. Modified key to the species of the genus *Chydaeus* is prepared by combining the keys provided in Shauberger (1932b) and Kataev & Schmidt (2006) and adding species *C. salvazae* which was not provided in the earlier works. Modified key to the species of the genus *Dioryche* is drafted by unifying the keys provided by Andrewes (1933d) and Kataev (2012a) and excluding synonymous species (*D. colombensis*). Kataev (2002c) provided a key to the species of the genus *Harpalus* from Nepal which is updated by adding five Indian species, *H. meghalayensis*, *H. meridianus*, *H. salinus*, *H. idiotus* and *H. fuscipalpis* to the key. Key to the species of the genus *Acupalpus* by Jaeger (2013) is modified by adding species, *A. maculatus* and *A. sikkimensis*. Key to the immaculate species of *Anthracus annamensis* group from the East Palaearctic and Oriental Regions by Jaeger (2012) is modified by adding maculate species, *A. horni* and five immaculate species, *A. fritzhiekei*, *A. nathani*, *A. anichtchenkoi*, *A. weigeli* and *A. skalei* reported after 2012 to the key. Modified key to the species of the genus *Psychristus* is prepared

by combining the keys provided by Jaeger (1997 and 2009). Key to the species of the genus *Gnathaphanus* by Andrewes (1920) is modified by excluding status changed (*Pseudognathaphanus punctilabris*, *P. festivus*, *P. exaratus*, *P. rusticus*, *P. rufitactor*) and the synonymised species (*Gnathaphanus orientalis*, *G. impressipennis*) from the key. Kataev & Wrase (2016a) provided a key to the species of the genus *Pseudognathaphanus* of the Oriental region. Key to the species of the genus *Harpaliscus* by Schauberger (1934c) is modified by adding species, *H. birmanicus* to the key and excluding synonymous species (*H. punctulatus*) from the key. Key to the species of the genus *Parophonus* (Kataev, 2010) is modified by adding species *P. rectangulus* to the key. Keys to the subtribes of the tribe Harpalini, genera of the subtribe Amblystomina, Ditomina and Harpalina, species to the genera *Progonochaetus*, *Amblystomus*, *Anomostomus*, *Oosoma*, *Allosiopelus, Coleolissus*, *Meroctenus*, *Trichotichnus*, *Batoscelis*, *Bradycellus*, *Parabradycellus* and *Stenolophus* are newly prepared.

Following challenges were encountered in the development of taxonomic keys. Genus *Harpalus*, noted as one of the taxonomically most difficult groups of ground beetles due to uniform appearance with a large number of species (Kataev, 2023b) is not included in the genus key of the subtribe Harpalina; genera *Parophonus* and *Siopelus* are included but not separated in the genus key for the subtribe Harpalina due to the unavailability of key characters to separate these genera. Among the 14 Indian species of the genus *Harpalus*, only two have been found in south India. To identify a specimen within the genus *Harpalus*, the key to Indian genera of subtribe Harpalina is used. If the specimen does not match the characteristics of any other genera listed in the key, it will be classified under the genus *Harpalus*. This

method serves as a practical, though temporary, solution to the ongoing taxonomic challenges associated with this group.

Trichotichnus lamprus is not included in the species key of genus *Trichotichnus* and *Anthracus annamensis* is not included in the species key of genus *Anthracus* due to insufficient species descriptions from authors (Bates, 1886 and 1889c respectively) and direct analysis of the type specimens at BMNH Museum, where the type of these species are deposited is required as it could not be sorted out with the images provided by BMNH Museum.

Fifty-four south Indian species belonging to 20 genera within three tribes [Anisodactylini- 1 species; Harpalini- 31 and Stenolophini- 22] (Table 1) were recorded with 44 species from Kerala, 25 species from Tamil Nadu and five species from Karnataka. Of the 54 species, most of them are with fully developed wings which facilitate wide distribution of those species. One new subgenus namely, *Tnaei* Nijisha et al., 2023 with one new species, *Anomostomus devagiriensis* Nijisha et al., 2023 is described from the Malabar coast region of Kerala in south India and is markedly distinguished from all other members of the genus in having ligula with four setae. *Anomostomus orientalis* is the only other species of the genus known from Indian subcontinent (Nijisha et al., 2023). Of the 54 south Indian species studied [which include species traced in the museums (ZSI Calicut and ZSI Chennai), earlier collection in the research lab and species collected from the field], 10 species, *Amblystomus resectus*, *Anomostomus devagiriensis*, *Anthracus nathani*, *Allosiopelus fulvicollis*, *A. punctatipennis*, *Coleolissus nakajimai*, *Dioryche solida*, *Oesyperus unctulus*, *Ophoniscus puneensis*, *Trichotichnus saluki* are endemic to Indian mainland with two species, *Coleolissus nakajimai* and *Oesyperus unctulus* endemic to the Western Ghats and Sri Lanka hotspot of biodiversity and five species, *Anomostomus*

devagiriensis, *Anthracus nathani*, *Allosiopelus fulvicollis*, *A. punctatipennis* and *Trichotichnus saluki* with records only from south India and can be treated as regional endemics to south India.

One species, *Loxoncus renitens* is new to India, had previously been known only from Sri Lanka (Kataev, 2003). Six species, *Acupalpus sinuellus*, *Anthracus skalei*, *A. weigeli*, *Coleolissus perlucens*, *Loxoncus discophorus* and *Stenolophus nitens* are first reports from south India, of which *A. sinuellus*, *Anthracus skalei*, *A. weigeli* and *Loxoncus discophorus* are first reports from Kerala, *Coleolissus perlucens* is first report from both Kerala and Tamil Nadu and *Stenolophus nitens* is reported first time from Kerala, Tamil Nadu and Karnataka. *Acupalpus sinuellus* was previously reported from north east and north west India (Jaeger et al., 2016) and in Laos, Myanmar, Nepal, Vietnam (Jaeger et al., 2016), China (Aston, 2016) and Indonesia (Anichtchenko et al., 2024). *Anthracus skalei* having previous distribution from central Nepal, Meghalaya and Bangladesh and *A. weigeli* from Uttarakhand, central Nepal, West Bengal and Odisha (Jaeger, 2015). *Coleolissus perlucens*, a species with earlier reports from Jammu & Kashmir (Bates, 1892), Uttarakhand (Kataev, 2022) and West Bengal (Saha, 1995), Pakistan (Kataev, 2022) and was endemic to western Himalaya (Kataev, 2022) and its record outside western Himalaya (Uttarakhand and Himalaya) makes it non-endemic to the western Himalaya. *Loxoncus discophorus* was previously reported with distribution in New Delhi (Andrewes, 1930b), Assam (Kataev, 2003), Chhattisgarh (Nijisha & Sabu, 2023), Himachal Pradesh (Chaudoir, 1852; Andrewes, 1930b), Uttarakhand (Andrewes, 1930b) and in Myanmar, Philippines, Sri Lanka, Thailand, Vietnam, Taiwan (Kataev, 2003) and Pakistan (Jaeger & Ahmed, 2017). *Stenolophus nitens* was previously reported from Maharashtra (Motschulsky, 1864), Uttarakhand (Jaeger et al., 2016),

West Bengal (Schauberger, 1938) and in China, Indonesia, Myanmar, Pakistan (Kataev, 2002d; Jaeger & Kataev, 2003; Jaeger et al., 2016) and Nepal (Anichtchenko et al., 2024).

Eleven species, *Acupalpus punctatus*, *Amblystomus quadriguttatus*, *A. resectus*, *Anthracus anichtchenkoi*, *A. horni*, *A. nathani*, *Dioryche convexa*, *D. lucidula*, *Parophonus subtilis*, *Siopelus tamilnadensis*, and *Trichotichnus saluki* and two subspecies, *Idiomelas fulvipes indus* and *Platymetopus flavilabris flavilabris* are first records from Kerala. *Trichotichnus saluki* was endemic to the Western Ghats and Sri Lanka hotspot of biodiversity as per Kataev (2020) and present record of the species outside the hotspot makes it non-endemic to the Western Ghats and Sri Lanka hotspot of biodiversity. *Dioryche solida* reported for the first time from Tamil Nadu which has been recorded earlier from Maharashtra and Karnataka (Andrewes, 1933) and *Pseudognathaphanus punctilabris* is first report from both Kerala and Karnataka and it was reported earlier from West Bengal (Saha, 1995, Kataev & Wrase, 2017a), Odisha (Andrewes, 1924a), Tamil Nadu, Assam and Himachal Pradesh (Kataev & Wrase, 2016a). Two species, *Stenolophus quinquepustulatus* with earlier distribution record from Rajasthan (Bates, 1891b), West Bengal (Saha, 1995) and Kerala (Sruthi & Sabu, 2022) and *S. smaragdulus* with earlier distribution record from Punjab, Haryana, Himachal Pradesh (Andrewes, 1924a), Rajasthan, Jharkhand (Bates, 1891b), Meghalaya (Saha & Halder, 2000), West Bengal (Saha, 1995) and Kerala (Sruthi & Sabu, 2022) are first reports from Tamil Nadu and Karnataka in south India.

Eighty two species belonging to 26 genera within three tribes (Anisodactylini: 3 genera, 6 species; Harpalini:16 genera , 54 species ; Stenolophini- 7 genera, 22 species) were recorded from south India till 2023 (Motschulsky, 1858; Bates, 1891b and 1892b; Alluaud, 1916; Andrewes, 1919a, 1921b, 1922, 1923a, 1923b, 1924a,

1930a, 1930b, 1931, 1933b and 1933d; Schauberger, 1934c and 1935; Jeannel, 1948; Kapur, 1954; Jedlička, 1969; Ito, 1995, 1996c and 1997; Kataev, 2002b, 2003 and 2005b; Jaeger, 2010; Kataev, 2010 and 2012a; Jaeger, 2013; Kataev, 2014a, 2015a and 2015b; Ito, 2016; Jaeger et al., 2016; Kataev & Wrase, 2016a; Jaeger, 2017; Akhil, 2020; Kataev, 2020, 2021 and 2022; Sruthi & Sabu, 2022; Divya, 2023; Ashly, 2023; Kataev, 2023). Of the 82 south Indian species previously reported, 46 species were recorded from south India during the study. The type series of all these 46 species are deposited in international museums and the present study has contributed to the deposition of identified and verified species in the Western Ghats Regional Centre, Zoological Survey of India, Calicut which enhances the accessibility of regional museum collections. Present study adds a new species, one Indian first report and first report of six species to the existing list of south Indian species, updating the total number of known species in south India to 90. Of the 90 species, 16 species are endemic to south India (*Anomostomus devagiriensis*, *Anthracus fritzhiekei*, *A. nathani*, *Panagrius nigricans*, *Allosiopelus fulvicollis*, *A. punctatipennis*, *Coleolissus deformipenis*, *C. inessae*, *C. kejvali*, *C. nakajimai*, *Dioryche dravidana*, *Lampetes marginalis*, *Oesyperus planus*, *O. pygmaeus*, *O. unctulus*, *Trichotichnus saluki*) and five species (*Coleolissus deformipenis*, *C. inessae*, *C. nakajimai*, *Lampetes marginalis*, *Oesyperus unctulus*) are endemic to the Western Ghats and Sri Lanka hotspot of biodiversity.

However, there are few works such as genus key to the subtribe Harpalina is incomplete (genus *Harpalus* is not included due to uniform appearance with other genera leading to the difficulties with the genus; genera *Parophonus* and *Siopelus* are not separated in the key due to similar morphological characters between both the genera), *Trichotichnus lamprus* is not included in the species key of genus

Trichotichnus and *Anthracus annamensis* is not included in the species key of genus *Anthracus* due to insufficient species descriptions.

To address the identified gaps (insufficient character details to include genus *Harpalus*, and also to separate genera *Parophonus* and *Siopelus* in the genus key for the subtribe Harpalina), future studies should focus on the physical analysis of type specimens of genera *Harpalus*, *Siopelus* and *Parophonus* (the type species of these genera are very old and is difficult to trace the museums where these types are deposited) and species *Trichotichnus lamprus* and *Anthracus annamensis* housed in various International museums.

Present taxonomic study on south Indian Harpalinae, coupled with interactions with various museums, has uncovered collections of species (*Batoscelis oblonga*, *Idiomelas fulvipes*, *Loxoncus microgonus*, *Stenolophus nitens*, *S. quinquepustulatus*, *S. smaragdulus, Amblystomus vulneratus, Anomostomus orientalis, Dioryche cuprina, Oesyperus unctulus, Ophoniscus compositus, Platymetopus figuratus* and *P. flavilabris*) deposited by different researchers (R. Babu, V. D. Hegde, Kannadian, K. Chandra, K. R. Rao, L Bindu, Ravi, R. Venkiteshan, J. Thilak and S. Prabhakaran) across the Oriental region. These collections are deposited in the Western Ghat Regional Centre, Zoological Survey of India, Calicut and Southern Regional Centre, Zoological Survey of India, Chennai. Future research should focus on gathering the data on type species of the genera *Harpalus*, *Parophonus* and *Siopelus* and holotype of species *Trichotichnus lamprus* and *Anthracus annamensis* from different international museums including BMNH, London that might have been added subsequently after the era of Andrewes (1930–1935).

The present work resolves the longstanding problems associated with taxonomic studies of Indian Harpalinae by addressing gaps, offering taxonomic keys,

and filling the lacuna with updated classifications and descriptions. These contributions will pave the way for a more cohesive understanding classification of Indian Harpalinae.

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Chapter 6

CONCLUSION



6. Conclusion

Primary data on taxonomy of south Indian Harpalinae is provided along with a checklist of Indian Harpalinae, taxonomic key and descriptions of Indian tribes, subtribes, genera and species, pictorial key to the studied species from south India and species images.

An updated checklist of 169 Harpalinae species from the Indian mainland along with the details of revisions by modern workers, literature, and distribution patterns is provided.

For the preparation of taxonomic keys, all available tribe, subtribe, genus, and species descriptions were collected by thorough review of literatures and those descriptions in French, Latin, and Russian languages were translated to English. Taxonomic keys to the subtribes of the tribe Harpalini, genera of the subtribe Amblystomina, Ditomina and Harpalina, species to the genera *Progonochaetus*, *Amblystomus*, *Anomostomus*, *Oosoma*, *Allosiopelus, Coleolissus*, *Meroctenus*, *Trichotichnus*, *Batoscelis*, *Bradycellus*, *Parabradycellus*, and *Stenolophus* were newly prepared.

Modified key to the genera of the tribe Stenolophini, species of the genera *Chydaeus*, *Dioryche*, *Harpalus*, *Acupalpus*, *Anthracus*, *Psychristus*, *Gnathaphanus*, *Harpaliscus*, and *Parophonus* were prepared from already existing keys and pictorial key to the studied species were also prepared.

Fifty-four species belonging to 20 genera within three tribes were recorded from south India with 44 species from Kerala, 25 species from Tamil Nadu and five species from Karnataka. One new subgenus, *Tnaei* of the genus *Anomostomus* with one new species, *Anomostomus devagiriensis* from Kerala in south India, one first report, *Loxoncus renitens* from India and six species (*Acupalpus sinuellus*, *Anthracus*

skalei, *A. weigeli*, *Coleolissus perlucens*, *Loxoncus discophorus* and *Stenolophus nitens*) are first reports from south India.

Eleven species (*Acupalpus punctatus*, *Amblystomus quadriguttatus*, *A. resectus*, *Anthracus anichtchenkoi*, *A. horni*, *A. nathani*, *Dioryche convexa*, *D. lucidula*, *Parophonus subtilis*, *Siopelus tamilnadensis* and *Trichotichnus saluki*) and two subspecies (*Idiomelas fulvipes indus*, *Platymetopus flavilabris flavilabris*) are first records from Kerala.

One species (*Dioryche solida*) reported first time from Tamil Nadu. One subspecies, (*Platymetopus flavilabris flavilabris*) reported first time from both Kerala and Tamil Nadu. One species (*Pseudognathaphanus punctilabris*) is first report from both Kerala and Karnataka. Two species (*Stenolophus quinquepustulatus* and *S. smaragdulus*) are first reports from both Tamil Nadu and Karnataka.

10 species (*Amblystomus resectus*, *Anomostomus devagiriensis*, *Anthracus nathani*, *Allosiopelus fulvicollis*, *A. punctatipennis*, *Coleolissus nakajimai*, *Dioryche solida*, *Oesyperus unctulus*, *Ophoniscus puneensis*, *Trichotichnus saluki*) are endemic to Indian mainland. Two species (*Coleolissus nakajimai* and *Oesyperus unctulus*) are endemic to the Western Ghats and Sri Lanka hotspot of biodiversity. Five species (*Anomostomus devagiriensis*, *Anthracus nathani*, *Allosiopelus fulvicollis*, *A. punctatipennis* and *Trichotichnus saluki*) are regional endemics to south India.

Verified 49 species and five subspecies are deposited in the Western Ghats Regional Centre (ZSI-WGRC) Kozhikode ZSI, Calicut station.

In the present study, the genus key to the subtribe Harpalina of the tribe Harpalini is incomplete- genus *Harpalus* is not included in the key (difficult to find out a key character due to its uniform appearance with other genera); genera *Siopelus* and *Parophonus* are included in the key but not separated (inability to find a key

character to separate these genera) and species *Trichotichnus lamprus* and *Anthracus annamensis* is not included in the species key of the genera *Trichotichnus* and *Anthracus* respectively (inability to find out a key character).

The baseline study conducted by Andrewes (1929 and 1935) developed significant contributions to Harpalinae taxonomy, providing an important foundation for subsequent research. After that there existed a gap in taxonomic works on Indian Carabidae leading to a disconnect between historical and recent classifications such as in Lorenz (2005). Also, later revision works by modern authors [Kataev (1997b, 2003, 2006, 2010, 2015b, 2017 and 2023a) and Jaeger (2012 and 2013)] created changes in the classification system followed by Andrewes (1929 and 1935) resulting into discontinuities which created challenges in the identification and classification of Harpalinae taxonomy. The present study fills these gaps by preparing a national checklist of Harpalinae, taxonomic key to Indian Harpalinae and pictorial key to the identified species.

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Chapter 7

RECOMMENDATIONS

7. Recommendations

In the present study few works such as genus key to the subtribe Harpalina and species key to the genera *Trichotichnus* and *Anthracus* is incomplete. To fill these gaps future studies should focus on the physical analysis of the type specimens of the genera *Harpalus*, *Siopelus* and *Parophonus* and species *Trichotichnus lamprus* and *Anthracus annamensis* deposited in various international museums.

Many of the type specimens of Harpalinae species are deposited in various international museums such as British Museum of Natural History, London (BMNH), Natural History Museum, Paris, France (MNHN), Natural History Museum, Berlin and Zoological Museum, Moscow University, Moscow, institution like Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia (ZISP) and American Museums like Smithsonian Museum (Research Institute in the United States of America). Direct examination of these specimens other than depending on images can greatly enhance the reliability of finding key characters among species. Prioritization to visit these museums and institution would contribute to more precise outcomes.

Genera *Harpalus*, *Siopelus* and *Parophonus* and species *Trichotichnus lamprus* and *Anthracus annamensis* require DNA analysis as these taxa did not include in the Indian taxonomic keys as they can not be differentiated based on morphological features and based on the characters given in the descriptions.

If practicable, direct examination of specimens by visiting museums are strongly recommended. However, in cases where direct visiting is not possible, museum collection images with high- resolution on museum website should be available to use as an alternative and advancement of digital access to museum specimens are strongly recommended which will helps in global research equity. Publishing high-resolution images of museum collection specimens in their official

webpages are strongly recommended that support equitable access to scientific resources and reduce logistical barriers.

Chapter 8

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First record of *Loxoncus renitens* (Bates, 1886) and additional records of *Idiomelas fulvipes indus* Kataev, 1997 from India (Coleoptera, Carabidae, Harpalinae)

Kuzhikkatil Nijisha
Entomology Research Unit, Post Graduate & Research Department of Zoology, College Research Centre Affiliated to University of Calicut, St. Joseph's College (Autonomous), Devagiri, Calicut 673008, Kerala, India.
✉ *nijishak71@gmail.com* *https://orcid.org/0000-0002-0638-8400*

Thomas K. Sabu
Department of Zoology, University of Calicut, Thenhipalam, 673635, Kerala, India.
✉ *sabukthomas@gmail.com* *https://orcid.org/0000-0002-8701-0484*

Viswanath D. Hegde
Zoological Survey of India Western Ghats Regional Centre, Kozhikode 673006, Kerala, India.
✉ *hegde67@yahoo.co.in* *https://orcid.org/0000-0001-9506-5170*

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ABSTRACT. New record of carabid species *Loxoncus renitens* (Bates, 1886) from Indian mainland with additional records of subspecies *Idiomelas fulvipes indus* Kataev, 1997 from the states of Kerala, Tamil Nadu and Karnataka with notes on their geographical distribution are provided.

Keywords: first report, ground beetles, *Idiomelas*, *Loxoncus*, south India

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INTRODUCTION

Genus *Loxoncus* Schmidt-Göbel, 1846 belongs to the tribe Stenolophini of subfamily Harpalinae with 36 species world-wide (Lorenz, 2021) and most commonly occurs in the subtropics and tropics of the eastern hemisphere (Kataev, 2003) with two subgenera, *Loxoncus* Schmidt-Göbel, 1846 and *Xoloncus* Kataev, 2003. At present five *Loxoncus* species are reported from India (Nijisha & Sabu, 2023) in which four species belong to subgenus *Loxoncus* and one belongs to subgenus *Xoloncus*. Another species, *Loxoncus renitens* of the subgenus *Loxoncus*, is recorded here for the first time from Indian mainland.

Genus *Idiomelas* Tschitschérine, 1900 belongs to the tribe Stenolophini of subfamily Harpalinae (Lorenz, 2021) and is distributed in Palearctic, Afrotropical and Oriental realms (Kataev, 1997). *Idiomelas* is represented by two subgenera, *Idiomelas* Tschitschérine, 1900 confined to the Palearctic realm (from Asia Minor to Mongolia and China) with two species, *I. morio* (Ménétriés, 1832) and *I. nigripes* (Reitter, 1894), and *Egaploa* Alluaud, 1916 with two species, *I. crenulatus* (Dejean, 1829) and *I. fulvipes* (Erichson, 1843), recorded from Afrotropical, Palearctic and Oriental realms (Kataev, 1997, 2014). Three subspecies of *I. fulvipes* are known with two subspecies (*I. fulvipes himalayensis* Della Beffa, 1931 and *I. fulvipes indus* Kataev, 1997) from Oriental [India, Myanmar, Nepal (Kataev, 1997, 2014)] and Palearctic [Pakistan (Kataev, 2014)] and one subspecies (*I. fulvipes fulvipes* (Erichson, 1843)) from Palearctic [Iraq, Oman, Saudi Arabia, Yemen (Kataev, 1997, 2014); Arab Emirates (Felix, 2009)] and Afrotropical [Angola,

Corresponding author: Kuzhikkatil Nijisha ✉ *nijishak71@gmail.com*
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Botswana, Cape Verde Is., Djibouti, Madagascar, Mozambique, Seychelles, Sudan, Tanzania (Kataev, 1997, 2014); Ethiopia, Ghana, Kenya, Kongo, Liberia, Namibia, Zambia, Zimbabwe (Jaeger et al., 2016)] realms. The present study reports additional records of the subspecies of *Idiomelas fulvipes, I. fulvipes indus*, from the states of Kerala, Tamil Nadu and Karnataka and also discussing about color variation among the same subspecies with an unusual trait observed in one specimen.

MATERIAL AND METHODS

Specimens attracted to light in a residential building were collected from Krishnan Kovil located in the foothill of the Western Ghats (09°33'51.3"N, 77°40'51.7"E) in Virudhunagar District, Tamil Nadu state and with light trap from forest at Aralam Wildlife Sanctuary (11°58'03.4"N, 75°46'19.2"E) from Kannur district in the north Malabar region of southern Kerala and loaned out from National Insect Collections of Zoological Survey of India Western Ghats Regional Centre, Kozhikode (ZSIK). Tribe and genus level identification was done by using the key modified from Habu (1973). Species level identification was done using the keys from Kataev (1997, 2003, 2014). Images were taken using Leica® M205C stereo zoom microscope fitted with Leica® MC170 HD digital camera and were enhanced with the help of Leica® Application Suite (LAS) version 4.12. Studied specimens were deposited in the National Insect Collections of Zoological Survey of India Western Ghats Regional Centre, Kozhikode (ZSIK).

Abbreviations. TL – body length from the anterior margin of the clypeus to the elytral apex; PL – length of pronotum along median line; PW – maximum width of pronotum; EL – maximum length of closed elytra; EW – maximum width of elytra.

RESULTS

Taxonomic hierarchy

Class Insecta Linnaeus, 1758

Order Coleoptera Linnaeus, 1758

Family Carabidae Latreille, 1802

Subfamily Harpalinae Bonelli, 1810

Genus *Loxoncus* Schmidt-Göbel, 1846

Type species: *Loxoncus elevatus* Schmidt-Göbel, 1846.

***Loxoncus renitens* (Bates, 1886)** (Fig. 1A–B)

Material examined *(n = 1).* 1♂, 26.ii.2022, light trap, Aralam Wildlife Sanctuary (11°58'03.4"N, 75°46'19.2"E), Kannur, Kerala, India, coll. K. Shigina, deposited in ZSIK, SJC-ZOO-AWSNK004.

Measurements. (Male), TL = 7.07 mm, PL = 1.49 mm, PW = 2.21 mm, EL = 4.35 mm, EW = 2.92 mm.

Distribution. India [Kerala: Kannur: Aralam Wildlife Sanctuary (**New record**)]; Sri Lanka (Bates, 1886:79; Kataev, 2003:367).

Genus *Idiomelas* Tschitschérine, 1900

Type species: *Idiomelas morio* (Ménétriés, 1832).

***Idiomelas fulvipes indus* Kataev, 1997** (Fig. 2A–D)

Material examined *(n = 5).* 1♂, 08.viii.2019, light attracted, Krishnan Kovil (9°33'51.3"N, 77°40'51.7"E), Virudhunagar District, Tamil Nadu, India, coll. K. Nijisha; deposited in ZSIK. ZSIK Regd. No.SJC-ZOO-KKVNK001; 1♂, 26.ii.2022, light trap, Aralam Wildlife Sanctuary (11°58'03.4"N, 75°46'19.2"E), Kannur, Kerala, India, coll. K. Shigina, deposited in ZSIK. ZSIK Regd. No.SJC-ZOO-AWSNK001; 2♀♀, 26.ii.2022, light trap, Aralam Wildlife Sanctuary (11°58'03.4"N, 75°46'19.2"E), Kannur, Kerala, India, coll. K. Shigina, deposited in ZSIK. ZSIK Regd. No. SJC-ZOO-AWSNK002–003; 1♂, 18.vi.2022, light trap, Mookambika Wildlife Sanctuary, (13°53'55.4"N, 74°44'42.4"E), Areshiroor, Karnataka, India, coll. V.D. Hegde & Party, deposited in ZSIK.

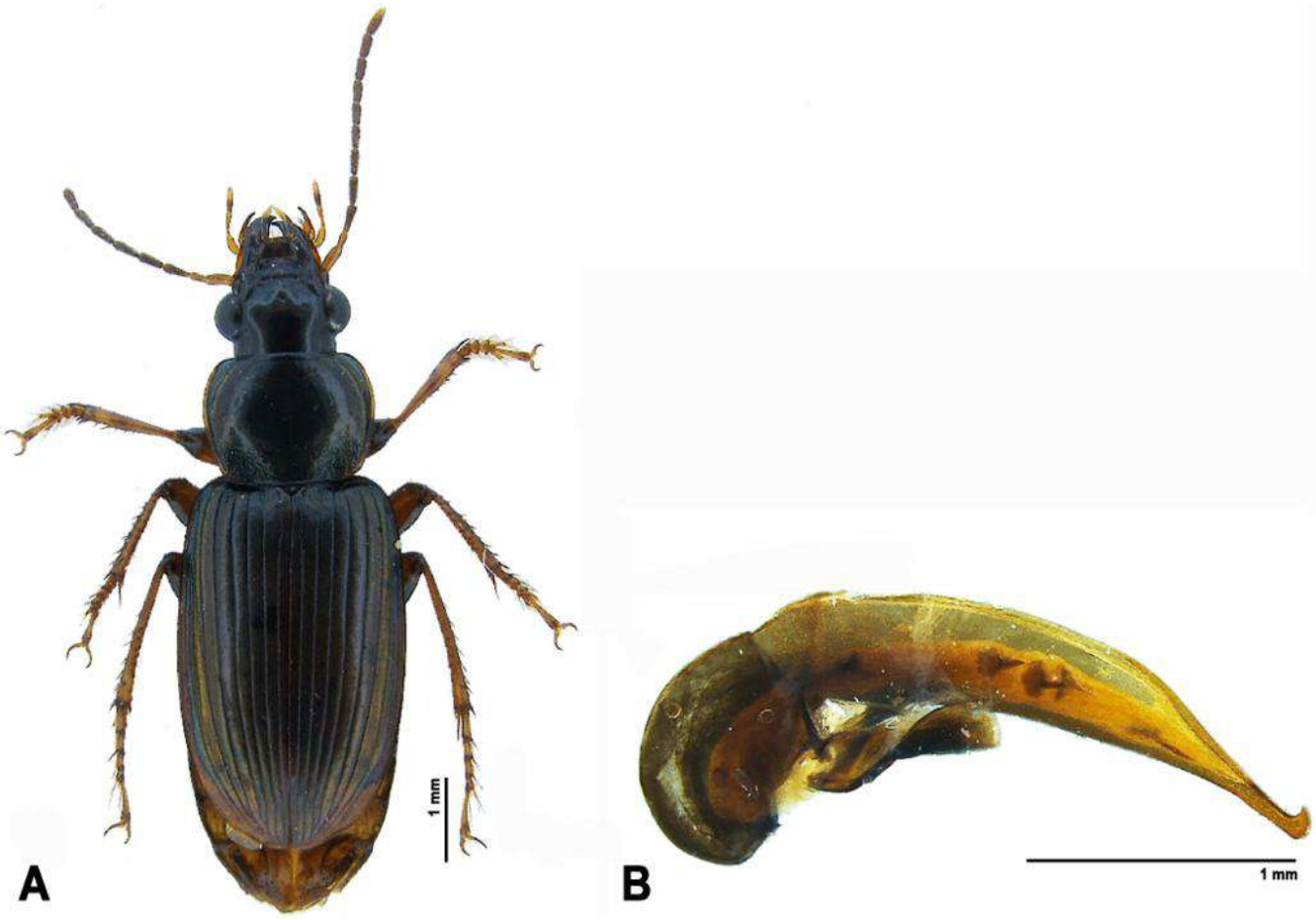


Figure 1. *Loxoncus renitens* (Bates, 1886). **A.** Habitus, dorsal view; **B.** Aedeagus, lateral view.

Measurements. (Males), TL = 7.7 mm, PL = 1.6 mm, PW = 2.4 mm, EL = 4.7 mm, EW = 2.9 mm. (Females), TL = 7.7 mm, PL = 1.7 mm, PW = 2.4 mm, EL = 4.7 mm, EW = 3 mm.

Distribution. India: Chhattisgarh: Jagdalpur, Forest rest house (Nijisha & Sabu, 2023:466); Odisha: Surada, Ganjam (Andrewes, 1924:39); Goa: Südgoa, Canacona Raj Baga Beach (Kataev, 2014: 249); Karnataka: Bangalore (Kataev, 2014:249), Mookambika Wildlife Sanctuary (Present study); Tamil Nadu: Krishnanan Kovil (Present study), Chennai, Coimbatore (Kataev, 2014:249), Kodaikanal (Alluaud, 1916:73; Jeannel, 1948:695), Tiruchirappalli (Kataev, 2014:249); Kerala: Kannur, Aralam Wildlife Sanctuary (Nijisha & Sabu, 2023:466); Myanmar (Kataev, 2014:249); Nepal (Kataev, 1997:348).

Remarks. Among the five specimens collected, one shows entirely black coloration, two exhibits dark reddish-brown legs while the other two specimens with pale yellowish-brown legs. However, upon closer comparison of aedeagus, it becomes evident that all these specimens belong to the same taxon *Idiomelas fulvipes indus* and the coloration of their legs may vary in this subspecies (Boris M. Kataev, pers. com.). Additionally, one specimen with black color exhibits a remarkable deep emargination in the basal edge of pronotum, an unusual trait in harpalines and it may be an aberrant character (Boris M. Kataev, pers. com.).

All the type specimens of the species of *Idiomelas* are in European museums (Erichson, 1843; Kataev, 1997) and the present study leads to deposition and availability of the studied specimens of *I. fulvipes indus* in Indian National depository at ZSI Calicut.

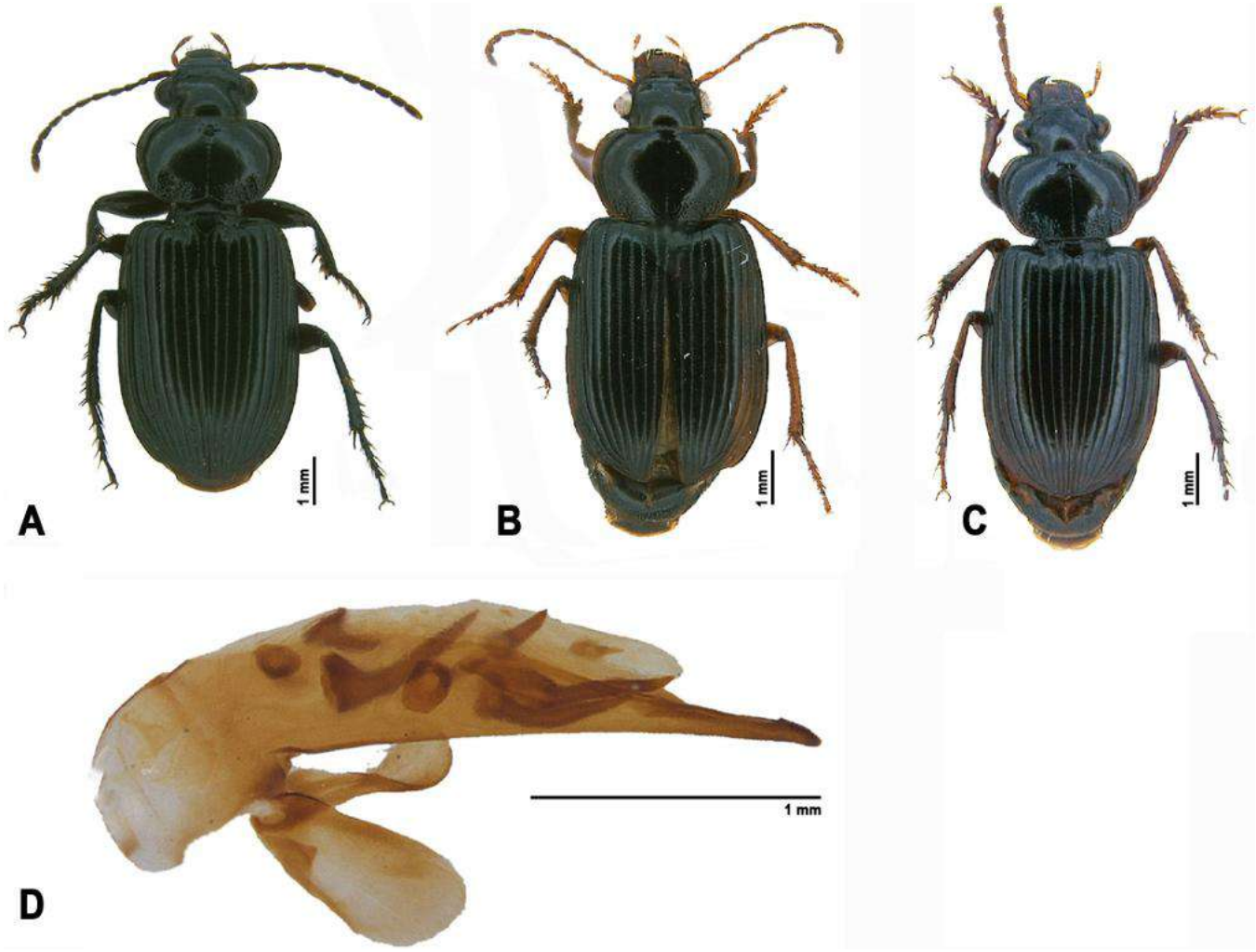


Figure 2. *Idiomelas fulvipes indus* Kataev, 1997, colour variation among specimens, and the male genitalia. **A.** Entirely black body; **B.** Pale yellowish brown legs; **C.** Dark reddish brown legs. **D.** Aedeagus.

DISCUSSION

Loxoncus renitens was described from Colombo and is known only from Sri Lanka (Kataev, 2003). It is the first report of the species from India and verification was done by comparing with the aedeagal illustrations provided in Kataev (2003). *Idiomelas fulvipes indus* was previously reported from Indian states of Chhattisgarh, Odisha, and Goa, in addition to Kerala, Tamil Nadu and Karnataka. Additional records of *I. fulvipes indus* from the states of Kerala, Tamil Nadu and Karnataka are provided.

AUTHOR'S CONTRIBUTION

The authors confirm their contribution to the paper as follows: K. Nijisha: Identification, digital imaging of specimens and drafting the manuscript; T.K. Sabu: Confirmation of the identified species and technical review of the manuscript; V.D. Hegde: Technical review of the manuscript. The authors read and approved the final version of the manuscript.

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AVAILABILITY OF DATA AND MATERIAL

The specimens listed in this study are deposited in the National Insect Collections of Zoological Survey of India Western Ghats Regional Centre, Kozhikode (ZSIK) and are available from the curator, upon request.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study only included plants and arthropod material, and all required ethical guidelines for the treatment and use of animals were strictly adhered to in accordance with international, national, and institutional regulations. No human participants were involved in any studies conducted by the authors for this article.

CONSENT FOR PUBLICATION

Not applicable.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this paper.

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نخستین گزارش *Loxoncus renitens* (Bates, 1886) و ثبت گزارش‌های بیشتر *Idiomelas fulvipes indus* (Coleoptera, Carabidae, Harpalinae) Kataev, 1997 از هند

کوژیکاتیل نیجیشا[1*]، توماس کی سابو[1] و ویشواناث هگ[3]

۱ واحد بخش تحقیقات حشرات، گروه تحصیلات تکمیلی و تحقیقات جانورشناسی، مرکز تحقیقات دانشگاه کالیکات، کرالا ۶۷۳۰۰۸، هند
۲ بخش جانورشناسی، دانشگاه کالیکات، تنهیپالام، ۶۷۳۶۳۵، کرالا، هند
۳ مرکز منطقه‌ای گهات غربی، بخش مطالعات جانورشناسی هند، کرالا-۶۷۳۰۰۶، هند.

* پست الکترونیک نویسنده مسئول مکـاتبه: *nijishak71@gmail.com*

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چکیـده: گزارش جدید گونه سوسک زمینی *Loxoncus renitens* (Bates, 1886) از شبه قاره هند به همراه گزارش‌های بیشتر از زیرگونه *Idiomelas fulvipes indus* Kataev, 1997 از ایالت‌های کرالا، تامیل نادو و کارناتاکا در هند، به‌علاوه نکاتی از انتشار جغرافیایی آن‌ها ارایه شد.

واژگـان کلیدی: اولین گزارش، سوسک زمینی، *Idiomelas*، *Loxoncus*، جنوب هند، Stenolophini

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GENUS *ANOMOSTOMUS* LAFERTÈ-SÉNECTÈRE (COLEOPTERA: CARABIDAE: HARPALINAE): ADDITION OF A NEW SUBGENUS AND NEW SPECIES FROM SOUTH INDIA

K Nijisha[1], K. Thomas Sabu[2,*] and P Aswathi[1]

[1]Entomology Research Unit, Post Graduate & Research Department of Zoology,
College Research Centre Affiliated to University of Calicut,
St. Joseph's College (Autonomous), Devagiri, Calicut 673008, Kerala, India
[2]Department of Zoology, University of Calicut, Thenhipalam 673635, Kerala, India
*Email: sabukthomas@gmail.com (corresponding author); ORCID ID 0000-0002-8701-0484

ABSTRACT

Genus *Anomostomus* LaFertè-Sénectère is represented by three species globally with two species known from Afrotropical region and one species, *Anomostomus orientalis* Andrewes from the Indian subcontinent (India, Sri Lanka and Indo-Pakistan border). A new subgenus, *Tnaei* subgen. nov. within the genus *Anomostomus* is described with a new species *Anomostomus (Tnaei) devagiriensis* sp. nov. from the Malabar coast region of Kerala in South India.

Key words: *Anomostomus (Tnaei) devagiriensis* sp. nov., *Tnaei* subgen. nov., *A. orientalis*, Afrotropical region, Indian subcontinent, Harpalini, Amblystomina, southern India, Kerala, distribution

Harpalinae is a species rich subfamily of Carabidae with four tribes (Anisodactylini Lacordaire 1854, Harpalini Bonelli 1810, Stenolophini Kirby 1837 and Pelmatellini Bates 1882) at global level (Lorenz 2022). Among the four tribes, tribe Pelmatellini is not reported from India. Tribe Harpalini represented by three subtribes- Amblystomina Fauvel 1889, Ditomina Bonelli, 1810 and Harpalina Bonelli 1810 (Lorenz 2022) with three, two and 20 genera respectively in India. Genus *Anomostomus* of subtribe Amblystomina of the tribe Harpalini (Lorenz 2022) is known from Oriental and Afrotropical regions. Genus *Anomostomus* is represented by three species globally (Lorenz 2022) with two species; *Anomostomus laevigatus* (Kuntzen) and *A. torridus* LaFertè-Sénectère) known from the Afrotropical region (LaFertè-Sénectère, 1853; Chaudoir, 1854; Kuntzen, 1919; Jeannel, 1948; Aistleitner and Baehr, 2016; and one species, *A. orientalis* Andrewes 1923 from the Oriental region (Andrewes 1923; Azadbakhsh and Rafi, 2017). Present study describes a new subgenus *Tnaei* subgen. nov. within the genus *Anomostomus* with a new species *Anomostomus (Tnaei) devagiriensis* sp. nov. from South India with a key to the species of the genus *Anomostomus*. The holotype and paratype of the new species are females and no male could be located. The specimens of *A. orientalis* are all females including the holotype and the gender of the other two species in the genus are not defined in their descriptions. In this study attention is given to morphological diagnostic features and remove the over dependence on sexually dimorphic characters.

MATERIALS AND METHODS

Specimens were collected with light traps from a paddy field at Chalode (11°55'47.6"N 75°30'06.3"E) from Kannur district in the Malabar coast region of Kerala. Tribe and subtribe level identification was done using Habu (1973). Genus key to the subtribe Amblystomina and species key to the genus *Anomostomus* were prepared. Images were taken using Leica M205C Stereozoom microscope fitted with Leica MC 170 HD digital camera and were enhanced with the help of Leica Application Suite (LAS) version 4.12. Studied specimens were deposited in the National Insect Collections of Zoological Survey of India Western Ghats Regional Centre, Kozhikode (ZSIK). Abbreviations used- TLA: body length from apex of mandibles to pygidium; TLB: body length from apex of labrum to apex of elytra; PL: length of pronotum along median line; PW: maximum width of pronotum; EL: maximum length of closed elytra; EW: maximum width of elytra.

RESULTS AND DISCUSSION

A. Key to the subgenera and species of the genus *Anomostomus* LaFertè-Sénectère 1853

1. Ligula bisetose.....subgenus

Anomostomus s. str. 2

- Ligula quadrisetose.....*Anomostomus (Tnaei) devagiriensis* sp. nov.

2. Pronotum greatly narrowed at the base; elytra reddish brown.....*A. torridus* LaFertè-Sénectère 1853
- Pronotum slightly narrowed at the base; elytra greenish.....3
3. Elytral striae smooth, without punctures; length 5.5–6.5 mm.....*A. laevigatus* (Kuntzen 1919)
- Elytral striae finely crenulate; length 6–8 mm. .....*A. orientalis* Andrewes 1923

B. *Tnaei* subgen.nov.

Type species *Anomostomus (Tnaei) devagiriensis* sp. nov.

Diagnosis: *Tnaei* subgen. nov. is very similar to the Oriental species, *Anomostomus orientalis* of the nominotypical subgenus *Anomostomus* s. str. It is distinguished from the members of the subgenus *Anomostomus* s. str in having ligula with four setae.

Description: Head: Large and wide. Labrum asymmetrical, left lobe slightly larger than right lobe, deeply emarginate at apex with six setae. Clypeus deeply emarginate at apex exposing the basal portion of labrum. Mentum without median tooth. Mentum and submentum separated by complete transverse suture and submentum with large single seta on each side. Ligula quadrisetose, with two small and two large setae; ligula not widening towards apex and surrounded by wide and membranous paraglossae. Antennae pubescent from 3rd segment; second segment a little shorter than the other segments. Pronotum: Transverse. Widest at middle with single seta on each side placed just before middle. Median line clearly visible only at disc and not reaching anterior and posterior borders. Hind wings well developed Ventral side: Shiny. Prosternal process round, not bordered and with fine setae. Metepisterna elongate and strongly narrowing towards posterior side. Last abdominal segment rounded at apex with a pair of widely placed setae on each side. Legs: Small with triangular tarsomeres. Tibiae with spines. Metatarsomere 1 is nearly equal to the 2nd, 3rd and 4th combined. Elytra: Parallel. Shoulders square. Scutellar striole present between elytral suture and first striae. Third interval with single pore near apex adjoining stria 2. Subapical sinuation fine. Interval 10 and apex of all intervals densely pubescent.

Etymology: Named in honour of late Prof. T N Ananthakrishnan, doyen of Indian entomology.

C. *Anomostomus (Tnaei) devagiriensis* sp. nov. (Fig. 1A-C)

Type: Holotype (♀) labelled: 'India: Kerala: Chalode, paddy field (11°55'47.6"N 75°30'06.3"E), 'Light trap', 09.x.2020, coll. K. Nijisha' deposited in ZSIK; Paratype (n=1)1 ex. (♀) Labelled: 'India: Kerala: Chalode, paddy field (11°55'47.6"N 75°30'06.3"E), 'Light trap', 09.x.2020, coll. K. Nijisha' deposited in ZSIK.

Description: Length (TLA). Holotype, 8.29 mm. Colour: Dorsal side black, shiny with greenish tinge. First two segments of antennae, palpi and basal portion of labrum yellowish. Antennal segments 3–11, lateral margins of pronotum and legs brownish yellow. Labrum except basal portion, anterior angles of clypeus, mandibles except apex and apex of scutellum reddish brown. Apex of mandibles black. Genae and gula blackish brown. Middle portion of pro, meso and metasternum and apex of abdominal ventrites 4–7 reddish brown. Head: Large and wide with fine punctures, convex behind. Labrum asymmetrical; left lobe slightly larger than right lobe; deeply emarginate at apex with six setae; several small setae are present in lateral and anterior margins of labrum. Clypeus deeply emarginate at apex exposing the basal portion of labrum; anterior angles rounded with single seta on each side. Fronto-clypeal suture distinct with a pore behind each extremity. Mandibles short. Eyes not prominent. Mentum without median tooth. Mentum and submentum separated by complete transverse suture and submentum with large single seta on each side. Ligula short and narrow, quadrisetose, with two small and two large setae; not widening towards apex and surrounded by wide and membranous paraglossae. Last segments of palpi acuminate but truncate at apex. Antennae pubescent from 3rd segment; second segment a little shorter than the other segments. Anterior portion of genae with fine and few coarse punctures on each side. Labrum with isodiametric meshes and head without any microsculpture. Pronotum: Transverse with fine punctures. Widest at middle with single seta on each side placed just before middle. Sides evenly rounded and marginal channels slightly crenulate. Median line clearly visible only at disc and not reaching anterior and posterior borders. Transverse impressions faint. Basal foveae small and distinct with punctures. Anterior angles rounded and posterior angles widely rounded. Pronotum without any microsculpture.

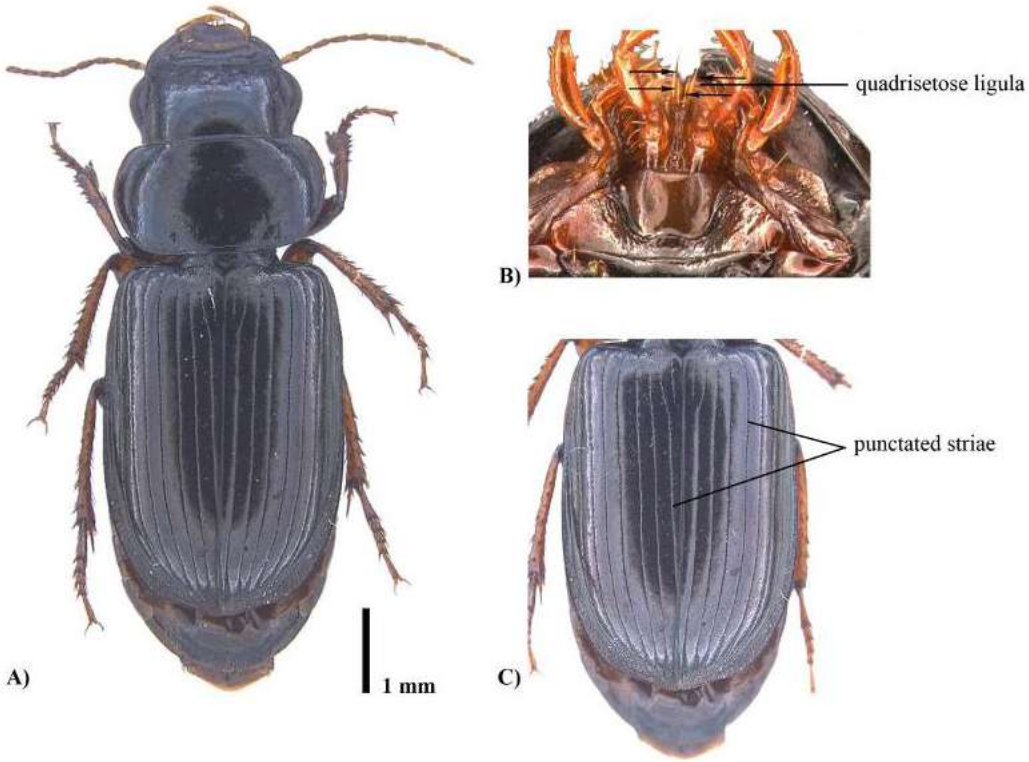


Fig. 1. A-C. *Anomostomus (Tnaei) devagiriensis* sp.nov. A) dorsal habitus; B) ligula with four setae; C) elytra with punctated striae

Elytra: Parallel, widest just behind middle. Shoulders square. Scutellar striole present between elytral suture and first striae. Intervals flat with fine punctures. Third interval with single pore near apex adjoining stria 2. Striae punctated. Subapical sinuation fine. Interval 10 and apex of all intervals densely pubescent. Elytra without any microsculpture. Hind wings well developed Ventral side: Shiny with scattered coarse punctures. Prosternal process round, not bordered and with fine setae. Metepisterna elongate and strongly narrowing towards posterior side. Last abdominal segment rounded at apex with a pair of widely placed setae on each side. Legs: Small with triangular tarsomeres. Tibiae with spines. Metatarsomere 1 is nearly equal to the 2nd, 3rd and 4th combined. Front tarsi not dilated and without adhesive vesture ventrally.

Measurements: Holotype (♀), TLA = 8.29 mm, TLB = 7.46 mm, PL = 1.51 mm, PW = 2.76 mm, EL = 4.37 mm, EW = 3.14 mm; Paratype (♀) (n=1), TLA = 9.02 mm, TLB = 7.42 mm, PL = 1.50 mm, PW = 2.70 mm, EL = 4.42 mm, EW = 3.08 mm

Distribution: INDIA: Kerala: Kannur: Chalode.

Diagnosis: Similar to *Anomostomus orientalis* but differs in the presence of ligula with four setae, punctated striae and finely punctated head and pronotum.

Etymology: Named after the host institution.

Remarks: *Anomostomus (Tnaei) devagiriensis* sp. nov. is similar to *A. orientalis* but is markedly distinguished from *A. orientalis* and other two members of the genus in having ligula with four setae. *A. (Tnaei) devagiriensis* sp. nov. also differs from the closely related *A. orientalis* in having punctated striae and finely punctated head and pronotum. *A. orientalis* is the only other known species of the genus from Indian subcontinent (India, Sri Lanka and the record from Pakistan close to Indian border). Close relationship of the new species with *A. orientalis* and geographic distribution pattern indicates that it is a derivative of *A. orientalis*. Andrewes (1923) related *A. orientalis* with *A. torridus*, which was the only other known species in the genus. Analysis of the *Anomostomus* species shows that *A. orientalis* is more closely related to *A. laevigatus* (Kuntzen 1919). Wide presence of the genus *Anomostomus* in Africa with regional distribution of *A. torridus* in North Saharan Africa and of *A. laevigatus* in Madagascar and the eastern and south-eastern region of Africa, non-record of *A. orientalis* in Africa, and the close relationship of *A. orientalis* to *A. leavigatus* indicates that, *A. orientalis* was restricted to the part

of the African landmass that got separated and became the Indian Peninsula. *A. (Tnaei) devagiriensis* sp. nov. could be a derivative of *A. orientalis* or could be another species that prevailed in the African land mass that became the Indian mainland.

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AUTHOR CONTRIBUTION STATEMENT

Nijisha K, Sabu K Thomas and Aswathi P analysed the specimens, verified the review and drafted the manuscript.

CONFLICT OF INTEREST

No conflict of interest.

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Checklist of Indian Harpalinae Bonelli, 1810 (Coleoptera: Carabidae)

K. NIJISHA[1] & K. THOMAS SABU[2]
[1]*Entomology Research Unit, Post Graduate & Research Department of Zoology, College Research Centre Affiliated to University of Calicut, St. Joseph's College (Autonomous), Devagiri, Kozhikode, 8, Kerala, India.* *nijishak 1 gmail.com*
https: orcid.org - - 8-8
Department of Zoology, University of Calicut , Thenhipalam, Kerala, India.
sabukthomas gmail.com http: orcid.org - -8 1- 8

Abstract

An updated checklist of 169 species of subfamily Harpalinae known from the Indian mainland, along with details of the revisions by modern workers, literatures and distribution patterns is provided. Of them, 39 species are endemic to the Indian mainland, whereas 11 species to the Western Ghats Hotspot of Biodiversity, one to the Indo-Burma Hotspot of Biodiversity and eight to the Himalaya Hotspot of Biodiversity. Four genera, *Allosiopelus* Ito, 1995, *Indocarterus* Kataev & Wrase, 2018, *Oesyperus* Andrewes, 1923 and *Panagrius* Andrewes, 1933 are endemic to the Indian mainland.

Key words: ground beetles, endemism, Himalaya, the Western Ghats, Indo-Burma hotspot of biodiversity

Introduction

Subfamily Harpalinae Bonelli, 1810 (Coleoptera: Carabidae) forms a diverse group with 161 genera and 2833 species at global level within the tribes Anisodactylini Lacordaire, 1854, Harpalini Bonelli, 1810, Stenolophini Kirby, 1837 and Pelmatellini Bates, 1882 (Lorenz, 2005).

Most modern authors treat this group as one of the tribes under subfamily Harpalinae with subtribes Amblystomina, Anisodactylina, Ditomina, Harpalina, Pelmatellina and Stenolophina. Here we consider the system in Lorenz (2005) in which subfamily Harpalinae with four tribes (Anisodactylini, Harpalini, Pelmatellini and Stenolophini) and three subtribes (Amblystomina, Ditomina and Harpalina) within the tribe Harpalini.

Major taxonomic work on Indian Carabidae is based on Andrewes (1929, 1930, 1935). Andrewes (1929, 1935) classified Indian Carabidae under two broad subfamilies, subfamily Carabinae in *Fauna of British India, Volume I* (1929) and Harpalinae in *Volume II* (1935). Andrewes (1929) deals with eight tribes under the subfamily Carabinae and Andrewes (1935) though titled Harpalinae, deals with another eight Carabidae tribes placed under Harpalinae and did not include the tribe Harpalini with 85 species listed in Andrewes (1930).

Noonan (1976) placed the 85 Indian species and 23 genera placed in the single tribe Harpalini by Andrewes (1930) under three subtribes Anisodactylina, Stenolophina and Harpalina (four genera and nine species under Anisodactylina, three genera and 22 species under Stenolophina and 16 genera and 54 species under Harpalina).

Lorenz (2005) raised the four subtribes discussed by Noonan (1976) to four tribes (Anisodatylini, Harpalini, Stenolophini and Pelmatellini) under the subfamily Harpalinae and the three generic groups (Amblystomi group, Ditomi group and Harpali group) discussed by Noonan (1976) as subtribes (Amblystomina, Ditomina and Harpalina respectively) under the tribe Harpalini.

It is revealed that 75 Harpalinae species were reported from India after Andrewes (1930) during 1930–2023 period [Andrewes (1930a, 1933b,d, 1936), Schauberger (1932b, 1934c, 1935); Jedlička (1931, 1936c, 1965, 1966); Kirschenhofer (1992); Ito (1985, 1994c, 1995, 1996c, 1998, 2003b, 2016); Jaeger (1997, 1998, 2009, 2012, 2013, 2015a, b, 2016, 2017); Kataev & Schmidt (2017); Kataev & Wrase (2001, 2013, 2018, 2023); Kataev (2001b, 2002b, 2012a, 2017, 2018, 2020, 2021, 2022)].

Identification of Indian Harpalinae is difficult due to lack of taxonomic keys, species descriptions and an up-to-date Indian Checklist of subfamily Harpalinae since Andrewes (1930). Current effort provides a Checklist of

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Department of Zoology
University of Kerala
Kariavattom

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(Principal)

Dr. AMINA POOVOLI
(Programme Co ordinator)

Dr. MUMTHAZ TMV
(Head, Dept. of Zoology)

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