

CHECKLIST OF JEWEL BEETLES (ORDER COLEOPTERA: FAMILY BUPRESTIDAE) COLLECTED FROM PAKISTAN DURING 2005 TO 2013

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ABSTRACT

Members of the family Buprestidae were collected in the survey conducted during 2005 to 2013 in various provinces of Pakistan including Sindh, Punjab, Khyber Pakhtunkhwa as well as Azad Kashmir and Tribal areas (Kurram Agency). The specimens were collected by beating branches of trees and bushes, by using sweep net and hand picking methods. Thirty nine species and 6 sub species, 14 genera, 10 tribes and 5 sub families are reported based.

Key Words: Jewel Beetles, Coleoptera, Buprestidae, Zoological Museum.

INTRODUCTION

Buprestidae (jewel beetles) are the most abundant in the terrestrial ecosystem. They are usually present in the semi desert and humid tropical areas. They are found in the leaf parenchyma of various plants including grasses and ferns. Buprestidae contains over 15,000 described species distributed throughout the world in almost every continent (Bellamy, 2008). The important characteristics of Jewel beetles vary in size, 2mm-80mm; shape cylindrical to flattened, elongate-ovoid, generally convex above; colour various, often bright iridescent or dark coloured with different maculae; head greatly deflexed; antennae serrate, some with flabellate or pectinate; labrum bilobed and setose distally; mandible stout, curved; maxillary palpi with four palpomeres; labial palpi with three palpomeres; eyes lateral, elongate-oval to reniform; pronotum slightly broader than head; legs simple, sometimes tibiae dentate or spinose; elytra with different vestiture, rugose or carinate; abdomen with five sternites; male genitalia trilobed type.

Some of the quantitative data on the Buprestidae has been provided by earlier workers Holdhaus (1919), Obenberger (1926, 1930, 1934, 1935, 1936, 1937), Beeson (1941), Stebbing (1914), Cobos (1980), Holynski (1993), Akiyama and Ohmomo (2000) and Bellamy (1985, 2003, 2009).

The aim of the present study is to identify Buprestidae fauna collected from Pakistan during the surveys conducted in 2005-2013. The checklist aims to include all species that have been reliably recorded from the Pakistan as possible residents. The checklist aims to be comprehensive in its listing of subfamilies, genera and species. Tribes are only listed when supported by a recent, authentic review.

MATERIALS AND METHODS

Specimens were collected from different parts of Pakistan during the surveys carried out from 2005 to the end of November 2013. The specimens were collected by beating branches of trees and shrubs and using sweep nets or directly with hand-picking methods. Specimens were killed by pinning, labeled and prepared for identification, dried specimens were placed in warm water for about 30 minutes, then dissected into several large parts, which were further softened and cleared of non-chitinous material in a 10% solution of warm KOH. The sample were identified on the basis of their identified taxonomic characters and confirmed and compared with the catalogue, literature, keys such as Holdhaus (1919), Obenberger (1926, 1930, 1934, 1935, 1936, 1937), Beeson (1941), Stebbing (1914), Cobos (1980), Holynski (1993), Akiyama and Ohmomo (2000) and Bellamy (1985, 2003, 2009). The identified specimens were deposited in Zoology Museum, Department of Zoology, University of Karachi, Karachi.

RESULTS AND DISCUSSION

In the present studies on the family Buprestidae of Pakistan, a total of 39 species, 6 sub-species belonging 14 genera, 5 Subfamilies and 10 tribes were recorded. The identification and the classification followed the relevant literature. The earliest study is that of Holdhaus (1919) who identified 16 species of jewel beetles, while Obenberger

(1926,1930,1934,1935,1936,1937) within his six volume catalogue (Coleopterorum catalogue) mentioned about 51 species and subspecies distributed in Mesopotamia. Beeson (1941) reported 88 species of jewel beetles from Indian region, Stebbing (1914) described seven subfamilies of Buprestidae from Indian region relatively recently, Holynski (1993) suggested 4 subfamilies, 12 tribes and about 64 subtribes of Buprestidae. Bellamy (2009) gave a checklist of Buprestidae the entire world. The check list is as follows:

Family Buprestidae Leach, 1815

Subfamily Agrilinae Lacordaire, 1857

Tribe Agrilini Laporte, 1835

Genus *Agrilus* Curtis, 1825

Species *Agrilus zigzag* Mars

Subfamily Buprestinae, Lacordaire, 1857

Tribe Anthaxiini Gory Et Laporte, 1839

Genus *Anthaxia* Eschscholtz, 1829

Species *Anthaxia setipennis* Obb

Anthaxia (*Anthaxia s.str.*) *anatolica* Chevrolat, 1838

Anthaxia (*Anthaxia s. str.*) *baconis* Thomson, 1879

Anthaxia (*Anthaxia s.str.*) *hemichrysis* Abeille de Perrin, 1893

Anthaxia (*Anthaxia*) *qalandarabadiensis* sp.nov.

Anthaxia (*Haplanthaxia*) *gedrosiana* Bílý, 1983

Anthaxia (*Haplanthaxia*) *iveta* Svoboda, 2003

Anthaxia (*Haplanthaxia*) *roxana* Bílý, 1983

Anthaxia (*Melanthaxia*) *conradti* Semenov, 1891

Anthaxia (*Melanthaxia*) *tianshanica* Bílý, 1984

Tribe Buprestini, Leach, 1815

Genus *Buprestis* Linnaeus, 1858

Species *Buprestis costipennis* (Fairmaire, 1891)

Buprestis decemspilota Hope, 1831

Buprestis denzleri Pochon

Tribe Melanophilini Bedel, 1921

Genus *Trachypteriskiby*, 1837

Species *Trachypteris picta* (Pallas, 1773)

Tribe Actenodini Kerremans, 1890

Genus *Belionota* Eschscholtz, 1829

Species *Belionota prasina* (Thunberg, 1789)

Subfamily Chalcophorinae Lacordaire, 1857

Tribe Chalcophorini Laporte, 1835

Genus *Chrysochroa* Dejean, 1833

Species *Chrysochroa ocellata* (Fabricius, 1775)

Chrysochroa rajah Gory, 1840

Genus *Chalcophorella* Kerremans, 1903

Species *Chalcophorella orientalis* (Obenberger, 1924)

Tribe Psilopterini Lacordaire, 1857

Genus *Capnodis* Eschscholtz, 1829

Species *Capnodis exsica* Ménériés, 1849

Capnodis indica Thomson, 1879

Capnodis miliaris (Klug, 1829)

Capnodis miliaris metallica Ballion, 1870

Capnodis sexmaculata Ballion, 1870

Genus *Lampetis* dejean, 1833

Species *Lampetis fastuosa* (Fabricius, 1775)

Lampetis (*Spinthoptera*) *mimosae mimosae* (Klug, 1829)

Tribe Sphenopterini Lacordaire, 1857

Genus *Sphenoptera* Dejean, 1833

Species *Sphenoptera backeri* Dohrn, 1866

Sphenoptera dadkhani Obenberger, 1955

- Sphenoptera edden pakistana* Volkovitsh & Kalashian, 2001
Sphenoptera heroica Jokovlev, 1903
Sphenoptera ignita Reitter, 1895
Sphenoptera lapidaria (Brullé, 1832)
Sphenoptera mesopotanica Marseul, 1866
Sphenoptera scovitzii Falder, 1835
Sphenoptera striatipennis Jakovlev, 1889
Sphenoptera (Chrysoblemma) tamaricis (Klug, 1829)
- Subfamily Julodinae Lacordaire, 1857
- Tribe Julodini Lacordaire, 1857
- Genus *Sternocera* Eschscholtz, 1829
- Species *Sternocera chrysis* (Fabricius, 1775)
Sternocera orientalis (Herbst, 1801)
- Genus *Aaata* Semenov, 1906
- Species *Aaata finchii* (Waterhouse, 1884)
- Genus *Julodis* Eschscholtz, 1829
- Species *Julodis euphratica beludjistana* Obenberger, 1924
Julodis faldermanni Mannerheim, 1837
Julodis kabakovi Alexeev, 1990
Julodis variolaris (Pallas, 1773)
- Subfamily Polycestinae Lacordaire, 1857
- Tribe Acmaeoderini Kerreman, 1893
- Genus *Acmaeodera* (Eschscholtz, 1829)
- Species *Acmaeodera* sp.

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(Accepted for publication August 2014)