

Insect Fauna of Korea

Volume 12, Number 2

Arthropoda: Insecta: Coleoptera: Curculionidae:
Bagoninae, Baridinae, Ceutorhynchinae, Conoderinae,
Cryptorhynchinae, Molytinae, Orobitidinae

Weevils I

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Arthropoda: Insecta: Coleoptera: Curculionidae:
Bagoninae, Baridinae, Ceutorhynchinae, Conoderinae,
Cryptorhynchinae, Molytinae, Orobitidinae

Weevils I

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The Flora and Fauna of Korea logo was designed to represent six major target groups of the project including vertebrates, invertebrates, insects, algae, fungi, and bacteria. The book cover and the logo were designed by Jee-Yeon Koo.

Preface

Biological resources are important elements encompassing organisms, genetic resources, and parts of organisms which provide potential values essential for human lives. The creation of high-valued products such as new varieties of organisms, new substances, and the development of new drugs by harnessing biological resources is now widely perceived to be one of the major indices of national competitiveness.

In the wake of the “Convention of Biological Diversity”, which was adopted in 1992 in recognition of national sovereignty over indigenous biological and genetic resources, all the countries of the world are now concerting their efforts on the discovery of original materials for the bio-industry, initiating international competition in the 21st century. Competition among countries for biological resources is now entering an intense phase following the adoption of the ABS (Access to genetic resources and Benefit-Sharing) international regime in Nagoya in 2010. For this reason, the National Institute of Biological Resources of the Korean Ministry of Environment recognizes the preservation and management of the biological resources in Korea for the bio-industry as a first priority project for the future, and has begun publication of *Flora and Fauna of Korea* for the systematic preservation and efficient management of our biological resources.

Korea has been acclaimed as a country with a high level of biological diversity, the total number of described species in Korea to date being about 37,000. Beginning in 2006, the National Institute of Biological Resources embarked on the publication of *Flora and Fauna of Korea* which, containing comprehensive and diverse information on our invaluable native species, has become the standard textbook of native species. The systematic survey of diverse taxa in all parts of Korea led by a group of professionals in the field of taxonomy over the past four years has finally come to fruition and culminated in the appearance of 16 monographs in the 2010 volumes of *Flora and Fauna of Korea* encompassing 1,037 species in 158 families belonging to 9 phyla, along with further volumes of *Flora and Fauna of Korea* encompassing 1,163 species in 112 families belonging to 7 phyla due to appear this year.

This is the first volume of *Flora and Fauna of Korea* in which a taxon of organisms of the Korean Peninsula is extensively treated at the level of species. *Flora and Fauna of Korea* will contribute to raising the standard of Korean taxonomy and improve pride in the management of our biological resources through enhanced understanding of the true nature of our native species. In addition, I am confident that the ongoing publication of *Flora and Fauna of Korea* will significantly contribute to paving the way for sustainable, wise use of biological resources.

I would like to express my sincerest gratitude to Dr. Ki-Jeong Hong, National Plant Quarantine Service, Mr. Sangwook Park, Research Institute of Forest Insects Diversity and Dr. Kyungduk Han, Korea University, who are responsible for writing this publication of *Flora and Fauna of Korea*. This series will play a pivotal role in the census of native Korean species, which are estimated to number 100,000.

By promoting innovative and taxonomic research for the identification of the totality of native Korean species and by continuously publishing such results in *Flora and Fauna of Korea*, I sincerely hope that a valuable foundation will be laid for the sustainable use of our national biological resources through the extensive research, development and for their profitable use by a prosperous bio-industry in the creation of high-valued products such as natural products, medicines, cosmetics and essential supplements in our country.

A handwritten signature in black ink, appearing to read "Kim, chun". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Chong-chun Kim, Ph. D.
President
NIBR

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Bagous fritodes O'Brien and Morimoto, 1994

Bagous kagiashi Chûjô and Morimoto, 1959

Bagous occultus O'Brien and Morimoto, 1994

Bagous tersus Egorov and Gratshev, 1990

Bagous youngi O'Brien and Morimoto, 1994

Subfamily Baridinae Schoenherr, 1836

Tribe Baridini Schoenherr, 1836

Subtribe Baridina Schoenherr, 1836

Genus *Barinomorphus* Morimoto, 1962

Barinomorphus antennatus Morimoto, 1962

Genus *Baris* Germar, 1817

Baris artemisiae (Herbst, 1795)

Baris ezoana Kôno, 1940

Baris pilosa (Roelofs, 1875)

Baris ussuriensis Zaslavskij, 1956

Genus *Cosmobaris* Casey, 1920

Cosmobaris orientalis (Roelofs, 1875)

Cosmobaris scolopacea (Germar, 1824)

Genus *Moreobaris* Morimoto and Yoshihara, 1996

Moreobaris deplanata (Roelofs, 1875)

Genus *Nespilobaris* Morimoto and Yoshihara, 1996

Nespilobaris parabasimaculatus (Morimoto and Lee, 1992)

Genus *Pharcidobaris* Morimoto and Yoshihara, 1996

Pharcidobaris piliventris (Zaslavskij, 1956)

Pharcidobaris suvorovi (Reitter, 1910)

Genus *Phrissoderes* Marshall, 1948

Phrissoderes rufitarsis (Roelofs, 1875)

Genus *Psilarthroides* Morimoto and Miyakawa, 1985

Psilarthroides czerskyi (Zaslavskij, 1956)

Tribe Madarini Jekel, 1865

Subtribe Leptoschoinina Lacordaire, 1866

Genus *Anthinobaris* Morimoto and Yoshihara, 1996

Anthinobaris dispilota (Solsky, 1870)

Genus *Dendrobaris* Egorov, 1976

Dendrobaris maculata (Roelofs, 1879)

Genus *Pellobaris* Morimoto and Yoshihara, 1996

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 - Genus *Orchidophilus* Buchanan, 1935
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- Tribe Madopterini Lacordaire, 1866
 - Subtribe Madopterina Lacordaire, 1866
 - Genus *Centrinopsis* Roelofs, 1875
 - Centrinopsis nitens* Roelofs, 1875
 - Subtribe Zygobaridina Pierce, 1907
 - Genus *Calyptopygus* Marshall, 1948
 - Calyptopygus albosparsus* (Reitter, 1910)
 - Genus *Limnobaris* Bedel, 1885
 - Limnobaris jucunda* Reitter, 1910
 - Tribe Neosharpiini Hoffmann, 1956
 - Genus *Eumycterus* Schoenherr, 1838
 - Eumycterus gracilis* Voss, 1958
- Subfamily Ceutorhynchinae Gistel, 1848
 - Tribe Phytobiini Gistel, 1848
 - Genus *Pelenomus* Thomson, 1859
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 - Pelenomus waltoni* (Boheman, 1843)
 - Genus *Phytobius* Schoenherr, 1833
 - Phytobius japonicus* Roelofs, 1875
 - Phytobius leucogaster* (Marsham, 1802)
 - Genus *Rhinoncus* Schoenherr, 1825
 - Rhinoncus bosnicus* Schultze, 1900
 - Rhinoncus cribricollis* Hustache, 1916
 - Rhinoncus jakovlevi* Faust, 1893
 - Rhinoncus koreanus* Korotyaev, 1997
 - Rhinoncus nigrotibialis* Wagner, 1939
 - Rhinoncus perpendicularis* (Reich, 1797)
 - Rhinoncus sibiricus* Faust, 1893
 - Genus *Rhinoncomimus* Wagner, 1940
 - Subgenus *Homorosomulus* Korotyaev, 2006
 - Rhinoncomimus (Homorosomulus) latipes* Korotyaev, 1997
 - Rhinoncomimus (Homorosomulus) rhytidosomoides* (Wagner, 1944)
 - Tribe Amalini Wagner, 1936
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 - Genus *Homorosoma* Frivaldszky, 1894
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Ceutorhynchus (Ceutorhynchus) dauricus Korotyaev, 1997
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- Genus *Calosirus* Thomson, 1859
Calosirus kwoni Korotyaev and Hong, 2004
- Genus *Glocianus* Reitter, 1916
 Subgenus *Glocianus* Reitter, 1916
Glocianus (Glocianus) fennicus (Faust, 1895)
- Genus *Hadroplontus* Thomson, 1859
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- Genus *Mogulones* Reitter, 1916
Mogulones koreanus Korotyaev, 1994
Mogulones kwoni Korotyaev and Hong, 2004
- Genus *Sirocalodes* Voss, 1958
Sirocalodes notatus (Brisout, 1883)
Sirocalodes umbrinus (Hustache, 1916)
- Genus *Thamiocolus* Thomson, 1859
Thamiocolus kerzhneri Korotyaev, 1980
- Genus *Wagnerinus* Korotyaev, 1980
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- Genus *Coeliodes* Schoenherr, 1837
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- Genus *Cyphauleutes* Korotyaev, 1992
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- Genus *Phytobiomorphus* Wagner, 1937
Phytobiomorphus variegatus (Hustache, 1920)
- Tribe Hypurini Schultze, 1902
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- Genus *Pericarticus* Hoffmann, 1968
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- Tribe Mecysmoderini Wagner, 1938
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- Genus *Metialma* Pascoe, 1871
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Metialma signifera Pascoe, 1871
- Tribe Lobotrachelini Lacordaire, 1866
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Lobotrachelus minor (Hustache, 1921)

Tribe Mecopini Lacordaire, 1866

Genus *Mecopomorphus* Hustache, 1920*Mecopomorphus amurensis* (Heyden, 1884)Genus *Phylaitis* Pascoe, 1871*Phylaitis maculiventris* Voss, 1958

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Genus *Keibaris* Chûjô, 1960*Keibaris babai* Chûjô, 1960Genus *Macrotelephae* Morimoto, 1960*Macrotelephae ichihashii* Morimoto, 1960

Tribe Othippiini Morimoto, 1962

Genus *Egiona* Pascoe, 1874*Egiona konoii* Nakane, 1963*Egiona picta* (Roelofs, 1875)

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Merus (Merus) nipponicus (Kôno, 1930)
Merus (Merus) saitoi (Kôno, 1937)
- Genus *Neomecyslobus* Pajni and Dhir, 1987
 Subgenus *Nipponomerus* Morimoto and Kojima, 2007
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Pissodes (Pissodes) obscurus Roelofs, 1874
Pissodes (Pissodes) pini (Linnaeus, 1758)

- Subtribe Cotasterominina Morimoto, 1962
 - Genus *Cotasteromimus* Chûjô and Voss, 1960
 - Cotasteromimus squamiger* Morimoto and Miyakawa, 1985
- Tribe Trachodini Gistel, 1848
 - Genus *Acicnemis* Fairmaire, 1849
 - Acicnemis azumai* Morimoto and Miyakawa, 1995
 - Acicnemis luteomaculata* Morimoto and Miyakawa, 1995
 - Acicnemis palliata* Pascoe, 1872
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 - Genus *Trachodes* Germar, 1824
 - Subgenus *Trachodes* Germar, 1824
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 - Trachodes (Trachodes) subfasciatus* Voss, 1957
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 - Genus *Trigonocolus* Lacordaire, 1863
 - Trigonocolus sulcatus* Roelofs, 1874
 - Trigonocolus tibialis* (Kôno, 1928)
- Subfamily Orobitidinae Thomson, 1859
 - Genus *Orobitis* Germar, 1817
 - Orobitis cyaneus* Linnaeus, 1758

Introduction

Weevils or the superfamily Curculionoidea are a particularly successful group among the Animal Kingdom and more than 60,000 species or 5% of total animal species have been described to date, but far more species must be living on the earth according to the estimates from the forest canopy data in the tropics obtained by the insecticidal fogging method by Erwin (1982, 1983, 1988), Davis et al. (1987) and Hammond et al. (1997) that 17.5–32.6% of Coleoptera and insect species living on the earth must be 30–50 millions (Erwin, 1988) or 5–10 millions (May, 1986, 1988). These data would suggest the presence of about 350 thousand to 5 million species of Curculionoidea on the earth.

This outnumbered species richness of the weevils must come from their efficient utilization of wide range of plant materials, living, dead or decayed, as food not only selecting one or more species of plant to feed upon, but also choosing a particular part of the plant materials at the stages of adult and larva in various environments. The other characteristic feature of weevils is the rostrum, which has a function of drilling the oviposition hole, and they lay eggs more effectively in the food of larvae as in the *K*-strategic insects (Pianka, 1978). One more reason of species richness must be caused by their frequent allopatric speciation in many taxa, especially in the flightless weevils.

Weevil fauna of Korea: The Korean peninsula located between 43° to 33° N latitude and extended from north to south for over 1,000 km. Seventy percent of Korea is mountainous, especially in the north and the east. The climate of Korea is temperate and differs considerably between northern and southern part. Zoogeographically, Korea belongs to the Manchurian subregion of the Palaearctic region along with the southern part of the Russian Far East, China and Japan. The northern part of the Korean peninsula have more faunal similarity with Russian Far East, and some Siberian faunal elements affected the high elevations in this area. On the other hand, the southern most part of Korea lies in the northern part of the subtropical climate zone and contains some genera and species with subtropical and oriental origins.

The curculionids fauna of the Korean peninsula, as a part of Manchurian subregion of Palaearctic region is saturated by endemic and oriental faunal elements and considerably different from other subregions in the region. The main feature of the curculionids fauna of the Korean peninsula is mixture of the northern (boreal), local (Manchurian and Chinese-Himalaian) and southern (Tropical and Subtropical) faunal elements in the small territory which defined by a special geographical position of the region.

History of taxonomic studies on Korean weevils: The faunal study of Korean curculionids was started from the end of the 19th century by Kolbe (1886). A comprehensive historical review of the faunal study of Curculionoidea in Korea have been done by Kwon and Lee (1986). And then in two catalogues (Hong et al., 2000; 2001) brief sketches are given with most important publications dealing the Korean fauna of the Curculionoidea.

In the period of 1886–1909, the first record on Korean curculionids with descriptions of 5 species mainly from Seoul and Busan were published by Kolbe (1886). Faust (1887a) described 12 species in Korea.

In the period of 1910–1945, researches on Coleoptera in Korea were conducted mainly by Japanese entomologists. Most of their reports were published in Japanese. The list of Coleoptera in Jeju Island, including Curculionidae, was published by Okamoto (1924) and list of Coleoptera including many new records of the curculionids in Korea were published by Muramatsu (1918, 1925), Kôno

(1926, 1928, 1929, 1930a, b, 1934, 1937, 1938), Machida and Aoyama (1930), Kamijo (1933), Günther and Zumpt (1933), Cho (1934), Klima (1934d), Yoshino (1935), Haku (1936), Zumpt (1936), Masaki (1936), Kusanagi (1936, 1937), Kôno and Kim (1937), Ishii (1937), Mochizuki and Tsunekawa (1937), Doi (1938) and Narita (1939). During this time, the most valuable publication on Korean curculionids was the article by Kôno and Kim (1937) which listed 65 species in Korea.

After the Second World War, lists of Coleoptera including many new records of the curculionids in Korea were published by Iga (1955), Ter-Minassian (1956), Zaslavskij (1956), Chûjô and Morimoto (1959), Morimoto (1962b, c, 1984, 1987b), Cho (1963), Ko (1969), Sin and Noh (1970), Kim and Kim (1972), Kim and Kim (1973a), Lee and Kwon (1974), Kim and Kim (1974), Kim et al. (1974), Egorov (1976a), Krivolutskaja et al. (1978), Kim (1979), Kim (1980), Korotyaev (1981, 1992b, 1994a, b, 1997a, b), Kim (1984), Lee et al. (1985), Kwon and Lee (1986), Kim and Chang (1987), Ahn et al. (1988), Kwon and Lee (1990), Kim et al. (1991), Morimoto and Lee (1992, 1993), Choi et al. (1992), Bae and Moon (1993), Morimoto and Miyakawa (1996), Egorov (1996), Egorov et al. (1996), Zherikhin (1996b), Zherikhin et al. (1996a, b), Kim and Kim (1998), Hong et al. (1999a, b), Han and Yoon (2000), Hong (2000, 2004), Hong et al. (2000, 2001), Han et al. (2000), Park et al. (2001, 2008, 2009), Hong and Korotyaev (2002), Han (2002), Han and Hong (2003) and Korotyaev and Hong (2004). At this period, several important articles were reported with specimens from southern part by Kwon and Lee (1986), in which the authors listed 222 species of superfamily Curculionoidea in Korea; by Kwon and Lee (1990), in which the authors listed 28 species of subfamily Curculioninae; by Morimoto and Lee (1992), in which the authors listed 57 species from Jejudo; by Hong et al. (1999a, b), in which the authors listed 36 species on subfamily Ceutorhynchinae; by Hong et al. (2000), in which the authors listed 373 species of family Curculionidae; by Hong et al. (2001), in which the authors listed 150 species of family Anthribidae, Rhynchitidae, Attelabidae, Brentidae, Apionidae and Dryophthoridae; and by Korotyaev and Hong (2004), in which the authors listed 58 species on subfamily Ceutorhynchinae; and were reported with specimens from northern part by Hong and Korotyaev (2002), in which the authors listed 91 species of Curculionidae; by Legalov (2001, 2003, 2006a, b, 2007, 2009a–c, 2010), in which the authors listed 80 species of the leaf-rolling weevils (Rhynchitidae and Attelabidae); by Legalov (2009d), in which the authors listed 1 species on family Nemonychidae from North Korea; and by Legalov (2009e), in which the authors listed 118 species on subperfamily Curculionoidea.

Comparing with Japan and the Russian Far East, the number of species is less than those in the Japan and the Russian Far East (over 1,000 are known). Therefore, weevils in Korea must be doubled in species number when surveys would be done to perfection in the future.

Consequently, a total of 173 species belong to 7 subfamilies (Bagoninae, Baridinae, Ceutorhynchinae, Conoderinae, Cryptorhynchinae, Molytinae and Oorbitidinae) of the family Curculionidae which deal with this work are enumerated for the fauna of Korea, and the “Invertebrate Fauna of Korea: Curculionidae I (Insecta: Coleoptera)” is provided. And then, we will be provided the “Invertebrate Fauna of Korea: Curculionidae II and III (Insecta: Coleoptera)” which deal with another 7 subfamilies (Curculioninae, Cossoninae, Cyclominae, Entiminae, Hyperinae, Lixinae and Mesoptiliinae) of the family Curculionidae.

Materials and Methods

This book is written as the first part of weevils in the series of the “**Invertebrate Fauna of Korea: Weevils I (Insecta: Coleoptera)**” including the general introduction to the superfamily Curculionioidea, and treats the subfamilies Bagoinae, Baridinae, Ceutorhynchinae, Conoderinae, Cryptorhynchinae, Molytinae and Orobittidinae in the family Curculionidae. The second and third parts treating the rest of Curculionidae in Korea is in preparation.

In this faunal work on 7 subfamilies belong to family Curculionidae, diagnoses are redescribed to each species, and also keys are provided to both species and genera. Synonymies are listed and geographical records are presented for species. Domestic collected localities of all members are arranged to each province. Biological notes including host plants for species are also provided on the base on the references or confirmed an investigation of the facts in the field.

Specimens included in this book are based on various collections in Korea, including universities and institutes. For the morphological study, weevils were observed directly by the ordinary methods under the stereoscopic microscopes (X5-320), and partly by the scanning electron microscope. The line drawings were prepared with the aid of an attached drawing tube and a calibrated eyepiece to microscopes. For the examination of the genitalia and abdomen, dissection was performed mostly on the specimens macerated in a hot 10% KOH solution for about 10 minutes or more according to the condition of specimen, and mounted on a slide glass with a mounting medium if necessary after the cleaning in water and dissection.

The number of the species corresponds with the numbers in the checklist and the colored plates. The type locality is indicated as “TL”, citing their present localities changed from the spellings in original descriptions as far as possible. All available synonyms of the genera and species are listed by using smaller letter-type. The valid subspecies names are marked “as a subspecies” after the name and references.

In the description of the species, there are not full description and given with general diagnosis or some major characteristics. The SPECIMEN EXAMINED includes all label data of available specimens from various collections in Korea or in abroad and some personal collections, especially in case of N. Korea. The KOREAN RECORD is not based on real specimens, but includes information of specimens reported in journals, reports or books by local workers, indicating author and year. The BIOLOGICAL NOTES are cited all host plants related to larvae from adjacent countries, including the Russian Far East, China and Japan, but unfortunately we can not indicate details on their original sources. The DISTRIBUTION refers countries or regions which the taxa are distributed. The KOREA means local distribution, indicating North (the northern part: HB, HN, RG, JG, PB and PN), Central (the central part: HH, GW, GG, CB and CN), South (the southern part: GB, GN, JB and JN), and JJ (Jeju Province). The REMARK section is given with information of the report of the species in Korea and some other taxonomic information.

Abbreviations of the provinces for collecting sites are as follows

HB: Hamgyeongbuk-do, HN: Hamgyeongnam-do, RG: Ryangang-do; JG: Jagang-do; PB: Pyeonganbuk-do, PN: Pyeongannam-do, HH: Hwanghae-do, GW: Gangwon-do, GG: Gyeonggi-do (including Seoul), CB: Chungcheongbuk-do, CN: Chungcheongnam-do, JB: Jeonlabuk-do, JN: Jeonlanam-do, GB: Gyeongsangbuk-do, GN: Gyeongsangnam-do (includeding Busan), JJ: Jeju-do.

Specimens examined are mostly preserved in the collection of the National Plant Quatantine Service.

Taxonomic Notes

Order Coleoptera

Ttak-jeong-beol-re-mok (딱정벌레목)

Superfamily Curculionoidea Latreille, 1802

Ba-gu-mi-sang-gwa (바구미상과)

The Curculionoidea had been treated the Rhynchophora comprising families Anthribidae, Brentidae, Curculionidae, Scolytidae and Platypodidae, and Bruchidae had often been included until the great contribution of Crowson (1955), who recognized 9 families in Curculionoidea on firm phylogenetic grounds mostly on the orthocerous families, but merged Rhynchophoridae (=Dryophthoridae), Scolytidae and Platypodidae in Curculionidae. Morimoto (1962b) recognized the family statuses of Rhynchophoridae, Scolytidae and Platypodidae, and defined Brentidae in broad sense including Apioninae, Nanophyinae, Brentinae, Cyladinae, Desmidophorinae and Ithycerinae, and later Morimoto (1976) recognized the family statuses of Ithyceridae and Apionidae among them. Thompson (1992) proposed a revised system upon review of some important characters, including the new family rank of Brachyceridae, Cryptolaryngidae and Raymondionymidae, with rearrangement of some subfamilies and recognition of Platypodidae as an independent family. Kuschel (1995) proposed a new system of Curculionoidea upon the cladistic methodology recognizing such families as Nemonychidae, Anthribidae, Belidae, Attelabidae, Brentidae and Curculionidae. Zimmerman (1993, 1994) raised Caridae, Nanophyidae and Erihrinidae to the family rank. On the other hand, Wood (1986) recognized 13 families including the treatments of Scolytidae and Platypodidae as full families. Morimoto and Kojima (2003, 2004) supported Wood for his treatment of Scolytidae and Platypodidae as independent families upon the detailed morphological observations of the head and larvae, and also recognized Dryophthoridae as family. Legalov (2006) reconstructed curculionid phylogeny of 16 families (Nemonychidae, Anthribidae, Belidae, Oxycorynidae, Eccoptarthridae, Allocorynidae, Rhynchitidae, Attelabidae, Ithyceridae, Brentidae, Brachyceridae, Cryptolaryngidae, Dryophthoridae, Curculionidae, Scolytidae and Platypodidae).

The number of families into which the taxa should be divided is still not completely settled. The classification adopted here is principally followed after Crowson (1955) and subsequent authors as mentioned above.

Key to the families of superfamily Curculionoidea

1. Labrum distinct, delimited posteriorly by clypeo-labral suture; antennae orthocerus; tibiae truncate vertical at apex, with tarsal insertion median and the apical surface fringed completely with setae; maxillary palpi elongate, flexible 2
 - Labrum obliterated; maxillary palpi short, inflexible 3
2. Rostrum slender; gular suture paired, distinct; postmentum almost as wide as prementum; each ventrite similarly articulated; pronotum without basal and lateral carinae; hypopharyngeal

- bracon absent Nemonychidae
- Rostrum more or less flattened dorso-ventrally, often scarcely narrower than head; hypopharyngeal bracon broad, completely dividing oral cavity dorso-ventrally; postmentum very broad, prementum small; 1st to 4th ventrites similarly delimited by weak sutures, 5th ventrite hinged 4th at base by deep inflection; pronotum with transverse carina at base and often with lateral carinae; gular sutures paired, basal, but almost not traceable externally Anthribidae
3. Rostrum absent, with pleurostomal sinus shallow; postcoila shallow and simply lying on the anterior margin of hypostoma for receiving conical postartis of mandible; hypostomal process absent; mandibles not produced nor laminate at laterobasal corner, with lateral depression or sulcus for receiving prominence of pleurostomal margin; gular suture Y-shaped in general (pregular sutures present) or exceptionally paired in the primitive condition, posterior tentorial arms broadly conglutinate anteriorly to the divaricated part of gular sutures; body compact, mostly subcylindrical 4
 - Rostrum present, mostly slender, with pleurostomal sinus deep; postcoila various in position, lying at antero-interior margin, a little behind, or on the anterior margin of hypostoma; hypostomal process present except for Attelabidae; mandibles with subspherical to spherical postartis, without lateral sulcus 5
 4. Tarsi with 1st segment not longer than the 2nd and 3rd segments combined; gular with posterior tentorial arms broadly conglutinate to the divaricated part of gular sutures, which extending anteriorly and continued to subgenal sulci in parallel to exterior margin of hypostomal sinus when viewed ventrally; paracoila located at the bottom of hypostomal sinus Scolytidae
 - Tarsi with 1st segment longer than the rest combined; gular with posterior tentorial arms broadly conglutinate with sheet-like extension of hypostoma from paracoila, and thus the pregular sutures continued anteriorly to hypostomal margin at the bottom of hypostomal sinus on each side of postmentum when viewed ventrally; paracoila translocated interiorly from bottom of hypostomal sinus; cardo almost rectangular outwards to stipes; strengthening sclerotization undeveloped at and behind paracoila at apex of rostrum on the inside Platypodidae
 5. Ventrites similarly articulated at least from the 1st to 4th, 5th ventrite deeply articulated with 4th at base in general 6
 - 1st and 2nd ventrites fused together, 1st suture weak, 3rd to 5th ventrites deeply and similarly articulated to each other at base, 2nd and 5th ventrites often longer than each 3rd and 4th ventrites; maxillary palpi 3-segmented; mandibles with its exterior surface inflected between articulations and the area basal to the inflection forming a smooth curved surface in an exterior view, which is a lamellar extension covering the joint of the abductor tendon to the mandible 11
 6. Gular sutures paired, often short and only visible at caudal margin of head; antennae orthocercous; mandibles simple at latero-basal corner, without inflection between articulations, nor lamellar extension 7
 - Gular sutures completely coalescent to each other and form a linear sulcus on the underside of head cranium 9
 7. Gular between gular sutures longer than wide; antennae filiform or nearly so, without club, inserted laterally remote from base of rostrum; female with sclerotized 9th tergite; male 8th sternite with speculum relictum; proventriculus with simple setae arranging in 8 or 8 pairs of rows Belidae
 - Gular between gular sutures short, visible at the base of head; antennae submoniliferous and/or clavate, inserted close to base of rostrum; male 8th sternite without speculum relictum

- 8
8. Tarsi pseudotetramerous; coxae larger, separated each other by less than width of them; proventriculus with simple setae arranging in 8 of rows; pronotum acute at lateral margin Oxycorynidae
- Tarsi pseudotrimerous; all coxae relatively small, each pair separated by a distance exceeding the width of one of them; proventriculus with 8 sclerotized plates, each with a median longitudinal row of aggregated setae Aglycyderidae
9. Maxillary palpi 4-segmented, galea and lacinia separated; elytra with narrow epimeron along outer margin externally; procoxae conical, strongly prominent; mandibles without lamellar extension at latero-basal corner 10
- Maxillary palpi 3-segmented, galea and lacinia fused; elytra without epimeron at side; procoxae subspherical; mandibles of the Curculionid-type, with lamellar extension at latero-basal corner Ithyceridae
10. Tibiae mucronate in both sexes, uncinata in male; front tibiae serrate on the ventral margin; claws connate; mandibles short, pincer shaped; abdomen with 1st to 4th ventrites conglutinate together, 1st to 6th tergites conglutinate together; female 8th sternite without speculum ventrale; prementum almost as wide as postmentum, labial palpi inserted into cavities on the ventral surface of prementum, 2- or one-segmented or often reduced to a sensory pore; preoral cavity divided by a narrow transverse bridge; metendosternite with lateral arms rounded and flat Attelabidae
- Tibiae neither uncinata nor mucronate, not serrate on the ventral margin; claws free; mandibles flat, toothed on inner and outer margins; abdomen with 1st and 2nd ventrites fused, the rest sternites and tergites freely articulated; female 8th sternite always with speculum ventrale; postmentum widening apically and embracing prementum in a deep concavity at apex, labial palpi mostly 3-segmented, inserted at antero-lateral margin of prementum; preoral cavity without transverse bridge; metendosternite with lateral arms more or less projected and trough-shaped Rhynchitidae
11. Prementum very small, deeply retracted into oral cavity and invisible externally; antennae inserted behind the middle or close to base of rostrum, funicle with 6 or fewer segments, basal segment of club often smooth; claw segment of tarsi mostly produced at dorsal and ventral apices and so curved between claws as to embrace the globular base of claws; male 7th tergite forming pygidium Dryophthoridae
- Prementum of normal size and freely visible from ventral side in front of postmentum; antennae inserted elsewhere between base and apex, funicle often 7-segmented; claw segment of tarsi not embrace the simple base of claws at apex in general; male 8th tergite partly exposed behind 7th at apex in general 12
12. Trochanters unusually elongate, separating femora distantly from coxae 13
- Trochanters small, allowing femora to approach closely coxae 14
13. Antennae orthocerous; maxillary palpi 2-segmented; labial palpi one-segmented; body often broadest behind the middle Apionidae
- Antennae geniculate; maxillary palpi 3-segmented; labial palpi 2-segmented; body mostly broadest on humeri Nanophyidae
14. Proventriculus not developed, with 8 or 16 rows of setae; male aedeagus with tectus (dorsal plate), tegmen with large and bilobate cap-piece 15
- Proventriculus mostly developed, with 8 or 16 rows of blade-like sclerites with a few exceptions; male aedeagus mostly without tectus except some genera of Eirrhini, tegmen at most with a

- pair of parameres Curculionidae
15. Labial palpi minute, inserted in deep pits on inner surface behind apical margin; antennae orthocercous; rostrum porrect, often slender, without definite scrobes; body slender Brentidae
- Labial palpi of normal size, not inserted in pits; rostrum robust, with definite antennal scrobes; body robust Brachyceridae

Family Curculionidae Latreille, 1802

Ba-gu-mi-gwa (바구미과)

Family common name: The weevils or snout beetles.

The family Curculionidae has been variously defined by authors as noted above, and here defined it after Morimoto and Kojima (2003) in a narrow sense with the exclusion of Dryophthoridae, Scolytidae and Platypodidae, and inclusion of Eirrhiniinae.

The family Curculionidae had been subdivided into 72 subfamilies and 143 tribes in Coleopterorum Catalogues (1929–1939), or 16 subfamilies and 195 tribes by Alonso-Zarazaga and Lyal (1999). In the latter system, some subfamilies of old sense were lumped together without giving strict definition as partly did by Kuschel (1995) probably and partly through their imaginations, and a persuasive new system of the higher taxa based on the strict definitions and analyses are strongly needed.

Characteristics: Body various forms: almost cylindrical stick-shaped (*Lixus*), oblong flat-shaped (*Cossonus*), massive short-oval shaped (*Larinus*, *Cionus*), rhombic (*Curculio*, *Trigonocolus*), convex and semi-spherical (*Orobitis*), globular shaped (*Ceutorhynchus*) or pear-like shaped (*Anthonomus*, *Catapionus*). Size of body from 1.0 to 30.0 mm, at tropical area to 50.0 mm (Length of body measured from anterior margin of eye to apex of elytra. Length and width of rostrum, head, pronotum and elytra take the greatest part, if especially not conditions). Body covered with yellow, brown to black, sometimes with spots of brighter or darker cuticle on pronotum and elytra, or with yellowish, reddish-brown legs; occasionally body with copper, greenish or bluish metallic tint. Body from above naked or with hairs, hair-like scales or with wide scales, often with rows of longer bristles on elytra; with whitish, yellowish, brownish and blackish spots or stripes, well camouflaged beetles on ground and vegetation. Sometimes beetles covered soil scab, but weevils that live around water, often with dense, mostly dull glazed scales with brown shade.

Head usually spherical, occasionally pear-shaped with long temples, transverse, slightly or strongly drawn into prothorax. Frons flat, keeled-convex or with more or less distinct foveae or sulcus between eyes. Eyes small of several ocelli or large, occasionally absent; flat or convex, round or transverse; mostly arranged laterally, sometimes displaced upward or downward.

Rostrum various lengths and widths: shorter than its width (*Stenoscelis*, *Miorrhinus*) or thin and long, exceeding to body length (*Curculio*), cylindrical, flattened dorso-ventrally or cone-shaped (*Conorhynchus*) or strongly widened toward apex (*Hylobius*, *Chlorophanus*). Surface of rostrum smooth, thin or large punctuation, coarse longitudinally - or transversely - rugous, flat or with longitudinal keel or depression on disk or lateral. Above or lateral sides of rostrum, between eyes and apex of rostrum arranged antennal foveae or more or less grooves, where inserted for antennal scape at resting or gnawing to substratum.

Mouthpart organ on ventro-apical part of rostrum. Labrum absent. Mandibles mostly small pincer-shaped, occasionally large pincer-shaped, with more or less smooth or tooth shaped edges, their exterior surface smooth, sometimes with distinct scars of pupal appendages; naked or haired. Mouthpart strongly flattened, especially maxillary and labial palpi, jointed immobile with labium. Maxillary palpi 3 segmented, lip not distinct, their suture absent. Labium various forms and proportions, submentum and mentum merged together with prementum, mostly not concealed to base of maxilla. Often mouthpart organ with bristles, their arrangement and numbers are used in systematic. Labial palpi 3 segmented, sometimes strongly reduced.

Antennae with 9 to 12 segments, including usually long 1st segment (scape), series of short segments formed with 6 to 7 segments, occasionally 5 segments (funicle) and compacted with spindle-shaped or egg-shaped club (9th to 12th segments). Occasionally 1st segment hardly longer than 2nd one, then antennae indistinctly elbow-shaped (*Chlorophanus*). Antennae naked, sparsely or densely hairs, with fringes of several bristles on apex of each segment.

Pronotum as wide as head with eyes or wider than it; notopleural suture merged, therefore lateral sides of pronotum convex-rounded. Forms of pronotum vary from longitudinal-cylindrical to transverse-conical and spherical, sometimes with depression on disk and lateral sides. Anterior margin of pronotum flat, emarginated or produced anteriorly; lateral margins of prosternum straight, often with rows of small, undiluted eye hairs, or with bristles of long hairs - cilia, or with developed postocular lobes. Base of pronotum straight or bisinuate, drawn widely toward scutellum or with shape of more or less acute process. Pronotum smooth or with punctate, rugous, tuberculous or with keel. Prosternum from short (*Cionus*) to long vertically, without or with rostral emargination at precoxal and postcoxal part. Fore coxae closed or separated, sometimes with deep median groove (for inserting to rostrum), which go through mesosternum and to metasternum. Cavity of fore coxae closed posteriorly. Scutellum large or small, usually visible, occasionally concealed to base of elytra; below or above of sutural intervals.

Elytra elongated or wide-oval, completely or not concealed pygidium, with 10 striae, additional scutellar striae absent. Punctated rows in striae from small to foveae-rectangular. Intervals flat and convex, costate, thin or coarse-rugous, or with tubercles; often concealed to dense pubescence of scales or hairs, sometimes with 1 or 2 rows of longer erected bristles. Shoulders angulated-prominent, smooth or absent in wingless species. Hind wings are or not developed. Veins of wing reduced. In wingless species epipleural wrinkle narrowed, mostly not visible outside. Elytra tightly fitted to body, inner basal keels formed channels which inserted for lateral margin of mesosternum, metasternum and sternites of abdomen. Elytra often merged on suture. Inner surface of elytra at apex with stridulated area.

Abdomen with 5 sternites, 1st and 2nd sternites more or less connated at middle part, suture distinct, surface of sternites smooth or punctate, naked, with hairs or scales.

Legs short or long, without visible trochanter. Fore coxae transverse, mostly separated widely. Forms of intercoxal process of prosternum, mesosternum and metasternum often used to determine of species, therefore beetles ought to glue on right side. Trochanter small triangular, femora slightly or strongly clubbed, sometimes with 1 (occasionally with 2) tooth from below, directed more or less toward apex of femora. Tibiae mostly thin, straight or bent, with denticles on inner margin or simple, with various sizes of mucro and uncus on apex. In digging species, fore tibiae sometimes strongly widened on apex to lateral lobe, with tooth or rows of robust flattened bristles on exterior angle, but apex of hind tibiae formed wide supporting area for push out lump of soil. In aquatic species, tibiae with long and thin hairs, play roles of oar. Tarsi pseudo-four segmented (formula 5-5-5, but 4th segment very small, concealed to base of claw segment), mostly with wide bilobed of 3rd

segment or 4th segment, because of disappearance of claw segment and appeared 3 segments (*Anoplus*). Soles of tarsi naked or with bristles and hairs (spongy, adherence). Claws usually 2, simple or with armed at base; free, connated basally, occasionally splitting or with additional “false” claw (*Sitona*); sometimes developed 1 claw (*Mononychus*, *Cionus*).

Male distinguished female from small size of body, shorter rostrum, its weakly curved and large width; antennal inserted closer to head, eyes different form, elytra less convex, sternites of abdomen usually concave at the middle. Often 5th sternite of abdomen in male with tubercles, or depression or notch on apex, with bundle hairs, separated bristles or naked spot. Sometimes in male, femora thick, greatly armed each femur, tibiae more bent, with strongly widened apex and different form of uncus and mucro; fore tarsi wide, its 1st segment more curved. In many species, male and female not different, whereas in *Dorytomus notaroides* completely different.

Male genitalia usually with more or less long curved tubular chitinous-sclerite penis, cylindrical or flattened dorso-ventrally, or convex on dorsal side. Basal part of penis with 2 parameres or without them, connated with membranous cover of aedeagus, internal of some penis has constrained muscle with attached in apex of middle of tergite scape (apodemis) and directed U-loop (tegumen), enveloped penis, intermingled toward apex of abdomen during copulation. Forms of penis, its apex and micro-structure of endophallus - internal sac (thorn, bristles, plate, etc.) have important for identification of genus and species. Female genitalia without paraproct, valvifer or occasionally, with small baculum; coxite and stylus present, proctiger absent. In female, apart from exterior structure, used to form of ovule, spermatheca and structures of 8th and 9th internal sclerites of abdomen at systematic for parts of broad-nosed weevils appeared parthenogenesis.

Larvae crescent-shaped, fleshy, without leg, spindle-like or elongated dorsally, sometimes with straight, V-shaped or flattened body. Color with white, grey, cream-colored, yellow, red or brown, body with sparsely, median long hairs and bristles. Larvae of *Hypera* and *Fronto*, live freely on leaves of greyish color with blackish spots, leg-like projection on prothorax segment from below.

BIOLOGY: Weevils basically phytophagous, occasionally phyto-saprophagous; injured all species of plants practically, constrained with more dicotyledonous than monocotyledonous. Larvae mined in leaves, developed flower buds, calyx, flower stalks, young shoots and branches; bit and entered under bark, on different depth in wood both of health and dead or decaying wood; developed at stems of grasses, on roots at soil or fed on fallen leaves. Some species formed galls on leaves, young stems, roots (weevils that injured tuber) or used of developing to larval galls of other insects (*Curculio*). Developed at tissues, fruits, seeds of plants, larvae of weevil injured to many wild fields, vegetable gardens, horticultural gardens, forest and industrial crops and stored vegetables. Among weevils, have many serious pests.

Adults feed on green parts of plants, pollens and tissues of flowers or developing fruits; some *Cryptorhynchus* and *Cossonus* gnawed woods, shoots of mushroom and ate hyphae of mushroom. Many semi-aquatic weevils (*Bagous*, *Ceutorhynchus*) ate tissues of aquatic plants, even under water. Weevils closely related with definite food plants. More polyphagous among broad-nosed weevils, more advanced in evolutionary respects.

Key to the subfamily of family Curculionidae

1. Tibiae mucronate or unarmed at apex, not uncinata at least on hind legs, the outer setal combs complete in length at apical margin, often prolonged externally round the corner along tarsal groove 2
- Tibiae uncinata at apex on all legs, unci originated from sharply keeled flange exterior to tarsal sockets; tibiae more or less flattened and tarsal grooves more oblique to axis of tibia 7

2. Postmentum very shortly or not pedunculate; prementum mostly covering buccal cavity; mandibles mostly with a deciduous cusp leaving scar on external surface excepting *Sitonini*; rostrum short, mostly flat on dorsum; antennal insertions subterminal *Entiminae*
 - Postmentum pedunculate; prementum narrower than the distance between hypostomal processes, exposing lateral parts of maxillae in hypostomal sinuses 3
3. First abdominal sternite strongly narrowed behind hind coxae and almost subdivided into three parts by coxal cavities; claws bifid, inner branches entirely contiguous to each other; body globular *Orobitidinae*
 - First abdominal sternite normal, not subdivided by coxal cavities 4
4. Mesepimera almost as large as mesepisterna, strongly ascending upwards and visible dorsally between the bases of pronotum and elytra; metasternum and 1st abdominal sternite continuous at sides between hind coxae and metepisterna; pronotum with ocular lobes; rostrum received upon prosternum, mostly small and oval species *Ceutorhynchinae*
 - Mesepimera smaller than mesepisterna, not ascending upwards and invisible dorsally 5
5. Rostrum robust; antennae inserted near apex of rostrum on dorso-lateral sides; antennal scrobes lateral, oblique; eyes not convex; larvae ectophytic on plants or in soil 6
 - Rostrum slender, cylindrical, mostly bare and shiny at least in front of antennal sockets; antennae inserted more or less distant from apex of rostrum *Curculioninae*
6. Rostrum stout, about equal to greatest width of femur in lateral aspect; prothorax with postocular lobes or prosternum deeply concave at anterior margin *Cyclominae*
 - Rostrum cylindrical, smaller than femora; prothorax without postocular lobes *Hyperinae*
7. Mesepimera almost as large as mesepisterna, strongly ascending upwards and visible dorsally between the bases of pronotum and elytra; fore coxae separated; posterior margins of 2nd to 4th abdominal sternites curved posteriorly at sides; pygidium entirely or partly exposed 8
 - Mesepimera not ascended upwards and invisible dorsally 9
8. Eyes large, dorsal to dorso-lateral, occupying the major part of forehead; tibiae unciniate from dorsal corners of apex *Conoderinae*
 - Eyes of normal size, lateral or latero-ventral; tibiae of hind legs unciniate from ventral corners of keeled flange *Baridinae*
9. Labial palpi one or two segmented, rigid, inserted in a hole at latero-ventral corners of prementum behind the apex, or completely obliterated; prementum truncate, vertical and thick at apex; claws connate at base; rostrum rather robust, antennal scrobes oblique at sides of rostrum; fore coxae contiguous; male aedeagus with short apophyses *Lixinae*
 - Labial palpi 3-segmented, inserted on apical margin of prementum, which is more or less rounded and not forming a vertical flat surface at apex 10
10. Tarsal grooves of fore legs oblique to tibial axis, trough-like for receiving tarsi when contacted and bordered laterally by setal comb oblique to axis of tibia; tibiae more or less flattened 11
 - Tarsal grooves of fore legs broadly flattened and bare behind tarsal sockets occupying major exterior surface behind apex, and inner setal comb translocated to ventral margin; tibiae unciniate from dorsal corner of apex and mucronate at ventral corner; body mostly cylindrical; rostrum mostly porrect; fore coxae separated *Cossoninae*
11. Uncus large, almost as wide at base as tibia, and continuously prolonged from tibial apex; body covered with smooth varnish-like coating over scales; rostrum rather robust, perpendicular to body axis *Bagoinae*
 - Uncus much narrower at base than tibia 12
12. Uncus formed of direct prolongation of acute dorsal edge of tibiae, outer and inner setose fringes

- short; body mostly cylindrical Mesoptiliinae
- Uncus arises from the inner flange of tibial apex 13
13. Fore coxae contiguous externally and internally; rostrum mostly rather robust, often with subapical antennal insertions 14
- Fore coxae separated by prosternal process; if connate, prosternum canaliculated and slender rostrum with postmedian antennal insertions; rostrum received into sterna canal, rectangular to axis of body when exposed; tibial apices marginated with setal combs, without socketed setae Cryptorrhynchinae
14. Body covered mostly with round scales and usually with a varnish-like coating on top of scales; aedeagus of some genera with tectum and pedon separated, of apionid-brentid form, apophyses connected with aedeagal body at dorso-basal corners; mostly semiaquatic Eirrhiniinae
- Body with or without narrower scales or setae, no coating; aedeagus without tectum (dorsal plate); mostly arboreal and edaphic Molytinae

Subfamily Bagoinae C.G. Thomson, 1859

Mul-ba-gu-mi-a-gwa (물바구미아과)

Members are easily recognized by the median prosternal channel, the smooth varnish-like coating over the scales, the mostly tuberculate elytra, and the elongate and slender legs. They are very similar in appearance to the tribe Stenopelmini (Eirrhiniinae) but the members of that tribe do not possess a sterna channel for reception of the rostrum and have different male genitalia.

Most are found in aquatic or semi-aquatic habitats where larvae are associated with a variety of plant families.

Genus *Bagous* Germar, 1817: 340.

Mul-ba-gu-mi-sok (물바구미속)

SYNONYM: *Macropelmus* Dejean, 1821: 89; *Hydronomus* Schoenherr, 1825: 583; *Cyprus* Schoenherr, 1825: 585; *Lyprus* Schoenherr, 1826: 288; *Dicranthus* Motschulsky, 1845: 102; *Ephimeropus* Hochhuth, 1847: 543; *Elmidomorphus* Cussac, 1851: 205; *Anactodes* Brisout, 1863: 497; *Bagoimorphus* Desbrochers, 1905: 11; *Parabagous* Schilsky, 1907: 44; *Abagous* Sharp, 1916: 275; *Probagous* Sharp, 1916: 275; *Heterobagous* Solari, 1930: 44; *Himeniphades* Kôno, 1934: 245; *Memptorrhynchus* Iablokov-Khnzorian, 1960: 253; *Fontenelleus* Hoffmann, 1962: 120.

Granulate to subgranulate, pitted scales, not hydrophilic except at points of articulation; usually with distinct, often dense, waterproof coating (lacking only in specimens recently emerged from pupal cell); median prosternal sulcus in front of fore coxae weakly developed to well-developed; tibiae usually slender, ventrally sinuate to bisinuate; tibial uncus well-developed; tarsomere 3 subcordate to linear, not deeply bilobed; rostrum with antennae inserted laterally; median lobe of male genitalia dorsally fully sclerotized except in orificial area and ventrally fully sclerotized

(except *B. kagiashi*); with or without post-orificial dorsal process; apodemes long and slender or very short, robust and curved inward. Most of species have mode of water life, some changed toward ground life. Widely polyphagous on water plants, and some monophagous.

Type species: *Curculio binodulus* Herbst, 1795.

SPECIES More than 150 (7 in Korea), (21 in Japan), (12 in Far Eastern Russia).

DISTRIBUTION: Cosmopolitan.

REFERENCE: O'Brien et al. (1994, 1995); Caldara and O'Brien, 1995; Zherikhin et al., 1996; Legalov, 2010.

Key to the species of genus *Bagous*

1. Antennal scrobes naked; postmentum bristles long, reached on apex of rostrum; preapical constriction of pronotum distinct; prosternum before coxae with depression and edges of its longitudinal keels; elytra with more or less distinct tubercles before apex on fifth intervals and raised or tubercles by merging 3rd and 9th intervals (sometimes absent); odd intervals of elytra often more or less raised; tarsi often long and thin, occasionally not dense scales or hairs 2
 - Antennal scrobes with scales, limited only above; postmentum bristles short; preapical constriction of pronotum hardly distinct; prosternum before coxae without depression and keel; intervals of elytra flat, without tubercle and raised; tarsi not long, comparatively wide, above with dense thin hairs *B. alismatis*
2. 3rd segment of fore tarsi broadly cordate, much wider than 2nd, apex rather deeply emarginated, more or less bilobed; elytra at apical third gradually tapered toward apex, declivital callus of 5th interval well developed; anal sternite with 2 bundles of bristles *B. bipunctatus*
 - 3rd segment of fore tarsi subcordate to sublinear, not wide or slightly wider than 2nd, apex slightly emarginated to truncate, not bilobed 3
3. Elytra without anteddeclivital swelling on 3rd interval and declivital callus on 5th interval; body narrower, strongly elongated *B. tersus*
 - Elytra with declivital callus on 5th interval, sometimes weakly developed anteddeclivital swelling on 3rd interval; body broader, elongate-oval 4
4. 3rd segment of fore tarsi subcordate *B. kagiashi*
 - 3rd segment of fore tarsi sublinear 5
5. Frons not sulcate nor foveate medially; abdominal sternum 2 not declivous apically *B. occultus*
 - Frons with median fovea; abdominal sternum 2 declivous apically 6
6. Elytra with declivity at 45 degrees (in relation to dorsal plane) *B. youngi*
 - Elytra with declivity at 75 degrees (in relation to dorsal plane) *B. fritodes*

1. *Bagous alismatis* (Marsham, 1802) (Pl. 1-1)

Taek-sa-mul-ba-gu-mi (택사물바구미)

Curculio alismatis Marsham, 1802: 272.

TL: Europe.

Body elongate-oval. Head widely rounded, with flat eyes. Rostrum short. Antennae inserted in

the apical 1/3 of rostrum. Antennal scrobe with scales, which only limited above. Postmentum bristles short. Pronotum quadratic or transverse with slightly distinct postocular lobes, with hardly distinct apical constriction. Elytral intervals flat, without tubercle and swelling, declivital callus on 5th interval not developed. Prosternum before coxae without depression and keel. Tarsi not long, comparatively wide, with dense thin hairs on dorsum.

MEASUREMENTS: Body length (excl. rostrum) 2.5–3.2 mm (in Russia).

COLOR: Derm dark, coarsely granulate, with contiguous, pitted, round and grayish scales and with bright whitish-grey spots behind middle of elytra. Antennae excepting clubs and tibiae reddish brown. Elytra covered with blackish and grayish round scales.

BIOLOGICAL NOTES: Larvae at water on *Alisma plantago-aquatica* and *Sagittaria* spp. (Zherikhin et al., 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), NE China, Russia (W. and E. Siberia, Far East), Kazakhstan, C. Asia, Caucasus, Europe.

KOREA: North.

KOREAN RECORDS: Zherikhin et al., 1996: 260; Hong et al., 2000: 75.

REMARKS: We could not find any Korean specimen of this species until now. The descriptions were cited from Zherikhin et al. (1996) and the photo on plate was taken from Russian specimen.

2. *Bagous bipunctatus* (Kôno, 1934) (Pls. 1-2, 15-2)

O-i-mul-ba-gu-mi (오이물바구미)

Himeniphades bipunctatus Kôno, 1934: 246.

TL: Japan- Wakamatsu, Komaba.

Body elongate broad-oval, robust. Rostrum long, 1.15 as long as prothorax; subcylindrical, without median carina, antennal scrobe visible from above only at point of insertion, without subrecumbent curled setae. Head moderately convex, with eyes weakly convex. Frons broad, somewhat flat, with deep and small median fovea. Antennae inserted just in front of apical 1/3 of rostrum, scape long, subclavate; funicle short, 0.64 times as long as scape, with segments 1 and 2 subequal in length, segments 3–6 short, segment 7 strongly transverse, club short, broad-oval. Pronotum transverse, 0.85 times as long as broad; with side very weakly expanding from base, with apical constriction strong, with median sulcus distinct and complete, with ocular lobes moderately developed. Elytra subparallel, with declivity at 60 degrees, markedly wider than prothorax, with humeri well-developed, obliquely angulate, at most slightly swollen adjacent to scutellum; with odd intervals more convex and elevated, not broader than even intervals, with interval 3 more or less uniformly elevated, antedecrivital swelling of 3rd interval lacking; declivital callus of 5th interval weakly developed, confluence of intervals 3 and 9 swollen, striae distinct, deep, narrow, with punctures minute. Prosternal sulcus deep, moderately broad, strongly narrowed at apical constriction, with side margins moderately sharply raised. Abdominal sternum 1 with median impression continuous for entire length, deep, broad, continued shallowly on sternum 2, suture between sternum 1 and 2 bisinuate, uniformly deep. Sternum 5 with pair of subbasal lateral impressions, with one pair of apicolateral suberect setae. Legs moderately short, femora strongly clavate. Tibiae moderately slender, with inner margin weakly bisinuate, with outer margin moderately arcuate toward apex,

with several distinct stout denticles on inner surface, with uncus moderately long and stout, subequal to width of tibial apex, hind tibiae as strongly arcuate as fore and middle tibiae, with denticles like fore and middle tibiae. Tarsi moderately short and broad, tarsomeres 1–3 broadened toward apex, tarsomere 3 distinctly wider at apex than 2, broadly cordate, rather deeply emarginated. Genitalia with median lobe widest at orifice, tapering toward base, elongate, with extreme apex subacute, narrowly rounded, slightly subapically constricted, slender in lateral view, tapering and narrowly rounded.

MEASUREMENTS: Body length (excl. rostrum) 3.2–3.8 mm.

COLOR: Rostrum black, with apex reddish brown. Head coarsely granulate, with contiguous, pitted, round and grayish brown scales. Antennal scape and funicle reddish and club reddish black. Femora, tibiae and claws reddish brown and tarsi reddish black.

BIOLOGICAL NOTES: Adults were collected on the edge of the water or in a light trap and larva sometimes fed on root of cucumber in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Khabarovsk and Primorskii Terr.).

KOREA: Central and South including JJ.

KOREAN RECORDS: Chûjô and Morimoto, 1959: 150 (JB- Iri); Morimoto, 1984: 291; Kwon and Lee, 1986: 79 (South); Kim and Oh, 1991: 157 (JJ); Kim, 1993: 392 (JJ); O'Brien et al., 1994: 32; ESK/KSAE, 1994: 206; Caldara and O'Brien, 1995: 398; Paik et al., 1995: 428 (JJ); Hong et al., 2000: 75 (South, JJ).

SPECIMEN EXAMINED: GG: 1 ♂ (Suwon: 23.vii.1997, light trap). GB: 1 ♂ (Daegu: 4.vii.1981).

3. *Bagous fritodes* O'Brien and Morimoto, 1994 (Pls. 1-3, 15-3)

Yu-yak-mul-ba-gu-mi (유약물바구미) (신칭)

Bagous fritodes O'Brien and Morimoto, 1994: 51.

TL: Japan- Hokkaido, Honshu.

Body elongate broad-oval, moderately robust. Rostrum moderately long, 0.96 times as long as prothorax, subcylindrical, without median carina, with sides evenly subparallel, antennal scrobe visible from above only at point of insertion, with numerous, widely and uniformly spaced, subrecumbent, evident, curled setae. Head weakly convex, with eyes weakly convex. Frons broad, somewhat flat, with median shallow small fovea. Antennae inserted just behind apical 1/4 of rostrum, funicle 0.75 times as long as scape, with segment 1 and 2 subequal in length, segments 3–6 short, segment 7 short and strongly transverse, club long, broad-oval. Pronotum transverse, 0.77 times as long as broad, with side not expanding from base, with apical constriction moderate, with indistinct narrow median sulcus; with ocular lobes strongly developed. Elytra subparallel, with declivity at 75 degrees; markedly wider than prothorax, with humeri well-developed, obliquely angulate, at most slightly swollen adjacent to scutellum. Odd intervals more convex and elevated, broader than even intervals, with interval 3 more or less uniformly elevated, antedecrivital swelling of 3rd interval lacking, declivital callus of 5th interval weakly developed, confluence of intervals 3 and 9 distinctly swollen, striae distinct, deep, narrow, with punctures small. Prosternal sulcus deep, moderately broad, strongly narrowed at apical constriction, with side margins moderately sharply raised. Abdominal sternum 1 with median impression in basal 1/2 only, moderately

deep and broad, suture between 1 and 2 bisinuate, broadly finely incised medially, deep laterally. Sternum 5 with pair of subbasal lateral impressions, with one pair of suberect apicolateral setae. Legs moderately long, femora clavate. Tibiae moderately slender, with inner margin weakly bisinuate, with outer margin moderately arcuate toward apex, with inner surface with denticles few, distinct, stout, with uncus moderately long and stout, subequal to width of tibial apex, hind tibiae as strongly arcuate as fore and middle tibiae, with 2 small denticles, with 1 or 2 short setae on inner surface. Tarsi moderately long and sublinear, tarsomeres 1–3 slightly broadened toward apex, tarsomere 3 not wider at apex than 2, sublinear, truncate. Genitalia with median lobe markedly asymmetrical toward apex, more or less parallel-sided, slightly constricted behind dorsal process, elongate, with extreme apex very broadly subacute, distinctly subapical constricted, very asymmetrically explanate, slender in lateral view, declivous, narrowly rounded.

Female: Frons broad, 0.71 times as wide as head across eyes. Antennae inserted just behind apical 1/3. Pronotum 0.89 times as long as broad.

MEASUREMENTS: Body length (excl. rostrum) 3.4–3.8 mm.

COLOR: Rostrum black, with apex reddish brown. Head with coarsely granulate, contiguous, pitted, round and brownish scales, antennal scape and funicle reddish brown, club reddish black. Pronotum black. Elytra reddish brown to black, humeri with white macula, antedeclyvital callus or area of interval 3 with white maculae, declivital callus or area of interval 5 white, otherwise with white, whitish, and black maculae on brown base color. Femora, tibiae and claws reddish brown, tarsi dark reddish.

BIOLOGICAL NOTES: Adults were collected on light trap.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu).

KOREA: Central.

SPECIMEN EXAMINED: GG: 1♂ (Suwon: 22.vii.1997, light trap); 1♀ (Mt. Yeogi, Suwon: 3.vii.1991, light trap).

REMARKS: This species is first recorded from Korea in this study.

4. *Bagous kagiashi* Chûjô and Morimoto, 1959 (Pl. 1-4)

Mul-ba-gu-mi (물바구미)

Bagous (Bagous) kagiashi Chûjô and Morimoto, 1959: 150.

TL: Japan- Honshu, Shikoku, Amami-Oshima; Korea- JB Iri.

Rostrum long, 1.02 times as long as prothorax, subcylindrical, without median carina, weakly subquadrately expanded in apical 1/3, antennal scrobe visible from above only at point of insertion, without numerous, widely and uniformly spaced, subrecumbent, evident, curled setae. Head moderately convex, with swelling beside eyes weak. Frons broad, somewhat flat; with moderately deep, narrow, short median sulcus. Antennae inserted just in front of apical 1/3 of rostrum, funicle 0.64 times as long as scape, with segment 1 and 2 subequal in length, segments 3–6 short, segment 7 short and strongly transverse, club broad-oval. Pronotum transverse, 0.93 times as long as broad, with side very weakly expanding from base, with apical constriction moderate, with distinct, narrow, complete median sulcus, with ocular lobes moderately developed. Elytra subparallel, with declivity at 60 degrees, markedly wider than prothorax, with humeri well-developed, obliquely angulate, at

most slightly swollen adjacent to scutellum. Odd intervals more convex and elevated, broader than even intervals, with interval 3 more or less uniformly elevated, antedeclyvital swelling of 3rd interval weakly developed, but evident, declivital callus of 5th interval well developed, confluence of intervals 3 and 9 swollen. Strial grooves distinct, moderately deep, narrow, with punctures small. Prosternal sulcus moderately deep, broad, strongly narrowed at apical constriction, with side margins moderately sharply raised. Abdominal sternum 1 with median impression continuous for entire length, deep, broad, continued shallowly on sternum 2, suture between 1 and 2 bisinuate, broadly finely incised medially, deep laterally. Sternum 5 with pair of subbasal lateral impressions, with two pairs of suberected, coarse apicolateral setae. Legs moderately short, femora clavate. Tibiae moderately slender, with inner margin weakly bisinuate, with outer margin moderately arcuate toward apex, with inner surface with denticles few, distinct, small, with uncus long, moderately slender, subequal to width of tibial apex, hind tibiae as strongly arcuate as fore and middle tibiae, with 1 very small denticle. Tarsi moderately short, sublinear, tarsomeres 1–3 broadened toward apex, tarsomere 3 distinctly wider at apex than 2, subcordate, submarginate. Genitalia with median lobe with ventral surface membranous, markedly broadest basally and constricted at extreme base, tapering toward apex, somewhat elongate, with extreme apex subacute, narrowly rounded, slightly subapically constricted, slender in lateral view, tapering and narrowly rounded.

Female: Frons very broad, 0.71 times as wide as head across eyes. Sternum 1 with median impression in basal 1/4 only, shallow, broad, narrowed apically.

MEASUREMENTS: Body length (excl. rostrum) 2.5–2.9 mm (in Japan).

COLOR: Body elongate broad-oval, robust. Rostrum black, with apex reddish brown. Head subgranulate, with contiguous, pitted, round, grey-brown and white scales. Antennal scape and funicle dark reddish and antennal club reddish black. Femora black, with basal half reddish brown. Tibiae, tarsi and claws reddish brown.

BIOLOGICAL NOTES: Weevils were collected on *Alisma* sp. (Caldara and O'Brien, 1995).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Ryukyu), Russia (Primorskii Terr.).

KOREA: South.

KOREAN RECORDS: Chûjô and Morimoto, 1959: 150 (JB- Iri); Morimoto, 1984: 291; Kwon and Lee, 1986: 90 (?South); O'Brien et al., 1994: 21; ESK/KSAE, 1994: 206; Hong et al., 2000: 76 (South).

REMARKS: We could not any Korean specimen of this species until now. The descriptions were cited from O'Brien et al. (1994) and the photo on plate was taken from Japanese specimen.

5. *Bagous occultus* O'Brien and Morimoto, 1994 (Pls. 1-5, 15-5)

Dalm-eun-mul-ba-gu-mi (답은물바구미) (신칭)

Bagous occultus O'Brien and Morimoto, 1994: 27.

TL: Japan- Shikoku.

Body elongate-oval, moderately robust. Rostrum moderately long, times 0.90 as long as prothorax, subcylindrical, without median carina, antennal scrobe visible from above only at point of insertion, without numerous, widely and uniformly spaced, subrecumbent, evident, curled setae. Head weakly convex, with swelling beside eyes lacking. Frons broad, weakly convex, not sulcate nor foveate medially. Antennae inserted at apical 1/3 of rostrum, funicle moderately long, 0.73 times

as long as scape, with segments 1 and 2 subequal in length, segments 3–6 short, segment 7 short and strongly transverse, club broad-oval. Pronotum transverse, 0.86 times as long as broad, with side moderately expanding from base, with apical constriction weak, with distinct, narrow, incomplete median sulcus, with ocular lobes strongly developed. Elytra subparallel, with declivity at 45 degrees, markedly wider than prothorax, with humeri well-developed, obliquely angulate, at most slightly swollen adjacent to scutellum. Odd intervals more convex and elevated, broader than even intervals, with interval 3 more or less uniformly elevated, antedecrivital swelling of 3rd interval lacking, declivital callus of 5th interval well developed, confluence of intervals 3 and 9 slightly swollen. Strial grooves indistinct, uneven, narrow, with punctures small. Prosternal sulcus moderately deep, broad, strongly narrowed at apical constriction, with side margins moderately sharply raised. Abdominal sternum 1 with median impression continuous for entire length, deep, broad, deeper apically, continued shallowly on sternum 2, suture between 1 and 2 bisinuate, broadly finely incised medially, deep laterally. Sternum 5 with pair of subbasal lateral impressions, with one pair of suberect, coarse apicolateral setae. Legs moderately long, femora clavate. Tibiae moderately slender, with inner margin weakly bisinuate, with outer margin moderately arcuate toward apex, with inner surface with denticles few, distinct, small, with unculus long, moderately stout, longer than width of tibial apex, hind tibiae as strongly arcuate as fore and middle tibiae, with 1 very small denticle. Tarsi long, sublinear, tarsomeres 1–3 slightly broadened toward apex, tarsomere 3 distinctly wider at apex than 2, sublinear, truncate. Genitalia with median lobe markedly compressed, dorsoventrally flat, very slightly broader basally and constricted at extreme base, rather elongate, with extreme apex subacute, narrowly rounded, slightly subapically constricted, very slender in lateral view, declivous, tapering and narrowly rounded, with ventroapical tubercle, with dorsobasal margin distinct, deeply emarginate.

MEASUREMENTS: Body length (excl. rostrum) 3.2 mm.

COLOR: Rostrum black, with apex reddish brown. Head subgranulate, with contiguous, pitted, round, grey-brown and white scales, antennal scape, funicle and club reddish black. Pronotum blackish black, with 3 vittae, with median vitta narrow, complete, distinct, straight, whitish, with lateral vitta broad, uneven, whitish, not maculate on disc, with sides brown, with indefinite blackish brown maculae. Elytra black, humeri with white macula, antedecrivital callus or area of interval 3 with white maculae, declivital callus or area of interval 5 small white macula, otherwise color in large part concealed by dense dirty waterproof coating, base color brown, with dark brown and whitish maculae. Femora black, tibiae and tarsi reddish black, claws reddish brown.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Shikoku).

KOREA: South.

SPECIMEN EXAMINED: GN: 2♂♂ (Upo Changryeong: 27.v.2003, no. 01276, 01277).

REMARKS: This species is first recorded from Korea in this study.

6. *Bagous tersus* Egorov and Gratshev, 1990 (Pls. 1-6, 15-6)

Dae-yang-mul-ba-gu-mi (대양물바구미)

Bagous tersus Egorov and Gratshev, 1990: 35.

TL: Russia- Primorskii Terr.

Body narrower, strongly elongated and smaller. Rostrum moderately long, subcylindrical, without median carina, antennal scrobe visible from above only at point of insertion. Head moderately convex. Frons broad, not sulcate nor foveate medially. Antennae inserted at apical 2/5 of rostrum. Pronotum transverse, 0.85 times as long as broad, with side weakly rounded, with apical constriction well-developed, without median sulcus, with ocular lobes strongly developed. Elytra 1.9–2.0 times as long as width, from developed shoulders toward middle slightly widened, with declivity at 40 degrees, markedly wider than prothorax. Intervals slightly flattened, odd intervals nearly as broad as even intervals, antedecrivital swelling of 3rd interval and declivital callus of 5th interval lacking, confluence of intervals 3 and 9 slightly swollen. Strial grooves distinct, narrow, deep, with punctures small. Prosternal sulcus moderately deep, broad, strongly narrowed at apical constriction, with side margins moderately sharply raised. Abdominal sternum 1 with median impression shallow anteriorly and strongly declivous posteriorly, suture between 1 and 2 weakly bisinuate. Sternum 5 slightly convex, without lateral impressions, with one pair of apicolateral setae. Legs moderately long, femora weakly clavate. Tibiae moderately slender, with inner margin weakly bisinuate, with outer margin moderately arcuate toward apex, with inner surface without denticles, with uncus longer than width of tibial apex. Tarsi long, sublinear, tarsomeres 1–3 slightly broadened toward apex, tarsomere 3 nearly as broad as 2, truncate. Genitalia with median lobe widest at orifice, tapering toward base and apex, with slightly rounded apically.

MEASUREMENTS: Body length (excl. rostrum) 2.5 mm.

COLOR: Body covered homogeneous greyish scales. Rostrum black, at apical 1/3 reddish brown. Head subgranulate, with contiguous, pitted, round, grey-brown and white scales, antennal scape reddish brown. Pronotum black. Elytra black, without macula, concealed by dense dirty waterproof coating. Apical half of femora and tarsi reddish black, basal half of femora, tibia and claws reddish brown.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Russia (Primorskii Terr., Amur Prov., Buryatia).

KOREA: South.

KOREAN RECORDS: Hong et al., 2000: 76 (South).

SPECIMEN EXAMINED: GN: 1 ♂ (Habcheon; 2.vi.1997).

7. *Bagous youngi* O'Brien and Morimoto, 1994 (Pls. 1-7, 15-7)

Yeong-mul-ba-gu-mi (영물바구미) (신칭)

Bagous youngi O'Brien and Morimoto, 1994: 48.

TL: Japan- Honshu, Ryukyu Is.

Body elongate broad-oval, robust. Rostrum 0.94 times as long as prothorax, subcylindrical, without median carina, antennal scrobe visible from above only at point of insertion, with numerous, widely and uniformly spaced, subrecumbent, evident, curled setae. Head weakly convex, with eyes moderately convex. Frons very broad, somewhat flattened, with shallow small median fovea. Antennae inserted just behind apical 1/3 of rostrum, funicle short, 0.60 times as long as scape, with segments 1 and 2 subequal in length, segments 3–6 short, segment 7 short and strongly transverse, club broad-oval. Pronotum transverse, 0.82 times as long as broad, with side not expanding from base, with

apical constriction moderate, without median sulcus, with ocular lobes moderately developed. Elytra subparallel behind humeri to declivity, with declivity at 45 degrees, markedly wider than prothorax, with humeri well-developed, obliquely angulate, at most slightly swollen adjacent to scutellum. Odd intervals more convex and elevated, broader than even intervals, with interval 3 more or less uniformly elevated, antedeclivital swelling of 3rd interval lacking though white maculae often appear raised, declivital callus of 5th interval weakly developed, confluence of intervals 3 and 9 swollen. Strial grooves distinct, moderately deep, narrow, with punctures small. Prosternal sulcus moderately deep, broad, strongly narrowed at apical constriction, with side margins moderately raised. Abdominal sterna with punctures small. Sternum 1 with median impression in basal 1/2 only, moderately deep, broad, flattened in apical 1/2, apical margin not declivous, suture between 1 and 2 bisinuate, uniformly deep. Sternum 5 with pair of subbasal lateral impressions, with two pairs of suberect apicolateral setae. Legs moderately long, femora strongly clavate. Tibiae moderately stout, with inner margin weakly bisinuate, with outer margin moderately arcuate toward apex, with inner surface with denticles several, distinct, stout, with uncus moderately short, stout, shorter than width of tibial apex, hind tibiae as strongly arcuate as fore and middle tibiae, with denticles like fore and middle tibiae. Tarsi moderately short, sublinear, tarsomeres 1–3 slightly broadened toward apex, tarsomere 3 not wider at apex than 2, sublinear, truncate. Genitalia with median lobe abruptly constricted and deeply incised laterally behind dorsal process; elongate, more or less triangular, with extreme apex subtruncate, very bluntly rounded, very slender in lateral view, declivous and with extreme apex upturned, narrowly rounded.

MEASUREMENTS: Body length (excl. rostrum) 3.0 mm.

COLOR: Rostrum reddish brown. Head granulate, with contiguous, coarsely pitted, round, grey-brown and white scales, antennal scape, funicle and club reddish brown. Pronotum coarsely granulate, with rugulose, pitted, subcontiguous, round, blackish brown scales, with 3 vittae, with median vitta narrow, complete, distinct, straight, whitish brown, with lateral vittae broad, strongly curved, pale whitish-brown, not maculate on disc. Elytra reddish brown and black, with scales granulate, contiguous, coarsely pitted, round, arranged irregularly, usually with 3 or more scales across intervals, brown, whitish and black; fasciate, humeri pale whitish brown, antedeclivital callus or area of interval 3 with white maculae, declivital callus or area of interval 5 white, otherwise with median area from base to declivity blackish brown, maculate brown and black. Legs reddish brown.

BIOLOGICAL NOTES: Adults collected on light trap in Japan (O'Brien et al., 1994).

DISTRIBUTION: Korea, Japan (Honshu, Ryukyu Is.).

KOREA: South.

SPECIMEN EXAMINED: GB: 3♂♂ (Jeo-ri, Geumseong-myeon, Uiseong-gun: 2.v.2000).

REMARKS: This species is first recorded from Korea in this study.

Subfamily Baridinae Schoenherr, 1836

Ae-ba-gu-mi-a-gwa (애바구미아과)

Most baridines are glossy and black, with few (usually white) or no scales on the body, and most readily recognized by an ascended mesepisternum that is visible between the hind angle of the pronotum and the elytral humerus. They share this latter feature with Ceutorhynchinae but the

latter have an exposed pygidium (shared with some Baridinae) and have a very small or no apical tooth on the hind tibia. This tooth is generally well-developed in Baridinae or the outer curved face of the tooth is continuous with the apex of the outer tibial margin or is connected to it by a distinct, continuous sharp carina that transverses the apical face of the tibia. Eyes placed on ventral side of head, widely separated on frons. Rostrum more or less cylindrical. Exterior basal angles of elytra obliquely cut, 9th and 10th striae reached at cutting part of elytra. Metepisterna mostly interception at anterior part, narrow. Abdomen not sloped at profile. Femora without tooth.

The natural history of baridines is poorly known. Some species are associated with monocots such as various grasses, sedges, and palms. Larvae mostly mine stems. Some species appear to be associated with fungi on dead wood. Adults, especially of the tribe Madopterini, frequently visit flowers. Many baridines can also be found in semi-aquatic habitats.

Key to the genera of subfamily Baridinae

1. Tarsi with a single claw *Barinomorphus*
 – Tarsi with two claws 2
2. Prosternum with depression in front of fore coxae very deep, broad, transverse and shiny; body rhomboidal 3
 – Prosternum not depressed, or transversely depressed behind anterior margin in subapical groove, or shallowly furrowed, in latter case the furrow usually longer than broad and much narrower than the distance between lateral margins of fore coxae 5
3. Elytron provided with 8 punctured striae, lateral 3 striae not reaching the base, ultimate and penultimate striae confluent above second ventrite; rostrum not separated from forehead by depression; forehead between eyes much narrower than the base of rostrum; pronotum with ocular lobes; Pygidium almost concealed; body rhombic, convex, shiny *Centrinopsis*
 – Elytron provided with 10 punctured striae, ultimate and penultimate striae separated throughout 4
4. Claws connate at the base; exposed part of pygidium narrow, vertical; pronotum punctate as usual; middle and hind femora flattened beneath for reception of tibiae *Barinomorphoides*
 – Claws free; pygidium completely concealed; pronotum longitudinally multistriate; middle and hind femora not flattened; lateral carinae of prosternal depression dentate before the middle in male *Phrissoderes*
5. Pygidium nearly horizontal or at most somewhat oblique and almost completely concealed by elytra; last ventrite rounded, never truncate or emarginate at tip; femora and tibiae slender, tibiae scarcely sulcate longitudinally; prosternal process much narrower than a coxa; mesosternal process at most as broad as a coxa; body often subcylindrical, much longer than broad 6
 – Pygidium narrowly or broadly exposed, at least visible caudally or ventrally; last ventrite almost truncate, often with a conical projection at the middle of apex 7
6. Lateral parts of mesothorax, metathorax and abdomen covered with dense whitish and yellowish scales, completely covering the derm; fore tibiae without median spine in male
 *Limnobaris*
 – Whitish scales denser at most on lateral pieces of meso- and metathoraces and lateral margins of 3rd to 5th ventrites, but part of derm uncovered, the remaining underside with sparse hairy scales; fore tibiae dentate internally at the middle in male *Calyptopygus*
7. Tibiae uncinata and mucronate, mucros conspicuous. Claws scarcely divergent, connate at the base, slightly curved; femora narrowly flattened or sulcate on the underside of distal half;

- rostrum weakly depressed at the base; tarsi with fifth segment shorter than the rest segments combined; derm mat *Pellobaris*
- Tibiae uncinata, but not or minutely mucronate 8
8. Pygidium fully or broadly exposed, directing posteroventrally and visible dorsally, without transverse carina along hind margin of elytra in general, lateral part of fifth ventrite also visible dorsally on each side of pygidium. Claws narrowly separated; fore tarsi with second segment much narrower than third; antennae with first segment of funicle longer than three following segments combined; derm sparsely clothed with scales, pronotum and elytra almost bare, with scaly patches in male *Eumycterus*
- Pygidium narrowly exposed, invisible dorsally, visible caudally or ventrally, exposed part often keeled along apical margin of elytra, lateral part of fifth ventrite concealed by elytra 9
9. Pro-, meso- and metasterna interrupted in continuity by depressed or oblique mesosternum; prosternal process narrower than a coxa 10
- Pro-, meso- and metasterna forming a continuous flat surface 14
10. Femora and tibiae slender, tibiae scarcely sulcate longitudinally; prosternal process much narrower than a coxa; mesosternal process at most as broad as a coxa; body often subcylindrical, much longer than broad. Claws almost connate at the base; prosternum with a pair of deep foveae; antennae inserted in (male) or behind (female) the middle of rostrum *Psilarthroides*
- Tibiae with longitudinally confluent punctures and more or less multisulcate; body often ovate to oblong-ovate 11
11. Pygidium very short, invisible dorsally, with its upper edge sharply delimited by a transverse carina along hind margin of elytra; pronotum multisulcate, elytra rugose and tuberculate
..... *Pharcidobaris*
- Pygidium rather broadly exposed, elytra smooth, not tuberculate 12
12. Mandibles triangular or exterior surface so weakly curved as to point the apical tooth anteriorly or antero-interiorly, first marginal tooth small to vestigial, posterior margin of apical tooth much longer than anterior margin of first marginal tooth; body scaled, pronotum and elytra with yellowish to grayish scaly patches *Anthinobaris*
- Mandibles decussate internally, apical tooth pointed internally, a little smaller than first marginal tooth, posterior margin of apical tooth shorter than anterior margin of first marginal tooth; body often bare 13
13. Pronotum with sides covered with broad, round scales. Body with white and tan colored scales intermixed *Cosmobaris*
- Pronotum with sides lacking broad, round scales. Body either subglabrous or with only white scales *Baris*
14. Femora not sulcate beneath or at most flattened between tooth and apex. Club of antennae oblong-ovate, continuous to the preceding, first segment longer than broad, twice as long as the rest segments combined; derm mat; rostrum not longer than head and pronotum combined; legs robust *Orchidophilus*
- Femora weakly but distinctly sulcate beneath at least on hind pair 15
15. Prosternum between coxae narrower than the apical width of rostrum. Body at least partly alutaceous and matt, elytra with scaly patches, femora edentate, hind femora reaching at most to the basal margin of fifth ventrite *Dendrobaris*
- Prosternum between coxae at least as broad as the apical width of rostrum and more than half as broad as mesosternal process 16
16. Rostrum weakly to scarcely thickened basally and obtusely angled to forehead at the base;

dorsal edge of eye above the middle of rostrum at the base in profile; femora more or less clavate; prosternum with a pair of small tubercles between fore coxae in male; pygidium almost vertical; mesosternal process as broad as or a little wider than a coxa and prosternal process

..... *Moreobaris*

- Rostrum strongly thickened basally and sharply separated from head by deep depression; dorsal edge of eye on or a little below the middle of rostrum in profile; femora weakly to hardly clavate; prosternum between coxae without tubercles; mesosternal process much wider than a coxa; tibiae and tarsi fringed internally with long setae in male

..... *Nespilobaris*

Tribe Baridini Schoenherr, 1836

Subtribe Baridina Schoenherr, 1836

Genus *Barinomorphus* Morimoto, 1962: 377.

Oe-bal-top-ae-ba-gu-mi-sok (외발톱애바구미속)

Head with frons a little narrower than the base of rostrum; eyes oval, flat; rostrum with its dorsal outline contiguous with that of head, nearly as long as pronotum, curved, narrowed dorso-ventrally from base to the apex, antennal scrobes oblique, confluent beneath the base of rostrum; antennae inserted into the middle of rostrum, funicle 7-segmented, widened terminally from 2nd segment, 7th segment annexed to club, club small, half as long as funicle. Pronotum with the anterior margin truncate, posterior margin bisinuate. Scutellum distinct, lying on the same surface with elytra. Elytra with 9th and 10th striae complete. Pygidium vertical, not visible from above, transverse. Femora weakly clubbed, unarmed, sulcate beneath. Tibiae widened terminally, each with an oblique mucro, not uncinat, outer setose fringe of tarsal groove complete, inner setose fringe present only on the lower half. Tarsi with 3rd segment bilobed, much broader than the preceding, claw segment small, the apex a little exceeding 3rd segment and bearing only a single claw. Prosternal canal terminate at the middle of front coxa, with a pair of depressions near the apex; mesosternal process oblique, as broad as a median coxa; metasternum not sulcate at the middle. Abdomen with the process broad, slightly arched, as broad as hind coxa, the suture between 1st and 2nd segments obsolescent at the middle, 5th segment quadrately pointed posteriorly at the middle in male.

Type species: *Barinomorphus antennatus* Morimoto, 1962.

SPECIES 1 in Korea and Japan.

DISTRIBUTION: Korea, Japan.

REFERENCE: Morimoto and Yoshihara (1996).

8. *Barinomorphus antennatus* Morimoto, 1962 (Pl. 1-8)

Oe-bal-tob-ae-ba-gu-mi (외밭톱애바구미)

Barinomorphus antennatus Morimoto, 1962c: 378.

TL: Japan- Mt. Fukuchi.

HEAD: Head very finely shagreened, sparsely punctured; frons between eyes half as broad as the base of rostrum; rostrum nearly as long as pronotum, gently curved, with a median weak keel, the dorsal surface with two rows of punctures on each side, lateral surface closely wrinkled punctured and shagreened above the antennal scrobes; antennae inserted into the middle of rostrum, funicle as long as scape, 1st segment robust, twice as long as wide, as long as the three following segments taken together, 2nd segment the narrowest, subquadrate, 7th segment twice as broad as long, club a little longer than wide. Pronotum transverse (6:5), broadest at the base, the sides gently narrowed from the base to the middle, thence rapidly narrowed forwards, subapical construction weak, disc finely shagreened, separately punctured, interval between punctures as broad as or a little narrower than the diameter of a puncture. Scutellum circular in shape, shallowly depressed at the middle. Elytra much broader than pronotum, broadest on the shoulders, gently narrowed posteriorly; striae narrow, punctured, narrowed from the base to the median part, thence slightly widened terminally; intervals flat, finely shagreened, with a row of punctures, which are closer and larger on the base. Prosternal process as broad as a front coxa; lateral surface of prothorax, lateral pieces of meso- and metathorax, lateral margins of metasternum and 3rd-4th segments, and 5th segment of abdomen very closely punctured, median part of metasternum sparsely with larger punctures, each of 3rd and 4th segments of abdomen with irregular two transverse rows of punctures. Femora shagreened, closely with oblong punctures. Tibiae shagreened and longitudinally with fine costae.

Female: Rostrum less strongly punctured. Antennae inserted just before the middle of rostrum. Prosternal process narrower than front coxa. Fifth segment of abdomen truncate at the posterior margin.

MEASUREMENTS: Body length (excl. rostrum). 2.0 mm.

COLOR: Black, mandibles black to dark brown.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Kyushu).

KOREA: South.

KOREAN RECORDS: Kwon and Lee, 1986: 85 (South); ESK/KSAE, 1994: 209; Hong et al., 2000: 77 (South).

SPECIMEN EXAMINED: GB: 1 ex. (Mt. Palgongsan: 6.vi.1978).

REMARKS: We could not any male specimen of this species until now. The descriptions were cited from Morimoto (1962c).

Genus *Baris* Germar, 1817: 340.

Ae-ba-gu-mi-sok (애바구미속)

Wide oval, elongated, sparsely narrowed. Reddish-brown or black, naked, with metallic blue or

greenish shining or pubescence scales. Antennal funicle not annexed to club; eyes flat transverse-oval; rostrum flat at base or long and thin, curved sparsely straight, with transverse drop, separated its base from head. The prosternal process is narrower than a coxa, the mesosternal process is depressed and the exposed part of pygidium is about twice as wide as long. Tarsi wide or narrow, with bilobed of 3rd segment. Claw free. Larvae at dicotyledonous plants; at roots, stems, petioles, sometimes at fruits. Beetles on leaves or general organs of same plants. Some injured Brassicaceae cultivation.

Type species: *Curculio artemisiae* Herbst, 1795.

SPECIES More than 700 (4 in Korea), (5 in Far Eastern Russia).

DISTRIBUTION: Cosmopolitan.

Key to the species of genus *Baris*

1. Metepisterna strongly narrowed in the middle. Middle and lateral sides of pronotum and odd intervals of elytra with a few elongated scale-like hairs *B. pilosa*
– Metepisterna wide, slightly narrowed in the middle 2
2. Pronotum punctate very large, but scarcely (about 10 punctures from middle to edge). Punctures on metepisterna usually much smaller than punctures on metasternum 3
– Pronotum punctate much smaller, dense (about 15–20 punctures from middle to edge). Rostrum somewhat widened before base. Pronotum at base not narrowed, only rounded angle. Elytral intervals with 1 row of punctures. 3rd and 4th abdominal sternites covered regularly and densely punctate *B. ussuriensis*
3. 1st segment of abdominal sternite in male obsoletely depressed. Aedeagus somewhat narrowly round with a lot of long setae at sides of apex *B. artemisiae*
– 1st segment of abdominal sternite in male clearly depressed. Aedeagus obtusely round with short and sparse setae at sides of apex *B. ezoana*

9. *Baris artemisiae* (Herbst, 1795) (Pls. 2-9, 15-9)

Ae-ba-gu-mi (애바구미)

Curculio artemisiae Herbst, 1795: 101.

TL: Europe.

Baridius rufitarsis Motschulsky, 1860: 157.

TL: Amur.

Rostrum cylindrical, regularly curved, considerably thick, sparsely punctate, with subpiceous apex. Pronotum punctate very large, about 10 punctures from middle to edge, constricted at anterior part, bisinuate at base, subacute at posterior angle. Elytra hardly wider than pronotum, parallel-sided at anterior half, roundly attenuate toward the posterior part, obtuse at apex; striae regularly deep and wide, with punctures; intervals subconcave, with 1 row of indistinct punctures in the middle, with a row of sparsely short decumbent ash-colored hairs. Punctures on metepisterna usually much smaller than punctures on metasternum. 3rd and 4th abdominal sternites with 2–4 rows of punctures in the middle. Depression of abdomen in male obsolete. Femora with large

punctures.

MEASUREMENTS: Body length (excl. rostrum). 3.8 mm.

COLOR: Elongate oval, subconvex, punctate, shining, black. Base of antenna and apex of tibia and tarsi slightly red.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan, Transpalaeartic.

KOREA: North, Central, South.

KOREAN RECORDS: Hong et al., 2000: 77, 78, 79 (Central, South); Hong and Korotyaev, 2002: 158 (North).

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Yeogisan: 20.iv.1989); 1 ex. (Suwon: 4.vii.1997); 1 ex. (Tp. Waujeongsa, Yongin: 24.v.1997); 1 ex. (Omokcheon-dong, Suwon: 23.iv.1998). GW: 2 exs. (Chiaksan: 23.vi.1977); 1 ex. (Gangwon Univ. Campus: 29.v.1992); 2 exs. (Goseong: 25.v.1993); 3 exs. (Goseong: 26.v.1993); 2 exs. (Inje: 27.v.1993); 1 ex. (Mt. Chiaksan, Wonju: 14.vi.2005). CB: 1 ex. (Yangseong, Eumseong: 7.v.1999). GB: 2 exs. (Bonghwa: 28.v.1993); 4 exs. (Chupungryeong, Gimcheon: 2.vi.1997).

REMARKS: On re-examination of series of specimens for our catalogue works in 2000 which determined with *Baris ezoana* Kôno and *Baris nipponicus* (Kôno), there are all female specimens. We compared them to a pair of Russian specimens of the *B. artemisiae* (Herbst) which collected at Khasan, Primorye on 6–7th Jun., 2002 and a Japanese male of the *B. ezoana* which collected at Shirakawa Hirase, Gifu Pref. on 28th Jun., 2006. In the case of female, the external characters of body and the shape of the spermatheca are not different each other, and in the case of male, the metasternum and 1st segment of abdominal sternite of the *B. artemisiae* are obsoletely depressed, but those of *B. ezoana* clearly depressed and the apex of the aedeagus of the former is somewhat narrowly round with a lot of long setae to the both sides of apex but that of the latter is obtusely round with short and sparse setae.

10. *Baris ezoana* Kôno, 1940 (Pls. 2-10, 15-10)

Ssuk-ae-ba-gu-mi (쑥애바구미)

Baris ezoana Kôno, 1940: 78.

TL: Japan, Hokkaido, Honshu.

Head strongly arched; very finely scattered punctate. Rostrum as long as pronotum, strongly curved, separated from forehead with transverse furrow, punctures in male rough and moderately dense, in female finer and sparse in the middle. Antennae inserted in the middle of rostrum; 1st segment of antennal funicle a little longer than the following 2 segments taken together. Pronotum broader than long, parallel-sided at the basal half, strongly narrowed from the middle to apex, somewhat constricted just behind the anterior margin, bisinuate at the base, with a smooth feeble longitudinal keel in the middle; Punctures rough and rather dense. Scutellum shorter than broad. Elytra distinctly broader than pronotum, with regular striae, incorporated portion of 4th and 6th striae with small preapical calli (scarcely make tubercle and uniformly curved dorsal outline in lateral aspect); intervals flat, with a row of large punctures; pygidium very densely punctate. Underside of body rough and rather densely punctate. Femora without tooth; tibia straight; claws free.

MEASUREMENTS: Body length (excl. rostrum). 3.5–4.1 mm (in Japan).

COLOR: Body elongate oval. Derm black; antenna, tarsi, anterior margin of pronotum and lateral margin of elytra rust-colored. Hairs short and sparse.

BIOLOGICAL NOTES: Adults were collected on *Artemisia* spp. in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu).

KOREA: Central, South.

KOREAN RECORDS: Morimoto, 1984: 309; Kwon and Lee, 1986: 85 (Central, South); ESK/KSAE, 1994: 209.

REMARKS: We could not any specimen of this species until now. The descriptions were cited from Kôno (1940) and the photos on plate were taken from Japanese specimen.

11. *Baris pilosa* (Roelofs, 1875) (Pls. 1-11, 15-11)

Keun-ae-ba-gu-mi (큰애바구미)

Baridius pilosa Roelofs, 1875: 182.

TL: Japan.

Rostrum shorter than pronotum, a little thickened in the middle and bulging on its upper side, separated from the head by an impressed transversal line, covered with fine and dense punctures. Antennae inserted before middle of rostrum; 2nd segment of antennal funicle shorter than 1st, the following segments gradually bigger and more transverse. Pronotum almost as long as broad, slightly bisinuate at base, almost parallel-sided from base to before middle and narrowing gradually to anterior part; with large and close punctures bearing a white elongated scale. Scutellum transverse, punctate. Elytra oblong oval, a little enlarged in shoulders, rounded at apex, with striae impunctate, intervals with a row of closer punctures carrying scales as those of the pronotum. Underside of body and legs with rather shallow punctures bearing hair; punctures of the abdomen fine.

MEASUREMENTS: Body length (excl. rostrum). 3.5–4.0 mm.

COLOR: Body blackish brown, oval, convex, shining, antenna and legs reddish brown. Underside with white hairs; dorsum with same colored filiform scales.

BIOLOGICAL NOTES: This species is a pest of *Mentha arvensis* and *Perilla frutescens* in Japan (Morimoto, 1984) and is collected on same crop plants in Korea.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu).

KOREA: Central, South.

KOREAN RECORDS: Hong et al., 2000: 80 (Central, South).

SPECIMEN EXAMINED: GG: 2 exs. (Suwon: 24.v.1984); 1 ex. (Suwon: 3.vii.1986, on *Mentha arvensis*); 1 ex. (Anyang: 21.vi.1984); 1 ex. (Pyeongtaek: 23.vi.1988); 1 ex. (Mt. Cheongyesan, Pocheon: 28.vi.1998); 1 ex. (Mt. Myeongjisan: 21.v.1999); 1 ex. (Giheung, Yongin: 12.vii.2000, No. 01141); 1 ex. (Mt. Cheonggyesan, Gwacheon: 24.viii.2007). CB: 6 exs. (Mt. Wolaksan: 18.vi.1984, on *Perilla frutescens*). CN: 1 ex. (Chubu-myeon, Geumsan: 7.vii.1999, on *Perilla frutescens*); 1 ex. (Eubnae-ri, Jinsan-myeon, Geumsan: 26.viii.1999, on *Perilla frutescens*); 1 ex. (Bangdong reservoir, Seongbuk-dong, Yuseong, Daejeon: 26.vii.2000). JN: 1 ex. (Yeosu: 6.viii.2007).

12. *Baris ussuriensis* Zaslavskij, 1956 (Pl. 1-12)

U-su-ri-ae-ba-gu-mi (우수리아바구미)

Baris ussuriensis Zaslavskij, 1956: 367.

TL: Russia- Primorskii Terr.

Baris ussuriensis ssp. *chinganensis* Zaslavskij, 1956: 364.

TL: China.

Baris pseudospitzyi Zaslavskij, 1956: 364.

TL: Russia- Primorskii Terr.

Body oval, wide (L:D=1:2.1-2.2). Rostrum as long as pronotum, curved, dorsum with round punctures, at sides to more rough, merging in grooves. Pronotum 2 times shorter than elytra, transverse (L:D=0.8:1), the broadest at base, narrowed to anterior part, before apex more sharply. Disk densely punctate, the median line visible, the basal part with same punctation. Bisinuate at base, posterior angle rounded. Scutellum large, quadrate, punctate and same level as 1st interval. Elytra wide, without any long hair-like scale. Striae distinctly punctate. Intervals a little concave, with 1 row of punctures. Metasternum with round punctures, bearing fine scales; metepisterna with sparsely fine punctures. Abdomen with dense fine punctures, 3rd and 4th sternites covered them regularly.

MEASUREMENTS: Body length (excl. rostrum). 4.0-4.5 mm (in Russia).**COLOR:** Body blackish brown.**BIOLOGICAL NOTES:** Unknown.**DISTRIBUTION:** Korea, Russia (Primorskii Terr., Amur Prov., Chita Prov., Buryatia), NE China.**KOREA:** North.**KOREAN RECORDS:** Egorov et al., 1996: 450 (North); Hong et al., 2000: 80; Legalov, 2009e: 199 (North).**REMARKS:** We could not examine any Korean specimen of this species until now. The descriptions were cited on Zaslavskij (1956) and the photo on plate was taken from Russian specimen.**Genus *Cosmobaris* Casey, 1920: 344.**

Al-rak-ae-ba-gu-mi-sok (알락애바구미속)

SYNONYM: *Poecilobaris* Zaslavskij, 1956: 356.

Body squamose and rostrum separated from the head by a deep transverse sulcus. Antennae slender, with moderate oval club, scape constitutes rather more than half the mass and loosely pubescent; the basal funicular segment as long as the next three segments. Prosternum flat, feebly fossulate transversely at apex and separates the coxae by about half their width. Prothorax feebly constricted at apex. This genus is associated with *Chenopodium* (Chenopodiaceae), and larvae mine stems.

Type species: *Cosmobaris americana* Casey, 1920.**SPECIES** (2 in Korea), (1 in Japan), (1 in European part), (1 in Nearctic).

DISTRIBUTION: Holarctic.

REFERENCE: Casey (1920).

Key to the species of genus *Cosmobaris*

1. Body with dense whitish, yellowish and brownish scales, not leaved clear part. Base and lateral sides on disk of pronotum with scales. Perhaps elytra with clear X-shaped pattern formed by bright scales *C. scolopacea*
- Body with whitish, yellowish and brownish scales, arranged with clear part. Lateral sides of pronotum with wide stripes formed by densely bright scales, intermittent on prosternum; disk of pronotum with thin hairlike scales. Elytral intervals with narrow scales in rows · *C. orientalis*

13. *Cosmobaris orientalis* (Roelofs, 1875) (Pls. 2-13, 15-13)

Al-rak-ae-ba-gu-mi (알락애바구미)

Baris orientalis Roelofs, 1875: 184.

TL: Japan, Hong Kong.

Baris borkhsenii Zaslavskij, 1956: 357 [syn. nov.].

TL: Korea- Pyeongyang.

Rostrum almost as long as pronotum, separated from the head by a printed, narrow line; cylindrical, rather strongly and densely punctated striole at base. Antennae inserted before middle of rostrum, pubescences; 2nd segment of funicle conical; the following segments gradually shorter and a little broader. Head obsoletely punctate. Pronotum almost as long as broad, slightly bisinuate at base, little rounded at sides to before the middle, scarcely narrowed to anterior part; large and closely punctate with a obsolete median carina; with grayish yellow and white scales, more densely at sides. Scutellum small, punctated form. Elytra barely broader than pronotum at bases, slightly enlarged in shoulders, almost parallel-sided, separated roundly at apex, impunctured striae, intervals finely rugose, appeared with scales similar to those of the pronotum, with a band or visible transverse spot beyond of middle of suture. Underside of body appearing transverse vestiture, which poorly punctate.

MEASUREMENTS: Body length (excl. rostrum). 3.0–3.7 mm.

COLOR: Black, antennae, tarsi, sometimes the apex of femora and tibia red-testaceous bearing greyish yellow and white scales.

BIOLOGICAL NOTES: Adults were commonly found on *Chenopodium album* and *Achyranthes japonica* in Korea and Japan (Morimoto, 1984; Morimoto and Lee, 1992; Hong et al., 2000). Also this species is widespread in Prymorye Territory and Amur Basin and very common on Umbelliferae flowers (Zherikhin, 1997).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), China (South).

KOREA: Whole country including Is. Ulreungdo and Is. Jejudo.

KOREAN RECORDS: Zaslavskij, 1956: 357 (Pyeongyang); Morimoto, 1984: 310; Kwon and Lee, 1986: 86 (Central, South, Is. Ulreungdo, Is. Jejudo); Kim et al., 1991: 183 (Sokrisan); Morimoto and Lee, 1992: 11 (JJ- Iho beach); Kim, 1993: 392 (JJ); ESK/KSAE, 1994: 209; Paik et al., 1995: 429 (JJ); Kim and

Kim, 1996: 131 (Bangtaesan); Egorov et al., 1996: 448 (North); Hong et al., 2000: 78, 79 (Central, South, Is. Ulreungdo, Is. Jeju).

SPECIMEN EXAMINED: GG: 1 ex. (Suwon: 21.vi.1983); 21 exs. (Goyang: 4.vii.1995); 3 exs. (Daegwang-ri, Yeoncheon: 16.viii.2000); 9 exs. (Sihwaho, Ansan: 9.viii.2002, No. 00017-00025); 1 ex. (Namhansanseong, Gwangju: 7.vii.2007). GW: 7 exs. (Hongcheon: 11.vi.1997); 1 ex. (Chuncheon: ?.vi.1997); 3 exs. (Sanjeo-ri, Yongsan-myeon, Hongcheon: 11.vi.1997); 2 exs. (Guman-ri, Gandong-myeon, Hwachon: 17.viii.2000); 1 ex. (Dongsu-ri, Yanggu: 5.vii.1999); 1 ex. (Jeok-ri, Nam-myeon, Yanggu: 6.vii.1999). CB: 1 ex. (Cheongwon: 11.vii.1995). CN: 1 ex. (Mt. Wolaksan N3652E12804: 21.vi.2001, No. 01188). JB: 1 ex. (Hyoja-dong, Jeonju: 9.vi.2000). JN: 1 ex. (Geumodo, Yecheon: 19.vii.1993); 1 ex. (Geumodo, Yecheon: 4.viii.1993); 1 ex. (Ando-ri, Nam-myeon, Yecheon: 4.viii.1993). GB: 1 ex. (Gimcheon: 18.vi.1996); 1 ex. (Anjeong, Yeongju: 20.vi.1997); 1 ex. (Yongsan-dong, Andong: 20.vi.1997). GN: 1 ex. (Hadong: 24.vi.1994); 4 exs. (Geojedo: 4.vi.1997); 1 ex. (Changryeong: 17.vi.1997). JJ: 1 ex. (Jeju: 3.ix.1992); 1 ex. (Daho, Jeju: 25.viii.1997); 1 ex. (Gueom-ri, Aewol-eub, Bukjeju: 26.viii.1997); 1 ex. (Gongcheon-ri, Namwon-eub, Namjeju: 27.viii.1997). HN: 1 ex. (Bukcheong: 1.viii.1950, coll. by N.S. Borkhsenius, determined by B.A. Korotyaev, preserved in ZIN, Russia).

REMARKS: On examination of a female specimen from North Korea collected by N.S. Borkhsenius in 1950 which determined with *Baris borkhsenii* Zaslavskij by B.A. Korotyaev in Zoological Museum of Russian Academy of Sciences, it is not found any difference characters to *Cosmobaris orientalis* (Roelofs). And Zaslavskij (1956) did not described on different characters between *Baris orientalis* Roelofs and *Baris borkhsenii* Zaslavskij on original descriptions. Therefore, it is deal with a synonym of *Cosmobaris orientalis* (Roelofs).

14. *Cosmobaris scolopacea* (Germar, 1824) (Pl. 2-14)

Yu-reob-al-rak-ae-ba-gu-mi (유럽알락애바구미)

Baris scolopacea Germar, 1824: 202.

TL: Europe.

Rostrum feebly arcuate, strongly sculptured and as long as the head and pronotum taken together, rather less in the male, with sparse pale brown scales and not conspicuous. Pronotum a fourth wider than long, the sides feebly converging, rapidly rounded anteriorly to the subtubulate apex; punctures strong and close-set; basal lobe feeble. Scutellum small, nude. Elytra one-half times in female to two-fifths times in male longer than wide, rather rapidly obtuse at apex; slightly wider than the pronotum and more than twice as long, the humeri not distinctly prominent; striae moderate; intervals two or three times as wide as striae, finely, loosely punctate.

MEASUREMENTS: Body length (excl. rostrum). 2.8 mm.

COLOR: Black, oblong-oval, convex; the pronotal scales narrower and more cylindrical, dense and whitish, wanting in a large medio-basal area having a few slender darker scales; the elytral scales more uniformly oval and dense, though similarly aggregated in white spots among the pale brown scales of the general surface; the propleura not denuded, the pale scales elsewhere on the under-surface narrow and well separated, coarser, denser and whiter on the metepisterna.

BIOLOGICAL NOTES: This species is associated with *Chenopodium* (Chenopodiaceae), and larvae mine stems (Egorov et al., 1996).

DISTRIBUTION: Korea, Kazakhstan, C. Asia, Caucasus, Russia (W. Siberia, European part), Europe, N. Africa.

KOREA: North.

KOREAN RECORDS: Hong and Korotyaev, 2002: 158 (North).

SPECIMEN EXAMINED: PN: 1 ex. (Is. Neungrado, Pyeongyang: 14.viii.1971, determined by B.A. Korotyaev, preserved in HNHM, Hungary).

REMARKS: It is need to re-examine taxonomically on *C. orientalis* (Roelofs) distributed in Far eastern Asia, *C. scolopacea* (Germar) in Europe and *C. americana* Casey in North America.

Genus *Moreobaris* Morimoto and Yoshihara, 1996: 40.

Ppong-na-mu-ae-ba-gu-mi-sok (뽕나무애바구미속)

Body robust, more shiny, not alutaceous; black (Far Eastern species), devoid of scales. Dorsal edge of eyes in lateral aspect is above middle height of rostrum. Rostrum separated from frons by less deep depression than in *Nespilobaris*. Space between fore coxae at least as wide as diameter of coxae and distinctly wider than rostrum. Elytral intervals coarsely punctate. Legs somewhat less slender.

Type species: *Baris deplanata* Roelofs, 1875.

SPECIES (1 in Korea), (4 in Japan).

DISTRIBUTION: Korea, Japan, Russian Far East, Taiwan, Malaysia.

15. *Moreobaris deplanata* (Roelofs, 1875) (Pls. 2-15, 15-15)

Ppong-na-mu-ae-ba-gu-mi (뽕나무애바구미)

Baris deplanata Roelofs, 1875: 183.

TL: Japan.

Body robust. Head between eyes depressed and as wide as the base of rostrum, the top of eye above the mid level of rostrum at the base in lateral aspect. Rostrum about as long as head and pronotum combined, curved, almost parallel-sided, slightly thickened basally; mandibles with first marginal tooth as long as and a little wider than apical tooth. Antennae inserted in or a little beyond the middle of rostrum, scape narrowly distant from eye by the length of first segment of funicle, funicle seven-segmented, seventh segment wider than the preceding, but not annexed to club, first segment of club as long as or slightly longer than the rests. Pronotum truncate at the apex, ocular lobes obsolete, bisinuate at the base, densely punctate on disc. Scutellum evident. Elytra parallel-sided on basal half, conjoint apices shallowly emarginate, with ten striae, ultimate and penultimate striae entire, intervals flat, subapical calli weak. Prosternum with a pair of foveae in the subapical constriction in both sexes, not sulcate nor depressed, with a pair of small tubercles between fore coxae in male; prosternal process as wide as a coxa and a little wider than apex of rostrum. Mesosternal process flat, not depressed, continuous to metasternum in a flat surface, much wider than a

coxa and prosternal process. Metepisternal suture arched laterally. Venter with first ventrite behind coxa as long as second and as long as third and fourth combined, fifth ventrite bisinuate at apex in male. Pygidium narrowly exposed, with a transverse ridge along margin of elytra in male, exposed part vertical, more than three times as wide as long. Legs with fore pair slightly greater than middle and hind pairs, femora clavate, edentate, depressed or shallowly sulcate on hind femora, hind femora not passing beyond posterior margin of fourth ventrite; tibiae uncinatae, not mucronate, not costate on outer and inner margins; fore tibiae in male fringed with greyish long hairs internally; tarsi with third segment bilobed, much broader than preceding, fifth segment longer than first, claws free, narrowly divaricated.

MEASUREMENTS: Body length (excl. rostrum). 2.8–3.6 mm.

COLOR: Derm more shiny, black, not alutaceous.

BIOLOGICAL NOTES: This species is a famous pest of *Morus* spp. in Japan (Morimoto and Yoshihara, 1996) and is collected on same plants in Korea.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: North, Central, South and Is. Ulreungdo.

KOREAN RECORDS: Yoshino, 1935: 14 (JN- Hampyeong); Saito, 1941: 56; Ko, 1969: 264; KSPP, 1972: 198; Morimoto, 1984: 309; KSPP, 1986: 194; Kwon and Lee, 1986: 85 (South, Ulreungdo); Yoon et al., 1990: 114 (Gayasan); ESK/KSAE, 1994: 209; Hong et al., 2000: 78 (Central, South); Hong et al., 2000: 89 (Central, South, Is. Ulreungdo); Hong and Korotyaev, 2002: 158 (North).

SPECIMEN EXAMINED: GG: 11 exs. (Suwon: 14.ix.1973, on *Morus alba*); 3 exs. (Suwon: 21.iv.1982); 11 exs. (Suwon: 30.iv.1982, on *Morus alba*); 4 exs. (Suwon: 26.v.1982, on *Morus alba*); 6 exs. (Suwon: 29.v.1983); 1 ex. (Suwon: 2.vi.1986); 6 exs. (Mt. Yeogisan: 9.v.1991); 9 exs. (Mangpo-ri, Suwon: 13.iv.2004, No. 01885-01893); 1 ex. (Hwado-eub, Namyangju: 27.v.2007); 1 ex. (Gwangju N372653E1271333: 1.vi.2007). GW: 8 exs. (Mt. Chiaksan: 1.v.1982); 8 exs. (Mt. Chiaksan: 2.v.1982); 2 exs. (Dunnae-myeon, Hoengseong: 22.v.1996, on *Morus alba*); 1 ex. (Ganseong-eub, Goseong: 25.v.1993); 1 ex. (Mt. Geonbongsan, Ganseong-eub, Goseong: 26.v.1993). CB: 3 exs. (Yongdong-ri, Sancheok-myeon, Jungwon: 23.v.1993); 1 ex. (Hyangsan-ri, Salmi-myeon, Jungwon: 23.v.1993); 1 ex. (Goesan: 26.vi.1996); 2 exs. (Daega-myeon, Danyang: 10.v.1997). CN: 1 ex. (Tp. Magoksa, Gongju: 4.v.1997); 5 exs. (Mt. Gosanbongsan, Daechon2-ri, Godae-myeon, Dangjin N3656356E12634111H60: 26.v.2006, on *Morus alba*). JB: 1 ex. (Mt. Naejangsan: 10.vi.1975); 1 ex. (Majeong-ri, Bug-myeon, Jeongeub: 21-27.vi.2007, malaise trap, No. M-5-1-4). JN: 1 ex. (Yeocheon: 10.v.1976); 1 ex. (Simwon valley, Mt. Jirisan, Sandong-myeon, Gurye N3519139E12731457H803: 7.v.2006). GB: 1 ex. (Daeyang reservoir, Joma-myeon, Gimcheon: 6.vi.1997); 1 ex. (Osu reservoir, Yeongcheon: 29.v.1993); 1 ex. (Mt. Sobaeksan, Yeongju: 11–14.vi.1999, malaise trap).

REMARKS: On re-examination of series of specimens which were determined with *Baris menthe* Kôno in Hong et al. (2000)'s catalogue, there are found only female specimens of *Moreobaris deplanata* (Roelofs).

Genus *Nespilobaris* Morimoto and Yoshihara, 1996: 41.

Maep-si-ae-ba-gu-mi-sok (맵시아바구미속)

Legs sexually dimorphic, fore legs in male longer than the middle and hind legs, fore tibiae bent

externally to the apex before the middle, and fore tibiae and tarsi fringed internally with long setae. Prosternal process much wider than a coxa and the apex of rostrum; mesosternal process more than 1.5 times as wide as a coxa and scarcely wider than intercoxal process of first ventrite.

Type species: *Acythopeus parabasimaculatus* Morimoto and Lee, 1992.

SPECIES (1 in Korea), (2 in Japan), (1 in Russia).

DISTRIBUTION: Korea, Japan, *E. Siberia*.

16. *Nespilobaris parabasimaculatus* (Morimoto and Lee, 1992)

(Pls. 2-16, 15-16)

Maep-si-ae-ba-gu-mi (맵시아바구미)

Acythopeus parabasimaculatus Morimoto and Lee, 1992: 10.

TL: Japan- Nakasaki; Korea- JJ Gaewol-bridge, Yeongsil, Halrasan (800 m).

Head alutaceous, with indefinite weak punctures. Rostrum sharply delimited from head by a transverse depression, thick at the base and slightly tapering apically in lateral aspect, almost parallel-sided, alutaceous, densely with shallow punctures except for apex, each puncture bearing a fine recumbent hairy scale, without carinae nor sulcus. Antennae inserted in the middle of rostrum, scape not reaching the base of rostrum, first segment of funicle almost as long as three following segments combined, fourth to seventh segments successively wider. Pronotum as long as broad, parallel-sided on basal half, rectangular at basal angle, bisinuate at base; disc alutaceous, bare, densely punctate, interstices between punctures narrower than their diameter, without median carina. Scutellum as long as broad, slightly convex, alutaceous. Elytra 2/3 times as broad as the length of suture, parallel on basal half, then gradually narrowed apically in a curve, side margins slightly sinuate; striae clear-cut, tenth stria entire, with shallow distant punctures; intervals alutaceous, flat from base to declivity, convex from V-shaped striae thence posteriorly to apex, each interval with a row of indefinite shallow weak punctures, each puncture with a minute brownish seta. Sternites and pleurites densely punctate, each puncture with a small seta. Prosternum with a pair of oval deep foveae before coxae, their outer margin (-) shaped ridged; mesosternum flat to form a same plane with pro- and metasterna; metepisternum slightly narrowed in the middle, with irregular two rows of punctures. Venter evenly punctate, each puncture with a seta of the same or smaller size than those on metasternum; first two ventrites flattened in the middle, terminal margin subtruncate, without any special fringe. Pygidium with apical part posterior to the carina exposed, alutaceous, with shallow punctures. Legs with fore pair distinctly longer than the posterior; femora edentate, fore femora a little thicker and less clavate than the posterior, alutaceous, with shallow punctures, each puncture with greyish small seta; fore tibiae longer than the posteriors, weakly curved outwardly, fringed with greyish long hairs internally, tibiae of the posterior two pairs almost straight, weakly expanded externally at apex, tarsi with third segment deeply bilobed, fore tarsi with long inner fringe like fore tibiae; claws of the same size, free. Struts of penis very long, reaching proximally to the anterior margin of mesothorax, internal sac and flagellum also very long.

Female: Rostrum slenderer, apical 1/3 shiny and sparsely punctate. Fore legs not fringed internally with long hairs. Venter weakly convex transversely.

MEASUREMENTS: Body length (excl. rostrum). 2.2–2.5 mm.

COLOR: Black, with a hairy short basal patch on third interval of elytra.

BIOLOGICAL NOTES: Collected from Shiitake mushroom (Morimoto and Lee, 1992).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Yakushima).

KOREA: Is. Jejudo.

KOREAN RECORDS: Morimoto and Lee, 1992: 10 (JJ- Gaewol-bridge, Yeongsil, Halrasan (800 m); Shiitake); ESK/KSAE, 1994: 209; Paik et al., 1995: 428; Hong et al., 2000, 5: 90 (JJ).

SPECIMEN EXAMINED: JJ: 1 ex. (Yeongsil: 17.ix.1983); 2 exs. (Mt. Halrasan, Jeju: 24.viii.1996).

Genus *Pharcidobaris* Morimoto and Yoshihara, 1996: 29.

Geuk-dong-ae-ba-gu-mi-sok (극동애바구미속)

Rostrum not thickened basally. Pronotum much narrower than elytra, very coarsely, longitudinally rugose and punctate dorsally. Elytra coarsely sculptured, distinctly rough, with very deep coarse striae, intervals narrow, with sparse recumbent scales. Pygidium strongly oblique in lateral aspect, virtually invisible from above.

Type species: *Pharcidobaris miyamotoi* Morimoto and Yoshihara, 1996.

SPECIES (1 in Korea), (1 in Japan), (2 in Russia).

DISTRIBUTION: Korea, Japan, Altai, South Siberia, South of the Russian Far East, Myanmar.

Key to the species of genus *Pharcidobaris*

1. Pronotum with large but shallow punctures, much narrower on elytra. Striae on elytra wide, with very large punctures bearing hair-like scales. Reddish-brown *Ph. piliventris*
– Sculpture on dorsum very rough. Punctures on pronotum and striae and intervals of elytra with large, deep and dense. Elytral intervals with sparse large scales. Black *Ph. suvorovi*

17. *Pharcidobaris piliventris* (Zaslavskij, 1956) (Pl. 2-17)

Dae-ryuk-ae-ba-gu-mi (대륙애바구미)

Baris piliventris Zaslavskij, 1956: 366.

TL: Russia- Primorskii Terr.; China- NE.

Rostrum long, separated from a frons with deep depression; in female straightened to middle, angularly curved at the middle; in male curved at the base and before apex, disk densely punctate, lateral sides roughly and densely punctate. Head from a place which attached rostrum to posterior edges of eyes with larger sparsely punctures. Pronotum completely parallel-sided, sharply narrowed at anterior part, strongly bisinuate at base, posterior angle sharp. Disk with large round punctures, bearing narrow hair-like scales, without median line; a little more rough punctures at lateral edges from the basal part as on disk. Elytra distinctly wider than pronotum, narrowed at the posterior

half. The striae, especially 1st in the anterior part, very wide, often with very large punctures. Intervals with 1 row of rather large punctures bearing rather long white hair-like scales; lateral with strong transversely rugose. Subapical calli strong. Mesosternum with large round punctures, metasternum as same punctures bearing scales. Metepisterna very narrow, with finer punctures. 1st and 2nd abdominal sternites regularly and densely covered by punctures which are almost same sizes. 3rd and 4th sternites with the same sculpture, 5th sternite with larger. 2nd–4th sternites with posteriorly directed narrow scales along posterior margin, on 5th sternite separately long scales. 3rd tarsal segment wide.

MEASUREMENTS: Body length (excl. rostrum). 2.8–3.3 mm.

COLOR: Body black. Legs reddish brown.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, NE China, Russia (Chita and Amur Prov., Primorskii Terr.).

KOREA: North, Central, South.

KOREAN RECORDS: Egorov et al., 1996: 449 (North); Hong et al., 2000: 80; Legalov, 2009e: 199.

SPECIMEN EXAMINED: GG: 2 exs. (Namhansanseong, Gwangju: 28.vii.2007); 1 ex. (Namhansanseong, Gwangju: 10.viii.2007). GW: 1 ex. (Seosang, Chuncheon: 24.vii.1997). CN: 1 ex. (Hwasan-ri, Jongcheon-myeon, Seocheon: 8.vi.2000). GN: 4 exs. (Tp. Munsuam, Sangri-myeon, Goseong: 3.vi.1997).

18. *Pharcidobaris suvorovi* (Reitter, 1910) (Pl. 2-18)

Geuk-dong-ae-ba-gu-mi (극동애바구미)

Baris suvorovi Reitter, 1910: 201.

TL: Transbaikalia.

Head between the top of eyes depressed and as wide as the base of rostrum, the top of eyes a little below the level of dorsal surface of rostrum at the base in lateral aspect. Rostrum about as long as pronotum, curved, parallel-sided, almost of the same thickness throughout, antennae inserted beyond the middle of rostrum; mandibles with outer surface evenly curved, apical tooth and first marginal tooth of the same shape and size, both directing internally. Antennae with scape shortly distant from eye by the width of first segment of funicle when retracted, funicle seven-segmented, seventh segment of funicle wider than preceding, but not annexed to club, club ovate, first segment half as long as club. Pronotum subparallel-sided on basal half, truncate at the apex, with feeble ocular lobes, weakly and broadly produced posteriorly in an arc in the middle, disc rugosely punctate or sculptured. Scutellum evident, small. Elytra widest a little behind humeri, conjointly rounded at the apices, with ten narrow striae, ultimate and penultimate striae entire, intervals each with a row of large punctures, subapical calli distinct, often tuberculate and uneven on before and behind the middle. Prosternum slightly concave at the apex, with a pair of foveae in the submarginal sulcus, longitudinally depressed from the apex to the apex of prosternal process, the depression becoming shallower and narrower posteriorly, prosternal process narrower than the apical width of rostrum. Mesosternal process depressed, as wide as a coxa, twice as wide as prosternal process, a little wider than first ventrite between coxae. Metasternum with median longitudinal sulcus in entire length. Metepisternal suture more or less out-curved. Venter with first ventrite behind coxa as long as second and as long as third and fourth combined, fifth ventrite bisinuate and triangularly

pointed in the middle of the caudal margin, first suture sinuate, second to fourth sutures more weakly curved at sides than the related genera. Pygidium shortly exposed behind the transverse edge along margin of elytra, vertical, invisible dorsally. Leg clavate, edentate, fore and mid femora simple, hind femora weakly sulcate for receiving tibiae; tibiae with punctures longitudinally confluent leaving indefinite carinate, outer and inner edges carinate, uncinata, not mucronate; tarsi with third segment much wider than preceding and deeply bilobed, fifth segment about as long as preceding segments combined, claws free, divaricated.

MEASUREMENTS: Body length (excl. rostrum). 4.5–5.0 mm (in Russia).

COLOR: Pronotum dark brown and elytra reddish brown.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, NE China, Russia (Altai Rep., Chita and Amur Prov., Khabarovsk and Primorskii Terr.).

KOREA: North.

KOREAN RECORDS: Egorov, 1976a: 836 (North); Egorov et al., 1996: 449 (North); Hong et al., 2000: 90; Legalov, 2009e: 199 (North).

REMARKS: We could not examine any Korean specimen of this species until now. The descriptions were cited on Reitter (1910) and the photo on plate was taken from Russian specimen.

Genus *Phrissoderes* Marshall, 1948: 459.

Jeom-gak-ryeol-ba-gu-mi-sok (점각렬바구미속)

SYNONYM: *Centrinoplesius* Voss, 1958: 77; *Pseudorhyssematus* Morimoto, 1962c: 381.

Body rhombic; mandibles sharply bidentate; pronotum with sculptures of branching costulae radiated in all directions from the middle of the base; tarsal claws free. This genus are known to attack orchids (Morimoto, 1984).

Type species: *Phrissoderes costalis* Marshall, 1948.

SPECIES (1 in Korea and Japan).

DISTRIBUTION: Korea, Japan, China, Myanmar.

19. *Phrissoderes rufitarsis* (Roelofs, 1875) (Pls. 2-19, 15-19)

Gulk-eun-jeom-gak-ryeol-ba-gu-mi (굵은점각렬바구미)

Rhyssematus (?) *rufitarsis* Roelofs, 1875: 159.

TL: Japan.

Body rhombic. Head hemispherical; eyes flat, not prominent from the outline of head, oval closely approximated beneath; frons between eyes as broad as the base of rostrum; rostrum as long as head and pronotum taken together, curved, separated from head by a transverse depression; antennal

scrobes oblique, confluent under the base of rostrum; mandibles sharply bidentate; antennae inserted before the middle of rostrum, scape a little longer than funicle, funicle 7-segmented, each of 3rd–7th segments transverse, 7th segment not annexed to club, club suboval, nearly half as long as funicle. Pronotum with the anterior margin truncate, with the posterior margin bisinuate and with costulate which branched radially from median base. Scutellum distinct, lying on the same level with elytra. Elytra with the apices conjointly rounded, 9th and 10th striae complete; intervals narrower than striae in both sexes. Prosternum with a transverse deep depression, much deeper on each side, lateral border of the depression each armed with an obtuse tooth in male. Mesepimera ascended upwards as far as the 9th stria of elytra. Abdomen with the suture between 1st and 2nd segments fine and obsolescent at the middle, 2nd segment as long as 3rd and 4th taken together. Pygidium entirely concealed. Femora unarmed, weakly widened terminally, inner carina of tarsal groove well developed, the dorsal edge rectangular, uncus arisen from the lower part of the carina, mucro absent, outer setose fringe of tarsal groove complete, inner setose fringe being present only on the lower half. Tarsi with the 3rd segment bilobed, much broader than the preceding, claws simple, free.

MEASUREMENTS: Body length (excl. rostrum). 3.3–4.0 mm.

COLOR: Derm black.

BIOLOGICAL NOTES: Damaged on *Platanthera hologlottis* and orchids in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Kyushu).

KOREA: South (JN).

KOREAN RECORDS: ESK/KSAE, 1994: 209; Hong, 2000: 131 (?Korea); Hong et al., 2000: 81 (?Korea).

SPECIMEN EXAMINED: JN: 3 exs. (Pungsan-ri, Dado-myeon, Naju: 22–28.vi.2007, malaise trap, No. M-6-1-4); 2 exs. (Pungsan-ri, Dado-myeon, Naju: 22–28.vi.2007, malaise trap, No. M-6-3-4); 1 ex. (Pungsan-ri, Dado-myeon, Naju: 14–20.vii.2007, malaise trap, No. M-6-1-5).

REMARKS: The present data are the first specimens of this species from Korea.

Genus *Psilarthroides* Morimoto and Miyakawa, 1985: 41.

Hwan-sam-deong-gul-ae-ba-gu-mi-sok (환삼덩굴애바구미속)

Head with very fine sparse punctures, separated from rostrum by a shallow transverse impression. Rostrum slender, subcylindrical, evenly curved, without any sulcus or carinae; scrobes oblique, contiguous to each other below rostrum at the base, not extending beyond scapes of antennae. Antennae inserted in (male) or behind the middle (female) of rostrum, scape slender, weakly clavate, funicle seven-segmented, 1st segment long, club compact, 1st segment shorter than the rest. Prothorax truncate at the apex, bisinuate at the base, subapical constriction feeble. Scutellum evident. Elytra black, shiny, with prominent shoulders and ten deep narrow striae containing catenulate punctures, with weak posterior calli. Pygidium exposed. Legs slender, femora moderately clavate, edentate, not sulcate beneath, tibiae straight, without any sulcus, uncus originate below the middle of apical margin, tarsi with 2nd segment longer than wide, 3rd segment as long as wide, bilobed, claws connate at the base. Prosternum with a pair of deep foveae, front margin of prosternum weakly sinuate; mesosternum slightly depressed, side pieces fused; metasternum with a median longitudinal sulcus in entire length. 2nd ventrite as long as 3rd and 4th combined, 5th ventrite pointed at the middle of hind margin in both sexes.

Type species: *Psilarthroides humuli* Morimoto and Miyakawa, 1985=*Baris laferi* Egorov, 1978.

SPECIES 1 in Eastern Asia.

DISTRIBUTION: Korea, Japan, South of the Russian Far East.

20. *Psilarthroides czerskyi* (Zaslavskij, 1956) (Pls. 2-20, 16-20)

Hwan-sam-deong-gul-ae-ba-gu-mi (환삼덩굴애바구미)

Baris czerskyi Zaslavskij, 1956: 366.

TL: Russia- Primorskii Terr.

Baris laferi Egorov, 1978: 158.

TL: Russia- Primorskii Terr.

Psilarthroides humuli Morimoto et Miyakawa, 1985: 42.

TL: Japan- Tokyo.

Head coriaceous, with very fine separate punctures, without median fovea. Rostrum shiny and with scattered fine punctures above, coriaceous at sides. Antennae inserted in the middle of rostrum, 1st segment of funicle as long as three followings combined, 2nd segment longer than wide, slightly widening distally from 2nd segment to 7th segment. Pronotum as long as wide, parallel-sided from the base to apical third, disk with separate punctures, interspaces between punctures as long as or slightly narrower than their diameters, punctures a little denser at sides. Scutellum with shallow longitudinal depression. Elytra narrowly ovate, 5/3 times as long as wide, parallel-sided from humeri to the apical third, then narrowing posteriorly in an even curve, dorsum without discal impressions, subapical calli weak, intervals broad, flat between the base and apical third, weakly convex on declivity, each with a row of minute separate punctures, each puncture with a fine minute hair, being visible under high magnification. Underside of thorax excepting the middle of metasternum with strong punctures, metasternum in the middle and venter sparsely with smaller punctures, the punctures a little denser at hind margin of fifth ventrite, each puncture of the underside with a fine hair. Pygidium vertical convex, densely punctate. Legs with sparse fine hairs, tibiae slightly widened to the apex, without mucro in either sex.

Female: Rostrum slender, antennae inserted behind the middle of rostrum. Venter not depressed at the base, fifth ventrite shortly pointed at the middle of hind margin.

MEASUREMENTS: Body length (excl. rostrum). 2.4–3.5 mm.

COLOR: Derm shiny black, apex of rostrum, antennae and tarsi dark reddish brown.

BIOLOGICAL NOTES: Adults were collected from *Humulus japonicus* in Japan (Morimoto and Lee, 1992) and common in Korea at same plant (Hong et al., 2000).

DISTRIBUTION: Korea, Japan (Honshu, Kyushu), NE China, Russia (Khabarovsk and Primorskii Terr.).

KOREA: Whole country including Is. Jeju.

KOREAN RECORDS: Morimoto and Lee, 1992: 11 (JJ- Oradong); ESK/KSAE, 1994: 209; Paik et al., 1995: 432 (JJ); Egorov et al., 1996: 449; Hong et al., 2000: 82 (Central, South, Is. Jeju); Hong and Korotyayev, 2002: 158 (North).

SPECIMEN EXAMINED: GG: 2 exs. (Suwon: 6.vi.1987); 3 exs. (Suwon: 28.vi.1988); 1 ex. (Mt. Yeogisan:

8.vi.1993); 13 exs. (Mt. Yeogisan: 6.vii.1994); 5 exs. (Mt. Yeogisan: 26.vii.1994); 1 ex. (Mt. Surisan, Banwol: 17.vii.1993); 1 ex. (Nam-myeon, Yangju: 12.vi.1996); 16 exs. (Deokyang-ku, Goyang: 4.vii.1996, on *Humulus japonica*); 4 exs. (Mt. Seounsan, Anseong: 7.vii.1996); 1 ex. (Janghwa, Ganghwado: 27.v.1997); 1 ex. (Mt. Yumyeongsan, Gapyeong: 14–15.iv.1997); 3 exs. (Mt. Gwanggyosan: 3.vi.1998); 1 ex. (Namhansanseong, Gwangju: 10.viii.2007); 1 ex. (Yangsa-myeon, Ganghwado: 10.vi.2007); 7 exs. (Mado-myeon, Hwaseong: 26.vi.2007); 1 ex. (Mt. Chukryeongsan, Namyangju: 15.vi.1998). GW: 1 ex. (Hongcheon: 27.vi.1986); 2 exs. (Hwacheon: 12–14.vi.1996); 3 exs. (Guseongpo, Hwachon, Hongcheon: 11.vi.1997); 1 ex. (Hongcheon: 25.vii.1997); 1 ex. (Ha-ri, Yanggu: 31.viii–2.ix.1999, yellow pan trap); 3 exs. (Seokhyeon-ri, Yanggu: 5.vii.1999); 1 ex. (Jeok-ri, Nam-myeon, Yanggu: 6.vii.1999); 8 exs. (Yongho-ri, Gandong-myeon, Hwacheon: 5.vii.1999); 3 exs. (Yokdan-ri, Geunnam-myeon, Cheolwon: 17.vii.2000); 1 ex. (Ssangyong: 15.vi.1996). CB: 1 ex. (Danyang: 7.vi.1979); 19 exs. (Daemyeong-ri, Mungwang-myeon, Goesan: 30.vi.1997); 1 ex. (Mt. Wolaksan, Sangmo-myeon, Chungju: 4.ix.1997); 4 exs. (Daeabo-ri, Sangmo-myeon, Chungju: 15.vi.1998); 1 ex. (Sesong3-ri, Salmi-myeon, Chungju: 15.vi.1998); 1 ex. (Tp. Daewonsa, Iryu-myeon, Chungju: 15.vi.1998); 2 exs. (Saenggeuk-myeon, Eumseong: 15.vi.1998); 1 ex. (Seongam-ri, Deoksan-myeon, Jecheon: 16.vi.1998); 1 ex. (Pyeongdong-ri, Baekun-myeon, Jecheon: 7.ix.1999); 2 exs. (Mt. Wolaksan N3652E12804: 21.vi.2001, No. 01189, 01204). CN: 1 ex. (Sieum-ri, Yanghwa-myeon, Buyeo: 11.ix.1996); 3 exs. (Charyeong resting place: 14.v.2000); 2 exs. (Hwasan-ri, Jongcheon-myeon, Seocheon: 8.vi.2000); 1 ex. (Jangpo-ri, Biinmyeon, Seocheon: 8.vi.2000); 2 exs. (Mt. Gosanbongsan, Daechon2-ri, Godae-myeon, Dangjin N3656356E12634112H60: 26.v.2006). JB: 2 exs. (Hyoja-dong, Jeonju: 8–9.vi.2000); 9 exs. (Songsan-ri, Yongji-myeon, Gimje: 9.vi.2000). JN: 1 ex. (Yeocheon: 4.viii.1993); 1 ex. (Simwon, Mt. Jirisan, Sandong-myeon, Gurye: 4.viii.1996); 1 ex. (Hwasun: 13.ix.1996); 1 ex. (Seogwang pasture, Yeongam: 14.vii.1999); 2 exs. (Yeosu: 12.vii.2007). GB: 2 exs. (Tp. Buseoksa, Yeongju: 30.viii.1992); 4 exs. (Seokpo-ri, Seokpo-myeon, Bonghwa: 28.v.1993); 14 exs. (Osu reservoir, Yeongcheon: 29.v.1993); 3 exs. (Nogui-jae, Hwabuk-myeon, Yeongcheon: 29.v.1993); 1 ex. (Gacheon, Seongju: 2.vi.1997); 1 ex. (Daebang-ri, Joma-myeon, Gimcheon: 2.vi.1997); 1 ex. (Daeyang reservoir, Joma-myeon, Gimcheon: 6.vi.1997); 1 ex. (Gaheung1-dong, Yeongju: 16.vi.1998). GN: 2 exs. (Jeongyang pond, Acheon-ri, Daeyang-myeon, Habcheon: 2.vi.1997); 1 ex. (Seongpo-ri, Sadeung-myeon, Geoje: 4.vi.1997); 1 ex. (Sinyeon-ri, Saengcho-myeon, Sancheong: 6.vi.1997); 3 exs. (Goseong: 5.vi.1997); 2 exs. (Hachon, Jinju: 3.vi.1997); 2 exs. (Yeha-ri, Jeomchon-myeon, Jinju: 5.vi.1997); 4 exs. (Baemsagol, Mt. Jirisan, Sancheong: 23.vii.1998); 2 exs. (Seongsan-ri, Ibang-myeon, Changryeong: 12.viii.1999, mating on *Humulus japonica*); 3 exs. (Changryeong: ?.v.2001); 1 ex. (Naepo-ri, Wondong-myeon, Yangsan: 12.vii.2000); 2 exs. (Mt. Cheolmasan, Gijang: 14.v.2004). JJ: 1 ex. (Aewol, Bukjeju: 26.viii.1997); 1 ex. (Seogwipo: 30.vii.1993).

Tribe Madarini Jekel, 1865

Subtribe Leptoschoina Lacordaire, 1866

Genus *Anthinobaris* Morimoto and Yoshihara, 1996: 31.

Kkot-ae-ba-gu-mi-sok (꽃애바구미속)

SYNONYM: *Indobaris*: Zaslavskij, 1956: 347.

Mandibles triangular or its exterior surface weakly curved as to point the apical tooth anteriorly or antero-interiorly, the first marginal tooth of the cutting margin small to vestigial, and posterior edge of the apical tooth much longer than the anterior edge of the first marginal tooth.

Body larger, pronotum and elytra with definite yellowish to whitish scaly patches, undersurface with oval scales, and the lateral pieces of meso- and metasternum with dense scales.

Type species: *Baridius dispilota* Solsky, 1870.

SPECIES (1 in Korea), [3 (1 subspecies) in Japan].

DISTRIBUTION: Korea, Japan, China, E. Siberia, Taiwan, Myanmar, Java, India.

21. *Anthinobaris dispilota* (Solsky, 1870) (Pls. 2-21, 16-21)

Huin-jeom-bak-i-kkot-ba-gu-mi (흰점박이꽃바구미)

Baridius dispilota Solsky, 1870: 312.

TL: Siberie orientale.

Baridius davidi Fairmaire, 1878: 127.

TL: Central China.

Baridius Reini Roelofs, 1879: 54.

TL: Prov. Mino und Echizen.

Baris coreanus Kolbe, 1886: 218.

TL: Korea.

Head with forehead between eyes as broad as the base of rostrum; rostrum separated from head by a depression at the base, curved, more or less dilated apically in front of antennal insertion, weakly narrowed dorso-ventrally from the base to the apex in lateral aspect. Antennae inserted beyond the middle of rostrum, scape separated from eye by the length of first segment of funicle when rested, funicle seven-segmented, first segment robust, longer than second, seventh segment transverse, much wider than preceding, but not annexed to club, club ovate, first segment as long as the rest segments combined. Pronotum truncate at the anterior margin, without ocular lobes, bisinuate at the base, densely punctate on dorsum. Scutellum evident. Elytra with conjoint apices broadly rounded or shallowly concave, with ten regular striae, ultimate and penultimate striae complete, lateral margin arcuately produced between the apex of metepisternum and hind coxa, intervals flat. Prosternum with a pair of foveae in the transverse sulcus, prosternal process narrower than the apex of rostrum. Mesosternal process depressed, about as wide as a coxa and narrower than intercoxal process of first ventrite. Metasternum with a median sulcus in entire length. Venter with first ventrite behind coxa as long as second and as long as third and fourth combined, first suture distinct, second to fourth sutures deep and curved backwards at sides, fifth ventrite truncate at apex in both sexes. Pygidium rather broadly exposed, exposed part more than half as long as wide, almost vertical. Legs almost of the same size and shape to one another, femora clavate, edentate, fore and middle femora not sulcate, hind femora shallowly sulcate at least on distal half, tibiae straight, obtusely costate internally, not costate externally, uncinata at inner apical angle, tarsi as usual, third segment bilobed and much wider than second, claws simple, free.

MEASUREMENTS: Body length (excl. rostrum). 5.0–7.0 mm.

COLOR: Pronotum and elytra with definite yellowish to whitish scaly patches, undersurface with oval scales, and the lateral pieces of meso- and metasternum with dense scales.

BIOLOGICAL NOTES: Adults are common on flowers of many wild plants in summer season in Korea.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), China (Heilongjiang, Hebei, Shanxi, Shaanxi, Henan, Hunan, Fujian), Russia (Amur Prov., Khabarovsk and Primorskii Terr., Buryatia).

KOREA: Whole country including Is. Jeju and Is. Ulreungdo.

KOREAN RECORDS: Kolbe, 1886: 218; Cho, 1934: 77 (Gwanmobong); Kusanagi, 1934: 25; Haku, 1936: 122 (Daegu); Mochizuki, 1936: 209 (Geumgangsán); Kôno and Kim, 1937: 24, 25 (Jangsusan); Mochizuki and Tsunekawa, 1937: 88 (Seoul); Hustache, 1938: 74; Narita, 1939: 50 (Soyosan); Mochizuki and Masui, 1939: 71 (Seoul, Soyosan, Sokrisan); Ishii, 1940: 55 (Soyosan); Cho, 1947: 66 (Geumgangsán); Cho, 1955: 161; Cho, 1957: 280; ZSK, 1968: 130; Cho, 1969: 569 (Central); Kim and Kim, 1972: 159 (Sangwonsa, Jingogae); Kim and Kim, 1973b: 196 (Haenam Daedunsan); Kim et al., 1974: 228 (Gamaksan, Bangsan); Kim and Kim, 1974: 113 (Naejangsan, Baekyangsan); Kim et al., 1976: 105 (Gusasa, Wonju Sinrim); Egorov, 1976a: 836; Kim and Nam, 1977: 133 (Seonamsa, Songgwangsa); Kim and Nam, 1978: 136 (Goljiri, Songgyeri); Kim, 1978: 304 (HB, HN, PB, HH, GG, GW, CB, CN, JB, JN, GB); Yoon and Nam, 1979: 148 (Gyeryongsan); Kim, 1980: 347 (Namyangju); Kim and Nam, 1981: 127 (Gyebangsán, Sogyebangsán); Park, 1981: 265 (Geumsán, Hwabangsán); Nam and Kim, 1982: 130 (Jirisan Piagol); Chang and Choe, 1982: 528 (Gyeryongsán); Morimoto, 1984: 308; Kim and Nam, 1984: 104 (Baekunsán); Kim et al., 1985: 106 (Juwangsán); Park and Cho, 1986: 128 (Baekunsán, Gibaeksán, Hwangseoksán); KSPP, 1986: 194; Kwon and Lee, 1986: 85 (North, Central, South, Jeju, Ulreungdo); Kim and Chang, 1987: 108 (Taebaeksán); Yoon et al., 1989: 141 (Dogabsa); Yoon et al., 1990: 114 (Gayasan); Kim et al., 1991: 183 (Sokrisán); Park and Han, 1992: 138 (Balwangsán); Park et al., 1993: 184 (Jirisan); Kim, 1993: 392 (JJ); ESK/KSAE, 1994: 209; Kim, 1995a: 174 (Sobaeksán); Paik et al., 1995: 428 (JJ); Egorov et al., 1996: 447; Kim and Kim, 1998: 177 (Odaesan); Hong et al., 2000: 87 (North, Central, South, Is. Ulreungdo, Is. Jeju); Hong and Korotyaev, 2002: 158 (North); Legalov, 2009e: 199 (North).

SPECIMEN EXAMINED: HN: 6 exs. [Shakuoji (=Anbyeon, Seokwangsán): 24.vii.1925]. GG: 3 exs. (Gwangreung: 14.viii.1918); 1 ex. (Gwangreung: 20.vi.1983); 10 exs. (Mt. Surisan: 2.viii.1986); 1 ex. (Mt. Surisan: 15.viii.1989); 6 exs. (Mt. Surisan: 15.viii.1989); 9 exs. (Mt. Gwanggyosan: 4.viii.1995); 6 exs. (Mt. Gwanggyosan: 28.viii.1995); 3 exs. (Suwon: 18.ix.1995); 74 exs. (Central Post-entry Quarantine Station, Suwon: 21.iii.2005); 2 exs. (Mt. Surisan, Anyang: 21.vii.1999). GW: 6 exs. [Onseiri (=Mt. Geumgangsán Onjeongri): 25.vii.1924]; 5 exs. [Kankakei (=Mt. Geumgangsán, Hanhagye): 27.vii.1924]; 1 ex. [Choanji (=Mt. Geumgangsán Jangansa): 3.viii.1924]; 1 ex. (Mt. Odaesan: 17.vii.1962); 11 exs. (Daegwanryeong: 15.viii.1987); 2 exs. (Jeongseon: 30.vii.1995); 19 exs. (Chuncheon: 24.vii.1997); 3 exs. (Daegwanryeong: 25.vii.1997); 3 exs. (Guman-ri, Gandong-myeon, Hwacheon: 17.vii.2000); 4 exs. (Hoenggye-ri, Doam-myeon, Pyeongchang: 2.viii.2005); 1 ex. (Tp. Baekdamsa, Mt. Seolaksán: 31.vii.2002). CB: 1 ex. (Mt. Sokrisán: 24.vii.1960). JN: 1 ex. (Mt. Baekunsán: 19.viii.1992); 1 ex. (Mt. Jirisan Simwon: 4.viii.1996); 3 exs. (Sangeum-ri, Bongrae-myeon, Goheung: 6.ix.2000); 1 ex. (Mt. Jogyesan, Suncheon: 20.viii.2007). GB: 1 ex. (Mt. Juwangsán: 16.viii.1980); 2 exs. (Cheongsong: 22.viii.1980); 10 exs. (Andong: 10.v.1988); 3 exs. (Gimcheon: 31.viii.1995); 1 ex. (Mt. Sudosan, Gimcheon: 1.ix.1995); 1 ex. (Oon-ri, Pyeongon-myeon, Yeongju: 26.viii.1999). GN: 6 exs. [Daigenji (=Mt. Jirisan Daewonsa): 1.viii.1924]; 5 exs. (Tp. Haeinsa: 14.viii.1980); 6 exs. (Tp. Haeinsa: 3.viii.1982); 1 ex. (Hadong: 24.viii.1993).

Genus *Dendrobaris* Egorov, 1976: 64.

Jeom-mu-nui-ae-ba-gu-mi-sok (점무늬애바구미속)

SYNONYM: *Spilobaris* Morimoto and Yoshihara, 1996: 37.

Body brown with yellow scaly patterns. Elytra with distinct subapical callus at 5th interval and smaller one behind it at junction of 3rd and 8th intervals. Prosternum with one or two impressions before coxae; space between fore coxae narrower than diameter of coxae. Pygidium vertical, small, visible from behind (not from above), at least in males with transverse ridge along apical margin of elytra. Hind femora at least shallowly sulcate beneath. Fore tibiae not serrate. Claws free. Larvae mine stem of *Schizandra chinensis* (Schisandraceae).

Type species: *Baris tatjanae* Egorov, 1976.

SPECIES 1 in Eastern Asia.

DISTRIBUTION: Korea, Japan, E. Siberia, Taiwan.

22. *Dendrobaris maculata* (Roelofs, 1879) (Pls. 2-22, 16-22)

Geom-eun-jeom-ae-ba-gu-mi (검은점애바구미)

Baris maculata Roelofs, 1879: 299.

TL: Japan.

Head between eyes as wide as the base of rostrum, the top of eye lying the middle or above the middle of the base of rostrum in lateral aspect. Rostrum thickened basally, sharply limited from head by deep depression, about as long as pronotum, curved at the base. Antennae inserted between the middle and apical third, scape almost reaching eye, funicle seven-segmented, seventh segment annexed to club, club with first segment about half as long as club. Pronotum truncate at anterior margin, ocular lobes obsolete, bisinuate at the base, with dense punctures on disc. Scutellum evident. Elytra almost parallel-sided on basal half, conjoint apices weakly emarginate, with ten regular striae, ultimate and penultimate striae entire, intervals flat, subapical calli weak, lateral margin above metepisternum very weakly produced laterally. Prosternum with a pair of foveae in the subapical sulcus, outer sides of the foveae shortly costate, prosternal process as wide as the apex of rostrum, much narrower than a coxa. Mesosternal process flat, forming a plane with metasternum, slightly wider than a coxa and intercoxal process of first ventrite. Metepisternal suture almost straight excepting the apex. Venter with first ventrite behind coxa slightly longer than second and as long as third and fourth combined, fifth ventrite bisinuate at the apex in male. Pygidium with a transverse ridge along margin of elytra, exposed part vertical, more than three times as wide as long in male, almost vertical, without edge, and more than twice as wide as long in female. Legs with fore pair slightly or scarcely greater than middle and hind pair in male, femora scarcely to normally clavate, edentate, flattened or shallowly sulcate at least on distal half on middle femora, and in entire length on hind femora; fore tibiae almost straight externally, uncinata, not mucronate; tarsi with third segment deeply bilobed, much wider than preceding, fifth segment longer than first, claws free.

MEASUREMENTS: Body length (excl. rostrum). 4.5 mm.

COLOR: Body brown with yellow scaly patterns. The 3rd and 5th intervals of elytra with tufts which are blackish erected scales.

BIOLOGICAL NOTES: Larvae mine stem of *Schizandra chinensis* (Schisandraceae).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Ryukyu), Taiwan.

KOREA: Central and South.

KOREAN RECORDS: Hong et al., 2000: 84 (Central).

SPECIMEN EXAMINED: GW: 1 ex. (Seolaksan: 27.vii.1982). JB: 6 exs. (Medicinal Herbs Research Institute, Jinan: 22.v.2009, *Schizandra chinensis*).

REMARKS: The host plant of this species is first known to *Schizandra chinensis* (Schisandraceae) in this study.

Genus *Pellobaris* Morimoto and Yoshihara, 1996: 16.

Da-rae-ae-ba-gu-mi-sok (다래애바구미속)

SYNONYM: *Didothis* Zaslavskij, 1956: 352.

Black and matt, elongated, with parallel-sided of elytra. Pronotum longitudinal, with straight at basal laterally; prosternum with groove or deep tunneled foveae for rostrum and antennae. Elytra with finely costate margins of each interval, striae with clear-cut punctures, the septa as high as intervals; 3rd and 9th intervals of elytra on apex jointly formed tubercles after large preapical calli, united a keel with apex of elytra. Fore tibiae inner side small toothed, claws connate at base.

Type species: *Baris melancholica* Roelofs, 1875.

SPECIES 2 (1 in Korea).

DISTRIBUTION: Korea, Japan, Russian Far East.

REFERENCE: Zaslavskij (1956).

23. *Pellobaris melancholica* (Roelofs, 1875) (Pls. 2-23, 16-23)

Da-rae-ae-ba-gu-mi (다래애바구미)

Baris melancholica Roelofs, 1875: 181.

TL: Japan.

Head with forehead between eyes as broad as the base of rostrum; rostrum separated from head by a weak to faint depression at the base, evenly curved, weakly tapered dorsoventrally to the apex, almost parallel-sided, antennae inserted in front of the middle of rostrum; mandibles bidentate, decussate. Antennae with scape close to eye when retracted, funicle 7-segmented, weakly widened distally from second, seventh segment annexed to club, club ovate, first segment half as long as club. Pronotum truncate dorsally at the apex, with faint ocular lobes, bisinuate at the base. Scutellum

evident. Elytra separately rounded or obtuse triangularly emarginate at conjoint apices, with ten regular striae, ultimate stria faint behind hind coxa, intervals flat, with a row of large punctures, each margin along striae usually costate. Prosternum as wide as the apex of rostrum, much narrower than a coxa, shallowly sulcate, the sulci longer than wide, with lateral carinae almost parallel or narrowed posteriorly to each other to the inner corners of fore coxae, with a pair of foveae behind the anterior margin. Mesosternal process about twice as wide as prosternal process, wider than a coxa, weakly depressed, as broad as abdominal process of first ventrite. Metasternum with a median longitudinal sulcus in entire length, metepisternal sutures arched laterally. Venter with first ventrite behind coxa as long as second and as long as third and fourth combined, first suture weakly sinuate, second to fourth sutures curved posteriorly at the sides, fifth ventrite produced posteriorly at the middle of caudal margin in male, truncate in female. Pygidium narrowly exposed, vertical, visible caudally. Legs same size and shape as one another, femora scarcely clavate, edentate, narrowly sulcate or flattened on distal half, tibiae uncinata and mucronate, often serrate internally, tarsi robust, third segment bilobed, wider than second, claws connate at the base, weakly curved.

MEASUREMENTS: Body length (excl. rostrum). 3.1–3.3 mm.

COLOR: Body black, devoid of scales, alutaceous.

BIOLOGICAL NOTES: This species is a pest of grape and feed on bud of pear and on *Actinidia arguta* in Japan (Morimoto, 1984) and beetles often find on flowers of *Polygonum sachalinense* in Kunashir, and on flowers of *Acer barinerve* at Primorsky (Egorov et al., 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima).

KOREA: Central and South including Is. Ulreungdo.

KOREAN RECORDS: Hong et al., 2000: 84 (South).

SPECIMEN EXAMINED: CB: 1 ex. (Mt. Wolaksan, Jecheon: 1.v.2006). JN: 1 ex. (Hwasun: 12.ix.1996). GB: 1 ex. (Is. Ulreungdo: 29.vii.1977).

Subtribe Madarina Jekel, 1865

Genus *Orchidophilus* Buchanan, 1935: 45.

Nan-cho-ae-ba-gu-mi-sok (난초애바구미속)

Derm black, rarely piceous or castaneous, shagreened, at least the elytra opaque or subopaque; true scales wanting above; mandibles feebly decussate; antennal funicle sparsely setose, 1st segment nearly or quite as long as 2nd plus 3rd, outer segments progressively broader, club rather small and narrow, 1st segment of same texture as funicle (though much more densely hairy) and comprising 2/3 to 3/4 the total mass; scape failing to reach the eye by distinctly less than length of 1st funicular segment; scrobe rapidly descending, its upper edge forming the lower side margin of rostrum in about basal half; rostrum longer than prothorax, subevenly arcuate, slightly to moderately thicker at base, rising from head at a shallow, obtuse angle; eyes large, lateral; prothorax bisinuate at base; elytra wider than prothorax, conjointly rounded at apex, humeri obliquely rounded, the anteriorly rounded and slightly produced basal margin of each elytron fitting into a shallow excavation of basal margin of prothorax, striae punctate, the intervals aciculate-punctulate, 10th

stria stronger near base and apex; sometimes effaced at middle, 9th usually much wider and deeper near apex; fore coxae separated by 1/2 to nearly full width of a coxa, front margin of prosternum usually emarginate; femora feebly dilated, more or less distinctly multidentate, but not sulcate, beneath; tibiae short, nearly straight to distinctly sinuate, uncinata at apex, the inner apical angle not toothed; tarsi short and broad, 2nd and 3rd segments and 1st in part, spongy-pubescent beneath, claws small, subapproximate at base, but free. Male with base of abdomen broadly and shallowly impressed, and often with uncus of mid- and hind-tibia minutely toothed. Weevils of this genus are known to attack orchids in green houses in the temperate countries.

Type species: *Orchidophilus peregrinator* Buchanan, 1935.

SPECIES (This genus is introduced 1 in Korea), (2 in Japan).

DISTRIBUTION: Korea (introduced, green house), Japan, U.S.A. (introduced), Hawaii, Philippines, Australia.

REFERENCE: Morimoto (1994).

24. *Orchidophilus ran* Morimoto, 1994 (Pls. 2-24, 16-24)

Nan-cho-ae-ba-gu-mi (난초애바구미)

Orchidophilus ran Morimoto, 1994: 236.

TL: Japan- Kyushu.

Body oblong oval. Head finely alutaceous, shallowly punctate between eyes, depressed area at the base of rostrum transversely impunctate, smooth on vertex. Rostrum about 1.2 times as long as pronotum, slightly robuster in male, almost as thick from the base as to the antennal insertion, then weakly thinner apically in lateral aspect, coarsely punctate, the punctures longitudinally confluent forming four rows of sulci on each side excepting the basal and apical areas, lateral two sulci above antennal scrobe deeper and carinae bordering them shaper, the punctures becoming smaller at apex in female, median carina usually distinct in entire length. Antennae inserted in the apical third, scape reaching just before the base of rostrum so that a narrow space present between head and apex of scape in repose in lateral aspect, funicle with seven segments, first segment as long as second and third combined, successively wider apically from second, club compact, visibly 4-segmented, basal segment 2/3 of the total length. Pronotum 1.1–1.2 times as broad as long, parallel-sided on basal half, then roundly narrowing anteriorly to subapical constriction, basal margin bisinuate, anterior margin truncate on disc and with ocular lobes at side, disc with dense and coarse punctures, interstices between them finely alutaceous, not granulate, median carina or smooth line absent. Scutellum subtrapezoidal with rounded corners, a little broader than long, often shallowly depressed in the middle. Elytra 1.4 times as long as broad, almost parallel-sided from humeri to the middle, then continuously and gradually narrowing apically, striae clear-cut, with distant oval punctures, which becoming smaller posteriorly behind the middle, ultimate stria obsolete behind first ventrite, intervals flat, much wider than striae, but weakly notched by the punctures of striae, each with a row of inconspicuous distant granules when observed under high magnification. Underside of thorax reticulately punctate. Prosternum broadly emarginate at anterior margin, with a pair of small foveae on submarginal transverse sulcus, outside of the foveae weakly costate for a short distance, median area between costae shallowly and longitudinally

depressed from submarginal sulcus to the of fore coxae in general; mesosternal process flat, a little broader than mid coxa; metepisternum narrowed in the middle, usually with a row or rarely two rows of punctures at the narrowest part. First ventrite evenly punctate in female, a little sparsely punctate at middle than at sides in male; second ventrite with punctures a little smaller than those on the first, third and fourth ventrite each with a row of punctures excepting sides, fifth ventrite bisinuate at posterior margin and obtusely produced posteriorly at middle in male, truncate at middle in female. Pygidium vertical, narrowly exposed behind the transverse costa along margin of elytra. Femora densely punctate, femoral teeth small; tibiae uncinata, straight and weakly costate externally, slightly dilated apically, without projection in male; tarsi spongy beneath excepting the base of third segment; claws approximate at base, but free. Aedeagus with very long struts, which reaching anteriorly to the middle of metathorax, flagellum slender.

MEASUREMENTS: Body length (excl. rostrum). 2.8–3.5 mm.

COLOR: Derm black, elytra opaque, unci of tibiae and claws reddish brown.

BIOLOGICAL NOTES: Adults occur throughout the year, but most abundant in May-July, abundant in October-November, and scarce in January-February in green houses. Weevils lie concealed between leaves in daytime and are active at night and feed on the soft part of young shoots, leaves and bulbs of *Cattleya*, *Cymbidium* and *Dendrobium*. Serious damage can be caused by the larvae, which bore into bulbs, stalks and vegetative buds, and leading the orchids to the death (Morimoto, 1994; Hong, 2000).

DISTRIBUTION: Korea (introduced), Japan (Honshu), Pan-tropical region.

KOREA: This species occurred in green house at the time of introduction, but does not occur here.

KOREAN RECORDS: Choi et al., 1992: 146 (green house in Seonghwan, damage in orchid; *Orchidiohilus* [sic] *atterimus* Waterhouse); Hong, 2000: 131 (green house in Seonghwan and Goyang); Hong et al., 2000: 83 (Central; green house).

SPECIMEN EXAMINED: GG: 2 exs. (Goyang: 20.vii.1995); 2 exs. (Goyang: 6.iii.1997, on *Dendrobium*); 4 exs. (Goyang: 28.vii.1997, oriental orchid); 2 exs. (Muchon-ri, Bubal-myeon, Icheon: 7.vii.2005, on *Dendrobium*). CN: 10 exs. (Seonghwan: 2.ix.1988, oriental orchid). GN: 2 exs. (Busan: 23.viii.2003, oriental orchid, No. 01785, 01786).

Tribe Madopterini Lacordaire, 1866

Subtribe Madopterina Lacordaire, 1866

Genus *Centrinopsis* Roelofs, 1875: 185.

Ma-reum-mo-ae-ba-gu-mi-sok (마름모애바구미속)

SYNONYM: *Idogenia* Pascoe, 1885: 287.

Narrow-rhombic, lateral sides of pronotum straightly narrowed toward head; elytra 1.45 times as long as width, the widest part at rounded shoulders, posteriorly almost straightly narrowed and jointly rounded on apex. Pygidium not protruded. Prosternum with 2 small separated foveae for

antennae. 1st and 2nd sternites of abdomen united, lateral sides of 2nd to 4th sternites angularly protruded posteriorly.

Type species: *Centrinopsis nitens* Roelofs, 1875.

SPECIES (1 in Eastern Asia).

DISTRIBUTION: Korea, Japan, China, South of the Russian Far East (Sakhalin), Java, Sumatra, Philippines.

25. *Centrinopsis nitens* Roelofs, 1875 (Pls. 3-25, 16-25)

Ma-reum-mo-ae-ba-gu-mi (마름모애바구미)

Centrinopsis nitens Roelofs, 1875: 185.

TL: Japan.

Body rhombic. Rostrum on 1/4 longer than pronotum, together with frons, uniformly semi-roundly curved, dorsum smooth, shining, lateral sides punctate, with diffused longitudinal keel. Eyes transverse, oblong-oval, flat. Frons slightly narrower than base of rostrum. Head and disk of pronotum with sparse punctures, lateral sides of pronotum and underside of body with dense small punctures. Elytra with eight striae; striae of elytra line-like, 4-5 times as narrow as flat intervals. Femora long and thin, curved at apex; tibiae straight, slightly shorter than femora; tarsi on quarter shorter than tibiae, with wide bilobed of 3rd segment. Inner margin of fore, sparsely middle femora with a row of small teeth.

MEASUREMENTS: Body length (excl. rostrum). 1.8-2.0 mm.

COLOR: Blackish shining, antennae and tarsi yellowish-brown. Dorsum naked, lateral sides of rostrum, prosternum, mesosternum, metasternum, abdomen and legs with sparse small white decumbent hairs.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), China (Fujian), Russia (Sakhalin).

KOREA: Central, Is. Jejudo.

KOREAN RECORDS: Hong et al., 2000: 86 (Central, Is. Jejudo).

SPECIMEN EXAMINED: GW: 1 ex. (Chuncheon: 25.v.1993). JJ: 1 ex. (Seongpanak: 28.vi.1990); 1 ex. (Sangeumburi: 16.v.2002, No. 00001); 2 exs. (Donneko: 9.vi.2004, No. 02139, 02140).

Subtribe Zygoaridina Pierce, 1907

Genus *Calyptopygus* Marshall, 1948: 466.

In-pyeon-gin-ae-ba-gu-mi-sok (인편긴애바구미속)

Body elongate. Rostrum cylindrical, slender, not thickened basally in lateral aspect, its dorsal

outline continuous with that of head, without any depression between them. Antennae with funicle slender, 7th segment about as long as wide. Mesosternum only slightly lower than metasternum. Scaling at lateral sides of mesothorax and abdomen much less developed than that at metepisterna. Hind femora not reaching apical margin of 2nd ventrite.

Type species: *Calyptopygus ellipticus* Marshall, 1948.

SPECIES 1 in Korea, Japan and Russian Far East.

DISTRIBUTION: Korea, Japan, Russian Far East.

26. *Calyptopygus albosparsus* (Reitter, 1910) (Pls. 3-26, 16-26)

Huin-in-pyeon-ae-ba-gu-mi (흰인편긴애바구미)

Limnobaris albosparsa Reitter, 1910: 203.

TL: Ussuri.

Head shallowly punctate. Rostrum slender, a little longer than pronotum, evenly and weakly curved and subequal in thickness from the base to the apex, shiny and minutely punctate on dorsal surface, the punctures becoming denser and coarser laterally. Antennae inserted slightly beyond the middle of rostrum; 1st segment of antennal funicle slightly longer than the following 2 segments taken together, 2nd segment 1.6 times as long as wide and 1.4 times as long as the 3rd, 3rd to 7th segments subequal in length and gradually widening distally, club oval, 1/2 times as long as funicle. Pronotum a little broader than long (10:9), parallel-sided from the base to the apical third, then narrowing anteriorly in a weak curve, anterior margin truncate, 3/4 times as broad as posterior margin which is shallowly bisinuate, disc densely punctate, interstices between punctures less than half as broad as the diameter, each puncture at lateral sides accompanied with a whitish hairy scale, median impunctate line obsolete. Scutellum oval, longer than wide. Elytra 2.0 times as long as broad, 2.6–2.8 times as long as pronotum, a little broader than pronotum, parallel-sided in basal two-thirds, then narrowed posteriorly, striae narrow, intervals flat, each with a row of oblong-oval whitish scales, apices separately rounded. Prosternum with a deep subapical sulcus at apical one-fifth, densely and coarsely punctate, densely clothed with whitish scales which become longer posteriorly. Lateral pieces of mesothorax densely clothed with whitish scales, but the derm is partly visible among them. Metepisterna densely covered with whitish scales. Metasternum and venter shiny, minutely punctate, each puncture accompanied with a minute whitish hairy scales which become larger laterally on 3rd to 5th ventrites. Femora unarmed, sparsely clothed with whitish hairy scales. Fore tibiae armed with an acute spine at the middle of inner margin. Middle and hind tibiae unarmed. Second segment of tarsi nearly as long as broad.

Female: Rostrum a little longer than in male. Fore tibiae unarmed. Basal two ventrites not depressed at the middle.

MEASUREMENTS: Body length (excl. rostrum). 2.8–3.0 mm.

COLOR: Black, antennae and tarsi dark brown.

BIOLOGICAL NOTES: Adults were collected from the colony of *Carex* sp. at swamps in Far East Russia (Egorov et al., 1996) and captured by sweeping of *Carex dickinsii* in marsh in Japan (Yoshihara and Morimoto, 1994).

DISTRIBUTION: Korea, Japan (Honshu), Russia (Khabarovsk and Primorskii Terr.).

KOREA: North and Central.

KOREAN RECORDS: Hong et al., 2000: 86 (Central); Legalov, 2009e: 199 (North).

SPECIMEN EXAMINED: GW: 2 exs. (Myeongju: 27.v.1993).

Genus *Limnobaris* Bedel, 1885: 183.

Gin-ae-ba-gu-mi-sok (긴애바구미속)

Body elongate. Rostrum cylindrical, not separated from frons by depression, about as long as pronotum. Antennae inserted into the middle part of rostrum, scape almost reaching the anterior margin of eye, 2nd segment of funicle distinctly longer than 3rd, club oblong, evenly pubescent all over. Pronotum parallel-sided or weakly narrowed posteriorly in basal half. Scutellum apparent. Elytra slightly broader than pronotum, parallel-sided, each provided with ten striae, subapical swellings obsolete. Pygidium concealed by elytra. Legs with femora unarmed, not sulcate beneath, hind femora not exceeding the apex of elytra, fore tibiae not longer than the posteriors, sometimes armed with a spine at the middle of inner margin in male, middle and hind tibiae unarmed, third segment of tarsi strongly bilobed. Claws free, simple. Underside of body sometimes densely covered with whitish or yellowish scales. Prosternum neither foveate nor tuberculate, with a deep submarginal transverse sulcus. Fore coxae narrowly separated.

Type species: *Curculio t-album* Linnaeus, 1758.

SPECIES 33 (6 in Palearctic), (1 in Korea), (2 in Japan).

DISTRIBUTION: Korea, Japan, China, Siberia, Myanmar, Uzbekistan, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, Caucasus, Europe, Panama, Nicaragua, Mexico, Honduras, Guatemala, El Salvador, Costa Rica, Belize, St. Vincent, Guadeloupe, Venezuela, Tanzania.

REFERENCE: Yoshihara and Morimoto (1994).

REMARKS: Records of the host plants are sedge of the family Cyperaceae in marshy ground and the larvae live in the rhizome.

27. *Limnobaris jucunda* Reitter, 1910 (Pls. 3-27, 16-27)

Gin-ae-ba-gu-mi (긴애바구미)

Limnobaris jucunda Reitter, 1910: 202.

TL: Ussuri.

Head minutely punctate, the punctures becoming larger and denser towards frons. Rostrum robust, nearly as long as pronotum, evenly and weakly curved and slightly becoming thinner towards the apex, shiny and minutely punctate on dorsal surface, with punctures much denser and coarser on lateral surface. Antennae inserted slightly beyond the middle of rostrum, 1st segment of antennal funicle as long as the following 3 segments taken together, 2nd segment 1.2 times as long as wide and 1.6 times as long as the 3rd, 3rd to 7th segments subequal in length and gradually

widening distally, club oval, 1/2 times as long as funicle. Pronotum a little broader than long (8:7), parallel-sided from the base to the middle, then narrowing anteriorly in a weak curve, anterior margin weakly biarcuate, 5/9 times as broad as posterior margin which is shallowly bisinuate, disc densely punctate, interstices between punctures about half as broad as the diameter, median impunctate line distinct in entire length. Scutellum oval, longer than broad. Elytra 1.8 times as long as broad, 2.5 times as long as pronotum, a little broader than pronotum, slightly widening from humeri to the middle, broadest at the middle, then narrowed posteriorly in a weak curve, striae narrow, intervals flat, each with a row of minute punctures, each interval with a row of slender whitish scales, but the scales are diminishing in size posteriorly and often fallen off in old specimens. Prosternum desely covered with yellowish hairy scales, but more than half of derm visible between them. Mesepisternum, mesepimera and metasternum densely covered with oblong oval scales. Metasternum and venter densely covered with oblong oval scales on lateral parts, sparsely covered with hairy scales on median parts. Metasternum, basal two and apical ventrites depressed in the middle. Legs with femora and tibiae unarmed, sparsely covered with whitish hairy scales. Second segment of tarsi nearly as long as broad.

Female: Rostrum slightly longer than in male. Basal two ventrites not depressed at the middle.

MEASUREMENTS: Body length (excl. rostrum). 3.4–4.3 mm.

COLOR: Shiny black, antennae dark brown, tarsi brown to reddish brown.

BIOLOGICAL NOTES: Adults were collected from the colony of *Carex* sp. in marsh in Japan (Chûjô and Morimoto, 1959) at wetted meadow in Far East Russia (Egorov et al., 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), NE China, Russia (Chita Prov., Amur Prov., Khabarovsk and Primorskii Terr., Kuril Isl.).

KOREA: North, Central and South.

KOREAN RECORDS: Yoshihara and Morimoto, 1994: 448 (Central); Egorov et al., 1996: 452; Hong et al., 2000, 5: 87 (Central); Legalov, 2009e: 199 (North).

SPECIMEN EXAMINED: GW: 1 ex. (Odaesan: 27.v.1993). GN: 1 ex. (Bupo-ri, Sangri-myeon, Goseong: 15.vii.1993).

Tribe Neosharpiini Hoffmann, 1956

Genus *Eumycterus* Schoenherr, 1838: 1083.

Jung-guk-ae-ba-gu-mi-sok (중국애바구미속)

Reddish brown, shining. Body elongated-oval with oblong scales formed pattern of condensation on pronotum and elytra. Rostrum very slender, cylindrical, not thickened basally. Pronotum slender, as wide as elytra. Elytra without subapical callus; with ultimate and penultimate elytral striae basally somewhat confused and not impressed. 2nd abdominal sternite about as long as 3rd. Pygidium slightly oblique, visible from above.

Type species: *Eumycterus albosquamulatus* Boheman, 1838.

SPECIES (1 in Eastern Asia).

DISTRIBUTION: Korea, Japan, China, Russia (Primorskii Terr.), Afghanistan, Algeria to Syria, Turkey, Europe, Senegal.

28. *Eumycterus gracilis* Voss, 1958

Jung-guk-ae-ba-gu-mi (중국애바구미)

Eumycterus gracilis Voss, 1958: 78.

TL: China- Shaowu, Kwangtseh, Kuatun.

Head hemispherical-shaped, forehead with very finely and a little close punctate, vertex impunctate. Eye located below the dorsal line of rostrum, covered partly by pronotum in repose. Rostrum almost as long as head and pronotum taken together, cylindrical, slightly widened from the middle to the apex, separated from the head by a fine transverse furrow; uniformly curved from the base, shiny, finely and closely punctate at sides of base. Antennae inserted into a little before middle of rostrum, scape almost reached to the eyes. 1st segment of antennal funicle elongate, almost as long as the remaining segments taken together; 2nd segment a little longer than broad; the remaining segments short. Antennal club elliptical, 1.5 times as long as width. Pronotum as long as broad, uniformly rounded at sides, anterior margin separated shortly and cylindrically, much half as broad as at middle of pronotum; punctate quite finely and closely, very close at sides; interstices between punctures wide, flat and shining at the middle and tapering the anterior margin. Elytra 1.5 times long as broad, as broad as pronotum, broadest over the shoulders, narrowed weakly conically from shoulders and roundly to the apex, rounded broadly at apex each other. Stria line-like furrow. Interval at least twice as broad as the stria. Pygidium freely, largely, a little longer than broad, with quite strong and very close punctures. Femora clavate, tibiae short, tibiae shortly stubby, straight.

MEASUREMENTS: Body length (excl. rostrum). 3.0–3.5 mm (in Russia).

COLOR: Black. Scaling moderately closed underneath, also on femora and tibiae. Upper side with scattered scales forming some small patches.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, China (Guangdong), Russia (Primorskii Terr.).

KOREA: North.

KOREAN RECORDS: Egorov, 1976a: 836 (North); Egorov et al., 1996: 453 (North); Hong et al., 2000: 84.

REMARKS: We could not any specimen of this species in this work. The descriptions were cited on Voss (1958). It was not provided a photo of specimen on plate.

Subfamily Ceutorhynchinae Gistel, 1848

Jop-ssal-ba-gu-mi-a-gwa (좁쌀바구미아과)

The subfamily Ceutorhynchinae contains 1,316 species, and is one of the most speciose in Curculionidae (Alonso-Zarazaga and Lyal, 1999; Colonnelli, 2004). This subfamily are a relatively well-

known group of small weevils found in both terrestrial and freshwater aquatic habitats throughout world. They are readily recognized by the ascended mesepimeron between pronotum and elytra (as in Baridinae), an exposed pygidium, and presence of a prosternal channel for the reception of the rostrum and have pronotal postocular lobes that cover the eyes when the rostrum is in repose, but some do not. They are also closely related with the subfamily Conoderinae, but Conoderinae with eyes always confluent dorsally and uncinatae tibiae.

Ceutorhynchines are associated with a variety of plant families, and are usually oligophagous or even monophagous. In terrestrial habitats the Cruciferae are a common host, whereas in aquatic habitats the most common host would appear to be Polygonaceae or semi-aquatic Cruciferae. Larvae of terrestrial species usually mine the stems or crowns of the plants but some aquatic taxa in the Phytobiini such as *Phytobius* have larvae that live and feed externally on plant reproductive organs. Some species in the genus *Ceutorhynchus* are adventives and serious pests of cultivated Cruciferae.

Key to the tribe and genera of subfamily Ceutorhynchinae

1. Tarsi with a single claw. 3.6–5.3 mm. - Associated with Iridaceae (*Iris* spp.). Holarctic
 Tribe Mononychini *Mononychus*
 – Tarsi with two claws 2
2. Base of pronotum extended medially into more or less long pointed process, concealing scutellum. Antennal funicle 6-segmented Tribe Mecysmoderini *Mecysmoderes*
 – Base of pronotum without process, scutellum distinct 3
3. Base of pronotum straight or weakly bisinuate, raised against the base of elytra in the form of a strongly crenulate bulging transverse edge, whereas the scutellar area is depressed. Pronotum and elytra often strongly tuberculate. Anterior margin of prothorax usually not notched in the middle. Eyes small. Frons narrow, and with parallel sides at least in part. Elytra not or hardly longer than wide, sides sometimes converging towards preapical calli, but never polygonal. Humeral calli prominent Tribe Egriini *Cyphosenus*
 – Not with all of the above features 4
4. Hind femora clearly thicker than other femora 5
 – Hind femora not or slightly thicker than other femora 9
5. Rostrum short and almost straight, usually not longer than 3 times its apical width, bare and shining apical of antennal insertion. Upper margin of eye straight or nearly so. Scape short, not longer than half of funicular length Tribe Hypurini 6
 – Rostrum usually much longer than 3x its apical width: if not, rostrum punctured and scaled apical of antennal insertion and/or upper margin of eye convex
 Tribe Cnemogonini 7
6. Dorsal investiture of elevated hair-like scales. Humeral tubercles much protruding, elytral trapeziform, sides converging towards preapical tubercles *Pericartius*
 – Dorsal investiture of recumbent or slightly elevated scales. Elytra more or less rectangular, not converging towards preapical tubercles *Hypurus*
7. Odd elytral interval clearly wider than even ones and with strong acute tubercles and/or large granules, the apex of which bear a thick curved seta. Larger, from 3.3 to 4.2 mm in length. Femora with a small acute tooth. Rostrum with median keel, a little widened toward apex. Rostral groove very deep, ending at the beginning of metasternum *Augustinus*
 – Not with all of the above characters 8

8. Rostral channel not extending onto mesosternum. Sometimes rostral groove is ill-defined beyond prosternum and only indicated on mesosternum by a pair of indistinct lamellar tubercles *Phytobiomorphus*
 – Rostral channel obvious on meso- and sometimes also on metasternum *Cyphauleutes*
9. Rostrum not or scarcely more than three times as long as wide 10
 – Rostrum more than three times as long as wide 16
10. Femora at least weakly toothed 11
 – Femora edentate Tribe Phytobiini 12
11. Disc of pronotum with a pair of rather strong tubercles in addition to the sharp lateral ones. Elytra with a sutural spot in the form of an inverted T. Base of elytra 1.6–1.7 times the width of pronotal base. Odd elytral intervals, especially three and five, ridge-like. Striae punctuate, half as wide as intervals, punctures large, wider than long. Rostral groove deep, clearly defined behind the mesocoxae *Sinauleutes*
 – Disc of pronotum often convex, without dorsal tubercles. Elytra heart-shaped, slightly longer than wide. Pronotum with lateral tubercles. Elytral investiture of sparse dark hair-like scales, with a post-scutellar spot of mostly yellowish scales. Intervals convex, finely muricate and hardly wider than deep, sides catenulate *Rhinocomimus*
12. Antennal funicle 7-segmented. Claws dentate *Rhinoncus*
 – Antennal funicle 6-segmented 13
13. 3rd tarsal segment narrower than 2nd. 1st article of antennal club glabrous and much longer than the combined length of the setose remaining joints of club. Elytra heart-shaped, relatively plump, about 1.25 times as wide. Lateral tubercles of pronotum sharp. 2.2–2.9 mm. - On Haloragaceae (*Miryophyllum* sp.). Eurasia *Eubrychius*
 – 3rd tarsal segment at least slightly wider than 2nd. 1st article of antennal club at most slightly longer than the combined length of the remaining joints of club 14
14. Body thickly invested with dull scales. Lateral tubercles of pronotum acute *Phytobius*
 – Body sparsely invested with dull, and generally also, at least in part, metallic scales 15
15. Anterior margin of pronotum not or very shallowly emarginated in the middle, with 2 small sharp tubercles separated by a distance equal to the rostral width *Pelenomus*
 – Anterior margin of pronotum notched in the middle, the 2 cusps limiting the incision separated by a distance half the rostral width. 1.9–2.8 mm. - On Polygonaceae (*Polygonum* and *Rumex*). Eurasia *Neophytobius*
16. Anterior margin of pronotum not raised. Antennal funicle 6-segmented. Body oval, elytra about 1.5 times as long as wide, with faint preapical calli. Striae sulciform, intervals uniformly convex. Rostrum, prothorax and at least basal third of elytra piceous. At least apical third of elytra reddish. Legs honey-red; antenna and apex of tarsi red-brown. Dorsal investiture of sparse very small hair-like brownish scales. A post-scutellar and an apical more or less elongate sutural spot of small whitish recumbent scales. Ventral surface clothed with sparse lanceolate white scales. Rostrum narrower than fore femora. Femora toothed. Prosternum in front of fore coxae short, without trace of keels. Insertions of fore coxae separated from anterior margin of prothorax by a short distance, not exceeding the width of antennal club, distance between fore coxae not greater than the width of antennal funicle Tribe Amalini *Amalus*
 – Not with all of the above characters 17
17. Width of rostrum at its widest point at least equal to the width of fore femora (excluding tooth when present) Tribe Scleropterini 18
 – Rostrum narrower than fore femora Tribe Ceutorhynchini 22

18. Antennal funicle 7-segmented *Homorosoma*
 – Antennal funicle 6-segmented 19
19. Body elongate. Dorsal investiture of rather thick whitish or greyish scales, a large transverse blackish patch immediately behind middle of elytra. Humeral calli prominent. Elytral intervals rather flat, much wider than sulciform striae *Tapeinotus*
 – Body short, convex. Dorsal investiture of sparse hair-like scales, sometimes with a white post-scutellar spot. Humeral calli weak or absent. Elytral intervals usually convex, often muricate, not wider than striae 20
20. Humeral tubercles prominent, elytra convex, heart-shaped *Scleropteroides*
 – Humeral tubercles absent or effaced 21
21. Mesosternum shallowly depressed, metasternum not depressed. Scutellum small, distinct
 *Rutidosoma*
 – Depression on meso- and metasternum deep, with steep walls. Scutellum wanting
 *Scleropterus*
22. Rostral channel deep, extending onto meso- and often metasternum 23
 – Rostral channel, if present, deep only on prosternum, not extending onto mesosternum
 Tribe Ceutorhynchini 31
23. Integument almost entirely piceous, and elytra with a pattern of whitish and dark scales not concealing integument 24
 – If elytra with a pattern of scales, then integument at least in part ferruginous or brown, or scales almost entirely concealing integument 25
24. Apical comb of setae ascending external margin of fore tibia for a distance from apex at least equal to one third of the tibial length. 2.95–3.5 mm. - On Lamiaceae. NE China *Sinocolus*
 – Apical combs of setae ascending external margin of fore tibia for a distance from apex much less than one third of the tibial length. 2.6–3.2 mm. - On Urticaceae. Holarctic *Nedyus*
25. At least lateral elytral intervals with a row of rasp-like granules virtually throughout. Investiture sparse. Elytra short, not more than 1.25 times as long as wide, with rounded sides
 *Zacladus*
 – If elytral intervals bear rasp-like granules, they are usually clustered around humeral and preapical tubercles 26
26. Dorsal investiture consisting at least in part of erect or elevated hairs or hair-like scales 27
 – Dorsal investiture without semi-erect hairs 28
27. Smaller, not over 2.4 mm long. Sides of pronotum curved; disc convex with at least a trace of dorsal channel. Elytral intervals moderately to strongly convex *Trichocoeliodes*
 – Larger, about 3 mm in length. Sides of pronotum almost straight; disc slightly convex, without dorsal channel. Elytral intervals almost flat. - On Hamamelidaceae. Japan *Conocoeliodes*
28. Elytra flattened, elongate, at least 1.2 times as long as wide. Pronotum flattened, with lateral tubercles in the form of oblique transverse ridge situated slightly apicad of middle of disc. 2.5–3.4 mm. - On Anacardiaceae (*Pistacia*). Eurasia *Pseudocoeliodes*
 – Elytra rather convex, quite stout, rarely more than 1.18 times as long as wide. Pronotum convex, usually without lateral tubercles; if with tubercles they are small and pointed 29
29. Apical comb of setae of fore tibia extending along external margin for a distance greater than one third of the tibial length, not concave. Setae of the comb thin, numerous, hair-like. Elytra without a trace of pattern, except for a possible postscutellar spot. - On Corylaceae. Northeast Asia *Brevicoeliodes*
 – Apical comb of setae of fore tibia extending along external margin for a distance less than one

- third of the tibial length, more or less concave. At least a trace of elytral pattern 30
30. Basal half of elytral intervals two to five with investiture so sparse as to appear almost glabrous, apical third with a faint trace of a whitish band formed by recumbent hair-like scales, intervals uniformly and moderately convex, striae punctured. Sutural interval at least slightly darker than others. Granules on weak preapical calli minute *Coeliodinus*
- Elytral intervals two to five clothed at least in part by scales. Dorsal investiture often dense or rather dense, with at least a trace of three transverse stripes on elytra. Granules on moderate to strong preapical calli conspicuous and rasp-like *Coeliodes*
31. Antennal funicle 6-segmented 32
- Antennal funicle 7-segmented 36
32. Elytra with an oblique lateral band on 6th to 8th intervals. Base of pronotum straight. Antennal club fusiform, not shorter than the combined length of 4th to 6th segments of antennal funicle. Lateral tubercles of pronotum moderately acuminate. Meso- and meta tibiae in male mucronate *Sirocalodes*
- Elytra without an oblique lateral band on 6th to 8th intervals 33
33. Anterior margin of prothorax not raised. Elytra about 2.55 times as long as pronotum. Sides of prothorax strongly narrowing in apical half. Pronotal disc convex, without lateral tubercles, only with a faint trace of dorsal channel at base. Claws simple. 1.6–2.8 mm. - On Brassicaceae. Holarctic *Amalorrhynchus*
- Anterior margin of prothorax obviously raised. Elytra usually less than 2.55 times the pronotal length 34
34. Base of prothorax almost straight. Dorsal channel of pronotum usually reduced to a deep, more or less elongate pre-scutellar pit *Glocianus*
- Base of prothorax distinctly bisinuate 35
35. Elytra bicolored, apical quarter, sometimes apical third reddish. Base of femora and tibiae bicolored; basal two-thirds piceous or brown, apical third reddish. Tarsi short. 4th tarsal segment exceeding 3rd segment by not more than the lobe-length of 3rd segment. Claws simple. Integument rather densely and coarsely punctured *Calosirus*
- If elytra reddish or bicolored, femora piceous or entirely reddish or brown. 4th tarsal segment exceeding 3rd segment by more than the lobe-length of 3rd segment. Claws simple or toothed *Ceutorhynchus*
36. Sides of elytra near the middle with a transverse band of dense light scales on 6th to 8th intervals at least, often with additional stripes and/or spots forming a more or less definite strongly contrasting with the darker ground 37
- Sides of elytra without a transverse band of light scales on 6th to 8th intervals, or a pattern is formed near the middle of the elytra by a brownish sparsely-scaled transverse stripe not strongly contrasting with the pale-scaled ground 41
37. Claws edentate *Hadroplontus*
- Claws dentate 38
38. Apical comb of setae at least of middle and hind tibia ascending along external margin for a distance from apex about equal to one third of the tibial length *Thamiocolus*
- Apical comb of setae at least of middle and hind tibia ascending along external margin for a distance from apex less than one third of the tibial length 39
39. Lateral band of elytra closely approaching humeral tubercles, the distance them and the lateral band on interval seven is much shorter than the width of the band. Scutellar spot T-shaped, without oblique extensions directed to lateral bands. Rostrum and legs usually slender. - On

- Lamiaceae. Eurasia *Datonychus*
- Lateral band of elytra originates at the elytral sides at a distance from humeral tubercles greater than its width 40
40. Scutellar spot hastate, extending posteriorly to about the middle of the elytra, its arms markedly oblique, often connected to lateral bands. Suture posteriad of scutellar spot with an elongate brown spot always followed by a light zone, even when the scutellar spot is obscure. The distance between the humeral calli and lateral stripe on interval seven is more or less equal to the width of the band. Rostrum and legs relatively slender; femora, if toothed, with small acute teeth. 2.8 mm. - On Asteraceae. Eurasia *Microplontus*
- Scutellar spot, when present, never hastate. The distance between the humeral calli and lateral stripe on interval seven is much longer than the width of the stripe. Rostrum and legs in most species relatively robust; femora, if dentate, with a large tooth *Mogulones*
41. Integument almost entirely ferruginous. Pronotum subconical, lacking lateral tubercles, but with a pair of discal prominences bearing a tuft of brownish scales at each side of dorsal channel *Ceutorhynchoides*
- Integument at least of pronotum and part of elytra piceous 42
42. At least alternate elytral intervals ridge-like, bearing minute granules. Investiture sparse. Scutellar spot inconspicuous. Meso- and metasternum slightly impressed *Wagnerinus*
- Elytral intervals sometimes convex but not ridge-like 43
43. Pronotum convex, campanuliform, with strongly rounded sides. Small sharp lateral tubercles situated very near the pronotal sides. Dorsal channel entire, rather deep. Apical third of pronotum narrowed, anterior weakly elevated, faintly notched in the middle. Elytra heart-shaped, with rounded sides narrowing towards weak preapical calli. Ground investiture of elytra brown; white or pale gray scales forming a post-scutellar spot, sometimes also with ill-defined longitudinal white stripes. Extreme base of intervals two to five (six) bearing some small white scales *Cardipennis*
- Pronotum usually moderately convex with gently curved or slightly sinuous sides. Tubercles of pronotum, when present, rather distant from sides. Elytra usually more elongate, ovoid not heart-shaped *Ceutorhynchus*

Tribe Phytobiini Gistel, 1848

Genus *Pelenomus* Thomson, 1859: 138.

Yuk-jeol-ae-jop-ssal-ba-gu-mi-sok (육절애좁쌀바구미속)

SYNONYM: *Paraphytobius* Wagner, 1936: 181.

Body short, thickset, with inconspicuous dark pubescence. Rostrum usually shorter than pronotum, if somewhat longer (*P. waltoni* (Boheman)), eyes strongly convex, small, their longitudinal diameter no greater than width of frons. Antennal funicle 6-segmented. Anterior margin of pronotum in the middle not produced, with straightened part which limited by 2 sharp teeth, distance between them no less than width of rostrum, lateral to these teeth smooth, not serrate, disc with moder-

ately coarsely punctate. Elytra with angular shoulders, more or less parallel-sided in basal half, with sometimes large scutellar spot formed by whitish oval scales. 5th to 9th intervals with small, sometimes inconspicuous granules. Prosternum before fore coxae sometimes short, with lower or obsolete keels, distance between fore coxae less than half width of rostrum. Femora usually dark. Tarsi wide. Claws dentate or simple. Found on Elatinaceae, Lythraceae, Polygonaceae, Primulaceae, Posaceae, Saxifragaceae (Colonnelli, 2004).

Type species: *Curculio comari* Herbst, 1795.

SPECIES 24 (2 in Korea), (6 in Russian Far East).

DISTRIBUTION: Palaearctic, Canada, U.S.A.

Key to the species of genus *Pelenomus*

1. Rostrum shorter than pronotum. Claws dentate *P. roelofsi*
- Rostrum longer than pronotum. Claws simple *P. waltoni*

29. *Pelenomus roelofsi* (Hustache, 1916) (Pls. 3-29, 16-29)

Yuk-jeol-ae-job-ssal-ba-gu-mi (육절애좁쌀바구미)

Phytobius quadricornis var. *Roelofsi* Hustache, 1916: 113.

TL: Japan- Kobe.

Head densely punctured, behind of eyes covered with ovate white scales, other part with hairy white scales; frons between eyes clearly narrower than the base of rostrum. Rostrum robust, shorter than pronotum, and broadest on apex; antennae inserted into the apical part of rostrum; scape extended behind anterior margin of eye and longer than the basal 3 funicular segments taken together; funicle with 6 segments, 1st funicular segment with robust, longer than 2nd, 2nd segment longer than 3rd, 3rd to 6th segments same in length, each segment with several long hairs; club spindle shaped, basal segment conical, 2nd segment broad, and longer than the next 2 segments taken together. Pronotum much wider than long with sharply decreasing the thickness toward the anterior, basal part with deeply punctured, other part weakly punctured wrinkles, basal part before scutellum scattered with ovate white scales, lateral sides with cone shaped projections on the middle, anterior margin with a pair of pyramidal projection. Scutellum black, small. Elytra heart shaped, scutellar patch with densely ovate white scales; punctured striae distinct, with a row of dark brown hairs; intervals flattened, with weakly pointed tubercles; each interval with 3–4 rows of dark brown short hairs. Underside of body weakly concave, covered with ovate white scales; procoxae broadly separated, without bordering keels of prosternal canal; 1st and 2nd abdominal segments 2 times as long as 3rd and 4th segments, 5th segment longer than 4th, weakly depressed in the middle. Femora slender without tooth; tibia almost straight; corbel fringed with dark brown bristles; inside of apex of mid and hind tibia with mucro; claws appendiculate, inner branches separate.

Female: Abdomen more convex and inside of apex of tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum) 2.4–2.8 mm.

COLOR: Body black, oval form, antennae and leg dark brown, lateral sides of pronotum and underside of abdomen covered with white scales.

BIOLOGICAL NOTES: Adults are collected on *Polygonum* spp. in moist places and near aquatic habitats (Hong et al., 1999a). The larvae feed on leaves of these plants fixing a cocoon built before pupation (Caldara and O'Brien, 1995).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu), Russia (E. Siberia).

KOREA: Cental and South.

KOREAN RECORDS: Hong et al., 1999a: 53 (Central, South); Hong et al., 2000: 113; Korotyayev and Hong, 2004: 144.

SPECIMEN EXAMINED: GG: 1 ♀ (Mt. Yeogisan, Suwon: 25.vi.1985). JN: 1 ♀ (Chusan, Gwangyang: 23.vi.1991). GB: 1 ex. (Mt. Hwanghaksan: 24.vii.1978); 1 ♀ (Mt. Palgongsan, Daegu: 23.v.1981); 1 ex. (Mt. Juwang: 26.vii.1984); 2 ♂♂, 3 exs. (Mt. Palgongsan, Daegu: 20.vi.1985); 1 ex. (Mt. Palgongsan, Daegu: 6.ix.1985).

30. *Pelenomus waltoni* (Boheman, 1843) (Pls. 3-30, 16-30)

Buk-jjok-ae-job-ssal-ba-gu-mi (북쪽애좁쌀바구미)

Phytobius waltoni Boheman, 1843 in Schoenherr, 1843: 345.

TL: Europe.

Rostrum 3 times as long as broad. Pronotum with 2 sharp teeth in the middle of anterior margin, distance between them about as wide as the forehead between the eyes, lateral to these teeth not serrate, disc with spot of whitish scales on surface covered with the dark or metallic shining hairs. Elytra with the scutellar spot behind the scutellum, covered with grayish brown scales in basal half and whitish scales in distal half. The external intervals only in the apical third of elytra with sharp calli.

MEASUREMENTS: Body length (excl. rostrum) 2.2–2.8 mm.

COLOR: Antennae and legs yellowish-brown.

BIOLOGICAL NOTES: Larvae develops on *Polygonum* spp. in Japan (Morimoto, 1984) and adults were collected on *Polygonum hydropiper* in Europe (Reitter, 1916).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), Russia (Far East, Siberia, European part), Kazakhstan, Iran, Turkey, Austria, Azerbaijan, Bosnia-Herzegovina, Belgium, Bulgaria, Bielorussia, Switzerland, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, England, Georgia, Croatia, Hungary, Italy, Latvia, Netherlands, Norway, Poland, Romania, Sweden, Slovakia, Ukraine, Yugoslavia.

KOREA: North and Central.

KOREAN RECORDS: Korotyayev and Hong, 2004: 144 (North).

SPECIMEN EXAMINED: PN: 1 ♀ (South Phenan Prov., Bongha-ri, on the Te-dong River, 45 km E of Pyongyang, Hung. Zool. Exp. I in Korea, No. 19: 23.v.1970, Dr. S. Mahunka and Dr. H. Steinmann, preserved in HNHM, Hungary). HN: 1 ♂ (South Hamgyong Prov., Simpo (=Sinpo): 9.v.1990, S.V. Murzin, preserved in ZIN, Russia). CB: 1 ♂ (Guksa 1-ri, Cheongwon-gun: 21.vi.2008).

Genus *Phytobius* Schoenherr, 1833: 20.

Su-se-mi-jop-ssal-ba-gu-mi-sok (수세미좁쌀바구미속)

SYNONYM: *Litodactylus* Redtenbacher, 1849: 399.

Body short, thickset, with contiguous vestiture of dull grey, yellowish or brownish scales. Rostrum longer than pronotum. Eyes moderately convex, large, their longitudinal diameter more than width of frons. Apex of antennal scape in repose separated from eye by distance less than apical width of scape. Antennal funicle 6-segmented. Antennal club dark, uniformly rounded at base, not pedunculate, uniformly pubescent. Anterior margin of pronotum often with 2 sharp denticles. Elytra moderately convex, parallel-sided in basal half, almost 1.3 times as long as wide. Prosternum before fore coxae short, without keel, fore coxae separated by less than width of antennal scape. Femora pale with infuscate apex. Tarsi long, narrow, 3rd segment distinctly wider than 2nd, claw-segment longer than 1st and 2nd segments combined, dorsum and sides without long erect pale hairs. Claws simple. Larvae found on Halorhagaceae (*Myriophyllum* sp.) (Egorov et al., 1996).

Type species: *Curculio leucogaster* Marsham, 1802.

SPECIES 4 (2 in Korea), (3 in Russian Far East).

DISTRIBUTION: Holarctic, Tropical Africa.

Key to the species of genus *Phytobius*

1. Anterior margin of pronotum with acute teeth *Ph. japonicus*
- Anterior margin of pronotum not elevated and with feeble trace of acute teeth *Ph. leucogaster*

31. *Phytobius japonicus* Roelofs, 1875 (Pls. 3-31, 16-31)

Il-Bon-ae-job-ssal-ba-gu-mi (일본애좁쌀바구미)

Phytobius japonicus Roelofs, 1875: 180.

TL: Japan.

Rostrum punctate on sides as those of the head. The outline of eyes with whitish scales. Antennal funicle 6-segmented. Pronotum densely punctate with a median line which is deep anteriorly and at base, with two lateral tubercles behind middle and two teeth on anteriorly emargination; lateral sides and the median line with whitish scales. Scutellum barely visible. Elytra a little broader than pronotum at base, roundly raised shoulders; striae not deep; intervals finely rugose; 3rd and 5th intervals a little raised. The whitish scales formed irregular spot on the suture towards the anterior fourth. Legs punctate.

MEASUREMENTS: Body length (excl. rostrum) 2.2–2.4 mm.

COLOR: Black; antennae, basal half of femur, tibia and tarsi red or reddish brown bearing with grayish white scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu), Russia (Primorskii Terr., Sakhalin, Kuril Isl.).

KOREA: Central and South.

KOREAN RECORDS: Hong et al., 2000: 114 (Central, South); Korotyaev and Hong, 2004: 144.

SPECIMEN EXAMINED: GW: 1 ♀ (Mt. Seolaksan: 9.viii.1976). GB: 1 ex. (Mt. Palgongsan: 12.viii.1961); 1 ♂ (Mt. Palgongsan: 24.v.1968); 1 ex. (Daegu: 25.viii.1971). GN: 1 ex. (Goryeong: 27.viii.1980).

32. *Phytobius leucogaster* (Marshall, 1802) (Pl. 3-32)

Su-se-mi-job-ssal-ba-gu-mi (수세미좁쌀바구미)

Curculio leucogaster Marshall, 1802: 253.

TL: Europe.

Rhynchaenus paroculus Gravenhorst, 1807: 207.

Rhynchaenus myriophylli Gyllenhal, 1813: 152.

TL: Europe.

Poëphagus suffriani Gistel, 1857: 532.

Phytobius griseomicans Schwarz, 1892: 165.

TL: Etats- Unis.

Rostrum with narrow metallic glossy scales only on apical part. Antennal funicle 6-segmented. Pronotum with acute lateral tubercles and its rounded apical margin with shallow median emargination limited by acute teeth. Elytra with 5th interval keel-shaped from base to middle area and finely muricate in basal one-third. Tarsi very long and narrow, 3rd segment slightly wider than 2nd, dorsal and lateral surface lacking long swimming hairs. Claws simple.

MEASUREMENTS: Body length (excl. rostrum) 2.2 mm.

COLOR: Body with very dense vestiture of short, recumbent or subrecumbent matte hydrophobic scales.

BIOLOGICAL NOTES: The adult lives on *Myriophyllum* spp. and eats their leaves swimming from one plant to another. Also the larva lives on the underwater portions of the plants, eating the more tender parts of the buds; for pupation, it builds a cocoon which it fixes to the plant (Caldara and O'Brien, 1995).

DISTRIBUTION: Holarctic.

KOREA: South (GB).

KOREAN RECORDS: Hong et al., 2000: 114 (South); Korotyaev and Hong, 2004: 144.

SPECIMEN EXAMINED: GB: 1 ♀ (Daegu: 29.vii.1969).

Genus *Rhinoncus* Schoenherr, 1825: 586.

Ae-jop-ssal-ba-gu-mi-sok (애좁쌀바구미속)

Antennal funicle 7-segmented. Rostrum short, nor or scarcely more than 3 times as long as wide. Anterior margin of pronotum without sharp denticles. Prosternum before fore coxae long, with more or less high keels; if these low and prosternum short, then body elongated, elytra almost

parallel-sided. Distance between fore coxae usually no less than half width of rostrum. Femora edentate. Claws dentate. Larvae found on *Polygonum* and *Rumex* (Morimoto, 1984; Egorov et al., 1996).

Type species: *Curculio pericarpus* Linnaeus, 1758.

SPECIES 36 (7 in Korea), (9 in Russian Far East).

DISTRIBUTION: Holarctic; in S. America and New Zealand only introduced species.

Key to the species of genus *Rhinoncus*

1. Pronotum with lateral tubercles behind middle 2
 - Pronotum without lateral tubercle 6
2. Elytra with the grayish white spot just behind scutellum, disc densely covered with whitish and somber scales *Rh. bosnicus*
 - Elytra with the whitish spot just behind scutellum, disc sparsely appeared with grayish or whitish hair-like scales 3
3. Pronotum with weak elevation behind middle laterally. Elytral intervals with densely punctate but not granulate *Rh. jakovlevi*
 - Pronotum with sharp lateral tubercles behind middle. Elytral intervals granulate or tuberculate except the median area 4
4. Elytra with strongly raised shoulders, and slightly depressed behind them laterally 5
 - Elytra with rounded outline without humeral prominence *Rh. koreanus*
5. Body black, legs and apex of elytra reddish-brown. Elytral striae with deeply punctate, intervals strongly convex with well-developed granulate or tuberculate. Elytra with sparse grayish scales, scaling on prosternum and mesosternum denser than on abdomen *Rh. cribricollis*
 - Elytra reddish-brown as a whole or for the most part, sometimes dark at basal part and sutural interval. Elytra with transverse bands formed by grayish hair-like scales on behind shoulders, lateral sides of middle part and the apical part. Scaling on abdomen denser than or same as on underneath of thorax. Elytral striae with shallowly punctate, each interval weakly convex with a row of tubercle behind the anterior third *Rh. sibiricus*
6. Rostrum much shorter and thicker, strongly expanded to apex. Forehead narrow, twice as width as bases of rostrum. Elytra more strongly rounded at sides. White stripes on elytra not conspicuous, scales on them rare. Keel on prosternum before fore coxae twice as long as behind fore coxae. Pubescences on underneath of body rare, scales on the most parts separated which not less than its width and not formed dense spots on sides of sternites. Femora almost black, tibia dark brown, and tarsi always brighter red *Rh. nigrotibialis*
 - Without above combination of characters. Femora pitch black, tibia and tarsi bright reddish brown or yellowish brown, more or less browned at their apex *Rh. perpendicularis*

33. *Rhinoncus bosnicus* Schultze, 1900 (Pl. 3-33)

Dae-ryuk-ae-job-ssal-ba-gu-mi (대륙애좁쌀바구미)

Rhinoncus bosnicus Schultze, 1900: 20.

TL: Bosnia.

Body short oval. Rostrum a little longer, subcylindric, densely rugoso-punctate, with finely somber hairs. Antennal funicle 7-segmented. Head with somber hairs, forehead flat, the basal part of rostrum almost same level as forehead, eye orbit prominent. Pronotum subconical, barely widened laterally, disk a little convex, with continuous median longitudinal canal, not elevated but weak emarginated at anterior margin, with sharp tubercles on lateral sides, bearing somber setae. Scutellum a little bit. Elytra shortly ovate, with strongly raised shoulders, broadest at them, almost same width from shoulders until the middle, and then moderately convergent curved toward apex, striae with obsolete punctures, all intervals except sutural intervals subconvex, most granules small, bare, transversely dispersed, the calli of intervals behind the middle not going to the 1st sutural interval; disc formed checkered pattern with spots which composed with grayish white and somber scales, scutellar spot with grayish white scales extended shortly to posterior at base and other spot with somber scales behind middle within sutural intervals. Underside of body covered with dense whitish scales; apex of mesepimera and metepisterna with dense somber scales. Femora blackish at base, apex of mid and hind tibia in male with sharp mucro, claws simple.

MEASUREMENTS: Body length (excl. rostrum) 2.0–2.2 mm.

COLOR: Dark black. Antennae reddish brown. Elytra with whitish scales patch on 1st interval of just behind scutellum and these scales scattered on the remaining part. Legs reddish brown.

BIOLOGICAL NOTES: In Europe, found on *Polygonum mite* Schrank (= *Persicaria mitis* Schrank) and several species of *Rumex*; in NW Caucasus, Amurskaya Prov. and South Korea, on *Rumex* spp. Larvae were found near Krasnodar (NW Caucasus) in late August inside the stem base and, rarely, beneath the leaf-sheath of *Rumex* sp. on a sandy bank of the Kuban' River (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Russia (Siberia, South of Far East), Mongolia, Kazakhstan, Turkmenistan, Austria, Bosnia-Herzegovina, Bulgaria, Bielorrussia, Czech Republic, Germany, Georgia, Hungary, Moldavia, Poland, European Russia, Slovakia, Ukraine.

KOREA: North and South.

KOREAN RECORDS: Hong et al., 2000: 116 (South); Korotyaev and Hong, 2004: 144.

SPECIMEN EXAMINED: GB: 2 ♀♀ (Gimcheon: 16.v.2000).

34. *Rhinoncus cribricollis* Hustache, 1916 (Pls. 3-34, 16-34)

Huin-jeom-ae-job-ssal-ba-gu-mi (흰점애좁쌀바구미)

Rhinoncus cribricollis Hustache, 1916: 111.

TL: Japan- Yumoto, Tokyo, Kyoto.

Rhinoncus uchidai Kôno, 1935: 60.

TL: Kunashiri I.

Rostrum a little longer than 2 times width, rugoso-punctate, tricarinate, the median carina more convex than the lateral ones. Head slightly convex, flat between eyes, densely, rugosely, rather shallowly punctate. Pronotum subconic, moderately curved towards the middle of lateral sides, strongly narrowed just behind the anterior margin which notched in the middle. Disc convex, deeply canaliculate in the middle, with a pair of strong lateral tubercles, punctated deeply and

densely with obviously more 2 times as large as puncture on the head, and confluent wrinkled anteriorly and on the lateral sides. Elytra oval, a little widened behind shoulders, deeply striate; intervals narrow, less broad than striae, convex, with a row of small and numerous tubercles and with a row of line-like, short, ash-colored, sparse scales. The whitish scutellar spot small bit. The apical calli reddish.

MEASUREMENTS: Body length (excl. rostrum) 2.0–2.2 mm.

COLOR: Body black, antennae, legs and apex of elytra reddish brown. Elytra with a whitish scutellar spot. Underside of the body sparsely covered with elongated whitish scales, a little denser on the thorax.

BIOLOGICAL NOTES: Found on *Polygonum sachalinense* F. Schmidt ex Maxim (Egorov et al., 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Sakhalin, Kuril Isl.).

KOREA: Central, South, Is. Jeju, Is. Ulreungdo.

KOREAN RECORDS: Morimoto, 1984: 311; Kwon and Lee, 1986: 82 (Central, South, Ulreungdo); Morimoto and Lee, 1992: 12 (JJ- Gaewol bridge); ESK/KSAE, 1994: 207; Paik et al., 1995: 433 (JJ); Hong et al., 1999a: 55 (Central, South, Is. Jeju, Is. Ulreungdo); Hong et al., 2000: 116; Korotyaev and Hong, 2004: 144.

SPECIMEN EXAMINED: GG: 1♂ (Incheon Subong park: 31.vii.1977). GW: 1♂, 1♀ (Mt. Seolaksan: 9.viii.1976).

35. *Rhinoncus jakovlevi* Faust, 1893 (Pls. 3-35, 17-35)

Cham-so-ri-jaeng-i-ae-job-ssal-ba-gu-mi (참소리쟁이에좁쌀바구미)

Rhinoncus jakovlevi Faust, 1893: 205.

TL: Russia- Irkutsk, Amur.

Body ovate, convex. Frons slightly convex. Pronotum densely strongly punctate, with canal or furrow at the posterior part, regularly curved to the anterior part at sides, then constricted behind the anterior margin. Elytra with striae densely acute punctate; intervals a little broader than striae, with rugosely punctate, without granulous tubercles. Metathorax and abdomen covered with long and very extensive whitish scales, their surface with densely punctate.

MEASUREMENTS: Body length (excl. rostrum). 3.0–3.4 mm.

COLOR: Body black, antennal club and tarsi reddish brown. Dorsum investiture sparse, sutural spot at base densely covered with whitish scales.

BIOLOGICAL NOTES: Adults were found in Japan on *Rumex acetosa* L. (Morimoto and Lee, 1992). In Tuva (southern Central Siberia), beetles are common on large plants of *Rumex* sp. and were found damaging cultivated *Rheum compactum* L. in the garden (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (south of Asian part), Mongolia, Afghanistan.

KOREA: Whole country including Is. Jeju.

KOREAN RECORDS: Lee and Kwon, 1974: 48 (JJ- Seogwipo, Hagwi); Morimoto, 1984: 311 (JJ); Kwon and Lee, 1986: 82 (JJ); Morimoto and Lee, 1992: 12 (JJ- Seongsan, Oradong); ESK/KSAE, 1994: 207; Paik et al., 1995: 433 (JJ); Hong et al., 1999a: 56 (Central, South, Jeju); Hong et al., 2000: 117; Koro-

tyaev and Hong, 2004: 144; Legalov, 2009e: 200 (North).

SPECIMEN EXAMINED: GG: 1 ♂ (Mt. Yeogisan: 24.vi.1985); 2 exs. (Mt. Gwanggyosan: 29.v.1990); 1 ♂ (Mt. Yumyeongsan: 14.vi.1997); 1 ♂, 2 ♀ (Ganghwado: 28.v.1997). GW: 2 ♂♂ (Chuncheon: 11.v.1985); 1 ex. (Chuncheon: 16.vi.1985); 1 ♀ (Hongcheon: 12.viii.1989); 1 ♀ (Inje: 27.v.1993); 2 ♂♂, 2 ♀♀ (Jinbu: 27.v.1993); 1 ♀ (Myeongju: 27.v.1993). CB: 1 ♀ (Jungwon: 23.v.1993); 3 ♀♀ (Jecheon: 24.v.1993); 1 ♀ (Danyang: 11.v.1997). GB: 1 ex. (Kyeongbuk Univ. Campus: 4.ix.1960); 3 exs. (Mt. Sobaeksan: 15.v.1981); 7 exs. (Mt. Sobaeksan: 10.v.1985); 2 ♂♂, 10 ♀♀ (Bonghwa: 28.v.1993).

36. *Rhinoncus koreanus* Korotyaev, 1997 (Pl. 3-36)

Han-guk-ae-job-ssal-ba-gu-mi (한국애좁쌀바구미)

Rhinoncus koreanus Korotyaev, 1997a: 382.

TL: Korea- Mt. Geumgangsán.

Rostrum slightly narrow, scarcely narrower 3rd segment of tarsi. Elytra with scutellar spot formed by large oval white scales, with rather numerous white scales along most of 1st interval, with regularly rounded humeral prominences. Prosternum with somewhat lower carinae in front of fore coxae.

MEASUREMENTS: Body length (excl. rostrum) 2.15 mm.

COLOR: Body black, antennae and legs dark brown.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: Central (GW).

KOREAN RECORDS: Korotyaev, 1997a: 382 (Mt. Geumgangsán); Hong et al., 1999a: 56 (Central); Hong et al., 2000: 118; Korotyaev and Hong, 2004: 144.

REMARKS: The type specimen was preserved in the Hungarian Museum of Natural History [HMNH].

37. *Rhinoncus nigrotibialis* Wagner, 1939 (Pls. 3-37, 17-37)

Ma-di-pul-ae-job-ssal-ba-gu-mi (마디풀애좁쌀바구미)

Rhinoncus (Amalorhinoncus) perpendicularis var. *nigrotibialis* Wagner, 1939: 207.

TL: East Siberia, Transbaikál.

Rostrum is much shorter and thicker, strongly expanded to apex. Forehead narrow, twice as narrow as bases of rostrum. Pronotum without lateral tubercle. Elytra more strongly rounded at sides. White stripes on elytra not conspicuous, scales in them sparse. Prosternum before fore coxae twice longer than behind them. Pubescences on underneath of body sparse, scales on the most part are separated which not less than its width and not formed dense spots on sides of sternites.

MEASUREMENTS: Body length (excl. rostrum) 2.0–2.4 mm.

COLOR: Body black. Femora almost black, tibia dark brown, and tarsi always brighter red.

BIOLOGICAL NOTES: Beetles are found on *Polygonum* spp (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan, Russia (E. Siberia, south of Far East).

KOREA: Whole country including Is. Jeju.

KOREAN RECORDS: Morimoto, 1984: 311; Kwon and Lee, 1986: 83 (Central, South, Jeju); Morimoto and Lee, 1992: 12 (JJ- Cheonjiyeon); Kim, 1993: 394 (JJ); ESK/KSAE, 1994: 207; Paik et al., 1995: 433 (JJ); Hong et al., 1999a: 56 (Central, South, Jeju); Hong et al., 2000: 118; Korotyaev and Hong, 2004: 144.

SPECIMEN EXAMINED: GG: 1♂ (Suwon: 30.v.1983); 1♂ (Gwangreung: 20.vi.1983); 1♀ (Suwon: 1.ix.1997). GW: 1♂ (Donghae: 28.v.1993); 1♀ (Hongcheon: 25.vii.1997); 1♀ (Daegwanryeong: 11.vi.1997); 1 ex. (Mt. Hambaeksan: 14.viii.1999). JB: 14♂♂, 17♀♀ (Mt. Naejangsan: 10.vi.1975). JN: 9 exs. (Is. Heuksando: 13.viii.1981). GB: 1 ex. (Mt. Palgongsan: 17.viii.1971); 1 ex. (Mt. Sobaeksan: 28.vii.1976); 1 ex. (Daegu: 28.vii.1980); 5 exs. (Daegu Ansim: 25.viii.1981); 1 ex. (Gyeongsan Hayang: 5.vi.1982); 9 exs. (Yeongpung: 23.v.1984); 1 ex. (Mt. Juwangsan: 26.vii.1984); 1 ex. (Mt. Palgongsan: 6.vi.1985). JJ: 2 exs. (Jungmun: 12.viii.1984).

REMARKS: Korean records for this species from Morimoto (1984) to Hong et al. (1999) were misidentified and re-cited with *Rhinoncus perpendicularis* (Reich).

38. *Rhinoncus perpendicularis* (Reich, 1797) (Pl. 4-38)

Eo-ri-ae-job-ssal-ba-gu-mi (어리애좁쌀바구미)

Curculio perpendicularis Reich, 1797: 10.

TL: Europe, Siberia.

Ceuthorhynchus guttalis Gravenhorst, 1807: 206.

Rhynchaenus subfasciatus Gyllenhal, 1813: 253.

TL: Sweden.

Rhinoncus erythrocneme Beck, 1817: 22.

TL: Allemagne.

Rhinoncus tibialis Stephans, 1831: 41.

TL: Angleterre.

Rhinoncus rubricus Pic, 1896: 95.

TL: Sicily.

Rhinoncus tibialis var. *Lysholmi* Pic, 1896: 95.

TL: Le Caire-Sicily.

Rhinoncus tibialis var. *rufofemoratus* Schultze, 1901: 94.

TL: Caucasus.

Rostrum much broader than long, slightly conically narrowed forwards, with moderately arched. Eyes barely protruded from the head curvature. Frons depressed quite widely, and closely and sometimes rugosely punctate. Vertex punctate about half as strong as thorax and very closely. Eye margin and the median line of vertex with broader, yellowish scales, the remaining areas with more setaceous hairs. Pronotum without lateral tubercle. Pronotum with thicker scales at sides which colored to yellowish white or greyish white, also at basal half of the middle line. Elytra covered with scales which formed some long stripes or long spots at the basal part, formed more or less distinct, narrow or broader and more or less serrated transverse band in the middle or behind

the middle and formed a small long spot behind this band of sutural stripe, and with thick bright scales at the apical margin. A scutellar spot which separated a little from scutellum formed by very closely and purely white and broader oval scales.

MEASUREMENTS: Body length (excl. rostrum) 2.2 mm.

COLOR: Body pitch-black, antennae dark brown to pitch-black excepting for reddish or yellowish brown in distal half of scape, femora same colored excepting for more or less lightened knee, tibiae and tarsi normally cloudily reddish or yellowish brown to brighter reddish yellow, the last tarsal segment and claws more or less browned. The whole underside with the yellowish white hair-like scales which covered surface incompletely: only on sides of meso- and metathorax and particularly in the mesepimera strongly condensed.

BIOLOGICAL NOTES: Beetles are found on *Polygonum* spp. in Europe (Reitter, 1916). The larva pierces the plant stems eating the parenchyma and pupates in the stems (Caldara et O'Brien, 1995).

DISTRIBUTION: Korea (introduced), Russia (Siberia), Mongolia, Kazakhstan, Iran, Syria, Turkey, Albania, Armenia, Austria, Bosnia-Herzegovina, Belgium, Bulgaria, Bielorussia, Switzerland, Czech Republic, Germany, Dagestan, Denmark, Estonia, Spain, Finland, France, England, Greece, Croatia, Hungary, Ireland, Italy, Lithuania, Luxembourg, Latvia, Moldavia, Macedonia, Netherlands, Norway, Poland, Portugal, Romania, European Russia, Sweden, Slovenia, Slovakia, Ukraine, Yugoslavia, Algeria, Egypt, Morocco, Canada.

KOREA: Central (GG- introduced).

KOREAN RECORDS: Hong et al., 2000: 119 (Central); Korotyaev and Hong, 2004: 145.

SPECIMEN EXAMINED: GG: 1 ♀ (Suwon: 1.ix.1997).

39. *Rhinoncus sibiricus* Faust, 1893 (Pls. 4-39, 17-39)

Ae-job-ssal-ba-gu-mi (애좁쌀바구미)

Rhinoncus sibiricus Faust, 1893: 205.

TL: Irkutsk, Minussinsk, Vladivostok.

Rhinoncus sulcipennis Schultz, 1898: 233.

TL: Japan.

Pronotum with sharp lateral tubercles behind middle. Elytra reddish-brown as a whole or for the most part, sometimes dark at basal and sutural intervals, with transverse bands formed by grayish hair-like scales on behind shoulders, lateral sides of middle part and the apical part; with strongly raised shoulders, and then slightly depressed behind them laterally; elytral striae with shallowly punctate, each interval weakly convex with a row of tubercle behind the anterior third. Abdomen denser scaling than or same as on underneath of thorax.

MEASUREMENTS: Body length (excl. rostrum) 2.2–2.6 mm.

COLOR: Body reddish brown as a whole.

BIOLOGICAL NOTES: This species is commonly found on *Polygonum* spp. in Korea, Japan and Siberia (Chûjô and Morimoto, 1960; Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), China, Taiwan, Mongolia,

Russia (E. and W. Siberia, south of Far East), Vietnam.

KOREA: Whole country including Is. Jeju.

KOREAN RECORDS: Morimoto, 1984: 311; Kwon and Lee, 1986: 83 (Central, South); ESK/KSAE, 1994: 207; Hong et al., 1999a: 57 (Central, South, Jeju); Hong et al., 2000: 120; Korotyaev and Hong, 2004: 145; Legalov, 2009: 200 (North).

SPECIMEN EXAMINED: GG: 1 ♀ (Suwon: 27.vi.1973); 1 ex. (Suwon: 25.v.1981); 3 ♀ (Suwon: 27.iv.1983); 1 ♂, 1 ♀ (Suwon: 12.v.1983); 3 ♀ ♀ (Suwon: 30.v.1983); 1 ex. (Suwon: 8.x.1984); 1 ex. (Mt. Yeogisan: 17.v.1988); 1 ex. (Suwon: 23.vi.1988); 1 ex. (Seoul: 27.vi.1988); 1 ♂ (Suwon: 18.iv.1989); 2 ♂ ♂ (Hwaseong Jeongnam: 4.v.1989); 1 ♀ (Suwon: 7.ii.1994); 1 ex. (Gwangreung: 18.vi.1994); 2 ♂ ♂, 1 ♀ (Suwon: 21.v.1997); 2 ♂ ♂ (Ganghwado: 28.v.1997). GW: 2 ♀ ♀ (Mt. Odaesan: 30.vii.1976); 1 ♂, 1 ♀ (Mt. Odaesan: 2.viii.1976); 1 ♂ (Mt. Seolaksan: 9.viii.1976); 1 ♀ (Mt. Obongsan: 12.viii.1976); 1 ex. (Chuncheon: 15.vi.1985); 1 ♂, 1 ♀ (Hwacheon: 25.v.1993); 1 ♂ (Donghae: 28.v.1993). CB: 2 ♂ ♂ (Okcheon: 22.v.1993); 1 ♀ (Jungwon: 23.v.1993). JB: 2 ♂ ♂, 1 ♀ (Iri: 10.viii.1970). JN: 1 ♂, 1 ♀ (Is. Heuksando: 13.viii.1981); 1 ♀ (Is. Jindo: 17.vii.1984); 1 ex. (Mr. Baekunsan: 22.vi.1988); 2 ♀ ♀ (Yeocheon, Is. Geumodo: 19.vii.1993); 2 ♂ ♂, 1 ♀ (Yeocheon, Is. Geumodo: 4.viii.1993). GB: 3 ♂ ♂, 1 ♀ (Daegu Ansim: 25.viii.1971); 1 ♂ (Sangju: 11.v.1976); 1 ♂ (Mt. Hwanghaksan: 24.vii.1978); 1 ♀ (Mt. Palgongsan: 29.vi.1979); 1 ♂ (Is. Ulreungdo: 26.v.1981); 1 ♀ (Andong: 28.v.1993); 1 ♂, 1 ♀ (Bonghwa: 28.v.1993); 1 ♀ (Geumreung: 11.ix.1996); 1 ♀ (Andong: 28.v.1997); 1 ♂ (Mt. Sambongsan: 14.viii.1997). GN: 1 ♂ (Mt. Geumjeongsan: 1.vi.1980); 1 ♀ (Goseong: 27.viii.1993); 3 ♂ ♂, 1 ♀ (Geojedo: 4.vi.1997); 4 ♂ ♂, 6 ♀ ♀ (Jinju: 5.vi.1997); 1 ♀ (Jinju: 26.vi.1997). JJ: 1 ♀ (Jeju: 27.vi.1990); 3 ♂ ♂, 2 ♀ ♀ (Daejeong: 18.ix.1996); 1 ♀ (Doggaebidoro: 26.vii.1997); 1 ♀ (Namjeju: 26.vii.1997); 2 exs. (no data).

Genus *Rhinoncomimus* Wagner, 1940: 78.

Geom-jop-ssal-ba-gu-mi-sok (검좁쌀바구미속)

Body more compact, with pronotum more transverse and convex, more strongly attenuate posteriorly in the middle at base. Rostrum very short. Disc of pronotum lacking tubercles or with small, rather sharp lateral tubercles. Elytra convex, scaling more conspicuous. Prosternum shallowly depressed, with oblique longitudinal folds behind the coxae and shallow median emargination. Fore coxae separated by not less than half width of the rostrum. Femora dentate. On Polygonaceae (*Polygonum* spp.) (Korotyaev, 2006).

Type species: *Rhinoncomimus klapperichi* Wagner, 1940.

SPECIES 5 (2 in Korea), (1 in Russian Far East).

DISTRIBUTION: Eastern Asia.

REFERENCE: Korotyaev (2006).

Subgenus *Homorosomulus* Korotyaev, 2006: 109.

The subgenus differs from the nominotypical one in the smaller body-size, narrower and longer

rostrum with less widened apical part, and less developed mucro on the male tibiae. The mandibles are concealed by the clypeus or are only narrowly exposed. Both species of this subgenus are apparently associated with two closely related species of the genus *Polygonum* Linnaeus: *P. perfoliatum* and *P. thunbergii*.

Type species: *Rhinoncomimus latipes* Korotyaev, 1997.

Key to the species of genus *Rhinoncomimus*

1. 3rd tarsomere slightly less than twice as wide as 2nd. 1st tarsomere in mid- and hind tarsi compressed, thicker than wide. Rostrum with high, sharp median carina along entire length; frons moderately deeply depressed. Pronotum more transverse, less rounded at sides; lateral tubercles transverse, with narrow shining ridge. Each interval of elytra with one regular row of large granules. Mucro on male pro- and hind tibiae minute but clearly visible, that on midtibia well developed *Rh. rhytidosomoides*
- 3rd tarsomere more than twice as wide as 2nd. 1st tarsomere in mid- and hind tarsi not conspicuously compressed, not thicker than wide. Rostrum with lower, often obtuse median carina; frons very shallowly depressed. Pronotum less transverse, more rounded at sides, with conical lateral tubercles. Intervals of elytra with small and less regular granules along midline and with conspicuous smaller granules along sides. Male protibia without mucro; that on midtibia minute; on hind tibia, barely visible under hairs *Rh. latipes*

40. *Rhinoncomimus (Homorosomulus) latipes* Korotyaev, 1997 (Pls. 4-40, 17-40)

Geom-job-ssal-ba-gu-mi (검좁쌀바구미)

Rhinoncomimus latipes Korotyaev, 1997b: 287.

TL: Korea- Pyeongyang; Russia- Primorskii Terr.

Underside uniformly covered with white lanceolate scales, longer on thorax and shorter on abdomen; pygidium with long recumbent hairs or hair-like scales.

Rostrum 2.75–2.85 times as long as wide, 0.85 times as long as pronotum; weakly curved. Antennae in male inserted at 0.35, in female at 0.42 length of rostrum from apex. Scape with three erect setae on apex. 1st segment of funicle less than twice as long as wide, 2nd–7th segments much narrower; funicle gradually widening to apex; 7th segment still noticeably longer than wide. Club short spindle-shaped. Eyes moderately and evenly convex, large, with greater diameter slightly exceeding basal width of rostrum. Frons scarcely depressed, matte, with dense large very shallow punctures, merging in places. Vertex with punctuation similar to that on frons and with fine median carina in posterior part. Pronotum about 1.3 times as wide as long; base shallowly bisinuate or obtuse-angularly produced in middle; apical edge weakly raised, produced and shallowly emarginated over head. Sides moderately convex, rounded, with slight, ill-defined apical constriction separating very short ring. Disc moderately or rather strongly and evenly convex, rather steeply sloping at base, with entire median sulcus shallow in middle and with dense medium-sized round punctures. Lateral tubercles large, sharp, conical. Elytra about 1.5 times as wide as pronotum, as long as wide, with strongly convex humeral prominences; in apical half strongly narrowing toward

widely separately rounded apices. Preapical prominences obsolete. Disc moderately convex, slightly depressed behind scutellum and obsoletely flattened along suture. Striae large and very deep, punctures separated by about own diameter. Sutural interval flat, others strongly convex; sutural and even-numbered intervals about $1.5 \times$ as wide as, odd-numbered intervals slightly wider than striae. Wide and nearly flat sutural interval with two sparse rows of small granules, other intervals with one or two confused rows of medium-sized regularly spaced granules and with smaller granules along sides. Base of 2nd interval noticeably widened. Keels in front of forecoxae well developed, reaching postocular lobes at very obtuse angle. All femora with well-developed spiniform denticle. Hind femur 1.3 times as wide as mid-femur. Foretibia outcurved and weakly widened apically, without mucro. Mid-tibia weakly widening at apex, with small sharp mucro pointed almost inward. Hind tibia with inconspicuous mucro and short apical comb of setae. Tarsi long; 1st tarsomere of foreleg almost twice as long as wide, 2nd about 1.5 times as long as wide, 3rd very wide, as long as, and slightly more than twice as wide as 2nd, with lobes as wide as 2nd tarsomere. Penis short, length about $1/4$ length of body, moderately curved dorsoventrally, evenly convexly narrowing toward apex, with medial part of dorsal side membranous.

MEASUREMENTS: Body length (excl. rostrum) 2.0–2.5 mm.

COLOR: Body black; antennae, tarsi and bases of tibiae dark brown. Disc of pronotum with inconspicuous yellowish narrow setae in the punctures and with lanceolate scales along base, midline, and sides. Elytra with well-defined white scutellar spot and white and dark brown linear or narrow parallel-sided scales on granules, white scales usually forming clearly detectable dotted lines on intervals.

BIOLOGICAL NOTES: The holotype is stated to have been collected from *Polygonum thunbergii*. In Korea, the species is common in the forests along roads in wet places and is swept from creeping plants of *P. thunbergii* or *P. perfoliatum* (Korotyaev, 2006).

DISTRIBUTION: Korea, Russia (Primorskii Terr.). This species has the northernmost range in the genus, being commonest apparently throughout the entire Korean Peninsula and reaching the south of the Russian Far East, while material from China is poor.

KOREA: Whole country including Is. Jeju.

KOREAN RECORDS: Korotyaev, 1997b: 287 (Pyeongyang); Hong et al., 1999a: 58 (North, Central, South, Jeju); Hong et al., 2000: 115; Korotyaev and Hong, 2004: 145; Korotyaev, 2006: 111.

SPECIMEN EXAMINED: GG: 2 ♀♀ (Seoul Hwikyeongdong: 19.v.1969); 1 ex. (Mt. Dobongsan: 11.viii.1977); 1 ♀ (Suwon: 2.vii.1983); 1 ♂, 1 ♀ (Suwon: 19.viii.1983); 1 ♂ (Suwon: 27.ix.1983); 1 ♂ (Seongnam: 19.v.1987); 1 ♂, 4 ♀♀ (Suwon: 21.v.1997). GW: 1 ex. (Mt. Odaesan: 30.vii.1976); 2 exs. (Mt. Seolaksan: 9.viii.1976); 2 exs. (Mt. Chiaksan: 22.v.1982); 2 ♂♂, 1 ♀ (Goseong: 25.v.1993). JB: 1 ♂ (Iri: 10.viii.1970); 1 ex. (Mt. Naejangsan: 14.viii.1981). JN: 1 ♀ (Mt. Jirisan: 21.vii.1981); 1 ex. (Mt. Mudeungsan: 26.vii.1981); 1 ♂, 1 ♀ (Gwangyang, Mt. Baekunsan: 22.vi.1988). GB: 1 ex. (Mt. Palgongsan: 18.vi.1978); 1 ex. (Gyeongsan Hayang: 5.vii.1980); 2 exs. (Daegu: 28.vi.1980); 1 ex. (Daegu Ansim: 29.v.1980); 6 exs. (Mt. Palgongsan: 28.v.1985); 1 ex. (Mt. Palgongsan: 2.vi.1985); 1 ex. (Mt. Palgongsan: 6.vi.1985); 1 ex. (Mt. Palgongsan: 18.vi.1985). GN: 4 exs. (Mt. Geumjeongsan: 1.vi.1980); 1 ex. (Mt. Sinbulsan: 28.v.1980); 1 ex. (Mt. Wonhyosan: 30.v.1980); 1 ex. (Mt. Jirisan: 14.vii.1981); 1 ex. (Yangsan: 16.v.1989); 1 ♂, 4 ♀♀ (Jinju: 1.vi.1993); 1 ♂ (Samcheonpo, Mt. Waryongsan: 5.vi.1993); 1 ♂ (Jinju: 16.vi.1993); 1 ♂, 1 ♀ (Jinju: 19.vi.1993); 3 ♂♂, 1 ♀ (Jinju: 14.vii.1993); 1 ♂, 2 ♀♀ (Goseong: 5.vi.1997); 2 ♂♂ (Jinju: 26.vi.1997); 1 ♀ (Geojedo: 4.vi.1997); 3 ♀♀ (Jinju: 5.vi.1997). JJ: 1 ex. (Jungmun: 11.vii.1984).

41. *Rhinoncomimus (Homorosomulus) rhytidosomoides* (Wagner, 1944)
(Pls. 4-41, 17-41)

Gol-gip-eun-job-ssal-ba-gu-mi (골깊은검좁쌀바구미)

Homorosoma rhytidosomoides Wagner, 1944b: 100.

TL: China- Fukien.

Rostrum 2.65–2.70 times as long as wide, 0.9 times as long as pronotum. Antennae in male attached at 0.33, in female at 0.38 length of rostrum from apex. Funicle 7-segmented; 7th segment about as long as wide. Club ovate, widely rounded at base and not pedunculate. Frons subparallel-sided in anterior third and moderately widening posteriorly, moderately depressed across entire width so that the inner eye orbits are steep. Punctures on frons large, superficial, with margins partly obliterated especially in posterior half of frons; punctures on vertex smaller, round, more distinct. Eyes medium-sized, moderately convex, rounded, with angular anteroventral area. Pronotum about 1.3 times as wide as long; base weakly produced posteriorly in middle; apical edge slightly raised and shallowly emarginate over head. Sides weakly rounded, slightly diverging from base and moderately converging to well-pronounced apical constriction separating short ring. Median sulcus narrow, shallow in basal half and obsolete in apical half. Lateral tubercles large, conical. Elytra nearly as wide as long, rounded-triangular, with obliquely rounded, moderately prominent humeri and smoothly rounded sides, lacking preapical prominences. Striae deep and wide, 1st stria weakly incurved at base, 2nd nearly straight. Intervals about as wide as striae, each with one usually regular row of pointed medium-sized granules. Granules on sutural interval smaller than on rest of disc but distinct along entire length. Hind femur 1.25 times as wide as mid-femur. Foretibia weakly widened at apex. Apical comb extending on outer surface for distance approximately equal to apical width of tibia. Hind tibia with spines of apical comb forming angular prominence closer to proximal end of comb. In male, mucro on foretibia concealed by hairs; on mid-tibia, clearly visible; on hind tibia, shorter but clearly visible. Tarsi rather narrow; 1st tarsomere almost twice as long as wide, in mid- and hind tarsi compressed, with height slightly exceeding width; 2nd about 1.1 times as long as wide; 3rd as long, and slightly less than twice as wide as 2nd. Aedeagus weakly sclerotized, very similar to that of *Rh. latipes*, but with slightly more narrowly attenuate apex.

MEASUREMENTS: Body length (excl. rostrum) 2.0–2.6 mm.

COLOR: Body black; antennal funicle, club and tarsi very dark brown. Inconspicuous, fine and sparse. Pronotum with sparse very narrow parallel-sided white scales on sides and in median sulcus, with few narrow-lanceolate scales in prescutellar fovea. Scutellar spot ill-defined. Granules on elytral intervals bearing dark brown or white reclinate linear scales forming no distinct pattern.

BIOLOGICAL NOTES: This species sometimes co-occurs with *Rh. latipes* in Korea (see labels recorded in Hong et al., 2000) but Korotyaev (2006) have never taken specimens of the two species from one plant. At least three specimens have been swept in roadside ditches from small, non-creeping plants of *Polygonum thunbergii* or *P. perfoliatum*, whereas most samples of *Rh. latipes* were swept from plants creeping over bushes. It is likely that *Rh. rhytidosomoides* and *Rh. latipes* are associated with different species of *Polygonum* (Korotyaev, 2006).

DISTRIBUTION: Korea, China (Fujian), Taiwan. *Rh. rhytidosomoides* has a more southern distribution than *Rh. latipes*; it is not recorded from Russia and North Korea, but occurs in Taiwan, where *Rh. latipes* is not found, and in SE China, where it is apparently more common than *Rh. latipes*.

(Korotyaev, 2006).

KOREA: Central and South.

KOREAN RECORDS: Korotyaev, 1997b: 287 (GW- Mt. Geumgangsan Onjeongri); Hong et al., 1999a: 59 (Central, South); Hong et al., 2000: 115; Korotyaev and Hong, 2004: 145; Korotyaev, 2006: 109.

SPECIMEN EXAMINED: GG: 1♂ (Mt. Surisan: 19.v.1997). GW: 1 ex. (Mt. Odaesan: 1.viii.1976); 2 exs. (Mt. Seolaksan: 9.viii.1976); 1♂ (Hoengseong: 24.v.1993); 1♀ (Hongcheon: 11.vi.1997). CB: 1♂ (Okcheon: 22.v.1993). CN: 2 exs. (Mt. Gyeryongsan: 22.vi.1980). JB: 4♂♂, 5♀♀ (Mt. Naejangsan: 10.vi.1975). JN: 3♀♀ (Mt. Jirisan Piagol: 2.viii.1996). GB: 1 ex. (Mt. Palgongsan: 29.vi.1979); 1 ex. (Mt. Palgongsan: 23.v.1981); 2 exs. (Mt. Palgongsan: 28.v.1985); 1 ex. (Mt. Palgongsan: 6.vi.1985); 1 ex. (Mt. Palgongsan: 20.vi.1985); 1♂, 2♀♀ (Andong: 28.v.1997). GN: 2 exs. (Mt. Geumjeongsan: 1.vi.1980).

Tribe Amalini Wagner, 1936

Genus *Amalus* Schoenherr, 1825: 583.

Gu-buk-gu-jop-ssal-ba-gu-mi-sok (구북구좁쌀바구미속)

SYNONYM: *Leptocaryurgus* Gistel, 1856: 371.

Rostrum, prothorax and at least basal third of elytra piceous. Legs honey-red. Antennae and apex of tarsi red-brown. Dorsal investiture of sparse very small hair-like brownish scales. A post-scutellar part and an apical part appeared more or less elongate sutural spot of small whitish recumbent scales. Ventral surface clothed with sparse lanceolate white scales. Body oval. Antennal funicle 6-segmented. Anterior margin of pronotum not raised. Rostrum narrower than fore femora. Prosternum in front of fore coxae short, without trace of keels. Insertions of fore coxae separated from anterior margin of prothorax by a short distance, not exceeding the width of antennal club, distance between fore coxae not greater than the width of antennal funicle. Femora unarmed. Claws toothed. Larvae feed on Polygonaceae (*Polygonum*) (Egorov et al., 1996).

Type species: *Curculio scortillum* Herbst, 1795.

SPECIES 1.

DISTRIBUTION: Transpalearctic, N. America (introduced).

42. *Amalus scortillum* (Herbst, 1795) (Pls. 4-42, 17-42)

Gu-buk-gu-job-ssal-ba-gu-mi (구북구좁쌀바구미)

Curculio scortillum Herbst, 1795: 418.

TL: Europe.

Curculio agricola Paykull, 1800: 260.

Curculio brunneus Marsham, 1802: 284.

Curculio inflexus Marsham, 1802: 253.
Rhynchaenus rubicundus Panzer, 1809: 12.
Rhynchaenus dumetorum Panzer, 1809: 12.
Amalus castaneus Stephens, 1831: 54.
Anthonomus ribinsoni Blatchley, 1916 in Blatchley and Leng, 1916: 312.

Rostrum in male 5 times as long as wide, 1.12 times as long as pronotum, about 0.7 times as wide as fore femur and 1.5 times as wide as fore tibia, slightly curved, shining, with sparse small punctures. Antennal funicle 6-segmented. Eyes moderately convex, their longitudinal diameter 1.5 times width of frons. Pronotum without traces of tubercles on weakly rounded sides; its base deeply bisinuate, anterior margin not raised, apical constriction on sides shallow, postocular lobes wanting; disk moderately convex, shining, with coarse deep punctures. Scutellum small, inconspicuous. Elytra with deep striae and strongly convex, finely punctate and covered with finest folds intervals; length of elytra 1.2 times their width, sides poorly rounded. Prosternum before fore coxae short, without traces of keels. Distance between fore coxae equal to width of antennal funicle. Femora unarmed, hind femur not wider than middle one. In male, tibiae finely mucronate. Third tarsal segment much wider than 2nd, claws with large tooth in basal half.

MEASUREMENTS: Body length (excl. rostrum) 1.8 mm.

COLOR: Elytra cherry-red, rarely black; pubescence of dorsal side sparse, intervals of elytra with 1–2 rows of short hair-like scales, sutural interval densely covered with white broad-lanceolate scales. Legs pale reddish brown.

BIOLOGICAL NOTES: Apparently, monophagous on *Polygonum aviculare* L. (Kokorotya and Hong, 2004).

DISTRIBUTION: Korea, Russia (European part, Siberia, Far East), Mongolia, Kirgizstan, Kazakhstan, Tajikistan, Turkmenistan, Turkey, Uzbekistan, Tuva, Armenia, Austria, Azerbaijan, Bosnia-Herzegovina, Belgium, Bulgaria, Bielorusia, Switzerland, Czech Republic, Germany, Dagestan, Denmark, Estonia, Spain, Finland, France, England, Greece, Croatia, Hungary, Ireland, Italy, Latvia, Moldavia, Netherlands, Norway, Poland, Romania, European Russia, Sweden, Slovakia, Ukraine, Yugoslavia, Canada, USA (introduced).

KOREA: Central (GG).

KOREAN RECORDS: Hong et al., 2000: 91 (Central); Korotyaev and Hong, 2004: 145.

SPECIMEN EXAMINED: GG: 1♂ (Suwon: 1.ix.1997).

Tribe Scleropterini Schultze, 1902

Genus *Homorosoma* Frivaldszky, 1894: 87.

Deul-jop-ssal-ba-gu-mi-sok (들좁쌀바구미속)

Body less convex. Rostrum much longer than 4 times its width, not or scarcely broader than fore femora. Antennal funicle 7-segmented. Elytra heart-shaped, with rounded sides, their maximum width in the basal quarter. Humeral calli rather strong. Legs elongate. Femora with a sharp acute

tooth. Integument for the most part piceous; elytra with sparse investiture, only dense white post-scutellar spot. On Polygonaceae (Egorov et al., 1996).

Type species: *Ceuthorhynchos speiseri* Frivaldszky, 1894=*Ceuthorhynchus validirostris* Gyllenhal, 1837.

SPECIES 8 (1 in Korea), (3 in Russian Far East).

DISTRIBUTION: Holarctic.

43. *Homorosoma asperum* (Roelofs, 1875) (Pls. 4-43, 17-43)

Deul-job-ssal-ba-gu-mi (들좁쌀바구미)

Ceutorhynchus asper Roelofs, 1875: 177.

TL: Japan.

Body less convex. Rostrum more than 4 times as long as wide, a little broadened toward anterior part and not broader than fore femora. Antennal funicle 7-segmented. Elytra heart-shaped, with rounded sides, their maximum width in the basal quarter. Humeral calli rather strong. Legs elongate. Femora with a sharp acute tooth.

MEASUREMENTS: Body length (excl. rostrum) 2.0–3.0 mm.

COLOR: Integument for the most part piceous. Elytra with sparse investiture, only behind scutellum formed scutellar spot which are densely covered with white scales.

BIOLOGICAL NOTES: In South Korea, common on *Polygonum* sp. along temporary and lasting waterbeds, at roadsides (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima), China (Guangdong, Fujian, Guangzhou), Russia (Primorskii Terr., Amur Prov.).

KOREA: Central, South and Is. Jeju do.

KOREAN RECORDS: Haku, 1936: 122 (Daegu); Kôno and Kim, 1937: 29; Morimoto, 1984: 316; Kwon and Lee, 1986: 83 (Central, South); ESK/KSAE, 1994: 208; Hong et al., 1999a: 60 (Central, South); Hong et al., 2000: 121; Korotyaev and Hong, 2004: 145. Misidentification and re-citation (with *Homorosoma chinense* Wagner): Morimoto, 1984: 316; Kwon and Lee, 1986: 83 (South); Morimoto and Lee, 1992: 13 (JJ- Oradong); ESK/KSAE, 1994: 208; Paik et al., 1995: 431 (JJ); Hong et al., 1999a: 60 (Central, South, Jejudo); Hong et al., 2000: 121.

SPECIMEN EXAMINED: GG: 1 ♂ (Suwon: 27.iv.1983); 1 ♂ (Mt. Gwanggyosan: 12.v.1992). GW: 2 exs. (Mt. Seolaksan: 9.vii.1976); 1 ex. (Mt. Obongsan: 12.viii.1976); 1 ♂, 1 ♀ (Goseong, Tp. Geonbongsa: 26.v.1993); 1 ♂ (Hongcheon: 11.vi.1997). CB: 1 ex. (Mt. Sobaeksan: 26.vii.1976); 1 ex. (Mt. Sobaeksan: 28.xi.1976); 1 ex. (Mt. Wolaksan: 8.viii.1978). JB: 2 ♀ ♀ (Mt. Naejangsan: 10.vi.1975); 1 ex. (Mt. Maisan: 11.v.1980). JN: 1 ex. (Yeosu: 15.ix.1974). GB: 2 exs. (Daegu: 25.viii.1971); 1 ex. (Daegu Ansim: 25.viii.1971); 1 ex. (Kyeongbuk Univ. Campus: early.vii.1976); 4 exs. (Mt. Hwanghaksan: 24.vii.1978); 1 ex. (Mt. Palgongsan: 20.vii.1980); 1 ex. (Daegu: 2.x.1982); 3 exs. (Mt. Palgongsan: 28.v.1985); 2 exs. (Mt. Palgongsan: 29.v.1985); 1 ex. (Mt. Palgongsan: 6.vi.1985); 1 ex. (Mt. Palgongsan: 6.ix.1985); 1 ♂ (Andong: 28.v.1993); 1 ♀ (Andong Univ. Campus: 22.v.1996). GN: 5 exs. (Mt. Geumjeongsan: 1.vi.1980); 1 ♂ (Changryeong: 19.vi.1996).

Genus *Rutidosoma* Stephens, 1831: 45.

Dung-geun-eo-kkae-jop-ssal-ba-gu-mi-sok (둥근어깨좁쌀바구미속)

SYNONYM: *Oligodites* Gistel, 1856: 370.

Antennal funicle 6-segmented. Pronotum without lateral tubercles and discal prominences. Scutellum small, distinct. Elytra strongly convex from base, rounded-triangular, with distinct humeral prominences. Alternating intervals of elytra not differing in their sculpture, even-numbered ones without swellings. Mesosternum shallowly depressed, metasternum not depressed. Femora with well-developed sharp tooth. Male hind tibia sometimes with large lobiform prominence (uncus) near apex. On Salicaceae (*Populus alba* L. and *P. tremula* L.) (Egorov et al., 1996).

Type species: *Curculio globulus* Herbst, 1795.

SPECIES 10 (1 in Korea), (1 in Russian Far East).

DISTRIBUTION: Korea, Japan, Mongolia, Siberia, Kazakhstan, Europe, U.S.A., Canada, Greenland, Alaska.

REFERENCE: Korotyaev (1999: subgenera).

Subgenus *Heorutidosoma* Korotyaev and Hong, 2004: 145.

Rostrum as in *Scleropteridius* Otto; prothorax with well-developed lateral tubercles and very coarse sculpture. Elytra subglobose, with distinct though beveled humeral prominences and sharply outlined, widening posteriorly scutellar spot; intervals shining, coarsely granulate. Legs long, as in *Scleropteridius*, but fore tibia in male lacking mucro. 1st and 2nd ventrites in male deeply depressed along midline, sides of depression densely squamose. Anal ventrite with bidentate lamelliform projection in middle third of length. Pygidium moderately transverse. Body black, antennae dark brown, bases of femora, tibiae, and tarsi reddish brown. Granules on elytral intervals bearing elongate brown scales, white scales present at base of 6th interval and forming ill-defined transverse band behind middle of elytra. Aedeagus with blunted apex, lacking setae or with a few ones.

Type species: *Rutidosoma koreanum* Korotyaev and Hong, 2004.

44. *Rutidosoma (Heorutidosoma) koreanum* Korotyaev and Hong, 2004 (Pls. 4-44, 17-44)

Dung-geun-eo-kkae-jop-ssal-ba-gu-mi (둥근어깨좁쌀바구미)

Rutidosoma (Heorutidosoma) koreanum Korotyaev and Hong, 2004: 146.

TL: Korea.

Body oval shaped. Head closely punctured, covered with hairy white scales; frons between eyes weakly concave, broader than the base of rostrum; eyes weakly projected; rostrum a little longer

than pronotum, apex of rostrum a little broad; antenna inserted into before the middle part of rostrum; scape not reached to the front border of eye, a little longer than the basal 3 funicular segments taken together; funicle 6-segments, 1st segment with robust, a little longer than 2nd segment, 2nd segment shorter than 1st, 3rd segment shorter than 2nd, 4th to 6th segments same in length, each segment with several long hairs; club spindle shape, 4 segments, basal segment conical, 2nd segment broader and longer than the next two segments taken together. Pronotum wider than long, rounded in basal part, middle part the broadest, narrowed to anterior, median disc convex, lateral sides with pyramidal projections. Scutellum very small, black. Elytra oval form, the 8th interval not broader than the others at the base, humeral tubercles absent; scutellar patch densely covered with ovate yellowish-brown scales; punctured striae distinct with a row of minute hairy brown scales; intervals with a row of setigerous obtuse projections, each projection with one brown scale, subapical swelling absent. Underside of body concave, covered with ovate pale-brown scales; pectoral canal deep, extend into metasternum without keel; median portion of 1st and 2nd abdominal segments strongly depressed, 1st segment 2 times as long as 2nd segment, 5th segment with projections on the middle. Femur subparallel-sided, with small spine; tibia slender, basal part of tibia some curved; 1st tarsal segment longer than 2nd; claws appendiculate, inner branches separate.

Female: Median portion of 1st and 2nd abdominal segments not depressed, 5th abdominal segment without any projection and inner side of apex of tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum) 2.1–2.3 mm.

COLOR: Body black.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: Central and South.

KOREAN RECORDS: Korotyaev and Hong, 2004: 146; Misidentified and recited with *Rutidosoma weisei* (Faust): Hong et al., 1999a: 61 (Central, South); Hong et al., 2000: 122.

SPECIMEN EXAMINED: GW: 1♂ (Mt. Seolaksan: 10.viii.1976, holotype); 2♀♀ (Pyeongchang, Mt. Gyebangsan: 17.vii.1999). JN: 1♀ (Mt. Jirisan, Imgeolryong: 15.vi.1997). GN: 2♀♀ (Mt. Jirisan: 26.v.1977); 1♀ (Mt. Jirisan: 29.v.1977).

Genus *Scleropteroides* Colonnelli, 1979: 214.

Na-mu-ttal-gi-jop-ssal-ba-gu-mi-sok (나무팔기좁쌀바구미속)

Rostrum about as wide as fore femur, densely rugosely punctate. Antennal funicle 6-segmented. Vertex clearly carinate. Punctures of prothorax large, extremely coarse. Elytra convex, heart-shaped, humeral tubercles prominent, intervals very convex, with strong acute tubercles, the apexes of which bear an elongate elevated claviform yellowish scale, striae catenulate, very deep, at least as wide as intervals. Rostral sulcus on meso- and metasternum deep, with steep margins. On Rosaceae (*Rubus*) (Hong et al., 1999a).

Type species: *Ceuthorrhynchidius hypocrita* Hustache, 1916.

SPECIES 1.

DISTRIBUTION: Korea, Japan.

45. *Scleropteroides hypocrita* (Hustache, 1916) (Pls. 4-45, 17-45)

Na-mu-ttal-gi-job-ssal-ba-gu-mi (나무딸기좁쌀바구미)

Ceuthorrhynchidius hypocrita Hustache, 1916: 126.

TL: Japan.

Rhytidosomus (Rhytidosomus) holdhausi Wagner, 1944a: 59.

TL: Japan.

Rhytidosomus insulare Voss, 1971: 54.

Body oval form. Head coarsely reticulated punctures, covered with reddish-black and pale brown scales, posterior part of head with strong median keel. Frons between eyes flat, broader than the base of rostrum. Eyes weakly projected. Rostrum slender, longer than pronotum, apex of rostrum a little broad. Rostrum about as wide as fore femur, densely rugosely punctate. Antenna inserted into before the middle part of rostrum. Scape not extends to the front part of eye, more longer than the basal 3 segments of funicle taken together. Funicle 6-segments, the 1st segment of funicle robust, a little longer than the 2nd segment, the 2nd segment a little longer than the 3rd segment, the 4th–6th segments same length, each segment with several long hairs. Club spindle shape, 4 segments, basal segment conical, 2nd segment broader and longer than the next two segments taken together. Pronotum wider than long, the broadest behind middle part, gradually narrowed to anterior part, with strongly reticulated punctures and without any projection. Scutellum small, black, covered with yellowish-brown scales. Elytra egg form, without scutellar spot. Punctured striae distinctly deep. Odd- and even-numbered intervals of elytra not conspicuously differing, with one row of sharp granules bearing long, reclinate, oblong-oval yellowish scales. Underside of body convex, covered with pale-brown scales. Rostral sulcus on meso- and metasternum deep, with steep margins. Abdomen covered with scales and punctures, the 5th segment of abdomen depressed like triangular form in middle part. Femur elongate, gradually thickened from the base to a little beyond the middle, with a denticular angulation that covered with scales at the base of emargination. Tibia slender, covered with scales gradually widened from the base to the apex in lateral-outer margins. Claws appendiculate.

Female: Abdomen more convex and inner side of apex of tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum) 2.3–2.9 mm.

COLOR: Derm reddish-black.

BIOLOGICAL NOTES: In Korea, beetles were collected on *Rubus matsumuranus* Bunge var. *concolor* Nakane (Hong et al., 1999a).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima).

KOREA: Central, South and Is. Ulreungdo.

KOREAN RECORDS: Kim et al., 1991: 183 (Mt. Sokrisan); Hong et al., 1999a: 63 (Central, South, Ulreungdo); Hong et al., 2000: 123; Korotyaev and Hong, 2004: 146.

SPECIMEN EXAMINED: GG: 2 exs. (Mt. Soyosan: 15.v.1982); 1 ex. (Mt. Myeongseongsan: 16.v.1982); 1 ♂ (Suwon: 24.v.1984); 11 ♂♂, 12 ♀♀ (Mt. Yeogisan: 13.v.1991); 1 ♂ (Mt. Yeogisan: 15.v.1991); 1 ♂ (Mt. Yeogisan: 7.v.1994); 1 ♂ (Mt. Yeogisan: 15.v.1994); 1 ♀ (Mt. Gwanggyosan: 26.iv.1996); 1 ♂ (Mt. Yeogisan: 11.iv.1997); 2 ♀♀ (Mt. Yeogisan: 15.iv.1997); 33 ♂♂, 21 ♀♀ (Mt. Yeogisan: 16.v.1997); 1 ♂ (Suwon: 21.v.1997); 1 ♀ (Yongin: 24.v.1997); 12 ♂♂, 7 ♀♀ (Mt. Yeogisan: 26.v.1997). GW: 2 exs. (Mt. Chiaksan: 13.vi.1976); 1 ex. (Mt. Odaesan: 30.vii.1976); 1 ex. (Mt. Odaesan: 2.viii.1976); 1 ex. (Mt.

Seolaksan: 9.viii.1976); 3 exs. (Mt. Chiaksan: 21.v.1979); 1 ex. (Mt. Chiaksan: 22.v.1982); 1 ♂ (Hoengseong: 24.v.1993); 1 ♂, 1 ♀ (Chuncheon: 25.v.1993); 2 ♂♂ (Hwacheon: 25.v.1993); 1 ♂, 3 ♀♀ (Mt. Seolaksan, Tp. Baekdamsa: 25.v.1993); 2 ♂♂ (Goseong: 25.v.1993); 1 ♀ (Yanggu: 26.v.1993); 1 ♂, 1 ♀ (Goseong: 26.v.1993); 1 ♀ (Jinbu: 27.v.1993); 2 ♂♂, 1 ♀ (Inje: 27.v.1993); 1 ♂, 1 ♀ (Taebaek: 28.v.1993). CB: 4 exs. (Mt. Sobaeksan: 15.v.1981); 2 exs. (Mt. Sobaeksan: 10.v.1985); 1 ♂ (Goesan: 23.v.1993); 1 ♂ (Jungwon: 8.v.1997); 5 ♂♂, 9 ♀♀ (Danyang: 10.v.1997). CN: 1 ♂ (Geumsan: 22.v.1993). JB: 4 exs. (Mt. Maisan: 11.v.1980); 1 ex. (Mt. Maisan: 11.v.1984). JN: 1 ♀ (Mt. Jirisan: 4.viii.1994); 1 ♂ (Mt. Jirisan Nogodan: 3.viii.1996). GB: 1 ♀ (Is. Ulreungdo: 1.viii.1977); 3 exs. (Mt. Juwangsan: 5.vi.1979); 3 exs. (Mt. Sambangsan: 21.v.1980); 2 exs. (Mt. Palgongsan: 23.v.1981); 3 exs. (Mt. Palgongsan: 26.v.1985); 2 exs. (Mt. Palgongsan: 28.v.1985); 4 exs. (Mt. Palgongsan: 1.vi.1985); 1 ex. (Mt. Palgongsan: 18.vi.1985); 1 ex. (Mt. Biseulsan: 28.vi.1985); 2 ♂♂, 3 ♀♀ (Bonghwa: 28.v.1993); 2 ♀♀ (Is. Ulreungdo: 22.v.1995); 7 ♂♂, 3 ♀♀ (Mt. Sobaeksan Huibangsa: 9.v.1997). GN: 2 exs. (Mt. Jirisan: 27.v.1976); 3 exs. (Mt. Jirisan: 28.v.1976); 3 exs. (Mt. Jirisan: 26.v.1977); 1 ex. (Mt. Gajisan: 21.v.1980); 1 ex. (Mt. Geumjeongsan: 1.vi.1980); 1 ex. (Mt. Yeongchuisan: 11.v.1981); 1 ♀ (Goseong Munsuam: 1.vi.1993); 1 ♂ (Jinju: 19.vi.1993); 1 ♀ (Jinju: 23.vi.1993); 1 ♂ (Geojeodo: 4.vi.1997).

Genus *Sclropterus* Schoenherr, 1825: 585.

Jang-mi-jop-ssal-ba-gu-mi-sok (장미줍쌀바구미속)

Rostrum wider than fore femur. Antennal funicle 6-segmented. Scutellum wanting. Elytra broadly oval, without traces of strongly oblique humeral prominences, with coarse deep striae and large sharp tubercles on convex. Depression on meso- and metasternum deep, with steep walls. Legs long and slender, femora unarmed.

Type species: *Cryptorhynchus serratus* Germar, 1824.

SPECIES 6 species (1 subspecies). (1 species in Korea), (1 species in Russian Far East).

DISTRIBUTION: Korea, China, Siberia, Russian Far East, Kazakhstan, Europe.

REMARKS: On Rosaceae (Korotyaev, 1980).

46. *Sclropterus rubi* Korotyaev, 1980 (Pls. 4-46, 17-46)

Jang-mi-jop-ssal-ba-gu-mi (장미줍쌀바구미)

Sclropterus rubi Korotyaev, 1980: 122.

TL: Primorskii Terr., Sakhalin.

Rostrum wider than fore femur. Antennal funicle 6-segmented. Scutellum wanting. Elytra broadly oval, without traces of strongly oblique humeral prominences, with coarse deep striae and large sharp tubercles on convex intervals. 3rd and 5th intervals at least with small elongate swellings behind middle, sometimes height of tubercle on 3rd interval no less than apical width of rostrum. Depression on meso- and metasternum deep, with steep walls. Legs long and slender; femora

unarmed; hind tibia in male without lobiform extension on inner side near apex.

MEASUREMENTS: Body length (excl. rostrum) 2.2 mm.

COLOR: Blackish brown.

BIOLOGICAL NOTES: In Sakhalin, taken from *Rubus sachalinensis* Levl (Korotyaev, 1980).

DISTRIBUTION: Korea, South of the Russian Far East (Primorskii Terr., Sakhalin).

KOREA: North.

KOREAN RECORDS: Hong and Korotyaev, 2002: 160 (North); Korotyaev and Hong, 2004: 146.

SPECIMEN EXAMINED: RG: 1 ♂, 1 ♀ (Paekdu-san-milyong 1,500 m: 27.vi.1988, No. 1353, preserved in HNHM, Hungary).

Tribe Ceutorhynchini Gistel, 1848

Genus *Cardipennis* Korotyaev, 1980: 228.

Ga-seum-gol-jop-ssal-ba-gu-mi-sok (가슴골좁쌀바구미속)

Rostrum slender, more or less curved. Antennal funicle 7-segmented. Pronotum campaniform, strongly convex, with small sharp tubercles on convex sides, with narrow entire median sulcus, dense and rather coarse punctation. Base of pronotum in middle noticeably projecting posteriorly; apical constriction deep, anterior margin weakly raised, slightly emarginate medially, on sides finely serrate. Elytra rounded-triangular, about as long as wide, evenly convex, with wide striae and flat or weakly convex intervals, the latter densely finely punctate and covered with fine smooth granules. Legs long; femora more or less swollen, finely dentate; apical combs of tibiae extending on their outer margin less than for width of tibiae on apex. Tibiae in both sexes without mucro; claw with large tooth in basal half. Aedeagus with attenuate and truncate apex and widely sclerotized margins. Body black, antennae and legs reddish brown to dark brown. Elytra with white scutellar spot on 1st interval and groups of white scales at base of 2nd–6th intervals; disk with uniform dark brown small narrow scales, or mottled, with narrow brown or golden and oval white scales, forming more or less contrasting, wide, transverse band behind middle. Beetles are found on Cannabaceae (Egorov et al., 1996).

Type species: *Cidnorhinus objectus* Voss, 1967=*Ceutorhynchus rubripes* Hustache, 1916).

SPECIES 3 (2 in Korea), (3 in Russian Far East).

DISTRIBUTION: Korea, Japan, China, Russian Far East, Siberia.

Key to the species of genus *Cardipennis*

1. Elytra with broad transverse band after middle part and its band broadened toward anterior on lateral sides *C. sulcithorax*
– Elytra with white patch just after scutellum and with pale scales on ending part of 1st interval ...
..... *C. shaowuensis*

47. *Cardipennis shaowuensis* (Voss, 1958) (Pls. 4-47, 17-47)

Hwan-sam-deong-gul-job-ssal-ba-gu-mi (환삼덩굴좁쌀바구미)

Ceuthorrhynchus (*Ceuthorrhynchus*) *shaowuensis* Voss, 1958: 74.

TL: China- Shaowu.

Rostrum as long as pronotum, weakly and uniformly curved, fine and very densely punctured, slightly brighter at apex. Antennae attached in the middle of rostrum; scape not reached the base of rostrum; 1st funicular segment robust, 1.5 times as long as wide; 2nd segment as same length, but thinner; the following segments gradually diminishing in length, the last 2 segments almost as long as wide. Club rather robust, short, almost 1.5 times as long as wide. Frons as wide as rostrum at base. Eyes weakly convex. Punctuation of vertex rather fine and very dense. Pronotum campaniform, wider than long, strongly convex, shallow bulging in the middle of anterior margin, with narrow entire median sulcus, with small sharp lateral tubercles, dense and rather coarse punctuation. Scutellum small but clearly visible. Elytra broad-shouldered, almost a little wider than long, triangular heart-shaped, rounded off by the shoulders, narrowed toward apex. Striae strongly deepened. Intervals flat, slightly wider than striae, fine and very dense slightly rough punctured. Anterior part of prosternum with a rather deep depression for rostrum. Femora with fine tooth. Tibiae straight, and slightly widened to apex. Claws deeply divided.

MEASUREMENTS: Body length (excl. rostrum) 2.7–3.0 mm.

COLOR: Derm dark brown. Antennae, tibiae and tarsi brightened reddish. Pronotum covered more or less densely white scales on median sulcus and lateral tubercles. Elytra diffused white scales and with white scaly patch just behind scutellum and with pale scaly patch on ending part of 1st interval, with broad transverse band after middle part and its band broadened toward anterior on lateral sides. Underside closed with fairly yellowish scales exception of some densely scaly below prothorax.

BIOLOGICAL NOTES: Adults were collected from *Humulus japonicus* Sieb. et Zucc. in Korea (Hong et al., 1999b) and Japan (Morimoto and Lee, 1992).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), China (Fujian), South of the Russian Far East (Primorskii Terr.).

KOREA: Whole country including Is. Jejudo.

KOREAN RECORDS: Morimoto, 1984: 317; Kwon and Lee, 1986: 83 (Central, South, Jejudo); Morimoto and Lee, 1992: 12 (JJ- Oradong, Eorimok); Kim, 1993: 392 (JJ); Kim, 1994: 215 (Geumoyeoldo); ESK/KSAE, 1994: 208; Paik et al., 1995: 429 (JJ); Hong et al., 1999b: 175 (Central, South, Jejudo); Hong et al., 2000: 91; Korotyaev and Hong, 2004: 146.

SPECIMEN EXAMINED: GG: 1 ♂ (Seoul Hwigyeongdong: 19.v.1969); 1 ♀ (Anseong: 30.vii.1970); 1 ♂ (Mt. Yeogisan: 6.vii.1994); 1 ♂ (Goyang: 4.vii.1996); 1 ♂, 1 ♀ (Mt. Yeogisan: 16.v.1997); 1 ♂ (Ganghwa-do: 27.v.1997). GW: 1 ♀ (Mt. Chiaksan: 23.vi.1977); 1 ♂, 1 ♀ (Chuncheon: 25.v.1993); 1 ♂ (Goseong: 25.v.1993); 1 ♀ (Hwacheon: 12.vi.1996). CB: 1 ex. (Mt. Wolaksan: 8.viii.1978); 1 ♂ (Danyang: 7.vi.1979); 1 ♂, 2 ♀ ♀ (Okcheon: 22.v.1993); 1 ♀ (Goesan: 30.vi.1997). JB: 6 ♂ ♂, 2 ♀ ♀ (Mt. Naejangsan: 10.vi.1975). JN: 3 exs. (Yeosu: 15.ix.1974); 1 ex. (Jindo: 18.vii.1984); 1 ♂ (Mt. Baekunsan: 29.vi.1990). GB: 1 ex. (Mt. Juwangsan: 6.viii.1975); 1 ex. (Kyeongbuk Univ. Campus: 2.vii.1976); 3 exs. (Mt. Palgongsan: 18.vi.1978); 1 ex. (Mt. Hwanghaksan: 24.vii.1978); 1 ex. (Daegu Ansim: 23.v.1980); 5 exs. (Gyeongsan Hayang: 5.vii.1980); 1 ex. (Kyeongbuk Univ. Campus: 16.ix.1981); 1 ex. (Gyeongsan Hayang: 14.vii.

1984); 2 exs. (Mt. Palgongsan: 1.vi.1985); 1 ex. (Daegu: 22.iv.1989); 1 ex. (Mt. Byeongpungsan: 13.viii.1997); 1 ex. (Mt. Palgongsan: 29.vi.1979); 1 ex. (Mt. Palgongsan: 6.ix.1985); 1 ♂, 1 ♀ (Andong: 28.v.1993); 2 ♂♂ (Bonghwa: 28.v.1993); 1 ♂, 1 ♀ (Yeongcheon: 29.v.1993); 1 ♂ (Gimcheon: 2.vi.1997); 1 ♀ (Sangju: 13.viii.1997). GN: 1 ex. (Ulsan: 24.v.1980); 1 ex. (Masan: 7.viii.1982); 1 ♂ (Milyang: 30.v.1997); 1 ♂ (Geojedo: 4.vi.1997). JJ: 4 exs. (Seogwipo: 9.v.1974); 2 exs. (Hagwi: 11.v.1974); 2 exs. (Seogwipo: 20.vi.1976); 2 exs. (Jungmun: 12.viii.1984); 1 ♀ (Daho: 25.vii.1997); 1 ♂ (Aewol: 26.vii.1997).

48. *Cardipennis sulcithorax* (Hustache, 1916) (Pls. 4-48, 17-48)

Ga-seum-gol-job-ssal-ba-gu-mi (가슴골좁쌀바구미)

Ceuthorrhynchus sulcithorax Hustache, 1916: 135.

TL: Japan.

Body oval form. Head sparsely with truncated hairy brownish scales, reticulate punctuated, with a median keel to vertex; frons slightly concave, with ovate white scales in middle, broad and narrowing to the base of rostrum; rostrum slender, reaching the anterior margin of metasternum, sparsely clothed with truncated hairy brownish scales, parallel-sided, and weakly curved; antenna inserted into the basal 3/5 of rostrum; scape longer than basal 5 funicular segments taken together, not reached to the front border of eye, with brown seta at apex; funicle 7 segments, 1st funicular segment with robust, as long as 2nd, 3rd segment shorter than 2nd, the other segments shorter; club spindle shape. Pronotum sparsely clothed with truncated hairy brownish scales and with ovate white scales on median sulcus and lateral sides, lateral sides with small pyramidal projections, shorter than the broadest width, broadest the base, subapical constriction weak, anterior margin a little sinuate. Scutellum small, black. Elytra oval form, with ovate white scales on the base, scutellar patch, 1st interval, beyond middle part, lateral sides and subapical part of elytra, longer than wide, broadest the middle; punctured striae shallow; each interval flattened, much broader than striae, with two to four rows of truncated brown scales. Sternum and abdomen densely clothed with oval yellowish white scales; prosternum with bordering keels of prosternal canal, fore coxae separated narrower than the width of rostrum; 1st and 2nd abdominal segments slightly depressed on median portion, 5th abdominal segment depressed on median portion. Legs elongate; femora a little slender, clothed with hairy yellowish white scales and femur with small tooth which covered with oval yellowish white scales on slightly emarginated portion; tibiae scarcely curvate and a little dilated toward apex, clothed with hairy yellowish white scales, anterior margin of corbel fringed with brownish bristles, tibiae without mucro; claws appendiculate, inner branches separated each other.

Female: 1st and 2nd abdominal segments convex on median portion, 5th abdominal segment not depressed on median portion.

MEASUREMENTS: Body length (excl. rostrum) 2.5–2.8 mm.

COLOR: Derm black, antennae and tibia brown.

BIOLOGICAL NOTES: Adults were collected commonly on *Humulus japonicus* in Korea (Hong et al., 1999b).

DISTRIBUTION: Korea, Japan (Honshu), China, South of the Russian Far East (Amurskaya Prov., Khabarovskii and Primorskii Terr.).

KOREA: Whole country including Is. Jeju.

KOREAN RECORDS: Hong et al., 1999b: 175 (Central, South, Jeju); Hong et al., 2000: 92; Korotyaev and Hong, 2004: 147; Legalov, 2009e: 199 (North).

SPECIMEN EXAMINED: GG: 1 ♀ (Hwaseong: 22.vii.1988); 1 ♂ (Yongin: 20.ix.1988); 1 ♂ (Mt. Gwanggyosan: 26.v.1990); 1 ♂ (Mt. Yeogisan: 8.vi.1993); 3 ♂♂, 3 ♀♀ (Suwon: 7.ii.1994); 2 ♂♂, 1 ♀ (Hwaseong: 1.vi.1994); 4 ♂♂, 10 ♀♀ (Mt. Gwanggyosan: 11.ix.1995); 1 ♂ (Hwaseong: 5.vi.1996); 1 ♀ (Seongnam: 12.vi.1996); 2 ♂♂, 2 ♀♀ (Yangju: 12.vi.1996); 1 ex. (Mt. Surisan: 2.vii.1996); 1 ♂ (Goyang: 4.vii.1996); 1 ♂, 1 ♀ (Mt. Yeogisan: 16.v.1997); 2 ♂♂ (Mt. Surisan: 19.v.1997); 1 ♂ (Hwaseong Sagang: 21.v.1997); 1 ♂ (Suwon: 21.v.1997); 1 ♂ (Mt. Yeogisan: 26.v.1997); 3 ♂♂, 4 ♀♀ (Ganghwado: 27.v.1997); 2 ♂♂, 1 ♀ (Suwon: 23.ix.1997). GW: 1 ♀ (Yeongwol: 24.v.1993); 1 ♂ (Hongcheon: 24.v.1993); 2 ♂♂, 1 ♀ (Hwachcheon: 24–25.v.1993); 23 ♂♂, 8 ♀♀ (Goseong: 25–26.v.1993); 1 ♀ (Myeongju: 27.v.1993); 5 ♂♂ (Gyeongpoda: 27.v.1993); 9 ♂♂, 4 ♀♀ (Donghae: 28.v.1993); 1 ♀ (Taebaek: 28.v.1993); 1 ♂, 1 ♀ (Samcheok: 28.v.1993); 13 ♂♂, 10 ♀♀ (Hongcheon: 11.vi.1997). CB 1 ex. (Mt. Wolaksan: 8.viii.1978); 3 exs. (Mt. Sobaeksan: 10.v.1985); 2 ♂♂, 1 ♀ (Okcheon: 22.v.1993); 1 ♂, 1 ♀ (Jecheon: 24.v.1993); 2 ♂♂, 6 ♀♀ (Chungju: 4.ix.1997). CN: 1 ex. (Mt. Deokseungsan: 23.v.1982); 1 ♀ (Asan: 16.ix.1992); 1 ♂, 1 ♀ (Geumsan: 22.v.1993); 1 ♂, 3 ♀♀ (Buyeo: 11.ix.1996); 1 ♀ (Gongju: 11.ix.1996); 1 ♂, 3 ♀♀ (Cheonan: 18.v.1997). JB: 1 ♂, 6 ♀♀ (Mt. Naejangsan: 10.vi.1975); 1 ♂, 3 ♀♀ (Jeongeub: 13.ix.1996); 4 ♂♂, 6 ♀♀ (Yeosan: 13.ix.1996). JN: 1 ♂ (Jangseong: 11.ix.1996); 1 ♀ (Hwasun: 13.ix.1996). GB: 1 ex. (Mt. Palgongsan: 24.viii.1980); 1 ex. (Yeongpung: 23.v.1984); 2 exs. (Mt. Palgongsan: 22.iv.1985); 5 exs. (Mt. Palgongsan: 28.v.1985); 1 ex. (Mt. Palgongsan: 1.vi.1985); 4 exs. (Mt. Palgongsan: 19.vi.1985); 1 ♀ (Andong: 16.v.1988); 6 exs. (Daegu: 22.iv.1989); 1 ♂, 1 ♀ (Yeongju: 30–31.viii.1992); 1 ♂, 3 ♀♀ (Andong: 28.v.1993); 1 ♂, 2 ♀♀ (Bonghwa: 28.v.1993); 1 ♂, 2 ♀♀ (Yeongcheon: 29.v.1993); 1 ♀ (Andong Univ. Campus: 30.viii.1996); 1 ♂ (Gimcheon: 6.v.1997); 2 ♂♂ (Andong: 28.v.1997); 1 ♀ (Mt. Sobaeksan Huibangsa: 10.v.1997). GN: 1 ♂ (Jinju: 14.vii.1993); 1 ♂ (Goseong: 15.vii.1993); 1 ♀ (Haman, Mt. Jebisan: 25.viii.1993); 1 ♂ (Goseong: 3.vi.1997); 1 ♂ (Jinju: 3.vi.1997). JJ: 1 ex. (Naepodong: 9.x.1990); 4 ♀♀ (Seongsan: 16.ix.1996); 1 ♂ (Gujwa: 19.ix.1996); 1 ♂, 1 ♀ (Daho: 25.viii.1997); 1 ♂ (Daejeong: 26.viii.1997).

Genus *Ceutorhynchus* Germar, 1824: 217.

Jop-ssal-ba-gu-mi-sok (좁쌀바구미속)

SYNONYM: *Ceuthorhynchidius* Jacquelin du Val, [1855]: 60; *Ceutorrhynchus* (Dionorenius) Reitter, 1916: 153; *Ceutorrhynchus* (*Marklissus*) Reitter, 1916: 153; *Neosirocalus* Neresheimer et Wagner, 1944 in Wagner, 1944c: 132; *Neosirocalus* (*Heterosirocalus*) Wagner, 1944c: 132; *Neosirocalus* (*Persirocalus*) Wagner, 1944c: 133; *Suboxyonyx* Hoffmann, 1956: 221; *Ceuthamiocolus* Colonnelli, 1983: 56.

Antennal funicle 7-segmented; if 6-segmented, then anterior margin of pronotum noticeably raised, sides usually with small but distinct tubercles, moderately rounded in basal half, disk with median sulcus, shining, more or less coarsely punctate; elytral striae rather wide, legs often pale. - Rostrum more slender than fore tibia, more or less curved. Anterior margin of prothorax more or less raised, disk with median furrow, sometimes smoothed or short. Elytra at least slightly longer than width, usually with distinct, seldom with almost or even completely smoothed humeral prominences and more or less distinct preapical prominences, not conspicuously granulate. Femora dentate or mutic; apical comb of fore tibia rarely noticeably beveled to their outer margin. Claws

simple or dentate. Middle and hind tibiae (rarely also fore tibia) in males with sharp mucro, in females middle tibia sometimes with small mucro (*C. querceti* Gyllenhal, *C. problematicus* Korotyaev, *C. dauricus* Korotyaev, *C. ussuricus* Korotyaev). Pubescence of dorsal side not forming distinct pattern, elytral suture sometimes with more or less dense white scales or small scutellar spot on 1st interval; sometimes body densely clothed with wide grayish scales or bare, shining, black or dark blue; if legs and apical third or half of elytra reddish brown, then length of body no more than 2.3 mm. On Brassicaceae, Linaceae, Resedaceae, Tropeolaceae (Colonnelli, 2004).

Type species: *Curculio assimilis* Paykull, 1792.

SPECIES About 370 species (12 species in Korea), (23 species in Russian Far East).

DISTRIBUTION: Holarctic and Afrotropical Regions, S. Africa, Northern Oriental Region (N. Vietnam).

Key to the subgenus of genus *Ceutorhynchus*

1. Dorsal side of body almost bare, weakly shining or matte; body black, sometimes dark blue. Elytral striae wide, with smooth margins, deep punctures in them separated by more or less long, nearly flat areas, situated below the level of the more or less convex intervals. The latter somewhat wider than striae, granulate, sometimes rugosely-granulate, posterior margins of points V-shaped raised. Dorsal margin of mesepimera usually keel-shaped convex, somewhat distant from base of elytra and pronotum. Pygidium of male usually deeply excavated apically, margins of the excavation set with yellow hairs. Aedeagus with widely sclerotized margins and truncate apex Subgenus *Heorhynchus*
- Dorsal side of body more or less densely pubescent. Partitions between punctures in elytral striae concave. Intervals of elytra noticeably wider than striae, without developed rugosely-granulate sculpture. Dorsal margin of mesepimera wide, not keel-shaped (keel-shaped in *C. scapularis* Gyllenhal). Pygidium not excavate apically, dorsal surface densely and uniformly covered with greyish elongate scales. Aedeagus of different structure Subgenus *Ceutorhynchus*

Subgenus *Ceutorhynchus* Germar, 1824: 217.

Key to the species of subgenus *Ceutorhynchus*

1. Elytra greenish or bluish metallic shining 2
- Elytra blackish metallic shining or dull 5
2. Pronotum with well-developed lateral stripes of white or yellowish lanceolate scales. Middle and hind femora finely dentate and mesepimera dense scaling. Claws simple *C. scapularis*
- Pronotum without stripes. Claws simple or appendiculate 3
3. Claws simple *C. filiae*
- Claws appendiculate 4
4. Shoulders rounded without any trace of humeral prominence *C. murzini*
- 8th interval convex, much broader than the others *C. nitidulus*
5. Antennal funicle 6 segments 6
- Antennal funicle 7 segments 9
6. Body reddish brown and legs brown. Basal and lateral margins of pronotum and 1st interval

- of elytra covered with densely whitish oval scales *C. sinicus*
 – Body black. Without ovals scales 7
 7. Antennal club elongated *C. asiaticus*
 – Antennal club spindle-shaped 8
 8. Leg reddish brown. Elytral intervals formed large whitish pattern at base of 1st and 2nd intervals by oblong feather-like scales, formed whitish longitudinal line on 1st interval by same scales, covered with 2–3 rows of thin and long dark hair-like scales on the rest intervals, scattered large whitish scales near exterior margin of elytra *C. albosuturalis*
 – Leg black. Elytral intervals 1.5–2 times wider than deepened striae, with irregularly 2 rows of short greenish yellow hairs *C. robustus*
 9. Elytra with lanceolate whitish scales in median line, a contrasting stripe of such scales along suture *C. ussuricus*
 – Elytra without above stripe along suture 10
 10. Body smaller, less than 2.2 mm. Body black, antennae, sometimes except the club, and usually legs dark brown, tarsi paler. Elytral interval with 2 irregular rows of setiform scales which are thinner *C. dauricus*
 – Body larger, more than 2.5 mm. All parts of body black. Elytral interval with 2 irregular rows of setiform scales which are thicker *C. obstructus*

49. *Ceutorhynchus (Ceutorhynchus) albosuturalis* (Roelofs, 1875)

(Pls. 4-49, 18-49)

Yu-chae-job-ssal-ba-gu-mi (유채좁쌀바구미)

Ceuthorhynchidius albosuturalis Roelofs, 1875: 178.

TL: Japan.

Body oval. Head densely punctate, with weakly longitudinal keel on vertex. Frons with scales toward posteriorly, the rest portion with scales toward vertex. Rostrum thin and long, weakly curved, a little longer than head and pronotum taken together and reached on anterior margin of metasternum. Antennae inserted before middle, scape reached on eye. Antennal funicle with 6-segmented, 1st segment large, as long as 2nd, 3rd segment a little shorter than 2nd. Antennal club with 3-segmented, 1st segment longer than the rest segments taken together. Pronotum a little broad, the broadest before middle, narrowed strongly anterior part, but weakly posterior part, strongly constricted at anterior margin. Posterior margin shallowly bisinuate. Disc with a pair of tubercles at lateral sides of middle, longitudinally strongly sulcate in the middle. Scutellum small, shining. Elytra broader than pronotum, the broadest behind shoulders. Elytral striae deep, with thin and long whitish feather-like scale on each puncture; intervals flat, formed large whitish pattern at base of 1st and 2nd intervals by oblong feather-like scales, formed whitish longitudinal line on 1st interval by same scales, covered with 2–3 rows of thin and long dark hair-like scales on the rest intervals, scattered large whitish scales near exterior margin of elytra. Underside of body covered densely with whitish feather-like scales.

MEASUREMENTS: Body length (excl. rostrum) 1.7–2.1 mm.

COLOR: Derm black or brownish black. Rostrum, antennae, legs and anterior margin of pronotum

tum brown. Underside, lateral margin of prothorax, scutellar spot and the first interval closely covered with white feathery scales, the rest part moderately covered with grey hairy scales.

BIOLOGICAL NOTES: This species is a pest of cruciferous plants (*Capsella bursa-pastoris*, *Nasturtium indicum*, *Cardamine flexuosa*, *Raphanus sativus*, *Brassica campestris*, *Brassica* spp.) in Japan (Morimoto, 1957); it is also commonest in Korea on various crucifers both in open and shaded, dry and wet habitats (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima), China, South of the Russian Far East (Amurskaya Prov., Khabarovsk and Primorskii Terr., Sakhalin).

KOREA: Whole country including Is. Ulreungdo and Is. Jejudo.

KOREAN RECORDS: Krivolutskaja et al., 1978: 90; Morimoto, 1984: 316; Morimoto and Lee, 1992: 12. (Gujwa); ESK/KSAE, 1994: 208; Paik et al., 1995: 429 (JJ); Hong et al., 1999b: 179 (Central, South, Ulreungdo, Jejudo); Hong et al., 2000: 94; Korotyaev and Hong, 2004: 147; Legalov, 2009e: 199 (North).

SPECIMEN EXAMINED: GG: 6 ♀♀ (Seoul Hwikyeongdong: 8.v.1969); 4 ♀♀ (Seoul Hwikyeongdong: 19.v.1969); 3 ♀♀ (Seoul Hwikyeongdong: 23.v.1969); 1 ♂ (Seoul Bulamdong: 25.v.1969); 5 ♀♀ (Anseong: 25.iv.1970); 2 ♂♂ (Seoul Hwikyeongdong: 13.vii.1970); 1 ♀ (Seoul Bulamdong: 13.vi.1971); 7 ♀♀ (Siheung: 25.iv.1973); 5 ♀♀ (Yeoju: 25.v.1973); 2 ♀♀ (Hwaseong: 6.v.1976); 1 ♀ (Suwon: 24.v.1976); 4 exs. (Mt. Wangbangsan: 30.v.1976); 7 ♀♀ (Banwol: 9.v.1977); 4 ♂♂, 15 ♀♀ (Suwon: 19.v.1980); 2 exs. (Ganghwado: 10.v.1982); 3 ♀♀ (Suwon: 18.iv.1983); 2 ♂♂, 9 ♀♀ (Suwon: 25.iv.1983); 3 ♀♀ (Suwon: 12.v.1983); 1 ♀ (Suwon: 30.v.1983); 1 ♀ (Suwon: 28.vi.1983); 5 ♀♀ (Suwon: 9.v.1984); 1 ♂, 11 ♀♀ (Suwon: 2.vii.1984); 11 ♀♀ (Suwon: 5.vii.1984); 1 ♂ (Suwon: 29.viii.1984); 1 ♀ (Mt. Gwanaksan: 25.v.1985); 1 ♀ (Suwon: 28.vi.1985); 2 ♀♀ (Suwon: 14.iv.1986); 1 ♀ (Suwon: 23.iv.1986); 1 ♀ (Suwon: 26.iv.1986); 1 ♀ (Suwon: 8.iv.1987); 1 ♀ (Anseong: 15.v.1987); 1 ♀ (Suwon: 17.iv.1989); 1 ♂, 1 ♀ (Suwon: 20.iv.1989); 1 ♀ (Yongin: 21.v.1989); 1 ♂ (Mt. Surisan: 22.iv.1989); 1 ♂, 7 ♀♀ (Jeongnam: 4.v.1989); 1 ♀ (Mt. Gwanggyosan: 26.iv.1996); 2 ♀♀ (Hwaseong: 5.vi.1996); 8 ♀♀ (Mt. Yeogisan: 11.iv.1997); 5 ♂♂, 20 ♀♀ (Mt. Yeogisan: 15.iv.1997); 2 ♂♂, 3 ♀♀ (Mt. Yeogisan: 16.v.1997); 2 ♂♂ (Suwon: 21.v.1997); 1 ♀ (Banwol: 22.v.1997); 2 ♂♂, 1 ♀ (Hwaseong: 21.v.1997); 1 ♀ (Mt. Yeogisan: 26.v.1997); 10 ♂♂, 17 ♀♀ (Ganghwado: 27.v.1997); 6 ♂♂, 5 ♀♀ (Suwon: 4.vii.1997). GW: 1 ex. (Mt. Odaesan: 30.vii.1976); 1 ex. (Mt. Obongsan: 18.v.1981); 1 ex. (Mt. Odaesan: 17.ix.1982); 2 ♀♀ (Chuncheon: 11.v.1985); 16 exs. (Mt. Obongsan: 12.v.1985); 1 ♀ (Hongcheon: 24.v.1993); 1 ♂, 13 ♀♀ (Yeongwol: 24.v.1993); 1 ♂, 8 ♀♀ (Goseong: 25–26.v.1993); 1 ♂, 2 ♀♀ (Hwacheon: 25.v.1993); 1 ♂, 4 ♀♀ (Chuncheon: 25.v.1993); 3 ♀♀ (Mt. Seolaksan: 27.v.1993); 1 ♀ (Gyeongpoda: 27.v.1993); 3 ♀♀ (Hongcheon Unduryeong: 27.v.1993); 1 ♀ (Pyeongchang: 27.v.1993); 4 ♀♀ (Donghae: 28.v.1993); 3 ♀♀ (Taebaek: 28.v.1993); 1 ♀ (Myeongju: 1.vi.1993); 8 ♂♂, 7 ♀♀ (Chuncheon: 10.vi.1997); 1 ♂, 3 ♀♀ (Hongcheon: 11.vi.1997); 7 ♂♂, 4 ♀♀ (Daegwanryeong: 11.vi.1997). CB: 1 ex. (Mt. Sobaeksan: 15.v.1981); 3 exs. (Mt. Sobaeksan: 10.v.1985); 1 ♂, 1 ♀ (Okcheon: 22.v.1993); 3 ♂♂, 6 ♀♀ (Goesan: 23.v.1993); 3 ♂♂, 1 ♀ (Eumseong: 26.vi.1996); 1 ♀ (Goesan: 2.vii.1996); 1 ♂ (Chungju: 2.vii.1996); 1 ♀ (Jungwon: 8.v.1997); 1 ♂ (Danyang: 8.v.1997); 6 ♀♀ (Danyang: 10–11.v.1997). CN: 1 ♀ (Mt. Chilgabsan: 15.vi.1992); 2 ♀♀ (Geumsan Gaedeoksa: 22.v.1993); 1 ♀ (Seosan: 22.iv.1997); 1 ♀ (Cheonan: 18.v.1997). JB: 53 exs. (Mt. Maisan: 11.v.1980). JN: 1 ♂ (Hongdo: 23.viii.1975); 2 ♀♀ (Mt. Mudeungsan: 17.iv.1985); 6 ♂♂, 3 ♀♀ (Naju: 18.iv.1985); 1 ♂, 6 ♀♀ (Muan: 18.iv.1985); 1 ♀ (Mokpo: 18.iv.1985). GB: 1 ex. (Kyeongbuk Univ. Campus: 9.v.1976); 3 exs. (Daegu: 19.v.1976); 1 ex. (Seonsan: 3.v.1980); 2 exs. (Daegu Ansim: 21.v.1980); 3 exs. (Is. Ulreungdo: 26.v.1981); 1 ex. (Daegu: 6.iv.1982); 1 ex. (Mt. Palgongsan: 29.iv.1982); 4 exs. (Daegu: 5.vi.1982); 2 ♂♂, 4 ♀♀ (Bonghwa: 28.v.1993); 5 ♀♀ (Andong: 28.v.1993); 3 ♂♂, 9 ♀♀ (Chupungryeong: 2.vi.1997); 1 ♀ (Gimcheon: 6.v.1997); 1 ♂, 2 ♀♀ (Andong: 10.v.1997); 2 ♂♂, 2 ♀♀ (Andong: 28.v.1997); 1 ♀ (Gimcheon: 6.vi.1997). GN: 2 exs. (Mt. Geumjeongsan: 1.vi.1980); 2 ♀♀ (Milyang Pochungsa: 16.v.1993);

1 ♀ (Jinju: 1.vi.1993); 1 ♀ (Haman: 20.vi.1993); 1 ♂ (Jinju: 14.vii.1993); 2 ♀ ♀ (Changryeong: 19.vi.1996); 1 ♂, 1 ♀ (Milyang: 19.vi.1996); 3 ♀ ♀ (Habcheon: 2.vi.1997); 1 ♀ (Jinju: 3.vi.1997); 10 ♂ ♂, 8 ♀ ♀ (Goseong: 3.vi.1997); 6 ♂ ♂, 12 ♀ ♀ (Geojedo: 4.vi.1997); 4 ♀ ♀ (Jinju: 5.vi.1997); 1 ♀ (Geochang: 6.vi.1997). JJ: 1 ex. (Hagwi: 11.v.1974); 2 ♀ ♀ (Jeju: 13.iv.1983); 1 ♀ (Seongsan: 28.vi.1990); 1 ♂, 1 ♀ (Donneko: 23.v.1995); 9 ♀ ♀ (Daejeong: 22-23.iv.1996); 1 ♀ (Jeju: 18.iv.1997).

50. *Ceutorhynchus (Ceutorhynchus) asiaticus* Korotyaev, 1997

(Pls. 5-50, 18-50)

A-si-a-job-ssal-ba-gu-mi (아시아좁쌀바구미)

Ceutorhynchus (Ceutorhynchus) asiaticus Korotyaev, 1997a: 422.

TL: Korea; Russia- Kuriles, Mongolia, Japan- Hokkaido.

Rostrum noticeably longer and strong, in female 1.55 times, 1.5 times in male as long as prothorax. Antennae in female inserted at 0.43, in male at 0.45 way from base of rostrum. Antennal funicle 6-segmented, club elongated.

MEASUREMENTS: Body length (excl. rostrum) 2.1-2.3 mm.

COLOR: Body black without ovals scales. Antennae including base of the club, yellow.

BIOLOGICAL NOTES: Beetles were collected from *Barbarea* sp. (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan (Hokkaido), Mongolia, Russia (Kuril Is.).

KOREA: Central and South.

KOREAN RECORDS: Korotyaev, 1997a: 422; Hong et al., 1999b: 180 (Central); Hong et al., 2000: 96; Korotyaev and Hong, 2004: 147.

SPECIMEN EXAMINED: GW: 1 ♂, 1 ♀ (Hongcheon: 27.v.1993); 2 ♂ ♂, 1 ♀ (Hongcheon: 11.vi.1997); 19 ♂ ♂, 15 ♀ ♀ (Daegwanryeong: 11.vi.1997). GB: 2 ♂ ♂ (Bonghwa: 28.v.1993).

51. *Ceutorhynchus (Ceutorhynchus) dauricus* Korotyaev, 1997

(Pls. 5-51, 18-51)

Kko-ma-job-ssal-ba-gu-mi (꼬마좁쌀바구미)

Ceutorhynchus (Ceutorhynchus) dauricus Korotyaev, 1997a: 417.

TL: Korea- PN, Daedonggang; Russia- Chita and Amurskaya Prov., Primorskii Terr., eastern Mongolia.

Rostrum 1.5 times as long as prothorax, regularly and evenly bent, 0.8 times as broad as fore femur and slightly broader than tibia at apex, cylindrical, parallel-sided. Antennae inserted at 0.46 way from the apex of rostrum. 1st segment of the funicle about three times as long as broad, 2nd segment 0.6 as long as 1st, 3rd segment nearly by third shorter than 2nd, twice as long as broad; 4th segment slightly broader and shorter than 3rd, about 1.5 times as long as broad; 5th and 6th segments slightly longer than broad, 7th segment about as long as broad. Club spindle-shaped, weakly elongate. Eyes medium-sized, moderately convex. Frons flat, strongly widening posterior-

ly; vertex not depressed. Pronotum 1.5 times as broad as long, base shallowly bisinuate, apical margin weakly raised and very shallowly emarginate, nearly straight. Sides moderately rounded in basal part; near apex, with a shallow constriction not becoming weaker on disc; lateral tubercles distinct though small and not very sharp. Scutellum moderately convex, ovate, mat. Elytra 1.18 times as long as broad, with well-developed humeral prominences, weakly rounded behind them to the middle, then moderately narrowing to apex; apical tubercles rounded, weakly pronounced. Striae fairly broad, moderately deep; round punctures in them densely spaced. Intervals nearly flat, about 1.5 times as broad as striae, weakly shining, with 2–3 irregular rows of minute, rounded granules bearing recumbent, grayish, setiform scales. Granules on apical tubercles larger, but not arranged in groups.

Femora unarmed. Fore tibiae gradually and moderately widening to and slightly outcurved at apex, not mucronate. Middle and hind tibiae provided with fairly long, pointed mucro. Tarsi narrow; 1st segment twice, 2nd segment 1.2 times as long as broad, 3rd segment 1.7 times as broad as 2nd. Claws small, with weakly projecting denticle in basal half.

Female: Middle tibiae minutely mucronate. Pygidium 1.5 times as broad as long, very shallowly depressed, mat, with very dense, semi-obliterated punctures.

MEASUREMENTS: Body length (excl. rostrum) 1.8–2.15 mm.

COLOR: Body black; antennae, except the club, and legs dark brown, tarsi paler. Upper surface clothed with fine, grayish, appressed, setiform scales, arranged mostly in 2 irregular rows on elytral intervals. The base, median sulcus, and sides of the pronotal disc with sparse, white, narrow lanceolate scales. Elytra with a diffuse, short scutellar spot of similar scales on 1st interval, and with a few scales at base of 2nd interval.

BIOLOGICAL NOTES: Two specimens have been swept probably from *Draba nemorosa* L. var. *hebecarpa* Lindbl. at rice field; a series of 4 specimens was swept from dense spot of *Cardamine flexuosa* Wither. on stony bank of a stream, but both of the recorded plants may be occasional hosts (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Mongolia, Russia (Chita and Amurskaya Prov., Primorskii Terr.).

KOREA: North, Central and South.

KOREAN RECORDS: Korotyaev, 1997a: 417 (PN- Daedonggang); Hong et al., 1999b: 181 (North, Central, South); Hong et al., 2000: 96; Korotyaev and Hong, 2004: 147; Legalov, 2009e: 199 (North).

SPECIMEN EXAMINED: GG: 2♂♂, 1♀ (Suwon: 18.iv.1983); 1♀ (Suwon: 27.iv.1983); 1♀ (Suwon: 3.v.1983); 2♀♀ (Mt. Yeogisan: 15.iv.1997); 1♂ (Mt. Surisan: 19.v.1997). GW: 1 ex. (Mt. Seolaksan: 9.viii.1976); 1 ex. (Mt. Obongsan: 18.v.1981). CB: 2♀♀ (Jecheon: 24.v.1993). CN: 1♂ (Magoksa: 4.v.1997). GB: 1 ex. (Seonsan: 3.v.1980); 1 ex. (Mt. Hwanghaksan: 10.vi.1980); 1 ex. (Mt. Palgongsan: 23.v.1981); 2 exs. (Mt. Palgongsan: 29.iv.1982); 6 exs. (Mt. Palgongsan: 28.v.1985); 1♀ (Bonghwa: 28.v.1993); 1 ex. (Mt. Seonuisan: 26.v.1997).

52. *Ceutorhynchus (Ceutorhynchus) filiae* Dalla Torre, 1922 (Pls. 5-52, 18-52)

Cho-rok-job-ssal-ba-gu-mi (초록좁쌀바구미)

Ceutorhynchus filiae Dalla Torre, 1922: 127.

TL: Japan.

Ceuthorhynchus diffusus Hustache, 1930 in Dalla Torre and Hustache, 1930: 58.

Head with hairy brownish scales sparsely, distinctly punctuate, with a median keel to vertex; frons flattened, broad and narrowing to the base of rostrum; rostrum slender, reaching the anterior margin of metasternum, sparsely clothed with hairy brownish scales on basal half and only sparsely with minute scales on apical half, parallel-sided, and weakly curved; antenna inserted into the middle of rostrum; scape longer than basal 3 funicular segments taken together and brown seta at apex; funicle 7 segments, with 1st segment robust, a little longer than 2nd, 2nd segment longer than 3rd, and the other segments much shorter; club spindle shape. Pronotum sparsely clothed with hairy brownish scales and with two or three ovate white scales on basal median depression, shorter than the broadest width, broadest the base, subapical constriction very weak, anterior margin entire. Scutellum small, black, oval form. Elytra oval form, without scutellar patch, longer than wide, broadest the middle; punctured striae shallow, with a row of minute scales same color as in intervals; intervals with a row of hairy brown scales, flattened, much broader than striae; subapical swelling portion with pointed tubercles. Sternum densely clothed with oval yellowish white scales; prosternum flattened, fore coxae separated as wide as the rostrum; abdomen sparsely clothed with oval yellowish white scales, 1st and 2nd abdominal segments slightly depressed on median portion, 5th abdominal segment strongly depressed on median portion. Legs elongate; femora slender, clothed with hairy yellowish white scales without tooth; tibiae scarcely curvate and dilated toward apex, clothed with hairy yellowish white scales, anterior margin of corbel fringed with brownish bristles, tibiae with robust and a triangular mucro; claws simple.

Female: Tibia without mucro; 1st abdominal segment slightly convex on median portion, 5th abdominal segment not depressed on median portion.

MEASUREMENTS: Body length (excl. rostrum) 2.0–2.2 mm.

COLOR: Body greenish blue metallic shine, in some specimens with brownish metallic shine, head, rostrum, antennae, pronotum and legs black.

BIOLOGICAL NOTES: Common on ruderal crucifers in Korea - *Capsella bursa-pastoris* (L.) Medikus, *Rorippa* sp., ?*Nasturtium* sp., *Lepidium* sp. (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima), Russia (Primorskii Terr.).

KOREA: Whole country including Is. Jeju-do.

KOREAN RECORDS: Hong et al., 1999b: 181 (Central, South, Jeju-do); Hong et al., 2000: 97; Korotyaev and Hong, 2004: 147; Legalov, 2009e: 199 (North).

SPECIMEN EXAMINED: GG: 1 ♀ (Suwon: 2.vi.1959); 2 ♂♂, 2 ♀♀ (Seoul Hwikyeongdong: 8.v.1969); 1 ♀ (Gwangreung: 15.v.1975); 9 exs. (Mt. Wangbangsan: 30.v.1976); 1 ♀ (Suwon: 19.v.1980); 2 exs. (Ganghwado: 10.v.1982); 9 exs. (Mt. Obongsan: 12.v.1985); 1 ♀ (Suwon: 6.v.1989); 1 ♂, 1 ♀ (Suwon: 21.viii.1996); 1 ♀ (Suwon: 10.v.1997); 1 ♂ (Mt. Yeogisan: 19.v.1997); 1 ♂, 3 ♀♀ (Suwon: 21.v.1997); 2 ♀♀ (Hwaseong: 21.v.1997); 2 ♂♂, 4 ♀♀ (Ganghwado: 27.v.1997). GW: 1 ♀ (Chuncheon: 11.v.1985); 3 ♂♂, 5 ♀♀ (Yeongwol: 24.v.1993); 1 ♂ (Hongcheon: 24.v.1993); 2 ♂♂, 4 ♀♀ (Goseong: 25–26.v.1993); 1 ♀ (Donghae: 28.v.1993); 1 ♀ (Hongcheon: 11.vi.1997); 1 ♂ (Pyeongchang: 12.vi.1997). CB: 2 ♀♀ (Goesan: 23.v.1993). CN: 1 ♂, 3 ♀♀ (Buyeo: 5.v.1997). JN: 1 ex. (Yeosu: 15.ix.1974); 1 ♀ (Hampyeong: 14.v.1996). GB: 1 ex. (Kyeongbuk Univ. Campus: 9.v.1976); 1 ♀ (Sangju: 11.v.1976); 4 exs. (Daegu Ansim: 23.v.1980); 1 ex. (Gyeongsan Hayang: 5.vi.1982); 1 ex. (Daegu: 5.vi.1982); 1 ex. (Mt. Palgongsan: 1.vi.1985); 1 ♂ (Andong: 28.v.1993); 2 ♂♂, 2 ♀♀ (Andong: 10.v.1997). GN: 1 ex. (Mt. Geumjeongsan: 1.vi.1980); 1 ♀ (Geojedo: 4.vi.1997). JJ: 3 exs. (Manjanggul: 9.v.1974); 1 ex. (Jungmun: 9.v.1974); 3 exs. (Jungmun: 11.v.1982); 1 ♀ (Donneko: 23.v.1995).

53. *Ceutorhynchus (Ceutorhynchus) murzini* Korotyaev, 1994 (Pl. 5-53)

Dung-geun-nal-gae-job-ssal-ba-gu-mi (둥근날개좁쌀바구미)

Ceutorhynchus (Ceutorhynchus) murzini Korotyaev, 1994a: 113.

TL: Korea- HN Toxong-Omdonri hill, 1800 m.

Rostrum more slender, more finely and sparsely punctate, basal striae running less than half way to antennal insertion. Eyes smaller, in dorsal view their transverse diameter only slightly greater than width of rostrum. Pronotum more strongly convex, lateral tubercles situated a little closer to the middle of its sides, apical constriction deeper both on disc and sides, median depression obsolete; blue metallic luster in disc imperceptible, only sides bluish near base and apex. Elytral intervals a little more convex and shining, stria margins less distinct. Shoulders rounded without any trace of humeral prominence, disc of elytra strongly convex, sides evenly rounded. Sides of the meso- and metathorax with sparser scaling than in *Ceutorhynchus nitidulus* Faust. Legs more slender, femora unarmed, 3rd tarsal segment a little less broad.

MEASUREMENTS: Body length (excl. rostrum) 2.35 mm, width of elytra 1.3 mm.

COLOR: Resembles and probably related to *Ceutorhynchus nitidulus* Faust, 1887, but differs in the following characters.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: North.

KOREAN RECORDS: Korotyaev, 1994a: 113 (HN- Toxong Omdonri); Hong et al., 1999b: 183 (North). Hong et al., 2000: 98; Korotyaev and Hong, 2004: 149.

SPECIMEN EXAMINED: HN: 1 ex. (Toxong-Omdonri hill 1,800 m: 27.v.1990, preserved in ZIN, Russia).

54. *Ceutorhynchus (Ceutorhynchus) nitidulus* Faust, 1887

(Pls. 5-54, 18-54)

Keun-cho-rok-job-ssal-ba-gu-mi (큰초록좁쌀바구미)

Ceutorhynchus (Nedyus) nitidulus Faust, 1887b: 178.

TL: Amur.

Head with hairy brownish scales sparsely, distinctly punctate, with a median keel to vertex; frons nearly flatted, broad and narrowing to the base of rostrum; rostrum slender, reaching the posterior margin of metasternum, sparsely clothed with hairy brownish scales on basal half and only sparsely with minute scales on apical half, parallel-sided, and weakly curved; antenna inserted into the basal 3/5 of rostrum; scape much longer than basal 3 funicular segments taken together and brown seta at apex; funicle 7 segments, with 1st segment robust, a little longer than 2nd and 3rd, and the other segments much shorter; club spindle shape. Pronotum rather sparsely clothed with hairy brownish scales and sparsely with ovate white scales on basal median depression, shorter than the broadest width, broadest the base, subapical constriction very weak, anterior margin entire. Scutellum small, black, lanceolate. Elytra oval form, with an scutellar patch on basal of 1st interval, which

is composed of contiguous ovate white scales, longer than wide, broadest the middle; punctured striae shallow, with a row of minute scales same color as in intervals; the even intervals irregularly with a row of hairy brown scales, and the odd intervals irregularly with two rows of hairy brown scales, each interval flatted, much broader than striae; subapical swelling portion with pointed tubercles. Sternum densely clothed with oval yellowish white scales; prosternum with prosternal process, fore coxae separated narrower than the width of rostrum; 1st abdominal segment slightly depressed on median portion, 2nd to 5th abdominal segments sparsely clothed with oval yellowish white scales, 5th abdominal segment strongly depressed on median portion. Legs elongate; femora a little slender, clothed with hairy yellowish white scales and mid and hind femur with small tooth which covered with oval yellowish white scales on slightly emarginated portion; tibiae scarcely curvate and a little dilated toward apex, clothed with hairy yellowish white scales, anterior margin of corbel fringed with brownish bristles, inner side of apex of mid and hind tibiae with robust and a triangular mucro; claws appendiculate, inner branches separated each other.

Female: Tibia without mucro; 1st abdominal segment slightly convex on median portion, 5th abdominal segment slightly depressed on median portion.

MEASUREMENTS: Body length (excl. rostrum) 2.4–2.6 mm.

COLOR: Body greenish blue metallic shine, head, rostrum, antennae and legs black.

BIOLOGICAL NOTES: Common on *Cardamine ?leucantha* (Tausch.) O.E. Schultz in wet, mostly shaded forest habitats in Korea (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Russia (Primorskii Terr.).

KOREA: North, Central and South.

KOREAN RECORDS: Hong et al., 2000: 98; Korotyaev and Hong, 2004: 149; Legalov, 2009: 199. Misidentified with *Ceutorhynchus sulcicollis* Paykull: Hong et al., 1999b: 184 (Central, South).

SPECIMEN EXAMINED: GW: 7 ♂♂, 8 ♀♀ (Pyeongchang Jinbu: 27.v.1993); 1 ♂, 3 ♀♀ (Hongcheon Unduryeong: 27.v.1993); 1 ♂ (Hongcheon Unduryeong: 11.vi.1997). JB: 1 ♂ (Mt. Naejangan: 10.vi.1975). GB: 2 ♀♀ (Bonghwa: 28.v.1993).

55. *Ceutorhynchus (Ceutorhynchus) obstrictus* (Marsham, 1802) (Pls. 5-55, 18-55)

Yu-reob-job-ssal-ba-gu-mi (유럽좁쌀바구미)

Curculio obstrictus Marsham, 1802: 255.

TL: Europe.

Body larger. Rostrum long and curved. Pronotum with deep median furrow and weak tubercles on lateral sides. Elytra much longer than broad, lateral sides a little rounded, or almost just narrowed from above, with across group of dull bent granules before apex; granules at lateral sides before apex arranged indistinctly. Intervals with 2 rows of whitish hair-like scales; hairs on striae a little smaller than that on intervals. Femur without tooth. Claws edentate.

MEASUREMENTS: Body length (excl. rostrum) 2.5–3.0 mm.

COLOR: Derm black, get of grayish color by whitish scales.

BIOLOGICAL NOTES: Recorded from various cruciferous plants in Europe and also feeding on intro-

duced (most commonly) and native Brassicaceae in the U.S.A. In European Russia, including NW Caucasus, usually found on *Brassica campestris* L., but is also common on flowering *Cardaria draba* L. (Desv.) in Daghestan, Krasnodar and Stavropol Terr. It is most probable to be introduced to Korea (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea (introduced), Russia (South of the Russian Far East), Nepal, Mongolia, Kazakhstan, Turkmenistan (?), Turkey, Austria, Belgium, Bulgaria, Bielorrussia, Switzerland, Czech Republic, Germany, Dagestan, Denmark, Estonia, Spain, Finland, France, England, Greece, Croatia, Hungary, Ireland, Italy, Latvia, Moldavia, Netherlands, Norway, Poland, Portugal, Romania, European Russia, Sweden, Slovenia, Slovakia, Ukraine, Yugoslavia, Canada (introduced), USA (introduced), Mexico (introduced).

KOREA: South (introduced).

KOREAN RECORDS: Hong et al., 2000: 99; Korotyaev and Hong, 2004: 149.

SPECIMEN EXAMINED: GB: 3 exs. (Yeonghae, Yeongdeok: 18.iv.2007). GN: 1 ♀ (Gimhae: 20.vi.1995, malformation); 2 ♂♂ (Gimhae: 7.iv.1998).

56. *Ceutorhynchus (Ceutorhynchus) robustus* Korotyaev, 1980 (Pl. 5-56)

Jang-dae-job-ssal-ba-gu-mi (장대좁쌀바구미)

Ceutorhynchus (Ceutorhynchus) robustus Korotyaev, 1980: 136.

TL: Mongolia, Russia- Irkutsk, Amur Prov., Primorskii Terr.

Rostrum 1.4 times as long as pronotum, thin, parallel-sided, moderately curved - a little stronger in distal half. Basal half of rostrum with numbers of fine punctures, apex shining, rarely punctate. Antennae inserted into middle of rostrum; scape weakly widened at apex; 1st funicular segment 2.5 times as long as width; 2nd segment slightly shorter and twice narrower than 1st, 3rd segment 1/3 times as long as 2nd, 4th hardly longer than width, 5th-7th segments about as long as width; club long. Eyes moderately prominence. Frons flat. Pronotum 1.4-1.5 times as wide as long, deeply bisinuate at basal part, slightly narrowed toward base and smoothly and stronger toward apex at lateral sides. Disc strongly convex at all length, median sulcus deep, and slightly smooth at middle. Lateral tubercles small. Apical constriction well distinct, but separated at anterior margin slightly raised. Punctuation dense, quite coarse. Scutellum well visible. Elytra 1.15 times as long as width, much wider than pronotum, strongly narrowed toward apex; preapical calli diffused, but quite distinct, without sharp granule. Disc behind scutellum somewhat flattened, quite strongly convex at middle. Elytral striae deep and wide, their punctures separated by narrow low portion. Intervals 1.5-2 times wider than striae, flat and hardly convex, with fine granules, slightly shining. Anal sternite with shallow transverse depression. Legs thin, femora without tooth. Middle and hind tibiae with quite thick mucro.

MEASUREMENTS: Body length (excl. rostrum) 2.3 mm.

COLOR: Body black, antennae blackish brown. Adults look like blackish grey. Intervals of elytra with irregularly 2 rows of short greenish yellow hairs.

BIOLOGICAL NOTES: Beetles were collected on *Arabis pendula* in eastern European part of Russia (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Russia (eastern European part, Siberia, south of Far East), Mongolia.

KOREA: South.

KOREAN RECORDS: Hong et al., 2000: 99; Korotyaev and Hong, 2004: 149; Legalov, 2009: 199.

SPECIMEN EXAMINED: GB: 1 ♀ (Mt. Palgongsan: 28.v.1985).

57. *Ceutorhynchus (Ceutorhynchus) scapularis* Gyllenhal, 1837
(Pls. 5-57, 18-57)

Gae-gat-naeng-i-job-ssal-ba-gu-mi (개갓냉이좁쌀바구미)

Ceutorhynchus scapularis Gyllenhal, 1837 in Schoenherr, 1837: 555.

TL: Europe.

Ceutorhynchus obscurecyaneus Gyllenhal, 1837 in Schoenherr, 1837: 556.

TL: Europe.

Pronotum with 3 well-developed stripes of white or yellowish lanceolate scales, 2 on lateral sides and 1 in the middle. Elytral intervals flat and wide, with very indistinct short dark hair row; preapical calli absent. Dorsal margin of mesepimera keel-shaped and dense scaling. Middle and hind femora finely dentate. Claws simple.

MEASUREMENTS: Body length (excl. rostrum) 2.1–2.7 mm.

COLOR: Derm black, elytra dark blue or greenish black shining.

BIOLOGICAL NOTES: In Europe, reported from *Rorippa amphibia* L. and *R. islandica* Oed.; in Magadan Prov., probably on one of the two species of *Rorippa* recorded from the area, *R. palustris* (L.) Besser or *R. barbareaifolia* (DC) Kitagawa, or on both (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Russia (European part, Siberia, Far East), Kazakhstan, Austria, Bulgaria, Bielorrussia, Switzerland, Czech Republic, Germany, Denmark, Finland, France, Croatia, Hungary, Italy, Netherlands, Poland, Romania, European Russia, Sweden, Slovakia, Ukraine, Yugoslavia.

KOREA: Cental.

KOREAN RECORDS: Korotyaev and Hong, 2004: 149 (Central).

SPECIMEN EXAMINED: GG: 1 ♂ (Seoul Huigyeong-dong: 19.v.1969).

58. *Ceutorhynchus (Ceutorhynchus) sinicus* (Voss, 1958) (Pls. 5-58, 18-58)

Hwang-sae-naeng-i-job-ssal-ba-gu-mi (황새냉이좁쌀바구미)

Neosirocalus sinicus Voss, 1958: 73.

TL: China- Kuatun.

Body smaller. Head transverse, conical, relatively strongly and closely punctate. Eyes small, moderately strongly arched, frons broader than eye length and a little broader than rostrum. Rostrum as long as head and pronotum taken together, quite curved. Antennae inserted into the middle of rostrum. Scape as long as half of rostrum, thinly, weakly clavate thickened in apical half. 1st and 2nd funicular segments same length, 1st segment, however, a little more broader; the follow-

ing segments toward distal part decreased a little in length. Club spindle-shaped, relatively broad, about 2.5 times as long as broad, a little longer than 4 last funicular segments taken together. Pronotum transverse, a little parallel-sided from base, narrowed roundly forwards, set off cylindrical at the anterior margin; sulcate to the apical constriction in the middle, with small and sharp lateral tubercles. Scutellum very small, long wedge-like shaped. Elytra longer than broad (1.1:1.4), the broadest in the basal quarter, moderately strongly roundly narrowed to apex. Striae moderately broad; intervals a little broader than striae. Prosternum before front coxae with sharp keels for rostral canal at sides. Pygidium finely and closely punctate. Femora weakly clavate, without tooth. Tibiae weakly widened to apex; middle and hind tibiae short corbel outwardly before apex.

MEASUREMENTS: Body length (excl. rostrum) 1.7–2.0 mm.

COLOR: Derm reddish brown and legs brown. Basal and lateral margins of pronotum and 1st interval of elytra covered with densely whitish oval scales.

BIOLOGICAL NOTES: All Korean specimens were collected sweeping *Cardamine flexuosa* Wither. near small streams and along bushes at roadside (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, China (Guangdong), Japan (Honshu).

KOREA: Central and South.

KOREAN RECORDS: Hong et al., 2000: 100; Korotyaev and Hong, 2004: 150.

SPECIMEN EXAMINED: GW: 1 ♂ (Gangreung: 26.v.1993). JB: 1 ♀ (Mayisan: 11.v.1980).

59. *Ceutorhynchus (Ceutorhynchus) ussuricus* Korotyaev, 1997 (Pls. 5-59, 18-59)

U-su-ri-job-ssal-ba-gu-mi (우수리좁쌀바구미)

Ceutorhynchus (Ceutorhynchus) ussuricus Korotyaev, 1997a: 419.

TL: Russia- Khabarovsk and Primorskii Terr., Korea- Central.

Rostrum 1.4 times as long as prothorax, evenly and rather strongly bent, 0.8 times as broad as fore femur and slightly broader than apex of foretibia, cylindrical, with sides shallowly emarginate in basal and parallel in apical half. Antennae inserted at 0.4 way from apex of rostrum. 1st segment of antennal funicle 2.5 times as long as broad; 2nd segment 0.7 times as long as 1st, 3rd and 4th segments by a quarter shorter than 2nd, about 1.5 times as long as broad; 5–7th segments noticeably broader than the foregoing ones, closely adjoining, 5th segment slightly, 7th noticeably broader than long. Club obovate, short. Eyes medium-sized, moderately convex. Frons flat, strongly widening posteriorly; vertex with shallow transverse depression. Pronotum 1.6 times as broad as long; base moderately deeply bisinuate, apical margin slightly raised, broadly and shallowly emarginate in the middle. Sides rather strongly and almost evenly rounded, with small tubercles. Median sulcus slightly designated at base and near the shallow apical constriction. Scutellum small, rounded triangular. Mesepimera strongly prominent, well visible in dorsal view. Elytra 1.1 times as long as broad, humeral prominences moderately convex, oblique, sides strongly and almost evenly rounded, apical tubercles obsolete. Disc regularly and rather strongly convex. Striae deep and broad, with sloping sides. Intervals 1–1.5 times as broad as striae, moderately convex, with 1–2 rows of small granules, weakly shining. All femora unarmed. Fore tibiae weakly outcurved and dilated apically, lacking mucro. Middle and hind tibiae nearly straight, with fine pointed mucro. 1st segment of

tarsi about 1.5 times as long as broad, 2nd segment as long as broad. 3rd segment 1.7 times as broad as 2nd. Claws short; at base, connate and provided with short, but clearly distinguishable, projecting denticle.

Female: Rostrum 1.5 times as long as prothorax, antennae inserted at 0.45–0.50 way from apex of rostrum. Sculpture of rostrum slightly finer than in male, but with fine striolation distinct up to the apex of rostrum.

MEASUREMENTS: Body length (excl. rostrum) 1.85–2.35 mm.

COLOR: Body black; antennae, short articulation at base of tibiae, and tarsi dark brown. Upper surface of body with sparse, weakly raised, setiform scales, more strongly raised on the granules on elytral intervals. In addition, prothorax has sparse, lanceolate, white scales along sides and in median line, and elytra, a contrasting stripe of such scales along suture. At base, the stripe occupies the entire width of 1st and extends on 2nd interval; in apical quarter of elytra, the stripe is reduced to a single row of short scales on inner margin of 1st interval.

BIOLOGICAL NOTES: Adults were collected sweeping along high mountain roadside.

DISTRIBUTION: Korea, Russia (Khabarovsk and Primorskii Terr.).

KOREA: North, Cental.

KOREAN RECORDS: Korotyaev, 1997a: 419 (Central); Hong et al., 1999b: 186 (Central); Hong et al., 2000: 100; Korotyaev and Hong, 2004: 150; Legalov, 2009: 200 (North).

SPECIMEN EXAMINED: GW: 1 ♂ (Hongcheon: 27.v.1993); 1 ex. (Tp. Bukdaesa, Mt. Odaesan: 28.v.1998); 6 exs. (Tp. Bukdaesa, Mt. Odaesan: 6.v.2009).

Subgenus *Heorhynchus* Korotyaev, 1999: 11.

SYNONYM: *Nipporhynchus* Korotyaev, 1996 in Egorov et al., 1996: 467.

Type species: *Ceutorhynchus ibukianus* Hustache, 1916.

60. *Ceutorhynchus (Heorhynchus) ibukianus* Hustache, 1916 (Pls. 5-60, 18-60)

Cheong-nal-gae-ba-gu-mi (청날개바구미)

Ceuthorrhynchus ibukianus Hustache, 1916: 143.

TL: Japan- Nikko, Mt. Ibuki.

Head densely punctate, forehead shallowly emarginated, vertex with slightly longitudinal keel. Each puncture with short whitish scales. Rostrum large, slightly curved, its base punctate reticulately with large punctures, shallowly and slightly punctate toward anterior part. Antennae inserted into middle of rostrum, scape reached to eye. Antennal funicle 7-segmented, 1st segment large and as long as 2nd, 3rd segment 2/3 time as long as 2nd, the rest segments same length respectively and half as long as 2nd. Pronotum with the broadest at a little before middle part, strongly narrow-

ed toward apex, strongly constricted at near anterior margin. Middle part of anterior margin with small V-shaped emargination. Posterior margin 1.5 times as broad as anterior margin. Disc with shallow longitudinal sulcus at anterior margin and in the middle, with very weak tubercles on lateral sides; reticulately punctate with very short hair-like scales on each punctures. Scutellum small, pointed shaped. Elytra broader than pronotum, with strongly produced shoulders. Elytral striae strong and distinct; intervals flat, with indistinctly sharp triangular tubercles and very short blackish brown hairs at posterior part. Middle part of abdomen weakly punctate, the rest part strongly punctate with whitish feather-like scale on each puncture. Pygidium strongly impressed. Apex of tibiae in male with mucro, but in female without mucro.

MEASUREMENTS: Body length (excl. rostrum) 2.6–3.2 mm.

COLOR: Derm black, elytra dark blue, scutellar spot absent. Dorsum of body not clothed with any hairs. Scales very minute, dark brown.

BIOLOGICAL NOTES: This species is a pest of cruciferous plants (*Brassica campestris*, *Raphanus sativus* etc.) in Japan (Morimoto, 1957). In Korea, it is very common in May on *Nasturtium* sp., *Lepidium apetalum* Willd., *Dentaria* sp. in the cities and at forest margins (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: Central, South and Is. Jeju.

KOREAN RECORDS: Lee et Kwon, 1974: 48 (JJ- Manjanggal, Jungmun); Morimoto, 1984: 317; Kwon and Lee, 1986: 83 (Central, South); Choi et al., 1990: 48 (damage); ESK/KSAE, 1994: 208; Hong et al., 1999b: 173 (Central, South, Jeju); Hong et al., 2000: 100; Korotyaev and Hong, 2004: 150.

SPECIMEN EXAMINED: GG: 1 ♀ (Suwon: 2.vi.1958); 5 ♂♂, 3 ♀♀ (Suwon: 24.v.1961); 2 ♂♂, 1 ♀ (Seoul Hwikyongdong: 19.v.1969); 3 ♀♀ (Anyang: 25.iv.1973); 1 ♂, 2 ♀♀ (Suwon: 27.iv.1973); 1 ♂ (Suwon: 16.v.1973); 1 ♂, 2 ♀♀ (Yeoju: 25.v.1973); 1 ♂ (Banwol: 12.vi.1974); 3 ♂♂, 1 ♀ (Suwon: 26.v.1976); 7 exs. (Mt. Wangbangsan: 30.v.1976); 1 ♂ (Suwon: 4.vi.1976); 1 ♂, 1 ♀ (Yongin: 21.v.1979); 1 ♂ (Namhansanseong: 20.ix.1981); 1 ex. (Gwangreung: 14.v.1982); 1 ♀ (Suwon: 18.v.1984); 7 ♂♂, 4 ♀♀ (Suwon: 16.v.1985); 1 ♂ (Seongnam: 23.iv.1986); 1 ♂ (Seongnam: 9.v.1986); 1 ♂ (Suwon: 2.vi.1986); 1 ♂ (Suwon: 5.vi.1986); 1 ♂ (Suwon: 17.vi.1988); 1 ♂, 1 ♀ (Suwon: 13.iii.1989); 1 ♀ (Jeongnam: 4.v.1989); 3 ♂♂, 4 ♀♀ (Seongnam: 11.v.1989); 1 ♂, 2 ♀♀ (Suwon: 19.v.1989); 1 ♂, 1 ♀ (Suwon: 22.v.1989); 2 ♀♀ (Seongnam: 22.v.1990); 1 ♀ (Hwaseong: 23.v.1990); 1 ♂ (Jangan Univ. Campus: 21.vi.1992); 1 ♂ (Suwon: ?.ix.1992); 1 ♀ (Seongnam: 12.vi.1996); 1 ♀ (Suwon: 10.v.1997); 1 ♀ (Pyeongtaek: 23.v.1997). GW: 1 ♀ (Pyeongchang: 9.ix.1993); 4 ♀♀ (Chuncheon: 15–16.v.1996); 1 ♀ (Chuncheon: 10.vi.1997); 1 ♀ (Hongcheon: 11.vi.1997). CB: 5 ♂♂, 13 ♀♀ (Cheongju: 15.iv.1987); 1 ♀ (Jungwon: 23.v.1993); 2 ♂♂, 7 ♀♀ (Jecheon: 21.v.1996); 2 ♂♂, 9 ♀♀ (Cheongwon: 25.x.1996); 1 ♂ (Jincheon: 22.x.1997). CN: 1 ♂ (Yesan: 19.v.1991); 2 ♂♂, 2 ♀♀ (Seocheon: 2.iv.1996); 1 ♀ (Nonsan: 2.iv.1996); 1 ♂ (Boryeong: 28.v.1996); 1 ♂ (Seosan: 22.iv.1997). JB: 1 ex. (Mt. Maisan: 11.v.1980). JN: 1 ♀ (Sinan: 24.v.1982); 1 ♂, 1 ♀ (Gurye: 18.iii.1997). GB: 5 exs. (Mt. Palgongsan: 24.x.1960); 5 exs. (Daegu: 24.v.1968); 1 ex. (Kyeongbuk Univ. Campus: 9.v.1976); 1 ex. (Mt. Palgongsan: 16.v.1976); 2 exs. (Daegu: 19.v.1976); 20 exs. (Daegu Ansim: 21.v.1980); 1 ex. (Mt. Palgongsan: 23.v.1981); 1 ex. (Daegu: 7.vi.1982); 1 ex. (Daegu: 2.x.1982); 1 ex. (Daegu: 5.vi.1982); 1 ex. (Chilgok: 17.vi.1984); 1 ♀ (Andong Univ. Campus: 30.viii.1996). GN: 1 ex. (Tongdosa: 9.x.1979); 3 exs. (Ulsan: 24.v.1980); 1 ♂ (Gimhae: 26.v.1980); 3 ♂♂, 3 ♀♀ (Changryeong: 23.iv.1996); 1 ♀ (Geojedo: 4.vi.1997).

Genus *Calosirus* Thomson, 1859: 140.

Ji-ri-san-jop-ssal-ba-gu-mi-sok (지리산좁쌀바구미속)

Integument rather densely and coarsely punctured. Anterior margin of prothorax obviously raised. Elytra usually less than 2.55 times the pronotal length. Tarsi short. Tarsomere four exceeding tarsomere three by not more than the lobe-length of tarsomere three. Claws simple.

Type species: *Ceuthorrhynchus orientalis* Hustache, 1915.

SPECIES 7 (1 in Korea).

DISTRIBUTION: Palaearctic.

61. *Calosirus kwoni* Korotyaev and Hong, 2004 (Pl. 6-61)

Ji-ri-san-job-ssal-ba-gu-mi (지리산좁쌀바구미)

Calosirus? kwoni Korotyaev and Hong, 2004: 151.

TL: Korea- Mt. Jirisan.

HEAD: Rostrum 1.51 times as long as pronotum, almost evenly narrowing from base to apex where it is 0.7 times as wide as at base; in lateral view, weakly tapering apically, slightly swollen dorsally at base. Sculpture finer than in *C. oxystoma*; dorsum with indistinct wide median carina in basal half, with shorter and sharper lateral carinae before middle; rugosely punctate in between and at sides. Apical half of rostrum shining, finely striolate-punctate distal to antennal insertion and obsolete punctate at apex. Antennae inserted at 0.45 length of rostrum from apex. Funicle slightly shorter than in *C. oxystoma*, 4th segment longer than wide, 5th as long as wide, 6th slightly transverse. Elytral striae broader and deeper, with more closely arranged punctures. Intervals more strongly convex, slightly narrower than in *C. oxystoma*, about 1.5 times as wide as striae, shining, with fine granules arranged mostly in more or less regular row.

MEASUREMENTS: Body length of female (excl. rostrum) 2.1 mm.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: South (GN).

KOREAN RECORDS: Korotyaev and Hong, 2004: 151 (Mt. Jirisan).

SPECIMEN EXAMINED: GN: 1 ♀ (Mt. Jirisan: 27.v.1976, holotype).

Genus *Glocianus* Reitter, 1916: 153.

Min-deul-re-jop-ssal-ba-gu-mi-sok (민들레좁쌀바구미속)

SYNONYM: *Ceutorrhynchus (Prenesdus)* Reitter, 1916: 153.

Rostrum not carinated, densely finely punctated. Antennal funicle 7-segmented. Pronotum

wide, with strongly rounded sides and straight base; anterior margin strongly raised; disk convex, without median sulcus, but with deep prescutellar foveae; lateral tubercles fold-shaped; punctation dense, inconspicuously coarse. Elytra with short scutellar spot of dense white or yellowish scales on 1st interval and small pale spot at the end of basal third of 6th intervals. Humeral prominences of elytra without large sharp granules, apical prominences moderately convex, without row of large granules. Pygidium widely and more or less deeply sulcated or excavated in apical part (in *G. fennicus* Reitter indistinctly excavated). Legs black or dark brown. Femora finely dentated, middle and hind tibiae in male with small sharp mucro; claws dentate. On *Taraxacum* and, probably, other Asteraceae with yellow flower-heads (Egorov et al., 1996).

Type species: *Ceuthorrhynchus distinctus* Ch. Brisout, 1870.

SPECIES 28 (1 in Korea), (2 in Russian Far East).

DISTRIBUTION: Palaearctic; introduced in North America.

Subgenus *Glocianus* Reitter, 1916: 153.

62. *Glocianus (Glocianus) fennicus* (Faust, 1895) (Pl. 6-62)

Min-deul-re-job-ssal-ba-gu-mi (민들레좁쌀바구미)

Ceuthorrhynchus fennicus Faust, 1895: 361.

TL: Finland and Russia (Caucasus).

Ceuthorrhynchus sparsutus Schultz, 1899a: 267.

Ceuthorrhynchus albonebulosus Hansen, 1917: 352.

Ceuthorrhynchus gammrli Hajóss, 1929: 25.

Rostrum moderately curved, not carinate, densely finely punctate. Antennal funicle 7-segmented. Pronotum wide, with strongly rounded sides and straight base; anterior margin strongly bent; disk convex, without median sulcus, but with deep prescutellar fovea; lateral tubercles fold-shaped; punctation dense, inconspicuously coarse. Elytra with short scutellar spot of dense white or yellowish scales on 1st interval, without oval white scales on base of other intervals and with small pale spot at the end of basal third of 6th interval. Humeral prominences of elytra without large sharp granules, apical prominences moderately convex, without row of large granules. Pygidium indistinctly culated in apical part. Femora with small tooth, middle and hind tibiae of male with small sharp mucro; claws dentate.

MEASUREMENTS: Body length (excl. rostrum) 2.4–2.9 mm.

COLOR: Body dark with pattern consisting only of subquadrate white or yellowish scutellar spot. Legs black or dark brown.

BIOLOGICAL NOTES: In Poland and in Tuva (southern Eastern Siberia) was found on *Taraxacum officinale* Wigg., but in Archangelsk Province, NW Russia, occurs on *Leontodon autumnalis* L. And also found on *Senecio integrifolius* (L.) Clairv. (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Russia (E. and W. Siberia, Far East), Kazakhstan, Turkey, Tuva, Armenia, Austria, Bielorrussia, Czech Republic, Germany, Denmark, Spain, Finland, Georgia, Greece, Hungary,

Norway, Poland, Sweden, Slovenia, Slovakia, Ukraine.

KOREA: South (GN).

KOREAN RECORDS: Korotyaev and Hong, 2004: 156 (South).

SPECIMEN EXAMINED: 1 ♀ (Korea, 25 mi. N of Fune: 20.v.1911, J.C. Thompson, preserved in CAS).
GN: 1 ♀ (Sanbuk Yangsan: 22.iv.1999).

Genus *Hadroplontus* Thomson, 1859: 140.

Sip-ja-mu-nui-jop-ssal-ba-gu-mi-sok (십자무늬좁쌀바구미속)

Body with strongly contrasting pattern of cruciform scutellar spot.

Type species: *Curculio litura* Fabricius, 1775.

SPECIES 3 (1 in Korea), (2 in Russian Far East).

DISTRIBUTION: Palaearctic.

REMARKS: On Asteraceae (*Cirsium*, *Carduus*) (Egorov et al., 1996).

63. *Hadroplontus ancora* (Roelofs, 1875) (Pl. 6-63)

Sib-ja-mu-nui-jop-ssal-ba-gu-mi (십자무늬좁쌀바구미)

Ceuthorrhynchus ancora Roelofs, 1875: 177.

TL: Japan.

Pronotum strongly protruding posteriorly in the middle at base. Femora with large tooth, fore tibia with short, convex apical combs; all tibiae in male with large mucro but in female without mucro. Claws simple.

MEASUREMENTS: Body length (excl. rostrum) 2.9–3.5 mm.

COLOR: Body with contrasting white pattern on black background of elytra consisting of cruciform scutellar spot; short, oblique narrow bands before middle, and white scales in apical part. Femora and tibiae black.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku), South of the Russian Far East.

KOREA: North.

KOREAN RECORDS: Korotyaev and Hong, 2004: 152 (North).

SPECIMEN EXAMINED: RG: 1 ♀ (Paekdu-san-milyong 1,500 m, No. 1353: 27.vi.1988, preserved in HNHM, Hungary).

Genus *Mogulones* Reitter, 1916: 152.

I-jop-ssal-ba-gu-mi-sok (이좁쌀바구미속)

SYNONYM: *Ceuthorrhynchus* (*Methadrolontus*) Wagner, 1942: 3; *Ceuthorrhynchus* (*Boraginobius*) Wagner, 1944c: 133.

The strongly rounded and convex elytra with completely rounded humeri, obsolete scutellum, short metasternum, robust and rather coarsely sculptured body, and short legs produce a very characteristic appearance of a highly advanced wingless form. On Boraginaceae (Colonnelli, 2004).

Type species: *Curculio geographicus* Goeze, 1777.

SPECIES 68 (2 in Korea).

DISTRIBUTION: E. Palaearctic.

Key to the species of genus *Mogulones*

1. Humeral and preapical prominences weakly pronounced *M. koreanus*
- Humeral prominences well pronounced but rounded; preapical prominences obsolete
..... *M. kwoni*

64. *Mogulones koreanus* Korotyaev, 1994 (Pl. 6-64)

Keun-i-job-ssal-ba-gu-mi (큰이좁쌀바구미)

Mogulones koreanus Korotyaev, 1994a: 113.

TL: Korea- HN.

Rostrum 1.35 times longer than prothorax, rather stout, strongly curved a little more so at base; sides nearly parallel, with a very slight prominence above antennal insertion and feebly sinuate in apical part; at apex rostrum a little broader than fore tibia at distal part of corbel. Median carina obsolescent in the middle third. Antennae inserted at 0.38 length of rostrum from its apex. 2nd funicular segment a little shorter than 1st, 3rd and 4th of nearly equal length, 7th as long as broad, club spindle-shaped, moderately long. Eyes rounded triangular, moderately convex. Frons very weakly depressed, very broad, with dense, rather small, deep punctures; interspaces narrow, shining. Pronotum 1.4 times broader than long, base nearly straight, weakly produced backwards in middle third only. Sides weakly diverging from base to the middle, almost straight, with small acute tubercle, moderately converging distal to it, rather abruptly constricted near apex and still convergent after the constriction; apical margin not bent upwards, but deeply emarginate in the middle. Median depression narrow and deep near base, obsolescent in the centre and foveiform in apical constriction. Scutellum shining, convex. Elytra 1.1 times longer than broad, subglobose, with rounded shoulders and very convex disc, highest a little proximal to the middle. Humeral and apical prominences weakly pronounced. Striae rather broad and deep, with very shortly spaced punctures. Intervals flat, opaque, 1.5 times broader than striae, with 2–3 rows of moderately large punctures. All femora with a large tooth, the one on fore and middle femur sloping very

steeply on apical edge. Front tibiae slightly bent and dilated externally near apex, weakly emarginate at base on inner margin, with a very small mucro; corbels short, densely set with fine spines. Middle tibiae more strongly dilated to the apex, S-shaped, with a large acute mucro, corbels longer, very shallowly emarginate. Hind tibiae weakly dilated to the apex, moderately curved S-shaped; corbel shortly rounded, mucro as in middle tibiae. 3rd tarsal segment twice broader than 2nd. Claws rather short, dentate.

MEASUREMENTS: Body length (excl. rostrum) 3.05 mm, width of elytra 1.8 mm.

COLOR: Body black. Elytra with a contrasting pattern of pale yellowish white spots. The scutellar spot occupies the basal 1/4 of the 1st interval. Lateral spots placed on 6–8th intervals a little proximal to the middle, the patch on 6th interval being the longest, that on the 7th - the shortest; the patch on 8th interval is produced a little forward. Apical spots comprise the one on 1st interval, not reaching sutural angle, and 2 arcuate bands beneath apical prominence.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: North (HN).

KOREAN RECORDS: Korotyaev, 1994a: 113 (HN); Hong et al., 1999b: 173 (North); Hong et al., 2000: 103; Korotyaev and Hong, 2004: 154.

SPECIMEN EXAMINED: HN: 1 ex. (Toxong-Omdonri hill 1,800 m: 27.v.1990, holotype, preserved in ZIN, Russia).

65. *Mogulones kwoni* Korotyaev and Hong, 2004 (Pl. 6-65)

Pal-gong-san-job-ssal-ba-gu-mi (팔공산좁쌀바구미)

Mogulones? kwoni Korotyaev and Hong, 2004: 154.

TL: Korea- Mt. Palgongsan.

Rostrum 1.5 times as long as pronotum, slightly wider than dilated apical part of fore tibia and 0.7 times as wide as fore femur; moderately and evenly curved, cylindrical, matte. Punctuation of rostrum dense, rather fine, somewhat rugulose; punctures more or less elongate. Obsolete median carina linear, scarcely discernible in basal half and slightly before antennal insertion. Short apical part of rostrum shining, more sparsely punctate. Antennae inserted in the middle of rostrum. 2nd funicular segment slightly shorter than 1st, 3rd and 4th segments 2/3 as long as 2nd, 5th segment noticeably shorter than 4th, scarcely longer than wide; 6th segment noticeably wider than 5th, as long as wide; 7th segment wider than 6th, weakly transverse. Club short spindle-shaped, with shining basal half. Eyes small, rounded-triangular, moderately convex. Frons weakly convex in anterior part, and nearly flat posteriorly; strongly widening backwards, more coarsely punctate than rostrum. Vertex very finely carinate along its entire length. Pronotum 1.36 times as wide as long. Base shallowly bisinuate, weakly produced posteriorly in the middle; basal margin not raised, overlapped by basal margin of elytra. Sides weakly rounded, moderately converging from slightly behind lateral tubercles to the moderately sharp apical constriction. Apical margin slightly raised, shallowly emarginate in the middle, sparsely and very finely serrate lateral to median emargination; postocular lobes large, occupying half of pronotum height (in lateral view). Lateral tubercles well developed, rather sharp, but not projecting beyond outlines of pronotum. Disc moderately convex,

much more steeply sloping to apical constriction than to base. Median sulcus obsolete in the center of disc, somewhat more distinct before apical constriction, moderately deepened in narrow fovea at base. Scutellum minute, punctiform. Elytra 1.6 times as wide as pronotum, as long as wide, strongly rounded, widest at the end of basal third. Humeral prominences well pronounced but rounded; preapical prominences obsolete. Disc strongly convex. Striae broad and deep. 1st stria strongly incurved in basal 1/6; 2nd stria very shortly incurved at very base, 3rd–5th striae straight at base. Intervals strongly convex, more or less uniform, somewhat wider than striae, matte, finely irregularly granulate. Granules on sides and near apices of elytra slightly larger and arranged in a more or less regular row. Granulation in the area of preapical prominences as elsewhere. Keels on prosternum before fore coxae very low, subequal in length to apical part of pronotum. Fore coxae separated by width of antennal scape. Meso- and metasternum flat; distance between middle coxae about half coxa diameter. Metasternum short; distance between middle and hind coxae slightly less than half-diameter of middle coxa. 1st ventrite flat, 2nd one rather strongly declivous posteriorly except for lateral corners; 3rd and 4th ventrites moderately convex longitudinally; 5th ventrite rather strongly sloping apically, somewhat flattened in middle third. Femora not considerably differing in width, all finely dentate. Tibiae wide; fore tibia noticeably outcurved and roundly dilated outward apically; middle and hind tibiae straight, also somewhat dilated at apex. Spines in apical combs fine and very dense. Tarsi short, 3rd segment 1.5 times as wide as 2nd. Claws free, with short dent at base.

MEASUREMENTS: Body length (excl. rostrum). 2.4 mm.

COLOR: Body black. Elytra with sparse, mostly brown scales similar to those on head, arranged in 3–4 rows on intervals, and with white pattern composed of larger lanceolate scales. Pattern consists of oblique narrow band running from scutellum to middle of 6th interval, where patch of white scales longest, and turning there from anteriorly to 9th interval immediately behind humeral prominence.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: South (GB).

KOREAN RECORDS: Korotyayev and Hong, 2004: 154 (Mt. Palgongsan).

SPECIMEN EXAMINED: GB: 1 ♀ (Mt. Palgongsan: 16.v.1976, holotype).

Genus *Sirocalodes* Voss, 1958: 73.

Goe-bul-jop-ssal-ba-gu-mi-sok (괴불좁쌀바구미속)

Antennae with 6-segmented funicle and elongate club. Base of pronotum straight or slightly angularly produced in middle; anterior margin bent. Elytra usually with rectangular pale scutellar spot, formed by dense wide lanceolate scales, restricted to 1st interval; or scutellar spot T-shaped, somewhat indistinct, formed by narrow-lanceolate or parallel-sided scales, weakly condensed in basal 2/5 of sutural interval and in basal 1/7–1/6 of 2nd–5th intervals. In latter case pale spot at the end of basal third of 6th interval, often continued as oblique band to humeral prominences, and diffuse wide pale band at middle also present. Femora finely dentate, claws dentate. On Papaveraceae. (*Corydalis*) (Egorov et al., 1996).

Type species: *Curculio nigrinus* Marsham, 1802=*Ceutorhynchus depressicollis* Gyllenhal, 1813.

SPECIES 19 (2 in Korea), (5 in Russian Far East).

DISTRIBUTION: Holarctic.

Key to the species of genus *Sirocalodes*

1. Middle trochanters of male produced in long lobe-shaped projection *S. notatus*
 – Trochanters without long lobe-shaped projection *S. umbrinus*

66. *Sirocalodes notatus* (Brisout, 1883) (Pls. 6-66, 18-66)

Goe-bul-job-ssal-ba-gu-mi (괴불좁쌀바구미)

Ceutorhynchidius notatus Brisout, 1883: 114.

TL: Siberia.

Sirocalodes czekanovskyi Korotyaev, 1980: 249.

TL: Russia- Irkutsk.

Rostrum 1.4 times as long as pronotum, slightly curved, a little stronger at apical third; matted to base of antennae, rugosely punctate, with very thin keel, and then shining, moderately dense punctate. Antennal funicle thin, 6-segmented, club elongated, as long as 2nd–6th funicular segments taken together. Eyes large, wide-oval, slightly prominent; frons quite deeply depression. Pronotum angularly widened at basal third, then conically narrowed to apex; apical constriction weak, anterior margin hardly raised. Lateral tubercles well developed. Disc moderately convex, median sulcus smoothed at middle, strongly deepened before scutellum. Scutellum narrow, convex. Elytra widened at shoulders, strongly narrowed to apex, preapical calli distinct. Disc behind scutellum flattened, convex along sutures in the middle. Striae deep and narrow, intervals twice wider than striae, matte, with small granules. 1st and 2nd intervals of just behind scutellum and behind middle part covered with whitish scales. Anal sternite longer than 3rd and 4th sternites taken together, slightly depressed. Pygidium flat. Legs very thin and long, femora slightly widened, with hardly tooth; middle trochanters of male produced in long lobe-shaped projection; tibiae straight, almost not dilated to apex, middle and hind tibiae with small mucro. 1st tarsal segment 2.5 times, 2nd tarsal segment 1.5 times as long as their broad. Claws with tooth.

MEASUREMENTS: Body length (excl. rostrum) 2.4 mm.

COLOR: Body blackish brown.

BIOLOGICAL NOTES: In southern Siberia, beetles are common on *Corydalis sibirica* (L.) Pers. together with *Sirocalodes marshakovi* Korotyaev, 1980, which also occurs in Primorskii Terr. and may probably be found in Korea (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Russia (E. and C. Siberia, Far East), Mongolia, Kazakhstan, Tuva.

KOREA: Cental (GW).

KOREAN RECORDS: Hong et al., 2000: 104 (Central); Korotyaev and Hong, 2004: 156.

SPECIMEN EXAMINED: GW: 1 ♀ (Goseong Geonbongsa: 26.v.1993); 4 exs. (Tp. Bukdaesa, Mt. Odaesan: 27.v.2008).

67. *Sirocalodes umbrinus* (Hustache, 1916) (Pls. 6-67, 18-67)

San-goe-bul-job-ssal-ba-gu-mi (산괴불좁쌀바구미)

Ceuthorrhynchus umbrinus Hustache, 1916: 131.

TL: Japan- Hukushima.

Body oblong, convex, matte. Rostrum thick, cylindrical, a little longer than pronotum, strongly curved, punctate in whole length, Antennal funicle 6-segmented, club elongated, longer than 4 last funicular segments taken together. Pronotum transverse, shortly and poorly narrowed behind anterior margin which is raised, slightly arched-converging at lateral margin, disc convex, with obsolete lateral tubercles, with short and deep dimple before scutellum. Elytra oblong, the broadest towards middle, a little broader than pronotum at base, very obtuse shoulders; lateral margin slightly but rather regularly arched-converging, separately rounded to apex, apical angle very obtuse; preapical calli absent. Striae rather strong punctate, intervals flat, twice broader than stria, 1st interval of just behind scutellum covered with whitish scales and these scales scattered on them. Disc convex, shallowly depressed at base. Underside of body strongly punctate and covered scales. Pygidium finely and densely punctate. Legs moderately punctate with ash pubescence, tibiae and tarsi brighter ferruginous; femora barely clavate, with a small tooth; tibiae curved at base, progressively dilated to apex; corbel short; tarsi robust, 4th segment subconical, twice longer than 2nd, 3rd segment with broad lobes and barely longer than 2nd. Claws with tooth.

MEASUREMENTS: Body length (excl. rostrum) 2.2–2.5 mm.**COLOR:** Derm blackish brown; legs and antennae brighter; apical margin of elytra reddish.**BIOLOGICAL NOTES:** Specimens were taken from *Corydalis speciosa* Maxim. in the mountains at the elevation of about 300–400 m, at roadsides and rice-field margins (Korotyaev and Hong, 2004).**DISTRIBUTION:** Korea, Japan (Honshu, Kyushu), Russia (Sakhalin).**KOREA:** South (GN).**KOREAN RECORDS:** Hong et al., 2000: 104 (South); Korotyaev and Hong, 2004: 156.**SPECIMEN EXAMINED:** GN: 11 exs. (Sancheong: 17.v.2000).**Genus *Thamiocolus* Thomson, 1859: 140.**

Kkul-pul-jop-ssal-ba-gu-mi-sok (꿀풀좁쌀바구미속)

SYNONYM: *Ceutorhynchus* (*Euthamiocolus*) Smreczyński, 1974: 76.

Antennal funicle 7-segmented. Elytra with more or less distinct, sometimes with strongly contrasted pattern; usually longer than wide. Meso- and metasternum without sulcus for reception of rostrum, not at all depressed medially. Fore tibiae with more or less elongate and emarginate apical combs (excepting *Th. kraatzi* Brisout which is short and not emarginated). Apical comb of setae on middle and hind tibia ascending along external margin for a distance from apex about equal to one third of the tibial length. Claws dentate.

Type species: *Rhynchaenus viduatus* Gyllenhal, 1813.

SPECIES 40 (1 in Korea), (4 in Russian Far East).

DISTRIBUTION: Palaearctic.

REMARKS: On Lamiaceae (*Phlomis*, *Stachys*) (Egorov et al., 1996).

68. *Thamiocolus kerzhneri* Korotyaev, 1980 (Pl. 6-68)

Kkul-pul-job-ssal-ba-gu-mi (꿀풀좁쌀바구미)

Thamiocolus kerzhneri Korotyaev, 1980: 235.

TL: Russia- Buryatia, Mongolia.

Rostrum 3 times as long as pronotum, regularly but moderately curved to base of antennae, apical third a little more abruptly bent downward; parallel-sided to basal 2/3, and then slightly narrowed, densely punctate. Antennae usually proportions, club as long as 3rd-7th funicular segments taken together. Frons slightly depressed, apical margin of eyes a little prominent above its surface. Pronotum 1.5 times as wide as long, with obtuse tubercles on lateral sides before middle and slight slanting depression before them; anterior margin slightly raised, with shallow emargination at middle. Elytra hardly longer than its width, the widest part behind shoulders, regularly quite slightly narrowed toward apex; preapical calli very weak. Striae thin, intervals flat, 4 times as wide as striae. Anal sternite at median thirds moderately depressed. Legs thick, all femora with distinct tooth, tibiae dilated toward apex. Apical combs of tibiae shallow, occupied 1/3 length of tibia, bearing 15 small thin bristles; at middle tibia, apical combs deep and occupied 2/5 length of tibia. Middle and hind tibiae with small bent inner mucro. Claws dentate.

MEASUREMENTS: Body length (excl. rostrum) 2.4-2.9 mm.

COLOR: Body black, antennal funicle and tarsi reddish. Pronotum and elytra with extensive white pattern.

BIOLOGICAL NOTES: In Tuva and SW Mongolia, these beetles occur together with *Thamiocolus gobicola* Korotyaev, 1980 on *Panzeria lanata* (L.) Soják (Lamiaceae) (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, China (Beijing, Shensi), Russia (southern Siberia), Mongolia.

KOREA: Cental (GW).

KOREAN RECORDS: Korotyaev and Hong, 2004: 156 (Central).

SPECIMEN EXAMINED: GW: 1♂ (Mt. Kumgangsan, R (khaam, No. 352, sweeping grass: 10-12.vii. 1977, preserved in HNHM, Hungary).

Genus *Wagnerinus* Korotyaev, 1980: 119.

Bol-rok-jop-ssal-ba-gu-mi-sok (불록좁쌀바구미속)

Rostrum narrower than fore femora, in apical part shining, in female sometimes almost smooth. Antennal funicle 7-segmented. Scutellar spot inconspicuous. Odd intervals of elytra more convex than even, sometimes almost costiform; granules on intervals small, sometimes inconspicuous. Investiture of intervals sparse, appressed, dark narrow scales. Rostral sulcus on meso- and meta-

sternum shallow, with more or less gentle slopes. On *Weigela* (Caprifoliaceae) (Yoshitake et al., 2008).

Type species: *Ceutorhynchus carinulatus* Faust, 1887.

SPECIES 4 (1 in Korea), (2 in Russian Far East).

DISTRIBUTION: Korea, Japan, South of the Russian Far East.

69. *Wagnerinus costatus* (Hustache, 1916) (Pls. 6-69, 19-69)

Hol-su-bol-rok-job-ssal-ba-gu-mi (홀수볼록좁쌀바구미)

Ceuthorrhynchus costatus Hustache, 1916: 139.

TL: Japan- Mt. Ibuki.

Head sparsely with hairy brownish scales, distinctly punctuate, with a median keel to vertex; frons slightly depressed, broad and narrowing to the base of rostrum; rostrum slender, reaching the posterior margin of metasternum, sparsely clothed with hairy brownish scales on basal half and only sparsely with minute scales on apical half, parallel-sided, and weakly curved; antenna inserted into the middle of rostrum; scape longer than basal 3 funicular segments taken together and brown seta at apex; funicle 7 segments, with 1st segment robust, a little longer than 2nd and 3rd, and the other segments much shorter; club spindle shape. Pronotum rather sparsely clothed with hairy brownish scales and sparsely with ovate brown scales on median line and lateral sides, a little shorter than the broadest width, broadest just before the base, subapical constriction very weak, anterior margin entire. Scutellum black, pear shape. Elytra rectangular form, with an scutellar patch on basal of 1st interval, which is composed of contiguous ovate yellow scales, intervals with a row of, partly two rows of brownish truncated scales, longer than wide, broadest just behind shoulders, the sides gently narrowed posteriorly; punctured striae deep, with a row of minute scales same color as in intervals. Odd-numbered intervals of elytra more convex than even and bearing 1 row of short hair-like scales, each interval carinate, much broader than striae and with a row of setigerous obtuse projections. Sternum more densely clothed than abdomen with oval yellowish white scales; prosternum flat, fore coxae separated as wide as rostrum, mesosternum excavated between middle coxae, metasternum slightly impressed at middle to receive apex of rostrum; rostral sulcus on meso- and metasternum shallow, with more or less gentle slope. 1st abdominal segment slightly depressed on median portion, 5th abdominal segment strongly depressed on median portion. Legs elongate; femora slender, clothed with hairy brownish scales and with tooth which covered with oval yellow scales on slightly emarginated portion; tibiae scarcely curvate and a little dilated toward apex, clothed with hairy brownish scales, anterior margin of corbel fringed with brownish bristles, inner side of apex of middle and hind tibiae with a triangular mucro; claws appendiculate, inner branches separated each other.

Female: Rostrum longer, reaching the middle of 1st abdominal segment; tibia without mucro; 1st abdominal segment nearly flattened on median portion, 5th abdominal segment not depressed on median portion. Basal margin of pygidium fairly strongly upraised.

MEASUREMENTS: Body length (excl. rostrum) 2.5–2.7 mm.

COLOR: Body black, apical half of rostrum, antennae and legs reddish brown.

BIOLOGICAL NOTES: This species is associated exclusively with galls on the axillary buds of *Weigela hortensis* (Caprifoliaceae) induced by the gall midge *Asphondylia baca* Monzen, 1937 (Diptera: Cecidomyiidae) in Japan (Yoshitake et al., 2008), and adults are collected on *Weigela subsessilis* L.H. Bailey in Korea.

DISTRIBUTION: Korea, Japan (Honshu).

KOREA: Central and South.

KOREAN RECORDS: Hong et al., 1999a: 68 (South); Hong et al., 2000: 106; Korotyayev and Hong, 2004: 146.

SPECIMEN EXAMINED: CB: 2exs. (Songgyeo valley, Mt. Wolaksan, Jecheon: 1.v.2006). GB: 1 ♀ (Mt. Unmunsan: 19.v.1985); 1 ♂ (Mt. Sudosan, Jeungsan-myeon, Gimcheon: 6.v.2006). GN: 1 ♂, 2 ♀ ♀ (Mt. Jirisan: 27.v.1976); 2 ♂ ♂, 1 ♀ (Mt. Jirisan: 5.vi.1983); 1 ex. (Tp. Yongsamsa, Mt. Jeongjoksan, Ulsan: 29.iv.2007).

Tribe Coeliadini Schultze, 1902

Genus *Coeliodes* Schoenherr, 1837: 282.

Gal-saek-jop-ssal-ba-gu-mi-sok (갈색좁쌀바구미속)

SYNONYM: *Megacetes* Thomson, 1859: 139.

Prothorax broadest in basal half, often near base, and rather strongly narrowing apically. Elytra shorter, no more than 1.21 times as long as broad, strongly narrowing in apical half. Elytra usually with transverse bands formed of light scales. Sides of the rostral furrow on mesosternum near hind coxae steep, often abrupt, posterior wall of the furrow on metasternum usually steep, furrow margins sharp. 2nd abdominal sternite in male often with a spot of dense scales sharply contrasting to the vestiture of the surrounding area. Male anal sternite usually with brushes of dense brown hairs along the depression and posterior margin. Female pygidium with smooth or slightly crenulate apical margin, without a trace of median carina. Femora sometimes with ill-defined tooth, not long; hind femora more or less clavate, no more than 3.8 times as long as broad. On Corylaceae and Fagaceae (Korotyayev, 1997c).

Type species: *Curculio rana* Fabricius, 1787.

SPECIES 34 (2 in Korea), (3 in Russian Far East).

DISTRIBUTION: Palaearctic.

REFERENCE: Korotyayev (1997c).

Key to the species of genus *Coeliodes*

1. Metepisterna covered with glossy yellowish grey scales in the antero-marginal part, venter in the male with the second ventrite devoid of median yellowish scaly patch, and the fifth ventrite shallowly depressed transversely in the middle, its posterior margin not fringed with long erect setae *C. babai*
- Without above combination of characters *C. nakanoensis*

70. *Coeliodes babai* Voss and Chûjô, 1960 (Pls. 6-70, 19-70)

Gal-saek-job-ssal-ba-gu-mi (갈색좁쌀바구미)

Coeliodes babai Voss and Chûjô, 1960: 1.

TL: Japan- Niigata Pref.

Coeliodes (Coeliodes) zinovjevi Korotyaev, 1997c: 627.

TL: Amurskaya.

Head with distinct median keel to vertex; frons between eyes a little broader than the base of rostrum, slightly depressed; rostrum 1.5 times as long as pronotum, weakly curved, parallel-sided and irregular rows of punctures, apical area less strongly punctured; antenna inserted into the basal two-fifths of rostrum; scape as long as the basal 5 segments of funicle taken together, apical two-fifths clubbed, apex rounded and with 2-3 long brown seta; funicle 7 segments, 1st funicular segment with robust, 3 times as long as wide, 2nd segment shorter than the 1st, a little longer than the 3rd, and longer than the 4th, 5th to 7th segments subequal in length to each other, each segment longer than wide; club fusiform, shorter than the basal 2 segments of funicle taken together, twice as long as wide, 1st segment of club conical, a little longer than wide, 2nd segment quadrate, twice as broad as long and 1/2 times as long as the 1st, each segment of antenna with several long hairs. Pronotum 2/3 times as long as wide, broadest at the basal one-third, the sides gently rounded, sub-apical constriction moderate, anterior margin not sinuate at the middle, posterior margin with gently rounded at the middle, dorsum without any projection, adorned with piliferous punctures, median sulcus very weak. Scutellum moderate, oval form. Elytra almost oblong, longer than wide, broadest on the shoulders, the sides sub-parallel and narrowed posteriorly, each apex separately rounded; punctured striae shallow and with a row of hairy scale; interval much broader than striae, each striae with sparsely two or three rows of hairy scale. Procoxae broadly separated, pectorial canal extending into metasternum. Abdomen with the 1st and 2nd segments sparsely punctured, interval between the punctures broader than the diameter of one puncture, the remaining segments of abdomen closely punctured, 1st and 2nd segments not depressed at the middle, 3rd and 4th segments very short and each with densely piliferous punctures, 5th segment not depressed at the middle and with densely piliferous punctures. Femora weakly clubbed, without any projection. Tibia almost straight, sub-parallel, corbel fringed with black bristles and the apical one-fifth of outer margin with 4 or 5 black strong bristles.

MEASUREMENTS: Body length (excl. rostrum). 2.6 mm.

COLOR: Body reddish-brown, oval form, head, rostrum and median portion of pronotum black, antennal funicle brown, shoulders, transverse band in middle part and ending part of 4th to 9th intervals of elytra blackish brown, sparsely covered with brown pubescence and hairy white scales, the under and lateral sides of body, lateral margins and basal part of pronotum and the base of 1st interval of elytra which covered with ovate white scales.

BIOLOGICAL NOTES: Adults were collected in Amurskaya Prov. (Korotyaev, 1997c) and also in Korea on *Quercus mongolica* Fisch. ex Ledeb.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku), South of the Russian Far East.**KOREA:** South (JB, JN).

KOREAN RECORDS: Hong et al., 2000: 102 (South); Korotyaev and Hong, 2004: 157. Misidentified with *Coeliodes brunneus* Hustache: Hong et al., 1999b: 164 (South).

SPECIMEN EXAMINED: JB: 1 ♂ (Simwon Valley, Mt. Jirisan: 7.v.2006). JN: 1 ♀ (Mt. Jirisan Nogodan: 3.viii.1996).

71. *Coeliodes nakanoensis* Hustache, 1916 (Pls. 6-71, 19-71)

Tti-gal-saek-job-ssal-ba-gu-mi (띠갈색좁쌀바구미)

Coeliodes nakanoensis Hustache, 1916: 114.

TL: Japan- Tokyo.

Head with distinct median keel after vertex; frons between eyes as broad as the base of rostrum, slightly depressed; rostrum a little longer than pronotum, weakly curved, parallel-sided and irregular rows of punctures; antenna inserted into the basal half of rostrum; scape shorter than the basal 5 funicular segments taken together, apical one-third clubbed, apex rounded and with 2-3 long brown seta, 1st funicular segment with robust, 2 times as long as wide, 2nd segment shorter than the 1st and a little longer than the 3rd, and 4th to 7th segments subequal in length to each other, each segment longer than wide; club fusiform, a little shorter than the basal 2 segments of funicle taken together, twice as long as wide, 1st segment of club conical, longer than wide, 2nd segment quadrate, twice as broad as long and 1/3 times as long as the 1st, each segment of antenna with several long hairs. Pronotum 4/5 times as long as wide, broadest at the basal one-third, the sides gently rounded, subapical constriction strong, anterior margin not sinuate at the middle, posterior margin with a triangular small projection at the middle, dorsum without any projection, adorned with piliferous punctures, median sulcus very weak. Scutellum moderate, lanceolate. Elytra almost oblong, longer than wide, broadest on the shoulders, the sides sub-parallel and narrowed posteriorly, each apex separately rounded; punctured striae shallow and without row of hairy scale; interval much broader than striae, each interval with two or three rows of hairy brownish scales. Procoxae broadly separated, pectorial canal extending into metasternum. Abdomen with piliferous punctured, interval between the punctures broader than the diameter of one puncture, 1st and 2nd segments depressed at the middle, 2nd segment with densely piliferous punctures, and 5th segment depressed on median and with densely piliferous punctures, and brown long hairs. Femora weakly clubbed, without any projection. Tibia almost straight, sub-parallel, corbel fringed with black bristles and the apical one-fifth of outer margin with 3 or 4 black strong bristles.

Female: The 1st, 2nd and 5th abdominal segments not depressed and inner side of apex of tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum). 2.4-2.5 mm.

COLOR: Body reddish-brown, oval form, rostrum and underside of body black, antennal scape blackish-brown, dimly transverse band in middle part and ending part of 4th to 9th interval of elytra with hairy white scales, sparsely covered with brown pubescence. The under and lateral sides of body, lateral margins and basal part of pronotum and the bases of 1st interval of elytra covered with ovate white scales.

BIOLOGICAL NOTES: Adults were found in Japan on *Quercus dentata* Thunb. (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Kyushu), Russia (Primorskii Terr.).

KOREA: Central (GW).

KOREAN RECORDS: Hong et al., 1999b: 166 (Central); Hong et al., 2000: 102 (Central); Korotyayev and Hong, 2004: 157.

SPECIMEN EXAMINED: GW: 1♂ (Hongcheon Unduryeong: 27.v.1993); 2♀♀ (no data).

Genus *Coeliodinus* Dieckmann, 1972: 39.

Si-be-ri-a-jop-ssal-ba-gu-mi-sok (시베리아좁쌀바구미속)

Prothorax usually weakly narrowing to apex, with sides in basal half subparallel or more or less evenly rounded. Elytra weakly elongate, 1.2–1.32 times as long as broad, moderately narrowed in apical half. Elytral without transverse bands composed of light scales. Sides of the rostral furrow on mesosternum more or less gently sloping, posterior wall of the furrow on metasternum not steep, sides of furrow smoothed. Femora without any trace of tooth, slender; hind femora no less than 3.8 times as long as broad. 2nd abdominal sternite in male with slightly denser white scales in the middle, without a bunch of erect elongate scales or a sharp-margined fovea. Male anal sternite without dense brushes composed of brown hairs along the depression and posterior margin. Apical margin of pygidium in female distinctly serrate; apical part of pygidium sometimes with more or less distinct short and low median carina. On Betulaceae (Korotyayev, 1997c).

Type species: *Curculio rubricundus* Herbst, 1795.

SPECIES 7 (1 in Korea), (4 in Russian Far East).

DISTRIBUTION: Korea, Japan, Russia, Caucasus, Europe.

REFERENCE: Korotyayev (1997c).

72. *Coeliodinus sibiricus* (Reitter, 1916) (Pl. 6-72)

Si-be-ri-a-jop-ssal-ba-gu-mi (시베리아좁쌀바구미)

Coeliodinus rubicundus var. *sibiricus* Reitter, 1916: 146.

TL: Siberia.

Pronotum parallel-sided at basal half. Elytra without transverse band by light scales, a little elongated 1.2 times longer than broad. Posterior half of elytra narrowed roundly, intervals with indistinct 1 or 2 rows of appressed yellowish hair-like scales. Basal half of elytral intervals two to five with investiture so sparse as to appear almost glabrous, apical third with a faint trace of a whitish band formed by recumbent hair-like scales, intervals uniformly and moderately convex, striae punctured. Sutural interval at least slightly darker than others. Granules on weak preapical calli minute. Pectorial canal more or less gently sloped on mesosternum and wall of canal between metacoxae and posterior canal on metasternum rarely sloped and smoothed. Median part of 2nd abdominal sternite in male condensed whitish scales, without erected long scaly tuft. Margin of emarginated area on 5th abdominal sternite without densely brownish hair-like bristle. Femora without tooth.

MEASUREMENTS: Body length (excl. rostrum). 2.6 mm.

COLOR: Body light reddish brown, rostrum and pronotum a little darker reddish brown than elytra.

BIOLOGICAL NOTES: In Siberia, occurs on *Alnaster fruticosus* (Rupr.) Ledeb. and *Alnus* (Korotyaev, 1997c).

DISTRIBUTION: Korea, Russia (Magadan, Khabarovsk, Amur, Primorskii, Yakutia, Irkutsk, Buryatia).

KOREA: North (RG).

KOREAN RECORDS: Korotyaev, 1997c: 624 (Paekdu-san); Korotyaev and Hong, 2004: 157.

SPECIMEN EXAMINED: RG: 1♂ (Paekdusan milyong 1500 m: 27.vi.1988, No. 1353, preserved in HNHM, Hungary).

Genus *Trichocoeliodes* Colonnelli, 1979: 142.

Bam-na-mu-jop-ssal-ba-gu-mi-sok (밤나무좁쌀바구미속)

Rostrum slender, noticeably narrower than fore femora. Pronotum narrow, with moderately convex disk and usually with median sulcus, rather coarse dense punctures, and noticeably rounded sides. Elytra at shoulders wide, strongly narrowed to apex usually immediately from base; intervals moderately or strongly convex, shining, with long, semi-erected parallel-sided or widened apically scales arranged in 1 row; striae deep and wide. Base of abdomen in male deeply depressed, 2nd sternite with bunches of yellow hairs at the margins of deep medioposterior foveae. Legs more or less long, femora usually unarmed. On Fagaceae (Morimoto, 1984).

Type species: *Trichocoeliodes erinaceus* Colonnelli, 1979.

SPECIES 2 (1 in Korea).

DISTRIBUTION: Korea, Japan, China, Bhutan.

73. *Trichocoeliodes excavatus* (Hustache, 1916) (Pls. 7-73, 19-73)

Bam-na-mu-jop-ssal-ba-gu-mi (밤나무좁쌀바구미)

Micrelus excavatus Hustache, 1916: 128.

TL: Japan- Mt. Kinkazan pres Gifu.

Rostrum slender, noticeably narrower than fore femur. Pronotum narrow, with moderately convex disk and usually with median sulcus, rather coarse dense punctures, and noticeably rounded sides. Elytra at shoulders wide, strongly narrowing to apex usually immediately from base; length of elytra somewhat greater. Intervals moderately or strongly convex, shining, with long, semi-erect parallel-sided or widening apically scales arranged in 1 row. Base of abdomen in male deeply depressed, 2nd sternite with bunches of yellow hairs at the margins of deep medioposterior foveae. Legs more or less long, femora usually unarmed.

MEASUREMENTS: Body length (excl. rostrum) 2.3 mm.

COLOR: Rostrum reddish brown, pale. Pubescence of pronotum and elytra not very dense, formed by narrow, sometimes almost hair-like, sometimes narrow-lanceolate white scales, on elytra arranged along margins of intervals and not forming bands. Disk of pronotum sometimes dark, elytra with dark brown base and 2 bands, one before middle, the other near apex.

BIOLOGICAL NOTES: These beetles were collected from flowers and young branches of chestnut (*Castanea crenata* Sieb. and Zucc.) in Korea and also from young branches of *Castanopsis cuspidate* (Thunb.) Schottky var. *sieboldii* (Makino) Nakai by net-sweeping in Japan (Yoshitake and Mataba, 2001).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: Central and South.

KOREAN RECORDS: Hong et al., 2000: 103 (South); Yoshitake et al., 2000: 455 (Mt. Jiri-san); Korotyayev and Hong, 2004: 157.

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Taehwasan, Gwangju: 26.vii.-7.viii.2006). JB: 2exs. (Jeoksangmyeon, Muju: 15.v.2008). JN: 1 ♀ (Suncheon: 20.v.1997).

Genus *Tapeinotus* Schoenherr, 1826: 21.

Keun-jop-ssal-ba-gu-mi-sok (큰좁쌀바구미속)

SYNONYM: *Caulocharis* Gistel, 1856: 370.

Body elongate. Rostrum stout, hardly wider than fore femora; in female, 1.25 times as long as pronotum, strongly curved, almost parallel-sided, matted, densely finely punctated. Antennal funicle 6-segmented, its 3rd segment slightly shorter than 2nd. Pronotum transverse, weakly rounded on sides, shallowly constricted near apex; anterior margin not raised; lateral tubercles absent, median sulcus slightly pronounced only at apical half. Elytra about 1.3 times as long as wide, finely striated, with imbricate scales depressed in the center; disk with wide brownish median cross-band. Meso- and metasternum flat. Legs long, femora obsoletely dentated, 3rd tarsal segment twice as wide as 2nd, claws with large connate teeth. On Primulaceae (*Lysimachia* in wet places) (Egorov et al., 1996).

Type species: *Tapeinotus ephippiger* Schoenherr, 1826.

SPECIES 1.

DISTRIBUTION: Korea, NE China, South of the Russian Far East, Siberia, Kazakhstan, Europe.

74. *Tapeinotus sellatus* (Fabricius, 1794) (Pls. 7-74, 19-74)

Keun-job-ssal-ba-gu-mi (큰좁쌀바구미)

Attelabus sellatus Fabricius, 1794: 454.

TL: Europe.

Rhynchaenus lysimachiae Olivier, 1807: 215.

Tapinotus ephippiger Schoenherr, 1826: 293.

Body long rectangle form, parallel-sided. Head coarsely punctuate, with median keel to vertex, weakly depressed at the frons between eyes; Rostrum stout, hardly wider than fore femur, about longer than pronotum, base of rostrum narrower than the frons between eyes, slightly widened apically, gently curved downwardly; antenna reddish-brown, inserted into apical one-third of rostrum; scape rounded at apex, not reached the front border of eye; funicle 6-segmented, 1st segment robust, but distinguished shorter than 2nd, 3rd segment shorter than 2nd and 2 times as long as 4th segment, 4th to 6th segments subequal in length; club long spindle-shape, pointed at the apex, very finely and closely pubescent. Pronotum transverse, broader than long, weakly rounded on sides, shallowly constricted near apex, anterior margin not sinuate at the middle, dorsum without any projection, lateral tubercles wanting, median sulcus slightly pronounced only in apical half. Scutellum small, lanceolate. Elytra distinctly longer than wide; scutellar patch absent; punctured striae shallow; base of 8th interval with strongly concave; finely striate, with imbricate scales depressed in the centre; disk with wide brown median cross-band. Underside of body coarsely covered with ovate white scales; prosternal canal bordered with keels; meso- and metasternum flat; abdomen slightly concave. Legs elongate; femur gradually thickened from the base to a little beyond the middle, emarginated beyond the underside of the thickest part with a denticular angulation at the base of that emargination, the denticle covered with ovate white scales; tibia slender, inner side of apex of tibia with mucro. 3rd tarsal segment twice as wide as 2nd. Claws with large connate tooth, inner branches separate.

Female: Rostrum 1.25 times as long as pronotum, strongly curved, almost parallel-sided. Abdomen more convex and inner side of apex of tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum) 3.2–3.9 mm.

COLOR: Derm black, coarsely covered with ovate dark brown scales. Rostrum matte, densely finely punctuate. White broad pattern on median line of pronotum, white round pattern from just behind of scutellum to 5th interval laterally, white band pattern beyond middle of elytra and white pattern on apex of elytra made by ovate white scales.

BIOLOGICAL NOTES: Found on *Lysimachia vulgaris* L., and *L. thyrsiflora* L. (Egorov et al., 1996).

DISTRIBUTION: Korea, NE China, Russia (European part, Siberia, Far East), Kazakhstan, Turkey, Belgium, Bulgaria, Bielorrussia, Switzerland, Czech Republic, Germany, Denmark, Estonia, Finland, France, England, Hungary, Italy, Latvia, Netherlands, Norway, Poland, Romania, Sweden, Slovakia, Ukraine.

KOREA: Central (GW).

KOREAN RECORDS: Hong et al., 1999a: 70 (Central); Hong et al., 2000: 103; Korotyayev and Hong, 2004: 157.

SPECIMEN EXAMINED: GW: 2♂♂, 1♀ (Mt. Odaesan: 27.v.1993).

Genus *Zacladus* Reitter, 1913: 66.

Ga-si-jop-ssal-ba-gu-mi-sok (가시좁쌀바구미속)

Antennal funicle 7-segmented. Frons wide, flat or slightly depressed. Pronotum with strongly rounded sides, sharply bent anterior margin, small sharp lateral tubercles; medial sulcus more or less smoothed, punctation dense. Intervals of elytra with 1 row of sharp granules, either numer-

ous and more or less regularly spaced along entire length of bare intervals, or 3–6 large, sometimes forming indistinct cross rows on elytral disk; in these cases intervals more or less densely covered with more or less wide pale scales. Mesosternum weakly depressed, metasternum at least between middle coxae deeply depressed, posterior wall of depression abrupt, often steep. Femora with small tooth. Fore tibia with more or less long, usually emarginate apical comb. Claws dentate. On Geraniaceae (Korotyaev, 1997a).

Type species: *Curculio geranii* Paykull, 1800.

SPECIES 7 (2 in Korea), (3 in Russian Far East).

DISTRIBUTION: Palaearctic.

REFERENCE: Korotyaev (1997a).

Key to the subgenus of genus *Zacladus*

1. Upper surface without pale scales; punctation of pronotum very dense, no less than 30 punctures along median line of pronotum. Elytral intervals with moderately large, sharp granules arranged in single row. Middle coxae common structure, not produced at apex *Zacladus*
- Prothorax and elytra with more or less abundant pale scales. Punctation of pronotum coarser, 20–25 punctures in a row along median line of pronotum. Elytral intervals with very large granules (no more than 10 per interval), often arranged in more or less conspicuous oblique rows on elytra. Middle coxae noticeably produced at apex *Angarocladus*

Subgenus *Zacladus* Reitter, 1913: 66.

75. *Zacladus (Zacladus) geranii* (Paykull, 1800) (Pls. 7-75, 19-75)

Ga-si-job-ssal-ba-gu-mi (가시좁쌀바구미)

Curculio geranii Paykull, 1800: 256.

TL: Europe.

Rhynchaenus crenatus Gravenhorst, 1807: 207.

Coeliodes fallax Boheman, 1844 in Schoenherr, 1844: 399.

TL: Crimea.

Allodactylus transversicollis Faust, 1894a: 147.

Coeliodes (Allodactylus) simplicicollis Reitter, 1901: 130.

TL: Kamtschatka.

Zacladus subopacithorax Pic, 1916: 13.

TL: Japan- Tokyo.

Body convex. Antennal funicle 7-segmented. Frons wide, flat. Pronotum with strongly convex disc and with strongly rounded sides, sharply notched in anterior margin, small sharp lateral tubercles; medial sulcus more or less smoothed; punctation of pronotum very dense, no less than 30 punctures along median line of pronotum. Elytral intervals with 1 row of moderately large, sharp granules. Mesosternum weakly depressed, metasternum at least between middle coxae deeply depressed, posterior wall of depression abrupt steep. Legs stouter and shorter. Middle

coxae common structure, not produced at apex. Femora with small tooth. Fore tibia with more or less long, usually emarginate apical comb, with corbels deeply emarginate, bearing broad spines, and ending with large angulated prominence. Claws dentate.

MEASUREMENTS: Body length (excl. rostrum) 2.5–2.8 mm.

COLOR: Body black, without white scale.

BIOLOGICAL NOTES: Host plants are several species of *Geranium* (Korotyaev and Hong, 2004).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), China, Russia (European part, Siberia, Far East), Mongolia, Kazakhstan, Kirgizstan, Turkmenistan, Turkey, Tuva, Austria, Azerbaijan, Belgium, Bulgaria, Bielorussia, Switzerland, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, England, Georgia, Greece, Hungary, Italy, Luxembourg, Latvia, Moldavia, Netherlands, Norway, Poland, Portugal, Romania, Sweden, Slovenia, Slovakia, Ukraine, Yugoslavia.

KOREA: North, South and Is. Jejudo.

KOREAN RECORDS: Morimoto and Lee, 1992: 13 (JJ- Taechondong); ESK/KSAE, 1994: 208; Paik et al., 1995: 434 (JJ); Hong et al., 1999a: 65 (South, Jejudo); Hong et al., 2000: 106; Korotyaev and Hong, 2004: 157.

SPECIMEN EXAMINED: JB: 2♂ (Mt. Naejangsan: 10.vi.1975). JJ: 1 ex. (Mt. Halrasan: 23.vii.1981); 1 ex. (Mt. Halrasan: 7.viii.1984); 1♂ (Mt. Halrasan: 28.vii.1985); 4 exs. (Mt. Halrasan: 5.viii.1989); 2 exs. (Mt. Halrasan: 7.x.1990); 18♂♂, 13♀♀ (Gwaneumsa: 27–28.vii.1997).

Subgenus *Angarocladus* Korotyaev, 1997: 405.

Pronotum and elytra with rather abundant oval or lanceolate white scales. Punctuation of pronotum coarser, 20–25 punctures in a row along median line of pronotum. Elytra with humeri more prominent, more strongly narrowing to apex; intervals with very large granules, often arranged in more or less conspicuous oblique rows. Legs longer, middle coxae noticeably produced at apex, fore tibiae slender, with corbels slightly emarginated and bearing short, very fine spines.

Type species: *Coeliodes radula* Hochhuth, 1851.

76. *Zacladus (Angarocladus) radula* (Hochhuth, 1851) (Pls. 7-76, 19-76)

Nal-gae-ga-si-job-ssal-ba-gu-mi (날개가시좁쌀바구미)

Coeliodes radula Hochhuth, 1851: 95.

TL: Irkutsk and Nerchinsk.

Body oval form, widest at just behind the humeral area. Head nearly flat, very coarsely reticulate-punctuate with a weak median keel to vertex, flattened at the frons between eyes; rostrum about as long as pronotum, narrower than the frons between eyes, parallel-sided, gently curved downwardly; antenna yellow-brown, inserted into the middle of rostrum; scape robust, rounded at apex, not reached the front border of eye; funicle 7-segmented, 1st segment with robust, slightly longer than 2nd, 2nd to 4th segments subequal in thickness and length, 4th segment distinctly longer than the

5th, 5th to 6th segments subequal in length; club spindle-shape, pointed at the apex, very finely and closely pubescent. Pronotum nearly twice as broad as long, rounded at lateral sides, narrowed to anterior, dorsum convex, with a uncertain median sulcus, lateral side with small pyramidal projections. Scutellum very small. Elytra broader than the base of pronotum; scutellar patch absent, just behind of scutellum clothed with hairy dark brown scales; punctured striae distinctly deep; intervals strongly carinate, much broader than striae, each interval with a row of setigerous obtuse projections, the base of 8th interval weakly protruded; humeri more prominent, more strongly narrowing to apex. Underside of body coarsely covered with white scales. Pro- and mesosternum and anterior of metasternum continuously very broadly and deeply hollowed for the reception of rostrum when in repose; abdomen slightly convex. Legs elongate; femur gradually thickened from the base to a little beyond the middle, emarginated beyond the underside of the thickest part with a denticular angulation at the base of that emargination, the denticle covered with ovate white scales; tibia slender, inner side of apex of all tibia with mucro; 1st tarsal segment longer than 2nd segment; claws appendiculate, inner branches separate.

Female: Very similar to male, differing as follows; inner side of apex of tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum). 2.0–2.2 mm.

COLOR: Derm black, partially clothed with white scales. Pronotum and Elytra with rather abundant oval or lanceolate white scales.

BIOLOGICAL NOTES: In southern Siberia (Tuva), beetles are found on *Geranium sibiricum* L. in wooden and steppe areas (Korotyaev, 1997a).

DISTRIBUTION: Korea, N. China, Mongolia, Russia (Siberia, south of Far East).

KOREA: Central and South.

KOREAN RECORDS: Hong et al., 1999a: 66 (Central, South); Hong et al., 2000: 107; Korotyaev and Hong, 2004: 157.

SPECIMEN EXAMINED: GW: 1 ♂ (Mt. Seolaksan: 26.viii.1974); 2 ♀ ♀ (Mt. Odaesan: 30.vii.1976); 1 ♂ (Mt. Seolaksan: 9.viii.1976). CB: 1 ♂, 1 ♀ (Jecheon Bongyang: 24.v.1993). GB: 1 ♀ (Mt. Juwangsan: 26.vii.1984).

Tribe Cnemogonini Colonnelli, 1979

Genus *Augustinus* Korotyaev, 1981: 130.

Kkwa-ri-jop-ssal-ba-gu-mi-sok (파리좁쌀바구미속)

Body pitchy black with sparse vestiture and without scaly tufts. Rostrum robust and strongly dilated apically. Pronotum with smooth basal margin and without lateral tubercles in the middle. Ocular lobes with long vibrissae fringing. Odd-numbered intervals of elytra with denticulate tubercles and sharp granules in various size. Hind legs without jumping organ. Rostral canal deep and abrupt posterior wall. On Solanaceae and Lamiaceae. In Korea, *Augustinus koreanus* Korotyaev et Hong is associated with *Physalis* sp. (Solanaceae), and in Japan, *A. comes* Yoshitake, *A. bouvieri* Hustache and *A. similis* (Chûjô) are associated with *Leucosceptum* (Labiatae) (Yoshitake, 2005).

Type species: *Cyphosenus (Augustinus) longipes* Korotyaev, 1981.

SPECIES 11 (1 in Korea), (5 in Japan).

DISTRIBUTION: Korea, Japan, China, Vietnam.

REFERENCE: Yoshitake (2005).

77. *Augustinus koreanus* Korotyaev and Hong, 2004 (Pls. 7-77, 19-77)

Kkwa-ri-job-ssal-ba-gu-mi (파리좁쌀바구미)

Augustinus koreanus Korotyaev and Hong, 2004: 158.

TL: Korea- JJ, Seongpanak.

Pronotum 1.2–1.3 times as wide as long, with sides nearly straight, weakly converging from base to the middle; thereafter, more strongly roundly narrowing to the moderately deep apical constriction. Base rather deeply angularly produced backward. Apical margin rather strongly raised and narrowly produced anteriorly, notched and acutely bidentate in the middle. Disc rather strongly convex, with two obtuse prominences separated by median sulcus, moderately deep on apical, and very shallow, on basal declivity. Each prominence with 2 or 3 irregularly spaced, more or less acute tubercles on anterior, lateral, and posterior slopes. Elytra 1.1 times as wide as long; at shoulders, 1.75 times as wide as pronotum, widest immediately behind shoulders, strongly narrowing to apex, slightly rounded on sides. Humeral prominences very strongly convex, coarsely granulate. Disc strongly convex in the middle, moderately depressed along base and behind scutellum. Striae well defined but shallow, moderately broad, sparsely punctate. Intervals flat, matte, with groups of very large acute prominences and granules. 3rd interval with short and very high ridge in the middle bearing 9–11 acute setigerous granules along apex. 5th interval with moderately elongate strong prominence near base, bearing 3 granules; one or two large verrucae present behind prominence in basal half of interval, and one verruca immediately behind middle. 7th interval with small verruca near base medioposterior to anterior margin of humeral callus on 8th interval, two larger verrucae medial and/or medioposterior to humeral callus, and another one, in the middle of interval. Humeral callus more or less evenly covered with 15–17 medium-sized granules; the rest of 8th interval with only 2 small granules, one before, the other behind the middle. 9th interval highly ridged in basal half, with 5 or 6 somewhat rounded, more or less evenly spaced granules; 1 large verruca sometimes present slightly behind ridge, and 2 smaller ones, near apex of the interval. Preapical prominence on 4–8th intervals strong; 4th interval with 1 acute verruca, 5th interval much more strongly swollen than 6th, with 3 verrucae arranged in one row; 6th interval with 2 verrucae of varying size. 7th interval with large verruca anterior to rest of prominence. 1st interval with a row of medium-sized to rather large verrucae in posterior 2/3. 2nd interval with 2 or 3 verrucae medial to the prominence on 3rd interval. Interval 2+10 with row of almost regularly spaced small granules between sutural corner and middle of 10th interval. Femora moderately swollen, dentate; hind tibia noticeably curved along its entire length. 2nd tarsal segment scarcely longer than wide. Appendages of tarsal claws very long, their apices almost reaching level of claw apices.

MEASUREMENTS: Body length (excl. rostrum). 3.37–4.25 mm.

COLOR: Body black. Rostrum 1.15 times as long as pronotum. Apical part of rostrum 1.25 times as wide as middle part of rostrum. Antennae inserted in the middle of rostrum. Scape at apex, produced in very short obtuse lamelliform process. Eyes large, rounded triangular, moderately

convex. Frons at anterior margin as wide as base of rostrum, moderately widening posteriorly. Median carina almost keel-shaped at posterior margin of vertex, but reaching middle of frons as a line.

BIOLOGICAL NOTES: At Seongpanak, Jeju I., adults were sittings and mating on underside of leaves of *Physalis* sp. (Solanaceae) on the 29th of September, 2000.

DISTRIBUTION: Korea.

KOREA: Is. Jeju.

KOREAN RECORDS: Korotyaev and Hong, 2004: 158 (JJ).

SPECIMEN EXAMINED: JJ: 8♂♂, 8♀♀ (Seongpanak, on *Physalis* sp.: 29.ix.2000, type series); 2♂♂ (Seongpanak: 5.ix.1998).

Genus *Sinauleutes* Korotyaev, 1996 in Egorov et al., 1996: 460.

Al-rak-jop-ssal-ba-gu-mi-sok (알락좁쌀바구미속)

Rostrum not narrower than fore femora, indistinctly carinated. Frons moderately or deeply depressed. Eyes strongly convex. Disk of pronotum with 2 medium-sized prominences at the middle. Lateral tubercles large, acute. Basal margin of pronotum weakly raised, basal margin of elytra more strongly raised. Elytra at shoulders 1.6–1.7 times as wide as pronotum; humeral prominences strongly, preapical prominences moderately convex. Odd intervals of elytra strongly costiform convex, middle part of 3rd and the entire 5th intervals more strongly so. Striae no less than 0.7 times as wide as intervals, with large punctures which separated by more than their diameter. Disk with 2 or 3 narrow, undulate, more or less distinct bands of narrow whitish or yellowish scales, and sparse narrow scales scattered over rest of surface. Scutellar spot in the form of like turned off “T”. Femora with small, well developed tooth. Associated with Saxifragaceae (*Hydrangea serrata* (Thunb.) Ser.) (Yoshitake et al., 2006).

Type species: *Craponius bigibbosus* Hustache, 1916.

SPECIES 1.

DISTRIBUTION: Korea, Japan, China.

78. *Sinauleutes bigibbosus* (Hustache, 1916) (Pls. 7-78, 19-78)

Al-rak-jop-ssal-ba-gu-mi (알락좁쌀바구미)

Craponius bigibbosus Hustache, 1916: 119.

TL: Japan- Mt. Takao.

Rostrum not narrower than fore femur, weakly flattened, indistinctly carinate; in male 3 times as long as wide, coarsely punctate; underside of rostrum in apical half roundly widening; dorsal margin of antennal scrobe extended above base of antennae. Frons moderately or deeply depressed, eyes strongly convex. Disk of pronotum with 2 medium-sized prominences moderately convex. Lateral tubercles large, acute. Basal margin of pronotum weakly raised, basal margin of elytra more

strongly raised. Elytra at shoulders 1.6–1.7 times as wide as pronotum; humeral prominences strongly, preapical prominences moderately convex. Odd intervals of elytra strongly costiform convex, middle part of 3rd and the entire 5th interval more strongly so. Striae no less than 0.7 times as wide as intervals, with large punctures which separated by more than their diameter. Posterior margin of rostral sulcus not extending beyond posterior margin of middle coxae, sharp, overhanding the sulcus; bottom of sulcus on metasternum bare, impunctate. Femora with small, well developed tooth, distinctly clavate. Fore tibia without tarsal groove. Apical comb of fore tibia not emarginate, sometimes its length slightly more than width of tibia at apex. In male, fore tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum). 2.4–2.8 mm.

COLOR: Derm black. Sides of elytra without spot of dense wide scales, disk with 2 or 3 narrow, undulate, more or less distinct bands of narrow white or yellowish scales, and sparse narrow scales scattered over rest of surface. Scutellar spot in the form of like turned off “T”.

BIOLOGICAL NOTES: This weevil is associated with *Hydrangea serrata* (Thunb.) Ser. (Saxifragaceae), where it grows in current-year branches during its larval stage in Japan (Yoshitake et al., 2006).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), China.

KOREA: Central and South.

KOREAN RECORDS: Morimoto, 1984: 315; Kwon and Lee, 1986: 83 (South); ESK/KSAE, 1994: 208; Hong et al., 1999b: 170 (Central, South); Hong et al., 2000: 110; Korotyaev and Hong, 2004: 159.

SPECIMEN EXAMINED: GW: 1♂ (Mt. Obongsan: 25.v.1993). GB: 1♂, 1♀, 7 exs. (Mt. Palgongsan: 3.vi.1984). GN: 1 ex. (Tongdosa: 24.v.1980); 1 ex. (Ulsan: 24.v.1980).

Tribe Egrini Pajni and Kohli, 1982

Genus *Cyphosenus* Schultzze, 1899b: 188.

Eo-kkae-neol-eun-jop-ssal-ba-gu-mi-sok (어깨넓은좁쌀바구미속)

Rostrum slender. Antennal scape with long bristles on tip; funicle with 7-segmented; club more or less elongate. Eyes large. Frons narrow, not wider than base of rostrum, more or less deeply depressed. Pronotum strongly narrowed apically, without lateral tubercle; disk strongly convex, with entire, moderately deep median sulcus and oblique depressions diverged from prescutellar foveae. Basal margin of pronotum and elytra at both sides of scutellum strongly raised and finely crenulate. Mesepimera not visible in dorsal view. Scutellum keel-shaped, deeply sunk in scutellar foveae. Elytra scarcely wider than long, moderately convex, with wide deep striae and more or less convex intervals bearing 1–2 rows of small, inconspicuous granules. Meso- and metasternum with deep rostral sulcus. Femora with sharp tooth. Apical combs of tibiae short. Claws dentate.

Type species: *Cyphosenus paradoxus* Schultzze, 1899.

SPECIES 10 (1 in Korea).

DISTRIBUTION: Korea, Japan, Vietnam, India, Benin, Gabon, Ghana, Kenya, Zaire.

Subgenus *Cyphosenus* Schultze, 1899b: 188.

79. *Cyphosenus (Cyphosenus) grouvellei* Hustache, 1916 (Pls. 7-79, 19-79)

Eo-kkae-neolb-eun-job-ssal-ba-gu-mi (어깨넓은좁쌀바구미)

Cyphosenus grouvellei Hustache, 1916: 121.

TL: Japan- Kyoto.

Rostrum slender, usually no more than 0.7 times as broad as fore femur. Antennal scape with long bristles on tip; funicle with 7-segmented; club more or less elongate. Eyes large. Frons narrow, not wider than base of rostrum, more or less deeply depressed. Pronotum strongly narrowing apically, without lateral tubercles; disk strongly convex, with entire, moderately deep median sulcus and oblique depressions diverging from prescutellar fovea. Anterior margin of pronotum not raised, with narrow median excision, restricted by angular prominences (in the form of triangular expansions in front view). Punctuation of pronotum not deep, moderately coarse. Mesepimera not visible in dorsal view. Scutellum keel-shaped, deeply sunk in scutellar fovea. Elytra scarcely wider than long, moderately convex, with wide deep striae and more or less convex intervals bearing 1-2 rows of small, inconspicuous granules. Groove for insertion of rostrum deep, extending on to apical half of metathorax, its margins usually slightly smoothed. Legs short, femora with sharp tooth, more or less clavate; hind femur not much wider than middle one. Apical combs of tibiae short. Claws dentate.

MEASUREMENTS: Body length (excl. rostrum). 2.2-2.3 mm.

COLOR: Body black. Dorsal side with inconspicuous dark brown scales widening apically, and small groups of wider pale grey scales, arranged in places in short crossbands.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu).

KOREA: North, Central and South.

KOREAN RECORDS: Korotyaev, 1981: 130 (North); Hong et al., 1999b: 170 (North, Central, South); Hong et al., 2000: 110; Korotyaev and Hong, 2004: 160.

SPECIMEN EXAMINED: GW: 1 ♀ (Mt. Chiaksan: 22.v.1982). GN: 1 ♂ (Mt. Wonhyosan: 30.v.1980).

Genus *Ceutorhynchoides* Colonnelli, 1979: 144.

Buk-eun-saek-jop-ssal-ba-gu-mi-sok (붉은색좁쌀바구미속)

Apex of antennal scape rounded and bearing 2-4 very long hairs on ventral surface. Antennal scrobe of rostrum separated from each other in entire width. Pronotum with a pair of tubercles in middle, lacking a row of particular scales along basal margin; basal margin serrate and apical margin evidently raised. Basal margin of elytra fringed with a row of long hairs. Elytra with three bands of squamate tubercles. Rostral channel wanting or diminished to shallow median concavities on meso- and metasternum. 5th abdominal sternite wide in both sexes.

Type species: *Ceutorhynchoides badius* Colonnelli, 1979.

SPECIES 10 (1 in Korea).

DISTRIBUTION: Korea, Japan, China, Southeast Asia.

REFERENCE: Yoshitake and Colonnelli (2005).

REMARKS: Associated with Styracaceae (*Styrax japonica* Siebold et Zuccarini) (Yoshitake and Colonnelli, 2005).

80. *Ceutorhynchoides koreanus* Korotyaev and Hong, 2004
(Pls. 7-80, 19-80)

Bulk-eun-saek-job-ssal-ba-gu-mi (붉은색좁쌀바구미)

Ceutorhynchoides koreanus Korotyaev and Hong, 2004: 160.

TL: Korea- GW Mt. Obongsan.

Rostrum 1.45 times as long as pronotum, moderately and evenly curved, slender, subcylindrical, subparallel-sided, obsoletely narrowing between antennal insertion and slightly dilated apex, slightly wider than fore tibia and half as wide as fore femur. At base, rostrum separated from frons by shallow depression. Basal half of rostrum densely punctate, small elongate punctures more or less arranged in rows but forming no distinct sulci; median carina absent. Apical half of rostrum shining, sparsely and very finely punctate. Antennae inserted in the middle of rostrum, very slender. Scape fine, moderately thickening in apical third, with 4 long, hook-shaped curved apically setae arranged in one plane at apex, and a shorter seta below them. 2nd segment of funicle as long and half as wide as 1st; 3rd and 4th segments 2/3 as long as 2nd, 5-7th segments progressively becoming shorter, 6th one still noticeably, 7th slightly longer than wide. Club short spindle-shaped, twice as long as wide. Eyes large, short-oval, moderately convex. Frons moderately depressed; in anterior half subparallel-sided, as wide as rostrum; in posterior half, weakly widening. Pronotum 1.34 times as wide as long, shortly widening from base, then strongly narrowing apically; sides nearly straight, apical constriction obsolete, disc with two rounded prominences in the middle separated by shallow median sulcus moderately deepening and widening at base. Anterior margin feebly raised, roundly emarginate in the middle for the width of rostrum. Base weakly produced posteriorly in the middle; basal margin distinctly crenulate, feebly raised against 2nd-6th elytral intervals in couple with basal margin of elytra. Scutellum drop-shaped, convex, covered with scales. Elytra 1.54 times as wide as pronotum, 1.08 times as long as wide; humeral prominences well developed, sides in basal half parallel, in apical half, strongly converging; preapical prominences moderately convex, with 5th interval more prominent than the rest and bearing a bunch of semi-erect brown scales. Disc rather strongly convex, highest before middle, depressed along suture in basal 1/4. Striae moderately broad, rather shallow. Intervals flat, 2-2.5 times as wide as striae, shining, with fine squamigerous punctures. 5th interval with small prominence near base. Posterior half of mesosternum noticeably depressed between middle coxae; metasternum shallowly depressed along midline. Femora clavate, rather strongly S-curved, all armed with small but well-pronounced tooth. Fore tibia slightly widening apically, non-mucronate; apical comb of short, fine, nearly hair-like setae slightly extending on outer side of tibia, setae gradually becoming longer. Middle and hind tibiae with sharp medium-sized mucro pointing medio-posteriorly. On hind tibia, apical comb extending on outer side of tibia for distance slightly greater than width of tibial apex. 1st segment

of hind tarsus 1.5 times as long as wide, 2nd segment as long as wide, 3rd as long and almost twice as wide as 2nd. Claws rather long, with long approximate appendages.

MEASUREMENTS: Body length (excl. rostrum). 2.4 mm.

COLOR: Body mid-brown with darker antennal funicle and club.

BIOLOGICAL NOTES: This species is probably associated with *Styrax japonica* Siebold et Zuccarini (Styracaceae) which was known to host plant of *C. styracis* in Japan (Yoshitake and Colonnelli, 2005).

DISTRIBUTION: Korea.

KOREA: Central (GW).

KOREAN RECORDS: Korotyaev and Hong, 2004: 160 (Mt. Obongsan).

SPECIMEN EXAMINED: GW: 1 ♂ (Mt. Obongsan: 12.v.1985, holotype).

REMARKS: Compared with descriptions, *Ceutorhynchoides styracis* Yoshitake et Colonnelli, 2005 which was reported by Yoshitake and Colonnelli (2005) is considered to deal with synonym of this species, but it is remained to investigate the type series in future.

Genus *Cyphauleutes* Korotyaev, 1992: 54.

Hok-jop-ssal-ba-gu-mi-sok (흑좁쌀바구미속)

Pronotum black with brown anterior margin, elytra brown or black with brown humeral prominences and, sometimes, middle of disk. Rostrum moderately widened at apical half; sometimes with median carina at basal half. Antennae in male inserted proximal to middle of rostrum. Eyes strongly convex, frons deeply depressed. Central part of pronotal disk with prominence which covered with erected scales, divided by median sulcus; sides without tubercles, strongly converged apically. Anterior margin of pronotum with small narrow median excision. Elytra at shoulders wide, strongly narrowed apically, with convex preapical prominences. Disk of elytra with 2 pairs of more or less high tubercles which densely covered with erected scales at the end of basal third and behind middle of 3rd and 5th interval. Elytral striae wide. Middle coxae separated from rostral sulcus, its walls being formed by meso- and metasternum. Femora finely dentate. Apical combs on tibiae short, not emarginated. On Myrsinaceae (*Ardisia* sp.) (Egorov et al., 1996).

Type species: *Cyphauleutes vietnamensis* Korotyaev, 1992.

SPECIES 4 (1 in Korea).

DISTRIBUTION: Korea, Japan, China, Taiwan, Vietnam, Southeast Asia.

81. *Cyphauleutes bifasciatus* (Voss, 1958) (Pls. 7-81, 19-81)

Hok-job-ssal-ba-gu-mi (흑좁쌀바구미)

Phytobiomorphus bifasciatus Voss, 1958: 65.

TL: China- Kuantun.

Head closely punctured, covered with ovate brown scales, with a strong median keel to vertex;

frons between eyes deeply depressed, broader than the base of rostrum; eyes strongly projected over frons in lateral view; rostrum robust, longer than pronotum, apex with the broadest, moderately widening in apical half, shining, less densely punctate than in basal part; sometimes with medial carina in basal half.; antennae attached proximal to middle of rostrum; scape not reached to the front border of eye, shorter than the basal 3 funicular segments taken together; funicle 7 segments, 1st segment with robust, shorter than 2nd and 3rd, 2nd segment a little longer than 3rd, 4th segment shorter than 3rd, 5th to 7th segments same in length, each segment with several long hairs; club spindle shape, 3 segments, basal segment conicle, broader and longer than 2nd. Pronotum much wider than long, strongly rounded in basal part, narrowed to anterior; subapical constriction very strong, anterior margin with small narrow median excision; central part of pronotal disk with prominence, divided by median sulcus; sides without tubercles, strongly converging apically. Punctuation dense, punctures shallow, medium-sized. Scutellum small, dark brown. Elytra trapezoid; scutellar patch densely covered with ovate black scales; punctured striae distinct; intervals covered with ovate yellowish brown scales; protuberances before and beyond middle part of 3rd and 5th intervals covered with black scales. Elytra at shoulders wide, strongly narrowing apically, with convex preapical prominences. Disk of elytra with 2 pairs of more or less high tubercles at the end of basal third and behind middle of 3rd and 5th intervals; tubercles on 5th interval located closer to elytral base. Elytral striae wide. Underside of body concave, covered with ovate pale-brown scales; pectorial canal deep, extend into metasternum; abdomen hardly covered with scale and puncture in lateral sides and median of 3rd and 4th segments, 5th segment depressed in the middle. Femur clavate, with strong tooth, hind femora 1.3 times as broad as fore femora; tibia slender, basal part of tibia some curved; 1st tarsal segment 2 times as long as 2nd; claws appendiculate, inner branches separate.

Female: Underside of abdomen not concave and inner side of apex of tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum) 2.7–2.9 mm.

COLOR: Body brown to reddish brown, oval shape with broad, covered with ovate brown scales. Legs and antennae pale, reddish yellow or pale brown; rostrum brown or black. Pronotum black with brown anterior margin, elytra brown or black with brown humeral prominences and, sometimes, middle of disk. Prominences in middle of pronotum and on 3rd and 5th intervals of elytra densely covered with erect scales. Background of elytral vestiture formed of small narrow white or yellowish scales. First interval before middle with spot of yellowish oval or lanceolate scales; before and behind the spot, with dark brown scales, sometimes reaching to elytral apex.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu), China (Guangdong).

KOREA: Central and South.

KOREAN RECORDS: Hong et al., 1999b: 168 (Central, South); Korotyaev and Hong, 2004: 162. Mid-identified with *Cyphauleutes alternanus* Voss: Hong et al., 2000: 108.

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Cheonmasan: 28.v.1976); 1 ex. (Gwangreung: 18.vi.1994); 1 ♂ (Mt. Yumyeongsan: 14.vi.1997). GW: 1 ex. (Mt. Odaesan: 1.viii.1976); 1 ♀ (Goseong: 25.v.1993). CN: 1 ♂ (Mt. Gyeryongsan: 31.v.1975); 1 ♀ (Mt. Chilgabsan: 15.vi.1992). JN: 1 ex. (Jindo: 18.vii.1984). GB: 1 ex. (Mt. Juwangsan: 5.vi.1978); 1 ex. (Mt. Hwanghaksan: 28.vi.1982); 1 ex. (Mt. Palgongsan: 2.vii.1982). GN: 1 ex. (Mt. Jirisan: 29.v.1977); 2 exs. (Mt. Gajisan: 21.v.1980).

Genus *Phytobiomorphus* Wagner, 1937: 309.

Se-mo-bal-jop-ssal-ba-gu-mi-sok (세모발좁쌀바구미속)

Rostrum strongly and regularly curved, matted, densely rugosely punctate. Pronotum with large lateral tubercles; disk convex, with wide median sulcus and 2 pairs of low prominences separated by slight transverse depression. Scutellum deeply sunken. Elytra at shoulders 1.5 times as wide as pronotum, somewhat wider than long; disk moderately convex; striae wide; even intervals weakly, odd ones moderately convex. Hind femora with large tooth, 1.3 times as wide as middle ones. Male middle tibiae with long sharp mucro, hind tibiae not mucronate. First two segments of male fore and hind tarsi extended to long conical prominence dorsally bearing long bristles on their tip. 3rd tarsal segment twice as wide as 2nd, claw segment extending beyond lobes of 3rd segment by about half of its length. Claws dentate. On Caryophyllaceae (*Lychnis* sp.) (Korotyaev and Hong, 2004).

Type species: *Phytobius variegatus* Hustache, 1920.

SPECIES 1.

DISTRIBUTION: Korea, China, Far Eastern Russia.

82. *Phytobiomorphus variegatus* (Hustache, 1920) (Pls. 7-82, 20-82)

Se-mo-bal-jop-ssal-ba-gu-mi (세모발좁쌀바구미)

Phytobius variegatus Hustache, 1920a: 333.

TL: China- Yunnan.

Cyphosenus moholeei Hong et Egorov, 1999: 171.

TL: Korea- Seolaksan.

Body nearly rhombus, widest at just behind the humeral area. Head lightly convex, very coarsely reticulate-punctuate with a strong median keel to vertex, very strongly depressed at the frons between eyes; rostrum strongly and regularly curved, matte, densely rugosely punctuate, about as long as pronotum, about as wide as the base of frons between eyes, slightly widened apically, gently curved downwardly; antenna yellow-brown, inserted into a little before the middle of rostrum; scape robust, apex with triangular, not reached to the front border of eye; funicle 7 segments, 1st segment robust, but slightly shorter than 2nd, 3rd segments distinctly shorter than 1st, 3rd to 7th segments gradually diminishing their length terminally; club oblong, pointed at the apex, very finely and closely pubescent. Pronotum nearly twice as broad as long, gently narrowed toward anterior, dorsum strongly convex, with very strong subapical constriction, median disc especially strongly raised and divided into two hillocks by the presence of a broad median sulcus, the behind outer side of each hillock with pyramidal projection. Pronotum with large lateral tubercles; disk convex, with wide medial sulcus and 2 pairs of low prominences separated by slight transverse depression. Scutellum very small, lanceolate, deeply sunken. Elytra at shoulders 1.5 times as wide as pronotum, somewhat wider than long; disk moderately convex; striae wide; even intervals weakly, odd ones moderately convex; scutellar patch with densely ovate pale-brown scales, just behind of scutellar patch with ovate white scale patch; punctured striae distinct; intervals covered with ovate dark-

brown and ovate yellowish-brown scales, the 3rd, 5th and 7th intervals more convex than the others. Pro- and mesosternum and anterior half of metasternum continuously very broadly and deeply hollowed for the reception of rostrum when in repose; abdomen with the median portion of the 1st segment somewhat depressed, median portion of the 5th segment strongly raised with a large triangular depression at the medio-posterior area and very closely clothed with hairy white scales in this depression. Legs elongate; femur gradually thickened from the base to a little beyond the middle, strongly emarginated beyond the underside of the thickest part with a denticular angulation at the base of that emargination, hind femur with large tooth, 1.3 times as wide as middle femur.; tibia slender; first two segments of fore and hind tarsus extended dorsally in long conical prominence with long bristles on tip; claws dentate, inner branches separate.

Female: Underside of abdomen not concave and the 1st and 2nd tarsal segment not broad and moderate form.

MEASUREMENTS: Body length (excl. rostrum) 2.3–2.5 mm.

COLOR: Derm dark brown, entirely clothed with gray-white and brownish scales. Convex parts of pronotal disk covered with dark brown and margined with pale scales. Underside of body, head and pronotum, except the bent apical part, black; elytra dark brown with narrow curved pale stripes; antennae pale, femora dark brown with more or less lightened dorsal margin and apex; tibiae pale with dark apex, tarsi light, more or less infuscate basally. Elytra with indistinct mottled pattern of small spots formed by moderately dense narrow pale and dark scales. Sutural interval with velvety black spot in basal third; behind it, with short spot formed of white scales replaced posteriorly with dark brown scales.

BIOLOGICAL NOTES: In Khasan, Primorskii Territory of Russia, adults were sitting, apparently feeding and mating on *Lychnis* sp. (Caryophyllaceae) on the early of June 2002.

DISTRIBUTION: Korea, China, Russia (Primorskii Terr.).

KOREA: Cental and South.

KOREAN RECORDS: Hong et Egorov, 1999: 171 (Seolaksan); Hong et al., 2000: 109; Korotyayev and Hong, 2004: 162.

SPECIMEN EXAMINED: GW: 1 ♂ (Mt. Seolaksan Baekdamsa: 26.v.1993). CB: 1 ♂ (Mt. Sobaeksan: 10.v.1985). CN: 1 ♂ (Mt. Deokseungsan: 27.v.1982). GB: 2 ♀ ♀ (Mt. Juwangsan: 28.vii.1984).

Tribe Hypurini Schultzze, 1902

Genus *Hypurus* Rey, 1882: 189.

Soe-bi-reum-jop-ssal-ba-gu-mi-sok (쇠비름좁쌀바구미속)

SYNONYM: *Hypurodes* Pajni and Kohli, 1982: 339.

Rostrum weakly and unevenly curved, its apical part shining. Pronotum with small sharp lateral tubercles, its disk flattened, without medial sulcus and prominences. Elytra at shoulders 1.3 times as wide as pronotum, distinctly longer than wide; disk flattened, striae rather narrow, intervals flat. Scutellum weakly sunken. Underside of body more or less extensively blackish; dorsal

side mainly reddish brown, elytra with cruciform dark spot before middle, or disk of pronotum and elytra with more or less large dark brown or black spot, narrowed to elytral apex. Antennae and legs pale brown. Pubescence of dorsal side more or less uniform, pale, moderately dense; sutural interval of elytra with diffuse white scutellar spot. Found on Portulacaceae (*Portulaca* sp.) (Colonnelli, 2004).

Type species: *Ceutorhynchus bertrandi* Perris, 1852.

SPECIES 5 (1 in Korea).

DISTRIBUTION: Korea, Japan, Indonesia, India, Pakistan, France, Portugal, Spain, Italy, Croatia, Morocco, Cape Verde, Tunisia, Egypt, Nigeria, Madagascar, Somalia, South Africa, Northern Mariana Is., Hawaii (introduced), U.S.A. (introduced), Puerto Rico (introduced), Chile (introduced).

83. *Hypurus bertrandi* (Perris, 1852) (Pl. 7-83)

Soe-bi-reum-job-ssal-ba-gu-mi (쇠비름좁쌀바구미)

Ceutorhynchus bertrandi Perris, 1852: 183.

TL: France.

Ceuthorhynchus carneus Perris, 1857: 146.

TL: Sicily.

Hypurus biskrensis Desbrochers, 1908: 64.

Hypurus portulacae Hustache, 1926: 262.

Ceuthorrhynchus oleraceae Marshall, 1935: 569.

Head strongly punctuated, covered with ovate yellowish white erected scales; frons between eyes weakly depressed, a little broader than the base of rostrum; rostrum robust, strongly punctured and shorter than pronotum, covered with ovate yellowish white erected scales on basal half and without scales on apical half, constricted before inserted antenna; antenna inserted into apical 1/3 of rostrum; scape not extended to eye, longer than the basal 2 funicular segments taken together; funicle 6 segments, 1st segment robust, 1st to 3rd segments same length, 4th to 6th segments half length of 3rd to each other; club spindle shape, 1st segment conical, 2nd segment broad and longer than the next 2 segments taken together. Pronotum strongly punctured, broadest on middle part, narrowed toward anterior, covered with ovate dark brown scales on median area and with ovate yellowish brown scales on lateral sides, and scattered with ovate gray scales to sulcus before scutellum and median of anterior margin, with triangulate corn shaped projections on the middle of lateral sides. Scutellum black, small. Elytra broadest just behind shoulder, a little convex after middle part of elytra; punctured striae clearly strong; each interval covered with 2-3 rows of scales; apex of elytra pointed and opened like \wedge -shape. Procoxae broadly separated; prosternal canal bordered with keels; abdomen covered with ovate gray scales, 1st and 2nd abdominal segments 2 times as long as 3rd and 4th segments, 5th segment deeply depressed on median, longer than 4th segment. Femora with strong tooth, hind femur 1.5-2.0 times as wide as middle femur; tibia almost straight, corbel fringed with dark brown bristles, without mucro. Claws simple.

MEASUREMENTS: Body length (excl. rostrum). 2.4 mm.

COLOR: Body mainly reddish brown, angulate rhombic form, pronotum, base of elytra to middle

of 3rd interval and lateral sides of elytra dark brown; covered with ovate yellowish white and dark scales.

BIOLOGICAL NOTES: Found on *Portulaca oleracea* L. (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Kyushu, Ryukyu), Indonesia, France, Portugal, Spain, Italy, Croatia, Morocco, Cape Verde, Tunisia, Egypt, Nigeria, Madagascar, Northern Mariana Is., Hawaii (introduced), USA (California - introduced), Puerto Rico (introduced).

KOREA: Is. Jeju.

KOREAN RECORDS: Hong et al., 1999b: 186 (Jeju); Hong et al., 2000; Korotyaev and Hong, 2004: 162.

SPECIMEN EXAMINED: JJ: 1 ♀ (Dongheung: 27.viii.1997).

Genus *Pericarticus* Hoffmann, 1968: 179.

Dorsal investiture of elevated hair-like scales. Elytra trapeziform, humeral tubercles much protruding, sides converging towards preapical calli. On Amaranthaceae (Colonnelli, 2004).

Type species: *Pericarticus chariensis* Hoffmann, 1968.

SPECIES 5.

DISTRIBUTION: Korea (?), Algeria, Morocco, Ethiopia, Tanzania, South Africa, Madagascar, St. Helena, Republic of Congo, Chad.

84. *Pericarticus aequatorialis* (Hustache, 1934) (Pl. 8-84)

Hypohypurus aequatorialis Hustache, 1934: 25.

TL: Congo.

DIAGNOSIS: Very similar to *H. bertrandi* but differs in the rounded sutural angles of elytra produced in well-developed processes in the latter, presence of mucro on all tibiae in male (in *H. bertrandi*, only middle tibiae in male are mucronate), and more rounded and less flattened dorsally elytra with less distinct dark spot along suture in basal part.

BIOLOGICAL NOTES: Found on *Amaranthus hybridus* L. (Amaranthaceae), *Suaeda fruticosa* (L.) Forsk (Chenopodiaceae).

DISTRIBUTION: Korea (?), Madagascar, St. Helena, South Africa, Republic of Congo.

KOREAN RECORDS: Hong et al., 2000: 111 (?Korea); Korotyaev and Hong, 2004: 162 (?Korea).

SPECIMEN EXAMINED: 1 ♀ (Korea: 12.vi.1991, #022964, intercepted by quarantine inspection in Anchorage, Alaska, National Museum of Natural History, Washington, DC, U.S.A.).

REMARKS: The photo on plate was taken from South African specimen.

Tribe *Mecysmoderini* Wagner, 1938

Genus *Mecysmoderes* Schoenherr, 1837: 569.

Ppyo-jok-ga-seum-jop-ssal-ba-gu-mi-sok (뽕죽가슴좁쌀바구미속)

Antennal funicle 6-segmented. Eyes less close anteriorly. Base of pronotum prolonged into a more or less elongate spine, hiding scutellum. Anterior margin of pronotum foveate. Pronotal carina evident only at base. On Ericaceae (*Rhododendron* spp.) and Fabaceae (Colonnelli, 2004).

Type species: *Mecysmoderes euglyptus* Gyllenhal, 1837.

SPECIES 28 (2 in Korea), (1 in Russian Far East).

DISTRIBUTION: Korea, Japan, Oriental Region and southeastern Palaearctic Region.

Subgenus *Coelioderes* Korotyaev, 2004 in Korotyaev and Hong, 2004: 162.

Rostrum more slender. Pronotum with larger punctures forming a pronouncedly reticulate sculpture, with slightly longer thoracic spine; anterior margin angularly produced in the middle. Elytra with well-developed dark scutellar spot. Found on Ericaceae (*Rhododendron* spp.) (Korotyaev and Hong, 2004).

Type species: *Mecysmoderes nigrinus* Hong and Woo, 1999.

Key to the species of subgenus *Coelioderes*

1. 1st to 3rd segment of antennal funicle not conspicuously differing in length. Elytra uniformly and roundly narrowing toward apex. Fore femora unarmed, middle and hind femora with slight angulation on the swollen part *M. nigrinus*
- 3rd segment of antennal funicle 1.5 times as long as 2nd segment. Elytra almost parallel-sided in basal half and strongly narrowing in apical half. All femora finely dentate, dents on middle femora slightly larger and wider than those on fore and hind femora *M. koreanus*

85. *Mecysmoderes (Coelioderes) nigrinus* Hong and Woo, 1999

(Pls. 8-85, 20-85)

Ppyo-jok-ga-seum-jop-ssal-ba-gu-mi (뽕죽가슴좁쌀바구미)

Mecysmoderes nigrinus Hong and Woo, 1999: 189.

TL: Korea- Suwon.

Rostrum slightly (in male) to considerably (in female) longer than pronotum, about as wide as

fore femur and almost 1.5 times as wide as fore tibia, moderately and evenly curved, subcylindrical, matte or weakly shining, with more or less dense, moderately coarse punctation and more or less distinct fine median carina. Antennae inserted near middle of rostrum in male, and slightly to noticeably proximal to the middle, in female. 1st to 3rd segments of antennal funicle not conspicuously differing in length. Funicle 6-segmented, rather short; club oblong-obovate. Pubescence on funicle short, recumbent or weakly raised. Eyes medium-sized, their diameter slightly exceeding width of frons. Pronotum moderately transverse, with well-developed apical constriction and moderately rounded sides. Disc moderately convex, widely and deeply sulcate longitudinally in apical half. Basal spine short, 0.2–0.3 total length of pronotum and occupying 0.11–0.13 length of elytral suture measured from base of 1st stria. Median carina not extending from thoracic spine onto pronotal disc. Pronotal sculpture moderately coarse, formed by dense punctation rather than reticulate, with rather deep punctures or small meshes. Base of pronotum extended medially into more or less long pointed process, concealing scutellum. Elytra somewhat longer than wide, deeply and broadly striate. Intervals about as wide as striae, convex, with small rounded or acute granules arranged in 1 (on narrower intervals) or 2–3 irregular rows. No large prominences, granules, or verrucae present on elytra. Meso- and metasterna rather deeply depressed for reception of rostrum, but sides of the depression gentle. Depression prolonged on 1st ventrite. Legs rather long and slender; femora unarmed, or middle and hind femora with slight angulation on the swollen part. Hind femur 1.2–1.3 times as wide as middle one, 3.2–3.6 times as long as wide. Fore and middle tibiae straight, hind tibia weakly S-curved. Apical combs on tibiae short, convexly rounded or shallowly emarginated, with fine and dense spines. Fore tibia in male unarmed, middle and, in most species, hind tibia mucronate. Tarsi rather short and narrow, 1st tarsal segment no more than 1.5 times as long as wide, 3rd segment as long and ca. 1.7 times as wide as 2nd. Claws short, weakly divergent; their length not exceeding apical width of claw-segment. Aedeagus elongate, narrow, with apex produced in short truncate prominence.

MEASUREMENTS: Body length (excl. rostrum) 2.0–2.7 mm.

COLOR: Body pale piceous brown to black. Elytral vestiture rather sparse. Pale (white or yellowish) uniform scutellar spot on 1st interval sometimes prolonged on inner margin of interval throughout entire length of elytra, or accompanied by more or less long transverse fasciae.

BIOLOGICAL NOTES: The species was collected on *Rhododendron mucronulatum* Turcz. Beetles were sitting, apparently feeding and mating on young fruits in early May in Korea. Adults were also found on young branches of *Rh. obtusum* var. *kaempferi* (Planch.) with the flower buds in Japan (Yoshitake, 2000).

DISTRIBUTION: Korea, Japan (Honshu, Kyushu).

KOREA: Central and South.

KOREAN RECORDS: Hong and Woo, 1999: 189 (Suwon); Hong et al., 2000: 112; Korotyaev and Hong, 2004: 163.

SPECIMEN EXAMINED: GG: 1♂, 2♀♀ (Suwon, Mt. Chilbosan: 10.iv.1998); 1 ex. (Suwon, Mt. Chilbosan: 9.v.2000). CN: 2♂♂ (Mt. Deokseungsan: 27.v.1982). JB: 1♂, 1♀ (Mt. Maisan: 11.v.1980). GB: 2♂♂ (Mt. Palgongsan: 24.viii.1980); 2♂♂ (Mt. Palgongsan: 23.v.1981); 2♀♀ (Mt. Palgongsan: 26.v.1985); 1♀ (Mt. Palgongsan: 29.v.1985). GN: 1♂ (Mt. Jirisan: 27.v.1976).

**86. *Mecysmoderes (Coelioderes) koreanus* Korotyaev and Hong, 2004
(Pl. 8-86)**

Han-guk-ppyo-jok-ga-seum-job-ssal-ba-gu-mi (한국뽕족가슴좁쌀바구미)

Mecysmoderes (Coelioderes) koreanus Korotyaev and Hong, 2004: 163.

TL: Korea- GB Yecheon.

Rostrum 1.83 times as long as pronotum, slender, weakly and evenly curved, moderately and evenly flattened dorso-ventrally, parallel-sided except for slightly widened short apical part. Antennae inserted at 0.42 length of rostrum from base. Scape produced in short rounded translucent process. 1st segment of funicle about twice as long as wide, oblong-oval; 2nd segment as long, and half as wide as 1st; 3rd segment 1.5 times as long as 2nd, 4th half as long as 3rd, almost 2.5 times as long as wide; 5th segment 0.6 times as long as 4th, almost twice as long as wide; 6th segment shorter than 5th and somewhat longer than wide. Club oblong-obovate, with basal segment glabrous. Eyes large, moderately convex, with subequal length and width. Frons at anterior margin as wide as base of rostrum, strongly widening posteriorly, shallowly depressed; inner eye margins sharply raised. Pronotum 1.37 times as wide as long. Base of pronotum moderately projecting posteriorly; sides moderately rounded, subparallel in basal third and moderately convexly converging to rather deep apical constriction. Median carina extending from basal process for about one-third length of pronotum and turning to linear interval between somewhat irregularly pentagonal cells on disc. The latter large; ca. 12 cells may be arranged along midline of pronotum. Elytra 1.04 times as long as wide, weakly rounded, almost parallel-sided in basal half and strongly narrowing in apical half. Humeri beveled, moderately prominent. Striae deep and broad, with rounded punctures separated by about own diameter. Intervals about as wide as striae, uniform, rather strongly convex; each, except 1st, with regular, or nearly regular row of small granules. Sutural interval on right elytron twice as wide as that on left elytron, weakly convex, matte, shagreened in apical half. Fore coxae separated by about width of rostrum; rostral channel deep, with steep walls; keels before coxae long, with barely concave, almost straight margin. All femora finely dentate; dents on middle and hind femora of subequal size. 1st segment in fore and middle tarsi about twice, in hind tarsus, 1.5 times as long as wide; 2nd segment slightly longer than wide, 3rd segment as long and 1.7–1.8 times as wide as 2nd. Claws short, their length approximately equal to apical width of segment; wide, moderately divergent, with parallel, separated apically appendages in basal half.

MEASUREMENTS: Body length (excl. rostrum). 2.5 mm.

COLOR: Body dark chestnut-brown with slightly darker pronotum; rostrum paler brown, antennae uniformly very pale brown.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: South (GB).

KOREAN RECORDS: Korotyaev and Hong, 2004: 163 (GB).

SPECIMEN EXAMINED: GB: 1 ♀ (Yecheon-gun, Gamcheon-myeon: 7.ix.1980, holotype).

Subfamily Conoderinae Schoenherr, 1833

Geo-mi-ba-gu-mi-a-gwa (거미바구미아과)

The subfamily Conoderinae was known as the subfamily Zygopinae until recently, is one of the largest subfamily of Curculionidae which are included at least 1,500 species belong to more than 200 genera. This subfamily has been defined by the combination of a prosternal channel for the reception of the rostrum, large approximate eyes, and the absence of postocular lobes on the antero-lateral margin of the pronotum. They are usually placed between the Cryptorhynchinae and the Ceutorhynchinae and are probably more closely related to the former. Adults are typically diurnal and very wary and active fliers. There is considerable structural diversity within the subfamily. Eyes occupied large part of anterior surface of head, almost contiguous on frons. Rostrum at base more or less three edged. Exterior basal angles of elytra more or less rounded. 9th, usually and 10th striae reached at base of elytra. Metepisterna without interception at anterior part, wide. Abdomen sloped after 2nd sternite at profile. Femora with tooth.

Most conoderine larvae are borers of wood or herbaceous stems although a few feed on seeds. Some larvae mine leaves.

Key to the tribes of subfamily Conoderinae

1. Prosternum canaliculated, each side of the canal keeled 2
 - Prosternum flat or depressed 4
2. Scutellar lobe of pronotum developed and covering scutellum Lobotrachelini
 - Base of pronotum straight, arched or bisinuate 3
3. Fore tibiae more or less depressed, with a fine stria at the lateral margin, which is bordered with fine carinae. Mesepimera strongly ascended upwards between the base of pronotum and elytra, therefore they are clearly visible from above Menemachini
 - Fore tibiae not or rarely depressed, simple or with a lateral keel. Mesepimera not ascended upwards. Metepisterna parallel-sided Othippiini Morimoto
4. Antennae with funicle 6-segmented. Mesepimera not or weakly ascended upwards Mecopini
 - Antennae with funicle 7-segmented. Mesepimera large, strongly ascended upwards between the base of pronotum and elytra, therefore they are clearly visible from above, their upper limits being far higher than that of metepisterna and reaching at least to the level of stria 9 of elytra. Metepisterna parallel-sided, posterior coxae broadly separated from lateral margin of elytra Coryssomerini

Tribe Coryssomerini C. G. Thomson, 1859

Key to the genera of tribe Coryssomerini

1. Elytra at shoulders strongly widened, then narrowed toward posterior; 1st stria on each side from scutellum reached at base. Width of intercoxal process of mesosternum larger than diameter of middle coxae *Metialma*
 - Elytra at shoulders slightly widened, further almost parallel-sided or slightly rounded; 1st stria flowed at scutellar emagination, not reached at base of elytra. Width of intercoxal process of mesosternum not larger than diameter of middle coxae *Euryommatus*

Genus *Euryommatus* Roger, 1857: 60.

Gin-geo-mi-ba-gu-mi-sok (긴거미바구미속)

SYNONYM: *Zygopsides* Marseul, 1868: 203.

Antennae inserted shortly before middle of rostrum in male, shortly behind middle of rostrum in female, scape passed to the base of rostrum, funicle 7-segmented, its first 2 segments much longer than the following segments, 1st segment stronger. Rostrum longer than head and pronotum, thinly, slightly curved, antennal scrobes directed towards and conjointed on the underside of rostrum. Eyes very large, separated only by a fine line, nearly touched anterior margin of pronotum when rostrum is posed vertically. Pronotum a little broader than long, weakly narrowed anteriorly, barely sensibly constricted in front, slightly sinuated at base. Scutellum deeply recumbent, almost longer than broad. Elytra almost twice as long as wide, slightly narrowed behind the middle. Abdomen sloped towards posteriorly, 1st segment barely longer than 2nd, 2nd segment as long as 3rd and 4th segments taken together, slightly protruded at posterior sides, 5th segment longer. Legs slender, fore femora swollen strongly clubs-shaped, with a strong tooth behind the middle, middle and hind femora only weakly thickened with a barely sensible little tooth. The tibia of fore-legs strongly curved before the middle, with a strong horn-like hook at apex, middle and hind tibia barely sensible curved with weak horn-like hook; the first tarsal segment elongated, only a little shorter than the following segments taken together; claws simple.

Type species: *Euryommatus mariae* Roger, 1857.

SPECIES (3 in Korea), (5 in Japan).

DISTRIBUTION: Korea, Japan, Russia (Kuril Is., Siberia, northeastern European part), Kazakhstan, Poland, Germany, Austria, Lebanon.

Key to the species of genus *Euryommatus*

1. Metepisterna strongly widened to the anterior part, its anterior margin about 2 times as broad as the narrowest part. Metepisterna white, with a brownish band on anterior third. Elytra with brownish grey scales on the 1st intervals and with scattering fine grayish hairs on the other part *E. kono*i
- Metepisterna slightly widened to the anterior part, its anterior margin 1.1–1.5 times as broad as the narrowest part 2
2. Smaller. Pronotum with the widest part before of middle, slightly narrowing posteriorly *E. mariae*
- Larger. Pronotum with the widest part before of base, uniformly and roundly narrowing anteriorly *E. tokioensis*

87. *Euryommatus kono*i Zumpt, 1937 (Pl. 8-87)

Gin-geo-mi-ba-gu-mi (긴거미바구미)

*Euryommatus kono*i Zumpt, 1937: 25.

TL: Japan- Sapporo.

MEASUREMENTS: Body length (excl. rostrum). 4.4–4.7 mm (in Japan).

DIAGNOSIS: Elytra with brownish grey scales on the 1st intervals and with scattering fine grayish hairs on the other part. Metepisterna white, with a brownish band on anterior third. Metepisterna strongly widened to the anterior part, its anterior margin about 2 times as broad as the narrowest part.

DISTRIBUTION: Korea (?), Japan (Hokkaido, Honshu, Kyushu).

KOREAN RECORDS: ESK/KSAE, 1994: 208; Hong et al., 2000: 125 (?Korea).

REMARKS: Authors could not find to the first record and any specimen from Korea until now. The diagnosis were cited on Morimoto (1984) and the photo on plate was taken from Japanese specimen.

88. *Euryommatus mariae* Roger, 1857 (Pl. 8-88)

Yeo-gi-san-geo-mi-ba-gu-mi (여기산거미바구미)

Euryommatus mariae Roger, 1857: 61.

TL: Siberia.

Rostrum smoothed, finely punctate at sides, wrinkly punctate at apical part, with yellowish thick hairs. Last 5 segments of antennal funicle gradually a little broader and shorter, club dark brown, 3-segmented. Pronotum densely and finely punctate with weakly yellowish gray hairs; erected grayish white scales covered a few on ground, numerous above of scutellum, and densely at below. Pronotum with the widest part before of middle, slightly narrowing posteriorly. Elytra with 9 deep striae and with wrinkly punctated intervals; covered stronger and denser grayish yellow hairs around the scutellum and at the distal part of sutural intervals, the remaining area covered sparsely with them and formed to indistinct gray spots with fine hairs. Underside of body covered with quite closely whitish small scales and greyish pubescences. Metepisterna slightly widened to the anterior part. Femora and tibia covered with greyish pubescences; hind tarsi slender in particular, 1st segment more than twice as long as 2nd, 3rd segment much shorter than wide, bilobed; claws moderately.

MEASUREMENTS: Body length (excl. rostrum). 2.6–3.3 mm.

COLOR: Black; antenna, apex of rostrum, basal part of fore tibia and tarsi dark reddish brown, underneath covered with numerous whitish scales, surface sparsely griseous hairs.

BIOLOGICAL NOTES: The adults were collected on *Picea jezoensis* and *Abies nephrolepis* (Morimoto, 1960).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), Russia (Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Transbaikalia, Irkutsk Prov., W. Siberia, European part), Kazakhstan, Europe.

KOREA: Central.

KOREAN RECORDS: Hong et al., 2000: 125 (Central).

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Yeogisan: 5.viii.1986); 1 ex. (Mt. Chukryeongsan, Namyangju: 11.vi–16.vii.1999, Malaise trap); 1 ex. (Tp. Yongjusa, Anryeong-ri, Taean-eub, Hwaseong: 28.vi–4.vii.2005, Malaise trap No. M-1-3-1). CB: 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 24.vi–1.vii.2005, Malaise trap No. M-3-2-1).

89. *Euryommatus tokioensis* Nakane, 1963 (Pls. 8-89, 20-89)

Yet-geo-mi-ba-gu-mi (옛거미바구미)

Euryommatus tokioensis Nakane, 1963: 39.

TL: Japan- Aoyama.

Rostrum longer than pronotum, weakly arched, rugosely punctured with a median carina on basal half and not closely punctate on apical half. Eyes large and approximated. Pronotum transverse, subparallel-sided on basal half and narrowed in front, disc densely punctured and rugose. Scutellum oval and covered with whitish scales. Elytra twice as long as and wider than prothorax, oval but subparallel-sided on anterior half behind shoulders, disc strongly but not broadly striate with deep punctured striae, and intervals closely punctured and roughly sculptured. Metepisterna slightly widened to the anterior part. Fore femora strongly thickened, with a large triangular tooth beneath. Fore tibiae curved on basal half. Middle and hind femora moderately thickened apically, with a sharp tooth beneath.

MEASUREMENTS: Body length (excl. rostrum). 5.0–5.6 mm.

COLOR: Blackish brown, with antennae, apex of rostrum, femora and tibiae, tarsi and intersegmental parts of abdomen reddish brown. Upper surface clothed with fuscous or brown scaly hairs and variegated by yellowish ones, and middle of suture and apex of elytra bearing pallid hairs. Under side mostly clothed with whitish scales or hairs. Hairs on legs also chiefly white.

BIOLOGICAL NOTES: Unknown.**DISTRIBUTION:** Korea, Japan (Honshu, Kyushu), Russia (Kuriles).**KOREA:** Central (GW).**KOREAN RECORDS:** Hong et al., 2000, 5: 125 (Central).**SPECIMEN EXAMINED:** GW: 3 exs. [Gesseiiji (=Mt. Odaesan Woljeongsa): 8.vii.1923].**Genus *Metialma* Pascoe, 1871a: 216.**

Geo-mi-ba-gu-mi-sok (거미바구미속)

Body rhomboidal. Rostrum slender, base cylindrical, with scales, upperside linear; scrobes in the middle. Antennal scape not attached to eyes; funicle 7-segmented, 1st segment thick, 2nd segment long, other segments short and gradually widened; club oval. Pronotum transverse, subconical, basal median lobe produced. Elytra cordiform, surface flat, apex widely rounded. Pygidium exposed transversely. Femora thick, especially occupy stout denticles; tibiae arcuate, posterior half bent, exterior margin thickened, apex oblique truncated; tarsi moderate, 3rd segment dilated. Mesepimera ascended. Abdomen normal.

Type species: *Metialma scenica* Pascoe, 1871.**SPECIES** (3 in Korea and Japan), (1 in Russian Far East).

DISTRIBUTION: Korea, Japan, China, South of the Russian Far East, India, Sri Lanka, Myanmar, Java, Philippines, Sulawesi, Moluccas, Is. Aru, Australia, Cameroon, Congo, Guinea, Ivory Coast, S. Africa, Tanzania, Zaire, Madagascar.

Key to the species of genus *Metialma*

1. Elytra with an elongate white spot at the apex of 1st intervals which is 2 times as long as its width. Abdomen in male widely darkened in the middle, widely depressed and densely appeared grayish pubescence at the basal 2 sternites, longitudinally and shallowly depressed at the 5th sternite. Abdomen in female with dark spots at 2nd–4th sternites *M. signifera*
- Elytra with a white spot at the apex of 1st intervals which is a little longer than its width. Abdomen in both sexes with dark spots at 3rd–4th sternites, sometimes darkened with a pair at posterior margin of 2nd sternite. Abdomen in male not pubescent at the basal 2 sternites 2
2. The 5th abdominal sternite in male with triangular projections at posterior margin to sides of pygidium. Elytra wider, with 1.1–1.2 times as long as its width *M. cordata*
- The 5th abdominal sternite in male without any projection. Elytra narrower, with 1.3–1.4 times as long as its width *M. pusilla*

90. *Metialma cordata* Marshall, 1948 (Pls. 8-90, 20-90)

Geum-su-ba-gu-mi (금수바구미)

Metialma cordata Marshall, 1948: 451, 454.

TL: India, Burma.

Rostrum longer than the pronotum (10:7) in both sexes, red from the antennae to the apex in male or only narrowly at the apex in female, rugulose and five-carinate from the base to the antennae in both sexes, and here with fairly dense whitish scaling in male and with thinner grey or brownish scaling in female. Antennae entirely red, inserted well beyond the middle of the rostrum in both sexes; funicle with joint 1 slightly longer than 2. Pronotum somewhat transverse, broadest at the base, gradually narrowing to the middle with the sides straight, then curving in to the apex where there is a shallow collar, which is rather deeper dorsally, the basal angles rounded; the dorsum gently convex longitudinally, but in the centre of the disk the scales are convergently suberect, so that in lateral aspect, the dorsum may appear to be subconical in the middle. Elytra strongly cordate, rapidly narrowing from the broad shoulders in an even curve to the apex, the transverse apical impression being very shallow and short and the posterior calli feeble, the transverse basal depression broad and distinct, the suture moderately depressed in the basal third and interval 2 somewhat tilted inwards basally. Pygidium setose in the middle and with broader yellowish scales at the sides; a median carina on the basal half in ♂, which is more or less obsolete in ♀; ventrite 5 with a broad triangular projection on each side in ♂ only. Legs without any sinuation beyond the tooth of the front femora; front tibiae strongly curved dorsally from the base nearly to the apex.

MEASUREMENTS: Body length (excl. rostrum). 3.5–4.0 mm.

COLOR: Derm black; pronotum with the large spot in the middle of the basal half broadly ovate, formed of narrow yellowish scales and enclosing behind an obovate spot of much denser broader yellowish-white scales, the whole surrounded by four subrotund black spots that are sometimes separate but more usually fused together, the remaining surface with separated narrow light brown and whitish scales enclosing an oval lateral black spot behind the middle and a smaller round one in front of it; scutellum with dense whitish or pale yellow scales; elytra with mixed

white, yellowish and brown scales and variable indefinite dark spots, without any distinct sutural stripe, except for an elongate white spot at the apex and a much shorter black spot in front of it; underside with dense whitish or yellowish scales, with a black spot at the base of the metepisterna, and the median black spots on the venter extending on to ventrite 2 but often bearing scattered pale scales, especially in male.

BIOLOGICAL NOTES: Adults of this species are hibernated under bark on *Aphananthe aspera* (Morimoto, 1958a) and under bark on *Zelkova serrata*.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu), China (Guangdong), Taiwan, Myanmar.

KOREA: Central, South and Is. Jejudo.

KOREAN RECORDS: Lee et Kwon, 1974: 47 (JJ- Seogwipo); Morimoto, 1984: 320; Kwon and Lee, 1986: 84 (Central, South, Jejudo); Morimoto and Lee, 1992: 11 (JJ- Gujwa); Kim, 1993: 394 (JJ); ESK/KSAE, 1994: 208; Paik et al., 1995: 432 (JJ); Kim, 1995b: 143 (Byeonsanbando); Hong et al., 2000: 126 (Central, South, Is. Jejudo).

SPECIMEN EXAMINED: GG: 12 exs. (Mangpo-ri, Suwon: 6.v.2004, No. 02053-02064); 1 ex. (Hwado-eub, Namyangju: 27.v.2007); 1 ex. (Yongjeong-ri, Jinjeob-eub, Namyangju: 3.vi.2007); 2 exs. (Yangsamyeon, Ganghwado: 10.vi.2007). CB: 1 ex. (Danyang: 7.vi.1979); 1 ex. (Annae-myeon, Okcheon: 26.ii.1999, on *Zelkova serrata*). CN: 1 ex. (Hwasan-ri, Jongcheon-myeon, Seocheon: 8.vi.2000); 1 ex. (Geumcheon-ri, Sinpyeong-myeon, Dangjin: 19.v.2006); 1 ex. (Gahak-ri, Songak-myeon, Dangjin: 19.v.2006); 1 ex. (Yeomi-ri, Unsan-myeon, Seosan N3649489E12634230H66: 26.v.2006). JN: 1 ex. (Jangseong: 11.ix.1996). GB: 1 ex. (Gwanchang2-ri, Myeongho-myeon, Bonghwa: 28.v.1993). GN: 1 ex. (Pyeongji, Dongbu-myeon, Geoje: 4.vi.1997); 1 ex. (Tp. Tongdosa, Yangsan: 28.v.2003, No. 01396). JJ: 1 ex. (Udo: 22.v.1982).

91. *Metialma pusilla* Roelofs, 1875 (Pls. 8-91, 20-91)

San-ae-geo-mi-ba-gu-mi (산애거미바구미)

Metialma pusilla Roelofs, 1875: 175.

TL: Japan- Jagami.

Rostrum as long as pronotum, curved, punctured striae, scaly, subtriangular at base, almost smooth towards apex. Antennae inserted into the middle of rostrum. Pronotum a little shorter than broad, obliquely bisinuate at base, almost straightened at sides, slightly narrowed to anterior part, strongly and densely punctate, a spot on each side formed by yellowish scales separated a dense white hair line at base uniting with the vestiture of the even color of scutellum by black area. Scutellum white. Elytra elongated, 1.3–1.4 times as long as broad, lightly enlarged in shoulders, almost parallel-sided, shortly rounded, almost cut down at apex; striae punctuate, intervals with yellowish and greyish scales and formed a white spot at the end of the sutural intervals. Pygidium with whitish yellow hairs. Underside of body with yellowish vestiture, white vestiture on the mesepisterna and 3rd, 4th and 5th abdominal segments without vestiture in the middle. Posterior margin of 5th abdominal segment in male not protruded to sides of pygidium. Legs with white ring-shaped.

MEASUREMENTS: Body length (excl. rostrum). 2.5–3.0 mm.

COLOR: Black, filiformed yellowish white scales formed subvariegate pattern. Rostrum piceous, antenna and tarsi rufo-testaceous; with hairs or filiformed grey scales. More parallel-sided form

than *M. signifera* Pascoe.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu).

KOREA: Central and South.

KOREAN RECORDS: Morimoto, 1984: 320; Kwon and Lee, 1986: 84 (South); ESK/KSAE, 1994: 208; Hong et al., 2000: 126 (South).

SPECIMEN EXAMINED: GG: 1 ex. (Gwangreung: 29.v.1983); 1 ex. (Mt. Taehwasan: 23.v.1982); 1 ex. (Mt. Myeongseongsan: 14.vi.1998). JB: 1 ex. (Mt. Naejangsan: 10.vi.1975). GB: 1 ex. (Mt. Palgongsan: 18.vi.1978).

92. *Metialma signifera* Pascoe, 1871 (Pls. 8-92, 20-92)

Geo-mi-ba-gu-mi (거미바구미)

Metialma signifera Pascoe, 1871a: 218.

TL: Hong Kong.

Rostrum dark, shining, with 5 lines. Antennae subtestaceous; 1st and 2nd segments of antennal funicle with same length, nevertheless, 1st segment a little stronger; club shortly ovate. Pronotum moderately transverse, basal median lobe produced. Scutellum narrowly, long, densely white scales. Elytra shortly subcordate, apex of 1st intervals with whitish pattern which is twice as long as broad. Abdomen in male widely darkened in the middle, widely depressed and densely appeared grayish pubescence at the basal 2 sternites, longitudinally and shallowly depressed at the 5th sternite. Abdomen in female with dark spots at 2nd–4th sternites. Last abdominal segment simple, lateral sides of pygidium arranged neither to hump nor scale bundle.

MEASUREMENTS: Body length (excl. rostrum). 3.5–3.9 mm.

COLOR: Black, elytra and pronotum mainly brownish black scales, some greyish zigzag band irregularly arranged. Base of pronotum connected with a triangular yellow scaly spot to the scutellum.

BIOLOGICAL NOTES: On *Balsamina* (Legalov, 2009).

DISTRIBUTION: Korea, Japan (Kyushu), NE China (Fujian, Guangdong), Hong Kong, Russia (Khabarovskii and Primorskii Terr.).

KOREA: Central and South.

KOREAN RECORDS: Hong et al., 2000: 127 (South).

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Taehwasan: 26.v.1982); 1 ex. (Mt. Yeogisan, Suwon: 24.vi.1985); 1 ex. (Bibong-myeon, Hwaseong: 1.vi.1994); 4 exs. (Mt. Yumyeongsan, Gapyeong: 14.vi.1997); 1 ex. (Mt. Yumyeongsan, Gapyeong: 15.vi.1997); 1 ex. (Gwangreung: 9.vi.1984); 1 ex. (Suwon campus, SNU: 21.vi.1992); 1 ex. (Yongin: 11.vi.1992); 1 ex. (Singal: 16.vi.1992); 1 ex. (Anyang: 21.vi.1991); 1 ex. (Gwanggyo: 22.vi.1992); 3 exs. (Gwanggyo: 16.v.1990); 3 exs. (Mt. Myeongseongsan: 14.vi.1998); 1 ex. (Mt. Chukryeongsan: 15.vi.1998); 1 ex. (Mt. Chukryeongsan: 3.vii.2000, No. 01148); 1 ex. (Hwado-eub, Namyangju: 27.v.2007); 1 ex. (Namhansanseong: 1.vi.2007); 2 exs. (Mt. Taehwasan: 1–9.vi.2007). GW: 1 ex. (Machijin-ri, Seongnae-myeon, Goseong: 25.v.1993); 1 ex. (Gandong-myeon, Hwacheon: 25.v.1993); 2 exs. (Cheonjeon5-ri, Sinbuk-myeon, Chuncheon: 25.v.1993); 1 ex. (Tp. Baekdamsa, Mt. Seolaksan: 26.v.1993); 1 ex. (Mt. Odaesan, Doam-myeon, Pyeongchang: 27.v.1993); 4 exs. (Inje: 27.v.1993); 1 ex. (Jingogae, Mt. Odaesan, Doam-myeon, Pyeongchang: 26.v.2005). CB: 7

exs. (Bakdaljae, Bongyang-myeon, Jecheon: 23.v.1993); 1 ex. (Sagimak, Goesan: 23.v.1993); 1 ex. (Mt. Wolaksan N3652E12804: 20.vi.2001, No. 01225); 9 exs. (Mt. Wolaksan: 21.vi.2001); 15 exs. (Mt. Wolaksan N3652E12804: 21.vi.2001, No. 01182, 01190, 01192, 01194-01203, 01205, 10207); 2 exs. (Mt. Wolaksan N3651E12805: 20.vi.2001, No. 02112-02113). CN: 1 ex. (Mt. Chilgabsan, Cheongyang: 15.vi.1992); 2 exs. (Mt. Sokrisan: 28.vi.1989); 3 exs. (Seongsang-ri, Myeoncheon-myeon, Danjin N3649644E12640478H139: 26.v.2006); 1 ex. (Yeomi-ri, Unsan-myeon, Seosan N3649489E12634230H66: 26.v.2006). JB: 12 exs. (Mt. Naejangsan: 10.vi.1975). JN: 1 ex. (Mt. Baekunsan, Chusan, Gwangyang: 25.vi.1991, light trap); 1 ex. (Nogodan, Mt. Jirisan: 23.vii.1998); 1 ex. (Simwon, Mt. Jirisan, Sandong-myeon, Gurye: 7.v.2006); 1 ex. (Yeosu: 9.vii.2007). GB: 1 ex. (Oji-ri, Beobjeon-myeon, Bonghwa: 28.v.1993); 1 ex. (Daehyeon-ri, Seokpo-myeon, Bonghwa: 28.v.1993). GN: 1 ex. (Habcheon: 17.v.1992); 1 ex. (Mt. Yeohangsan, Haman: 13-20.vi.1993); 16 exs. (Jungbang, Sicheon-myeon, Sancheong: 17.v.2000); 1 ex. (Geumseo, Sancheong: 17.v.2000); 4 exs. (Mt. Cheolmasan, Gijang: 13.v.2004).

Tribe Lobotrachelini Lacordaire, 1866

Genus *Lobotrachelus* Schoenherr, 1838: 711.

Gwang-taek-geo-mi-ba-gu-mi-sok (광택거미바구미속)

SYNONYM: *Catarhynchus* Desbrochers, 1891: 359; *Cyphogonus* Fairmaire, 1898: 417.

Body black, strongly shining. Scutellar lobe of pronotum developed and covering scutellum. Prosternum canaliculated, each side of the canal keeled.

Type species: *Lobotrachelus vestitus* Rosenschoeld, 1838.

SPECIES (1 in Korea), (2 in Japan).

DISTRIBUTION: Korea, Japan, Afrotropical and Oriental Region.

93. *Lobotrachelus minor* (Hustache, 1921) (Pls. 8-93, 20-93)

Gwang-taek-geo-mi-ba-gu-mi (광택거미바구미)

Apiophorus minor Hustache, 1921: 93.

TL: Japan.

Lobotrachelus montanus Morimoto, 1958b: 19.

Rostrum as long as pronotum, not strongly curved, rugosely punctate and with scales in male, smooth, shining, with sparsely punctures in female. Antennae inserted into before third in male or middle in female of the rostrum, the first 2 segments of the funiculus not different from length, the following segments barely longer than broad, club oval and short. Pronotum conical, broader than long, straightened at sides, weakly bisinuate at base, twice as broad as anterior margin, densely and shallowly punctate. Scutellum small, with densely scaling, encircled with a groove. Elytra

about twice as broad as pronotum, the largest width at shoulders, regularly narrowed to apex; raised and shining humeral calli and depressed under the subapical calli. Elytral striae narrow, deep, glabrous; intervals broader than striae, flat, shiny, provided with one or two irregular rows of elongate and decumbent hairs. Groove for insertion of rostrum extending to before prosternum. Pygidium rounded inferiorly and punctate. Legs slender; femurs sublinear, edentate, rugosely and finely grayish scales; tibia straightened, punctate, armed with a small apical spur externally which truncated obliquely at apex and furrowed on external surface for the reception of tarsus; 1st segment of tarsi conical, as long as the following 2 segments together, 2nd segment barely longer than broad, 3rd broad and bilobed, onychium rather short and ended by two small claws and divaricate.

MEASUREMENTS: Body length (excl. rostrum). 2.8 mm.

COLOR: Elliptical, black, shiny, antennae and tarsi ferruginous. Elytra covered with finely filiformed white or light yellow scales on suture in entire length and formed transverse three bands; median and basal ones broad and apical one narrow. Pronotum scattered pubescences on the disc which formed three spots; one on the posterior angle of each side and median one extended on the scutellum. Apical margin of elytra reddish brown. Underneath with bigger, denser, white scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: Central (GG).

KOREAN RECORDS: Hong et al., 2000: 127 (Central).

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Surisan: 2.vii.1996).

Tribe Mecopini Lacordaire, 1866

Key to the genera of tribe Mecopini

1. Hind femora with large triangular serrate tooth posteriorly. Inner side at middle of hind tibiae strongly widened *Mecopomorphus*
– Hind femora with small tooth but not serrate. Inner side of hind tibiae not widened ... *Phylaitis*

Genus *Mecopomorphus* Hustache, 1920b: 635.

Keun-geo-mi-ba-gu-mi-sok (큰거미바구미속)

SYNONYM: *Dentisca* Ter-Minassian, 1956: 392.

Elongate-oval, black, dorsum with golden-yellow scaly spots, ventrum with oval white scales. Head with larger oval eyes which strongly pull together on the vertex. Forehead between them formed a elongate-oval instead of a narrow line as a slender seed. Temples not truncate, eyes considerably apart from anterior margin of pronotum. Antennae inserted near middle of sides of rostrum, antennal funicle 6-segmented. Pronotum with strong spherical convex laterally. The width of pronotum in the middle exceeds to width of shoulders. Prosternum without a groove for insertion

of rostrum. Elytra gradually narrowed from shoulders to apex. Legs slender and long, all femora with tooth, hind femora especially with large triangular serrated tooth posteriorly. Inner side at middle of hind tibiae strongly widened. 2nd and 3rd sternites of abdomen with recurved lateral edges. Pygidium covered with elytra.

Type species: *Mecopomorphus griseus* Hustache, 1920=*Chirozetes amurensis* Heyden, 1884).

SPECIES (1 in Korea and Japan).

DISTRIBUTION: Korea, Japan, Taiwan, South of the Russian Far East.

94. *Mecopomorphus amurensis* (Heyden, 1884) (Pls. 8-94, 20-94)

Keun-geo-mi-ba-gu-mi (큰거미바구미)

Chirozetes amurensis Heyden, 1884: 296.

TL: Russia- Primorskii Terr.

Mecopomorphus griseus Hustache, 1920b: 635.

TL: Japan- Chuzenji, Tokyo, Nikko.

Dentisca serridens Ter-Minassian, 1956: 392.

Rostrum hardly longer than pronotum, curved from base to middle, slightly widened to apex and flattened, with roughly punctate laterally, with smooth median carina. Antennae inserted into the posterior third of rostrum; scape longer than club; the first 2 segments of antennal funicle equal in length each other and equal to three following segments taken together; 3rd-6th segments small, moniliform, equal to each other; club oval. Eyes in forehead, more approximate in anterior and posterior parts than in the middle, between eyes bald, gena with reddish yellow scales. Head with dense and small punctures. Pronotum distinctly wider than its length, with strongly rounded laterally, disk convex, with thin median carina, with distinctly constriction before apex, with dense and strong punctures. Scutellum cordiform; large, oblong with small chopped at apex. Elytra semielongated oval, 1.6-1.7 times longer than the widest at shoulders, gradually and slightly narrowed from shoulders to the posterior part, their apex separately rounded; striae with very deep shining punctures; intervals raised and covered by brilliant granules. Last sternite with two tubercles before apex. Pygidium covered with elytra. Legs slender and long, all femora with tooth, hind femora especially with large triangular serrated tooth posteriorly. Inner side at middle of hind tibiae strongly widened.

Female: Rostrum longer, disk shining, its sides more finely and sparsely punctate; last sternite without tubercle.

MEASUREMENTS: Body length (excl. rostrum). 6.0 mm.

COLOR: Elongated oval, black. Ventrum covered oval yellowish-white scales. Dorsum with thick yellow hairs formed a narrow median line on pronotum and covered its sides. Elytra with golden-yellow scales formed indistinct spots.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Taiwan, Russia (Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Kuriles).

KOREA: Central, South and Is. Ulreungdo.

KOREAN RECORDS: Hong et al., 2000: 128 (Is. Ulreungdo); Legalov, 2009: 199.

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Taehwasan, Gwangju: 26.vi-4.vii.2007, malasia trap). JN: 1 ex. (Dabgok, Gwangyang: 26.vi.1994). GB: 1 ex. (Namyang, Ulreungdo: 12.viii.1995).

Genus *Phylaitis* Pascoe, 1871a: 213.

Ppul-geo-mi-ba-gu-mi-sok (뿔거미바구미속)

Oblong-oval, Black, underside of body, femora and tibiae with dense whitish scales. Rostrum slender, base cylindrical not compressed, dorsum linear, apex subdepressed; scrobes before middle. Eyes large, adjoining. Antennal scape hardly reached to basal of rostrum; funicle 6-segmented; club with elongated at base, hardly pedunculate. Pronotum spherical, transverse, slighter narrowed toward base, basally bisinuate. Elytra 1.3 times as long as, and hardly wider than pronotum, the widest part behind oblique shoulders, almost straightly narrowed toward separately rounded apex. Legs elongate; femora thin, with tooth, fore femora slightly thickened with a slender spine-like tooth beneath; tibia slender and long, fore tibia with equal width throughout; tarsi elongate, 3rd segment dilated. Prosternum foveate, bicorneate. Metepisterna not ascended. Abdomen normal.

Type species: *Phylaitis v-album* Pascoe, 1871.

SPECIES (1 in Korea and Japan).

DISTRIBUTION: Korea, Japan, Sakhalin, China, Taiwan, Borneo, Sulawesi, Moluccas, India, Madagascar, S. Africa.

95. *Phylaitis maculiventris* Voss, 1958 (Pls. 8-95, 20-95)

Ppul-geo-mi-ba-gu-mi (뿔거미바구미)

Phylaitis maculiventris Voss, 1958: 59.

TL: China- Kuatun.

Head almost hemispherical-shaped; eyes large, separated narrowly with lines-like on frons. Rostrum almost as long as head and pronotum taken together, moderately strongly and steadily curved; dorsum with five fine keels and four punctured furrows which reach to the apical third of rostrum; finely and very closely punctate in the top third. Antennae inserted into the front third of rostrum; scape not reached at base of rostrum, as long as funicle and club taken together; funicular segments short and broad, 1st and 2nd segments longer than broad, 2nd segment a little longer than 1st, the remaining segments transverse, club elongate-oval, as long as the last four funicular segments taken together. Pronotum broader than long, moderately strongly and steadily rounded at sides, collar-like at frontal part, however, not sharply edged, but with small concave radius; punctures quite finely and very close; ocular lobe very weak; weakly bisinuate at base. Scutellum small, scaly. Elytra a little longer than broad, shoulders briefly rounded, about them a little broader than pronotum; quarter a little widened at base, then weakly circular, but strongly narrowed to the

posterior part, weakly rounded at apex; Subapical calli moderately strong; a little fringed convex at base; striae line-like; intervals broad and level up. Prosternum deeply hollow and with a pair of long thoracic spines at both sides in male. Legs long, straight, femora barely clavate, the apex of hind femora passing over apex of elytra with moderate tooth; Tibia slender, a little outwardly curved just in the apical part; fore tibia longer than the remaining ones; 1st tarsal segment elongate straightened, half as long as tibiae; 3rd tarsal segment short; claws free.

MEASUREMENTS: Body length (excl. rostrum). 4.0–4.9 mm.

COLOR: Brownish black, antennae reddish brown. Scales on dorsum mainly black, on 3rd and 4th abdominal sternites with common deep black spots, on 5th sternite with a little narrower brown spot. Underside of prothorax more greyish-brown, upperside before scutellum and 5th interval with short, bright wedge-shaped spot. Elytra with indistinct sutural band and indistinct transverse bands behind the middle formed by yellowish grey scales. The base beside scutellum a little conspicuously red. Femora black, on the posterior part or at least in the apical part with greyish scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu), Russia (Sakhalin), China (Fujian), Taiwan.

KOREA: Is. Jeju.

KOREAN RECORDS: Park et al., 2008: 120 (Is. Jeju).

SPECIMEN EXAMINED: JJ: 2 exs. (Sequipo-Siheomrim, Sequipo-si: 24.vii–4.viii.2007, malaise trap).

Tribe Menemachini Lacordaire, 1866

Key to the genera of tribe Menemachini

1. Forehead between eyes about half as wide as base of rostrum *Keibaris*
- Forehead between eyes not parallel-sided, 1/8 times as broad as the base of rostrum
..... *Macrotelephae*

Genus *Keibaris* Chûjô, 1960: 1.

Keun-i-geo-mi-ba-gu-mi-sok (큰이거미바구미속)

SYNONYM: *Abaris* Voss, 1958: 87.

Forehead between eyes half as wide as base of rostrum, pronotum without lateral calli, scutellum invisible, fore femora greater than posteriors, claws simple and prosternal canal absent.

Type species: *Keibaris babai* Chûjô, 1960.

SPECIES (1 in Korea and Japan).

DISTRIBUTION: Korea, Japan (Is. Tsushima), China, Tanzania.

96. *Keibaris babai* Chûjô, 1960 (Pls. 9-96, 20-96)

Keun-i-geo-mi-ba-gu-mi (큰이거미바구미) (개칭)

Keibaris babai Chûjô, 1960a: 1.

TL: Japan- Tsushima.

Rostrum separated from head by a faint impression, weakly curved; 0.7 times as long as pronotum, weakly becoming thinner toward apex, wider than knee of fore femur at base; upper surface indistinctly pluricarinate behind antennae; antennal scrobes extend anteriorly beyond antennal insertion. Antennae inserted a little beyond middle of rostrum; scape a little shorter than funicle; funicle with 2nd segment a little shorter than 1st, 3rd to 7th transverse; club weakly depressed laterally, about as long as 3rd to 7th segments of funicle combined; 1st segment less than half of club. Forehead between eyes about half as wide as base of rostrum. Pronotum as long as broad, subparallel-sided in basal half, then rounded in a curve to weak subapical constriction, subtruncate at base; pronotum densely punctate, interstices between them narrower than their diameter, generally with fine median impunctate line in entire length. Scutellum invisible. Elytra 1.5 times as long as broad and 1.76 times as long as pronotum; a little wider than pronotum at shoulders; intervals each irregularly with two rows of punctures; stria 10 complete. Prosternum not canaliculated before coxae, which are separated less than half the breadth of it, sternellum enlarged and flattened on a same level with area in front of fore coxae, and produced caudad at sides. Mesosternal process almost as wide as a middle coxa. Metasternum between middle and hind coxae a little longer than ventrite 1 behind coxa; metepisternum tapered posteriorly. First abdominal ventrite behind coxa a little longer than 2nd, which is nearly as long as 3rd and 4th combined at side. Venter with basal two ventrites weakly depressed at middle. Pygidium concealed. Legs with femora swollen, especially on fore pair, each arms with triangular tooth which is largest in fore pair, with hind femora barely reaching posterior margin of 4th ventrite; tibiae carinate along inner and outer margins, curved and weakly dilated internally before middle in fore pair, uncinata, but not mucronate, uncus arisen near inner apical corner, outer setose fringes ascending upwards in middle and hind pairs; claws toothed. Aedeagus with long flagellum; tegmen without paramere.

Female: Resembles male except rostrum slightly slenderer, 0.75 times as long as pronotum, and more constricted laterally beyond antennal insertions, and venter with basal two ventrites not depressed at middle. Spermatheca with long duct.

MEASUREMENTS: Body length (excl. rostrum). 6.0 mm.

COLOR: Blackish to dark red-brown, pronotum darkest, antennae and legs lighter; hairy scales yellowish grey, clothed on underside, lateral parts, legs and dorsum along basal margins of pronotum and elytra, and at apical 1/3 of 1st interval of elytra.

BIOLOGICAL NOTES: A number of adults were found on leaves of *Morus* sp. (Moraceae) in Tsushima. Another adult collecting record is known to have been taken on flower of *Mallotus japonicus* (Kojima and Morimoto, 2004).

DISTRIBUTION: Korea, Japan (Tsushima).

KOREA: South (GB, GN).

KOREAN RECORDS: Hong et al., 2000: 85 (South).

SPECIMEN EXAMINED: GB: 1 ex. (Mt. Seonuisan: 26.v.1997). GN: 1 ex. (ChilseonValley, Mt. Jirisan: 7.vi.2002).

REMARKS: The Korean name of this species may be changed “큰이애바구미” to “큰이거미바구미”,

because the systematic position of the aberrant genus *Keibaris* Chûjô in the subfamily Baridinae transferred to the tribe Menemachini of the subfamily Conoderinae (Kojima and Morimoto, 2004).

Genus *Macrotelephae* Morimoto, 1960: 113.

Wang-geo-mi-ba-gu-mi-sok (왕거미바구미속)

Head globular, reticulately punctured; eyes oval, $4/3$ times as long as wide; forehead between eyes not parallel-sided, $1/8$ times as broad as the base of rostrum, not impressed; rostrum shorter than pronotum, slightly curved, with a median fine keel, base semicircular in cross-section; antennae inserted a little before the middle of rostrum, funicle 7-segmented, club suboval. Pronotum slightly broader than long, the sides gently curved, apical construction weak, anterior margin slightly produced anteriorly, ocular lobes weak, posterior margin bisinuate, disc reticulately punctured, lateral tubercles absent. Scutellum depressed, oblique to the axis of body, posterior margin much lower than the level of elytra. Elytra $4/3$ times as long as wide, the sides gently curved and narrowed posteriorly, 1st stria sinuate by scutellum and reaching the base, 10th stria complete, intervals much broader than striae, posterior margin of elytra subtruncate. Pygidium entirely concealed. Mid- and hind femora each with a large tooth. Front tibia strongly curved near the base, widened inward about the apical $1/3$; inner-apical angle triangular, with several setae. Claws simple, free.

Type species: *Macrotelephae ichihashii* Morimoto, 1960.

SPECIES 1.

DISTRIBUTION: Korea, Japan.

97. *Macrotelephae ichihashii* Morimoto, 1960 (Pls. 9-97, 20-97)

Wang-geo-mi-ba-gu-mi (왕거미바구미)

Macrotelephae ichihashii Morimoto, 1960: 114.

TL: Japan- Mie.

Head reticulately punctured; rostrum $4/5$ times as long as pronotum, weakly curved, with a median impunctate flat keel widened from the base towards the apex and obsolete before antennal insertions, punctures closer on the base; antenna inserted just before the middle of rostrum, 1st segment of funicle thick, a little longer than wide, 4.3 times as long as the 2nd, 3rd segment half as long as the 1st, 5th–7th segments each globular or subglobular, 5th segment as long as wide, 6th and 7th segments each transverse, club nearly as long as the 5 basal segments of funicle taken together. Pronotum broadest at the base, the sides nearly straight and scarcely narrowing anteriorly to the middle, thence rapidly narrowing anteriorly; disc reticulately punctured, punctures smaller near the anterior margin, with a median impunctate keel. Scutellum sparsely punctured, glossy. Dorsum of elytra flat, intervals each with three irregular rows of filiferous punctures.

MEASUREMENTS: Body length (excl. rostrum). 4.4–4.6 mm.

COLOR: Black; apex of rostrum, antennae, tarsi, inner and outer margins of front tibia, tibial unci, and posterior margins of elytra reddish brown. Derm covered with ochreous and brownish black scales; ochreous scales forming a pair of lateral stripes and a triangular spot on pronotum just before scutellum, three spots on suture of elytra, and spots on lateral sides of 3rd–5th segments of abdomen.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu, Tsushima).

KOREA: South and Is. Jeju.

KOREAN RECORDS: Morimoto and Lee, 1992: 12 (JJ- Jungmun beach, Yeongsil); ESK/KSAE, 1994: 208; Paik et al., 1995: 432 (JJ); Hong et al., 2000: 128 (South, Is. Jeju).

SPECIMEN EXAMINED: GB: 1 ex. (Mt. Unmunsan: 21.v.1991). JJ: 1 ex. (Sequipo-Siheomrim, Sequipo-si: 22–29.vi.2007, malaise trap); 1 ex. (Sequipo-Siheomrim, Sequipo-si: 30.vi–6.vii.2007, malaise trap); 1 ex. (Sequipo-Siheomrim, Sequipo-si: 24.vii–4.viii.2007, malaise trap); 1 ex. (Halla-Siheomrim, Sequipo-si: 22–29.vii.2007, malaise trap); 1 ex. (Halla-Siheomrim, Sequipo-si: 30.vi–6.vii.2007, malaise trap).

Tribe Othippiini Morimoto, 1962

Genus *Egiona* Pascoe, 1874: 51.

Maep-si-geo-mi-ba-gu-mi-sok (맵시거미바구미속)

SYNONYM: *Apiophorus* Roelofs, 1875: 173.

Rostrum always capable of being retracted between coxae. Antennal scrobes running to lower part of rostrum. Eyes close together around middle and separate anteriorly and posteriorly. Femora each with tibial groove on anterior margin, more or less with bare keel on dorsally and ventrally, respectively. Pygidium exposed.

Type species: *Egiona laeta* Pascoe, 1874.

SPECIES (2 in Korea), (3 in Japan).

DISTRIBUTION: Korea, Japan, China, Borneo, Sulawesi.

Key to the species of genus *Egiona*

1. Elytra with 3 transverse wavy bands by ochraceous or orange yellow scaly hairs *E. kono*
- Elytra formed a reddish gray transverse band beyond of middle *E. picta*

98. *Egiona kono* Nakane, 1963 (Pls. 9-98, 20-98)

Maeb-si-geo-mi-ba-gu-mi (맵시거미바구미)

Egiona kono Nakane, 1963: 39.

TL: Japan- Ohnuma-Junsai.

Head and pronotum densely and rugosely punctured. Elytra strongly striate, and intervals bearing granules.

MEASUREMENTS: Body length (excl. rostrum). 3.1 mm.

COLOR: Black, ovate and convex; median area of elytra, antennae and tarsi reddish brown; peripheries of pronotum with exception of middle of front margin, prosternum, mesosternum, 3 transverse wavy bands of and apical part of elytra covered with ochraceous or orange yellow scaly hairs, metasternum and abdomen bearing white ones, and other parts clothed with blackish ones.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima).

KOREA: Central, South and Is. Jeju.

KOREAN RECORDS: Morimoto, 1984: 319; Kwon and Lee, 1986: 84 (South); ESK/KSAE, 1994: 208; Hong et al., 2000: 129 (South, Is. Jeju).

SPECIMEN EXAMINED: GW: 1 ex. (Hoengseong: 10.vi.2007). JJ: 1 ex. (Gwangryeonggyegok: 13.x.1984).

99. *Egiona picta* (Roelofs, 1875) (Pls. 9-99, 21-99)

Geom-jeong-maeb-si-geo-mi-ba-gu-mi (검정맷시거미바구미)

Apiophorus pictus Roelofs, 1875: 173.

TL: Japan.

Rostrum punctate, more densely punctate at base, with smoothed median line. Head finely punctate, covered with brown scales and yellow scales around eyes. Pronotum bisinuate at base, slightly narrowed, rounded and shortly tubulate at anterior part; very finely shagreened; decorated with a big velvety black spot before scutellum, which is more or less cordiform; a small spot of the same color is next to this one; edge of the middle spot with yellow scales; this color scales formed a lateral band and are scattered on the basal margin. Elytra trisinuate and exactly same broad as pronotum at base; shortly oval, isolated roundly on apex, striae regularly and deeply punctate, intervals flat and rough. Decorated to the big spot around the scutellum and to other spots of the even color at the base of the 4th interval which are separated by the yellow scales, formed the reddish gray transverse band in arch beyond of middle of elytra. Underside punctate; sides of mesosternum and metasternum with one or two black spots.

MEASUREMENTS: Body length (excl. rostrum). 2.6–2.8 mm.

COLOR: Elliptical; underside, rostrum and head black; pronotum grayish black, its anterior margin red. Elytra dark red; legs and antenna red; dorsum, sides of pronotum and legs with grayish red scales, decorated the velvety pattern on dorsum by the black scales and the remaining areas with yellow and black scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu).

KOREA: South (GN).

KOREAN RECORDS: Park et al., 2008: 121 (South).

SPECIMEN EXAMINED: GN: 1 ex. (Dapcheon-ri, Ilbanseong-myeon, Jinju: 19–25.iv.2007, malaise trap No. M-8-2-1); 1 ex. (Dapcheon-ri, Ilbanseong-myeon, Jinju: 10–16.v.2007, malaise trap No. M-8-3-2).

Subfamily Cryptorhynchinae Schoenherr, 1825

Beo-deul-ba-gu-mi-a-gwa (버들바구미아과)

Members of this subfamily Cryptorhynchinae are easily recognized by the ventral canal on the sternum, in which the rostrum lies in repose, being extended beyond the prosternum onto the mesosternum or even metasternum. Usually, the eyes are covered by the anterolateral margins of the pronotum when the rostrum is in repose, and the tibia possess a large, curved apical tooth.

Cryptorhynchine larvae associated with dicotyledonous or coniferous, usually develop in dead wood although some mine inside living plants and some species are found in seeds. Most genera are found in terrestrial habitats. Aquatic forms not known. Many species are found in leaf litter. Many species are flightless.

Key to the tribes and genus of subfamily Cryptorhynchinae

1. Body narrow and long, almost stick-formed. Mouthpart emagination of rostrum not longer than its width. Pectorial canal for rostrum extending into the posterior margin of prosternum and enclosed behind, inner side with contiguous tightly pressed scales. Hind coxae reached on lateral margin of elytra. Hind femora go behind apex of abdomen, and bended. 1st sternite of abdomen behind coxae shorter than 2nd sternite. - Fore tibiae in male on inner margin at apical half with emagination, bearing long, weakly curly-haired (Tribe Camptorhinini) *Camptorhinus*
- Body not stick-formed. Mouthpart emagination of rostrum longer than its width. Pectorial canal for rostrum go on mesosternum, inner side naked even at apical half. Hind coxae not reached on lateral margin of elytra. Hind femora not go behind apex of abdomen, more or less straight. 1st sternite of abdomen behind coxae as long as 2nd sternite 2
2. Rostrum touching middle coxae in repose (except *Deiradocranus*). Postcoxal part of prosternum with lamellae limiting the pectorial canal for rostrum laterally. Fore coxae distant from middle one. Anal sternite with 2 long bristles on distal margin (Tribe Aedemonini) 3
- Rostrum not touching middle coxae, but ending in receptacle on mesosternum 5
3. Rostrum not touching middle coxae in repose. Small (less than 2.2 mm). Antennal funicle 6-segmented. Mesosternum with lamellae limiting pectorial canal laterally. Receptacle forming an acute edge on metasternum. Scutellum tomentose *Deiradocranus* Roelofs
- Rostrum touching middle coxae in repose. Large (more than 4.0 mm) 4
4. Hind femora clavate; their dorso-basal margin bare and glossy. 1st suture between 1st and 2nd abdominal sternites deep on each side and weak at the middle, especially in male *Monaulax*
- Hind femora narrow, not clavate, often with narrow naked margin at the base seen ventally. 1st suture between 1st and 2nd abdominal sternites distinct throughout its length in both sexes *Rhadinomerus*
5. Rostrum straightened or slightly curved more or less flattened. Fore coxae with tooth or angu-

- lated projection posteriorly. Pectorial canal for rostrum on mesosternum usually not go behind anterior margin of middle coxae, if (sparsely) go between coxae, then shallow and flattened at apical part. Length of metasternum between middle and hind coxae longer than diameter of middle coxae. Apical fringed bristles on exterior surface of hind tibiae reduced; if developed, then transverse or (sparsely) longitudinal, not oblique. Femora without tooth or sulcate beneath, inner side of hind femora with contiguous integument of scales (Tribe Gasterocerini) 6
- Rostrum curved, hardly flattened at apical part. Fore coxae with weak angulated projection posteriorly. Pectorial canal for rostrum on mesosternum go between coxae, same deep on all length. Length of metasternum between middle and hind coxae not longer than diameter of middle coxae. Apical fringed bristles on exterior surface of hind tibiae not reduced, sloped, often double. Femora from below with weak tooth, partly with sulcate; inner side of hind femora naked (Tribe Cryptorhynchini) 8
6. 2nd abdominal sternite subequal to 3rd sternite. Rostrum straight, flat. Scutellum present. Pectorial canal not reaching anterior margin of middle coxa. Receptacle costate on the posterior wall. Fore legs longer than the others in male *Gasterocerus* Laporte et Brulle
- 2nd abdominal sternites nearly as long as 3rd and 4th sternites combined 7
7. Femora sulcate beneath. Body ovoid-oval. Pronotum broadest a little before the base. 9th elytral interval costate at the base, forming outer margin of shoulder and connate to 10th one a little behind the base, so that 9th elytral stria does not reaching the base. 2nd abdominal sternite at least as long as 3rd and 4th sternites combined. Femora edentate *Orochlesis*
- Femora not sulcate beneath, dentate. Rostrum slightly curved and closely punctured. Pronotum granulate on each side. Scutellum bare. 1st elytral interval on the same level as 2nd. Conjoint apices of elytra more or less mucronate. Fore legs much longer than hind ones in male. Fore tibia straight, serrate internally *Syrotelus*
8. Metasternum short, shorter than 3rd of abdominal sternite. Intercoxal process of abdomen as broad as a coxa. Metepisterna narrow or partly hidden, or metepisternal sutures absent. Elytra with more or less reduced humeri. Scutellum minute or absent (Subtribe Tylodina) 9
- Metasternum longer than 3rd of abdominal sternite. Intercoxal process of abdomen narrower than a coxa. Metepisterna distinct, broader. Elytra often with rectangular humeri. Scutellum present. Antennal scape shorter than funicle and at most reaching eye. Mesosternal process cavernous, forming receptacle. Apex of tibiae without distinct corbels (Subtribe Cryptorhynchina) 10
9. Scutellum absent. Hind femora not exceeding apex of elytra. Metepisternal sutures visible throughout their length. Frons between eyes as broad as base of rostrum. Ultimate elytral striae absent. Receptacle prominent, its posterior wall costate *Simulacalles*
- Scutellum present. Elytral oval. Hind femora weakly clavate, weakly sulcate beneath, finely dentate. Tibiae irregularly dentate on the dorsal margin. Receptacle with a pair of foveae on the bottom *Hytanzo*
10. Mesosternum truncate between middle coxae 11
- Mesosternum arched posteriorly, its apex close to a line between the posterior margins of hind coxae. Head sulcate above eyes. Pronotum broadest at base, strongly punctured, without projection. Femora linear or clavate, not compressed at base, unidentate. Elytra with rectangular humeri *Rhadinopus*
11. Femora bidentate 12
- Femora unidentate 13
12. Head depressed along the dorsal margin of eyes *Caenocryptorrhynchus*

- Head not depressed above eyes *Cryptorhynchus*
- 13. Head depressed along the dorsal margin of eyes. Frons not depressed. Tibiae not extended near the base. Large weevils with more or less pointed humeri *Eucryptorrhynchus*
- Head not depressed above eyes 14
- 14. Tibiae with the inner carina of corbels strongly laminate, with two rows of outer setose fringes. Femora not or weakly sulcate beneath, the sulci covered with scales *Sternochetus*
- Tibiae with the inner carina of corbels not laminate, with a row of outer setose fringe. Femora sulcate beneath, the sulci bare 15
- 15. 1st segment of hind tarsi as long as all of other segments combined, or longer than them. Pectorial canal for rostrum on mesosternum narrow, process of mesosternum almost reached on hind margin of middle coxae. Femora with inconspicuous tooth. Tibiae on apex curved. Abdomen in male from 1st to 5th sternites in the middle with bundles of erected scales *Coniferocryptus*
- 1st segment of hind tarsi as long as 2nd and 3rd segments combined, or hardly longer than them. Pectorial canal for rostrum on mesosternum wider, process of mesosternum not reached far hind margin of middle coxae. Femora with distinct tooth. Tibiae on apex not curved. Abdomen in male and female from below without bundle of erected scale, sometimes with sparse erected scales and hairs on the middle of 1st sternite *Shirahoshizo*

Tribe Cryptorhynchini Schoenherr, 1825

Subtribe Cryptorhynchina Schoenherr, 1825

Genus *Caenocryptorrhynchus* Morimoto, 1962: 395.

Eol-ruk-nal-gae-ba-gu-mi-sok (얼룩날개바구미속)

Head sulcate along the dorsal margin of eyes and the sulci contiguous to each other on frons; rostrum separated from frons, curved, closely punctured on the base and finely punctured on the distal half, slightly narrowed from the base to the middle; eyes pear-shaped; antennae inserted just before the middle of rostrum, funicle a little longer than scape, 7-segmented, 1st segment as long as 2nd, 4th segment a little longer than wide, each of 5th–7th segments as long as wide, club 5/2 times as long as wide, broadest on the distal 1/3. Pronotum with ocular lobes. Scutellum distinct. Mesosternum subtruncate between mesocoxae. Abdomen with 2nd–4th segments equal in length to each other. Femora not clubbed, bidentate, sulcate beneath, the sulcus indistinct or obsolescent near the base of femora. Tibiae uncinatae, punctured, not costate. Tarsi similar in both sexes, claws free, simple. This genus may be similar to *Cryptorhynchus* Illiger, 1807 and *Rhadinopus* Faust, 1894b, but may easily be separable from *Rhadinopus* by the bidentate femora and from *Cryptorhynchus* by a transverse sulcus which is separating the rostrum from the head.

Type species: *Caenocryptorrhynchus frontalis* Morimoto, 1962.

SPECIES 1.

DISTRIBUTION: Korea, Japan.

100. *Caenocryptorrhynchus frontalis* Morimoto, 1962 (Pls. 9-100, 21-100)

Eol-ruk-nal-gae-ba-gu-mi (얼룩날개바구미)

Caenocryptorrhynchus frontalis Morimoto, 1962c: 396.

TL: Japan- Honshu, Shikoku, Kyushu.

Head closely punctured on vertex and rugose on frons; frons separated from vertex by an arched depression and a little lower than the level of vertex, with a pair of tubercles and a median keel, deeply sulcate along the dorsal margin of eyes; rostrum as long as pronotum, closely punctured on the base and sulcate above the antennal scrobes; antennae with 1st segment of funicle $5/3$ times as long as wide and as long as 2nd, 3rd-4th segments equal in length to each other and half as long as 1st, 5th-7th segments subequal in length to each other, as long as wide and a little shorter than 4th, club compact, suture of segments very fine, closely covered with velvety pubescence. Pronotum a little broader than long (8:7), broadest at the base, the sides slightly sinuate behind the middle, anterior margin $3/5$ times as broad as the posterior one, arched anteriorly, posterior margin bisinuate, basal part covered with the bases of elytra, derm shagreened, sparsely punctured, with a median keel, which is glossy and strongly costate on the median part. Scutellum oval, naked, punctured. Elytra $3/2$ times as broad as pronotum, $3/2$ times as long as wide, basal half subparallel, subapical swellings weak; striae separately punctured; 3rd, 5th, 7th and 9th intervals more or less convex, the other intervals almost flat, derm shagreened. Lateral pieces of meso- and metathorax, metasternum and 1st segment of abdomen closely punctured, 2nd-4th segments each with an irregular transverse row of shallow punctures, 1st segment longitudinally depressed at the middle and each side of the depression closely scaled. Femora not clubbed, bidentate, sulcate beneath, the sulcus indistinct or obsolescent near the base of femora. Tibiae uncinatae, punctured, not costate. Tarsi similar in both sexes, claws free, simple.

Female: First segment of abdomen not closely scaled.**MEASUREMENTS:** Body length (excl. rostrum). 5.0-6.1 mm.

COLOR: Black; tarsi and apical half of rostrum dark brown, antennae brown. Derm covered with scales; pronotum with five scaly black tufts, two on the anterior margin and three on a median transverse line; elytra not or sparsely covered with scales and visibly black on the basal triangular area and the apical area behind declivity, the remaining median area covered with brown to grayish brown scales, grayish scales forming a transverse vague band on the posterior $1/3$ of elytra and short oblique bands from shoulders to the anterior $1/3$ of suture, black erect scales forming a scaly tuft on 3rd and 5th intervals near the base respectively, brown to grayish brown erect scales forming 4-6 scaly tufts on the median part of 3rd and 5th intervals respectively. Underside sparsely covered with brown scales. Femora and tibiae closely covered with brown scales, femora annulated with dark brown scales a little beyond the middle and with whitish scales on the exterior margin of dark annulus.

BIOLOGICAL NOTES: Unknown.**DISTRIBUTION:** Korea, Japan (Honshu, Shikoku, Kyushu).**KOREA:** Central and South.**KOREAN RECORDS:** Morimoto, 1984: 341; Kwon and Lee, 1986: 82 (South); ESK/KSAE, 1994: 207; Hong et al., 2000: 134 (South); Hong and Korotyaev, 2002: 160 (Central).**SPECIMEN EXAMINED:** HH: 1 ex. (Kaesong, Mts. Pakyon, 20km NE from Kaesong: 9.ix.1971, No.

252). GG: 1 ex. (Gwangreung: 10.x.1998). GW: 1 ex. (Hongcheon: ?.vi.2006); 1 ex. (Mt. Taebaek: 12-13.viii.1999). GB: 1 ex. (Heuibangsa, Mt. Sobaek, Punggi, Youngju: 10.v.1997); 1 ex. (Mt. Hakgasan: 6.ix.1998); 1 ex. (Tp. Bogyengsa, Pohang: 17.ix.1977).

REMARKS: Hong and Korotyaev (2002) described only on data which determined a specimen with *Cryptorhynchus fasciculatus* Roelofs by V.V. Zherikhin in 1991 that collected at Kaesong, Mts. Pakyon, 20 km NE from Kaesong on 9. Sept. 1971 by Horvatovich and Papp (Coll. No. 252) preserved in the Hungarian Natural History Museum (HNHM), but it was confirmed as *Caenocryptorrhynchus frontalis* Morimoto in this study.

Genus *Coniferocryptus* Zherikhin, 1991 in Zherikhin and Egorov, 1991: 100.

Jeom-bak-i-ba-gu-mi-sok (점박이바구미속)

Pectorial canal for rostrum on mesosternum narrow, inner side naked or with single inconspicuous thin hair. Abdomen in male from 1st to 5th sternites in the middle with bundles of erected scales. Femora inconspicuous unidentate beneath. Tibiae on apex curved. 1st segment of hind tarsi as long as all of other segments combined, or longer than them.

Type species: *Coelosternus tamanukii* Kôno, 1938.

SPECIES (1 in Korea), (2 in Japan).

DISTRIBUTION: Korea, Japan, Russian Far East, Kuril Is.

101. *Coniferocryptus tamanukii* (Kôno, 1938) (Pl. 9-101)

Ga-mun-bi-huin-jeom-bak-i-ba-gu-mi (가문비흰점박이바구미)

Coelosternus tamanukii Kôno, 1938: 144.

TL: Sakhalin.

Body oblong. Head coarsely and densely punctate; forehead in the middle between eyes with a longitudinal depression. Rostrum curved, with a longitudinal keel on the posterior half, coarsely and densely punctured at the base, but finely and sparsely punctured on the anterior half, and substantially finer at female. Antennae inserted in the middle of rostrum; 2 basal funicular segments elongate and almost equal in length, ending part of 1st segment thickened with club-shape, 3rd and 4th segments longer than broad, but distinctly shorter than 2nd, 5th segment shorter, 6th and 7th segments round; antennal club oblong, compact. Pronotum wider than long, rounded on the sides, posterior margin much broader than anterior one; disc with a longitudinal median keel, bisinuate at base, very coarsely and densely punctured. Elytra much broader than pronotum, weakly tapered on the sides from humeri to posterior calli; Intervals almost flat, 1st interval (sutural interval) distinctly narrower than 2nd, 2nd and 4th intervals at posterior half much broader than 3rd and 5th. Portion between foveae on striae almost not lowered on level of intervals with dense

punctures. Striae narrower than interval. Underside of body coarsely and densely punctured. 2nd sternite of abdomen in the middle with wide smooth area. Abdomen in male with wide bright yellowish erected scales which reclinated posteriorly; 1st sternite in the middle of distal margin arranged and anal sternite mixed with long and thin erected hairs. Distal margin of anal sternite in male widely rounded. The 3rd and 4th abdominal segments with 3 or 4 rows of punctures. Femora slender, without distinct tooth, with long scales not densely clothed, indistinctly grooved.

MEASUREMENTS: Body length (excl. rostrum). 4.7–6.7 mm (in Japan and Far eastern Russia).

COLOR: Derm darkly brown; rostrum, antennae and tarsi reddish brown; covered predominantly greyish brown scales, blackish mottled, scattered with long pointed scales; disk of pronotum with 2 bundles of blackish erected scales; odd intervals of elytra with bundles of same scales; bright yellowish scales formed small oblique spot before middle of 4th to 5th intervals, formed small spot at distal half of elytra, and formed large spot on lateral sides of prosternum and ring on femora. Underside brighter and not densely scaled; each abdominal segment at male with a transverse scaly bunch in the middle, and without them at female, but 2nd–4th abdominal segments with a transversal row of long dark scales.

BIOLOGICAL NOTES: This species was collected on *Picea jezoensis* in Japan (Morimoto, 1984) and on *Picea* and *Pinus* (Zherikhin, 1996b).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), Russia (Khabarovsk and Primorskii Terr., Sakhalin, Kuril Isl.).

KOREA: South.

KOREAN RECORDS: Morimoto, 1984: 340; Kwon and Lee, 1986: 82 (South); ESK/KSAE, 1994: 207; Hong et al., 2000: 139 (South).

REMARKS: Authors could not find any Korean specimen of this species until now. The descriptions were cited on Kôno (1938) and the photo on plate was taken from Russian specimen.

Genus *Cryptorhynchus* Illiger, 1807: 330.

Beo-deul-ba-gu-mi-sok (버들바구미속)

SYNONYM: *Arachnipes* Villa and Villa, 1833: 22; *Cryptorhynchidius* Pierce, 1919: 25; *Cryptorrhynchobius* Voss, 1965: 90.

Head not depressed above eyes. Pectorial canal for rostrum before fore coxae covered on inner side non-dense scales, posteriorly naked. Mesepimera almost as wide as mesepisterna. Femora from below with 2 small teeth, distinctly different on inner sides. Middle and hind tibiae laterally with 2 fringed bristles. Larvae at wood of dried or weakened deciduous trees.

Type species: *Curculio lapathi* Linnaeus, 1758.

SPECIES (2 in Korea), (4 in Japan).

DISTRIBUTION: Cosmopolitan.

Key to the species of genus *Cryptorhynchus*

1. Elytra covered with various dark hair-like scales which formed spots on odd intervals and

- appeared the transverse bands towards the base or middle and towards end; with white scales which formed a small oblique band on the 3rd, 4th and 5th intervals before middle and other transverse band towards the posterior third *C. electus*
- Elytra with bundles of dark erected scales on 3rd, 5th and 7th intervals. Apex of elytra covered with dense gray scales *C. lapathi*

102. *Cryptorhynchus electus* (Roelofs, 1875) (Pls. 9-102, 21-102)

Du-ni-beo-deul-ba-gu-mi (두니버들바구미)

Coelosternus electus Roelofs, 1875: 170.

TL: Japan- Kobe.

Rostrum about as long as pronotum, curved, not much enlarged and almost as thick as broad at base, which is punctate with subcarinate and scaly, smooth on the rest; its scrobes beginning before middle. First 2 segments of antennal funicle oblong reversely conical, equal to length, 1st segment bigger, the following segments gradually a little rounded and transverse. Head depressed between eyes, densely punctate with blackish brown scales, more clear around eyes. Pronotum shorter than broad at base, which is bisinuate, rounded on sides, slightly shrunk forward, constricted laterally before the anterior margin, densely punctate with clear, brown elongated scales on the median line and on sides; black scales formed two spots in the middle of the disc. Scutellum black, punctate, rounded. Elytra broader than pronotum, trisinuate at base, rectangular in shoulders, subparallel-sided to their posterior third and then narrowed towards the end, which is subacuminate; striae with rather deep punctures; the odd intervals a little more leveled up septa between punctures of striae. Elytra with various dark hair-like scales; forming spots on odd intervals and appearing the transverse bands towards the base or middle and towards end; white scales forming a small oblique band on the 3rd, 4th and 5th intervals, before middle and other transverse band towards the posterior third of the elytron. Underside with large punctures with a yellowish scale. Abdominal segments separated by sutures rather shallow. Intercoxal process angulate. Legs with the same vestiture variageted blackish brown, the clear color forming rings on femora. Femora bidentate. Tarsi elongate; their 1st segment as long as the following segments combined.

MEASUREMENTS: Body length (excl. rostrum). 4.4 mm.

COLOR: Brownish black to reddish brown; rostrum, antennae and legs brownish testaceous; with various dark and white hair-like scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Khabarovskii and Primorskii Terr., Amur Prov.).

KOREA: Central, South and Is. Jeju.

KOREAN RECORDS: Park et al., 2008: 121 (Central, South, Is. Jeju).

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Surisan, Gunpo: 13.v.2000). CB: 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 4-10.x.2007, malaise trap No. M-3-2-8); 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 25-31.x.2007, malaise trap No. M-3-3-9). GN: 1 ex. [Cheolma (surface 1-5): Gijang, Busan, 3.vi.2001]. JJ: 1 ex. (Sangumburi: 28.v.1992).

103. *Cryptorhynchus lapathi* (Linnaeus, 1758) (Pls. 9-103, 21-103)

Beo-deul-ba-gu-mi (버들바구미)

Curculio lapathi Linnaeus, 1758: 379.

TL: Europe.

Rostrum with punctures, weaker at apical half in female. Frons wide. Pronotum with median keel and 5 bundles of dark erected scales: 2 at anterior margin and 3 at the middle. Middle and lateral sides of pronotum with blackish scale bundles. Most part of elytra with bright scales. Sutural intervals of elytra without raised scale. 3rd, 5th and 7th intervals of elytra with bundles of dark erected scales. 9th interval of elytra behind humeral tubercles keel-shaped. Apex of elytra covered densely with gray scales. Intercoxal process of 1st sternite of abdomen with acute-angulated apex. Depression of 1st sternite of abdomen in male with sparse decumbent scales and raised hair-like scales.

Femora from base toward tooth widened. 1st segment of hind tarsi almost as same as 2nd and 3rd segments combined.

MEASUREMENTS: Body length (excl. rostrum). 6.0–9.0 mm.

COLOR: Body black or blackish-brown. Lateral sides of pronotum and apical part of elytra with dense whitish scales, disk of elytra covered with admixture of dark brownish, grayish or whitish scales.

BIOLOGICAL NOTES: The larva live on trunk of *Salix* spp. and *Populus* spp. in Japan (Morimoto, 1984). The adult was collected on *Salix*, *Populus* and *Chosenia* (Zherikhin, 1996b) and on *Populus maximowiczii*, *P. alba*, *P. nigra*, *P. deltoides*, *P. euramericana*, *Populus* spp., *Salix* spp., and *Alnus japonica* in Korea (FRI, 1991).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu), China (Heilongjiang, Liaoning, Sichuan, Zinjiang), Russia (Magadan and Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Yakutia, E. and W. Siberia, European part), Kazakhstan, Caucasus, Europe, N. America.

KOREA: North, Central and South.

KOREAN RECORDS: Kôno, 1926: 89 (Seokwangsa); Mochizuki, 1936: 209 (Naegumgang); Mochizuki and Tsunekawa, 1937: 88 (Naegumgang); Kôno and Kim, 1937: 24; Saito, 1941: 59; Cho, 1947: 66 (Geumgangsán); Cho, 1957: 279; ZSK, 1968: 130; Cho, 1969: 569 (Central); Ko, 1969: 265; KSPP, 1972: 198; Krivolutskaja et al., 1978: 98; Chao and Chen, 1980: 152; Kim, 1980: 347 (Namyangju); Morimoto, 1984: 341; KSPP, 1986: 194; Kwon and Lee, 1986: 81 (North, Central, South); FRI, 1991: 101 (biology); ESK/KSAE, 1994: 207; Zherikhin, 1996b: 293; Hong et al., 2000: 135 (North, Central, South).

SPECIMEN EXAMINED: GW: 1 ex. (Hoenggye: 2.viii.1981); 4 exs. (Hoengseong: 15.vii.1984); 2 exs. (Hoengseong: 9.viii.1984); 1 ex. (Cheongpyeong: 10.vi.1987); 1 ex. (Chunseong: 26.v.1995); 1 ex. (Bongmyeong-ri, Chuncheon: 12.vi.1996). GB: 2 exs. (Gagog-3ri, Sangun, Bonghwa: 26.ix.2000, 000925-TM21).

Genus *Eucryptorrhynchus* Heller, 1937: 71.

Geuk-dong-beo-deul-ba-gu-mi-sok (극동버들바구미속)

Larger, more than 10.0 mm. Eyes margined deep sulcate from above with scales. Scutellum rais-

ed over level of sutural interval of elytra. Punctures on striae of elytra large, intervals much narrower than striae. 2nd, 4th and 6th intervals at basal part like irregular longitudinal rugulous, 3rd, 5th, 7th and 9th intervals keel-shaped. Pectorial canal for rostrum on mesosternum wider, process of mesosternum not reached far hind margin of middle coxae. Metepisternum narrow. Mesepimera wider than mesepisterna. 1st segment of hind tarsi as long as 2nd and 3rd segments combined, or hardly longer than them. Femora strongly narrowed at base, with tooth. Base of tibiae rounded laterally; apex of middle and hind tibiae with 2 apical fringed. The larva live in woods of broad-leaf trees (Zherikhin, 1996b).

Type species: *Cryptorhynchus scrobiculatus* Motschulsky, 1854=*Curculio chinensis* Olivier, 1790.

SPECIES (2 in Korea), (1 in Japan and Russian Far East).

DISTRIBUTION: Korea, Japan, China, South of Primorskii Terr., Cambodia, New Guinea.

Key to the species of genus *Eucryptorrhynchus*

1. Body smaller, more than 2 times as long as wide. Most part of pronotum, elytral humeri and apical fourth of elytra densely covered with whitish scales *E. brandti*
- Body larger, less than 2 times as long as wide. Basal part of pronotum and elytra and apical third of elytra covered with whitish and reddish scales *E. chinensis*

104. *Eucryptorrhynchus brandti* (Harold, 1881) (Pls. 9-104, 21-104)

Geuk-dong-beo-deul-ba-gu-mi (극동버들바구미)

Cryptorrhynchidius brandti Harold, 1881: 165.

TL: Peking.

Frons distinctly narrower than width of rostrum at base. Eyes margined deep sulcate from above with scales. Scutellum raised over level of sutural interval of elytra. Elytra with foveae, intervals of elytra narrow, across one keel-shaped. Punctures on striae of elytra large, intervals much narrower than striae. 2nd, 4th and 6th intervals at basal part like irregular longitudinal rugulous, 3rd, 5th, 7th and 9th intervals keel-shaped. Pectorial canal for rostrum on mesosternum wider, process of mesosternum not reached far hind margin of middle coxae. Metepisternum narrow. Mesepimera wider than mesepisterna. 1st segment of hind tarsi as long as 2nd and 3rd segments combined, or hardly longer than them. Femora strongly narrowed at base, with tooth. Base of tibiae rounded laterally; apex of middle and hind tibiae with 2 apical fringed.

MEASUREMENTS: Body length (excl. rostrum). 7.5–14.5 mm.

COLOR: Body black; antennae and tarsi somewhat reddish brown. Rostrum, base of the middle and anterior sides of pronotum, scutellum and its surrounding and the broad transverse band of elytra, underside of body with blackish scales; almost all of prosternum, large apical spot on elytra, small spots on shoulders, lateral sides of mesosternum and 2 rows of spots on abdomen with whitish scales. Dorsum of body with coarsely punctuate.

BIOLOGICAL NOTES: We observed mating pairs in the middle of April on *Fraxinus rhynchophylla* and *Zelkova serrata*. This species was collected on *Quercus* in Primorskii Terr. (Zherikhin, 1996) and

on *Ailanthus altissima* in China (Chae and Chen, 1980).

DISTRIBUTION: Korea, Japan, China (Heilongjiang, Hebei, Shanxi, Shandong, Henan, Shaanxi, Gansu, Hubei, Anhui, Jiangsu, Sichuan), Russia (Primorskii Terr.).

KOREA: North, Central and South.

KOREAN RECORDS: Egorov, 1976a: 836; Kim, 1978, 2: 303 (HB, GG, GW, JN; with *Gasterocerus longipes* Kôno); Chao and Chen, 1980: 150; Kwon and Lee, 1986: 82 (North, Central, South); ESK/KSAE, 1994: 207; Hong et al., 2000: 136 (North, Central, South); Hong and Korotyaev, 2002: 160 (Central).

SPECIMEN EXAMINED: GG: 1 ex. (Gwangju: 26.v.1979); 1 ex. (Mt. Gwanaksan: 21.v.1980); 1 ex. (Suwon: 12.vi.1987); 2 exs. (Mt. Gwanaksan: 21.v.1988); 1 ex. (Mt. Chilbosan: 11.v.1990); 3 exs. (Anyang: 2.vi.1990); 1 ex. (Mt. Gwanggyosan: 3.vi.1990); 1 ex. (Juksan: 3.vi.1990); 1 ex. (Mt. Gwanggyosan: 9.vi.1990); 3 exs. (Suwon: 19.v.1990); 1 ex. (Anyang arboretum: 5.v.1992); 1 ex. (Mt. Yeogisan: 31.v.1992, light trap); 1 ex. (Suwon: 23.vi.1995); 1 ex. (Uijeongbu: 30.vii.1995); 1 ex. (NIAST, Suwon: 7.vii.1997, light trap); 1 ex. (NIAST, Suwon: 22.vii.1997, light trap); 1 ex. (Gyeonggi Forest Environment Institute, Osan: 30.vii.1998, light trap); 2 exs. (Korea National Arboretum, Gwangreung: 14.iv.2001, on *Fraxinus rhynchophylla*); 12 exs. (Central Post-entry Quarantine Station, NPQS, Manpori, Suwon: 12.iv.2004, No. 01873-01884). GW: 1 ex. (Wonchang-ri, Chuncheon: 26.v.1981); 1 ex. (Chuncheon: 12.vi.1988); 1 ex. (Chuncheon: 8.vii.1988); 1 ex. (Hongcheon: 12.vi.1992); 1 ex. (Gangwon Univ. Campus: 21.v.1994); 1 ex. (Mancheon-ri, Chuncheon: 3.vi.1995); 1 ex. (Chuncheon: 10.v.1996); 1 ex. (Gangwon Univ. Campus: 10.v.1996); 1 ex. (Bongmyeong-ri, Chuncheon: 12.vi.1996); 1 ex. (Gangwon Univ. Campus: 9.v.1997); 1 ex. (Gangwon Univ. Campus: 10.vi.1997). CB: 4 exs. (Cheongwon: 16.iv.1997).

105. *Eucryptorrhynchus chinensis* (Olivier, 1790) (Pl. 9-105)

Jung-guk-ba-gu-mi (중국바구미)

Curculio chinensis Olivier, 1790: 507.

TL: China.

Cryptorrhynchus scrobiculatus Motschulsky, 1854: 48.

TL: China.

Body elongated oval, larger, less than 2 times as long as wide. Rostrum with 2 lateral furrows of median carina. Frons slightly narrower than width of rostrum at base. Antennal funicle 7-segmented, 2nd segment longer than 1st. Eyes slight convex. Pronotum wider than long (5.2:4.6). Elytra 1.45 times as long as wide. Femora club-shaped, with tooth.

MEASUREMENTS: Body length (excl. rostrum). 16.5 mm (in Chinese specimen).

COLOR: Derm slight shining. Basal part of pronotum and elytra and apical third of elytra covered with whitish and reddish scales which are thin and long.

BIOLOGICAL NOTES: *Ailanthus altissima*, *Sapium sebiferum*, *Robinia pseudoacacia* in China (Chae and Chen, 1980).

DISTRIBUTION: Korea, China (Laioning, Hebei, Shanxi, Shandong, Shaanxi, Gansu, Qinghai, Henan, Hubei, Anhui, Jiangsu, Fujian, Hunan, Guizhou, Sichuan).

KOREA: North and Central.

KOREAN RECORDS: Kôno and Kim, 1937: 24 (Pyeongyang, Jeongbangsan, Guwolsan, Jaeryeong);

Cho, 1957: 279; ZSK, 1968: 130; Kwon and Lee, 1986: 81 (North, Central); ESK/KSAE, 1994: 207; Hong et al., 2000: 136 (North, Central).

REMARKS: Authors could not find any specimen of this species until now.
The photo on plate was taken from Chinese specimen.

Genus *Rhadinopus* Faust, 1894b: 288.

Geo-chil-beo-deul-ba-gu-mi-sok (거칠버들바구미속)

SYNONYM: *Sculptosternellum* Morimoto, 1962c: 398.

Head with frons rugosely punctured and depressed, with a median keel and a pair of tubercles, shallowly depressed along the dorsal margin of eyes; eyes oval; rostrum separated from frons by a shallow depression, closely punctured and with a median keel on the basal half, glossy and finely punctured on the distal half; antennae inserted into the middle of rostrum, scape a little shorter than funicle, funicle 7-segmented, 1st segment robust, as long as 2nd, 3rd segment a little longer than wide, each of 4th–7th segments globular, club compact, nearly three times as long as wide, bullet-shaped. Pronotum with ocular lobes, posterior margin weakly bisinuate. Mesosternum arched posteriorly, the apex close to a line between the posterior ends of mesocoxae, abdomen with 2nd–4th segments subequal in length to each other. Femora not clubbed, hind femora a little longer than the anteriors, broadly sulcate beneath in entire length. Tibiae longitudinally costate, uncus oblique, outer setose fringe oblique. Tarsi similar in both sexes, claws free, simple.

Type species: *Rhadinopus centriformis* Faust, 1894.

SPECIES (2 in Korea and Japan).

DISTRIBUTION: Korea, Japan, China, Myanmar, Malaysia, India.

Key to the species of genus *Rhadinopus*

1. Elytra with the round shoulders, considerably broader than pronotum *Rh. confinis*
- Elytra with subrounded at shoulders, a little broader than pronotum at base *Rh. sulcastriatus*

106. *Rhadinopus confinis* Voss, 1958 (Pls. 9-106, 21-106)

Je-ju-geo-chil-beo-deul-ba-gu-mi (제주거칠버들바구미)

Rhadinopus confinis Voss, 1958: 57.

TL: China- Kuatun.

Rostrum a little shorter, the medial keel on basal half of the rostrum continues on frons, mostly ends on height of posterior margin of eye mostly in a tubercle-like widening. Antennae inserted in the middle of rostrum; club oval, barely twice as long as broad. Pronotum clearly roundly narrowed at base and broadest a little before the base; sometimes with the median keel. Elytra

with the round shoulders, considerably broader than pronotum; intervals as broad as or a little broader than striae. Pectorial canal reached at the posterior margin of mesosternum. Last abdominal segments with transverse impression. Middle- and hind tibia noticeably curved outward.

MEASUREMENTS: Body length (excl. rostrum) 4.0–5.2 mm.

COLOR: Scaling clearly with red and yellowish scales. Hairs also on pronotum a little shorter. Elytra covered more distinct reddish brown scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu), China (Fujian).

KOREA: Is. Jejudo.

KOREAN RECORDS: Park et al., 2008: 122 (Is. Jejudo). Misidentified with *Shirahoshizo rugipennis* Morimoto: Hong et al., 2000: 139 (Is. Jeju).

SPECIMEN EXAMINED: JJ: 1 ex. (Seondeul: 18.viii.1994); 4 exs. (Jeolmul: 9–16.vii.2005, malaise trap No. M-9-1-2); 2 exs. (Jeolmul: 6–13.viii.2005, malaise trap No. M-9-3-6); 1 ex. (Jeolmul: 13–20.viii.2005, malaise trap No. M-9-1-7); 3 exs. (Jeolmul: 20–27.viii.2005, malaise trap No. M-9-1-8); 1 ex. (Jeolmul: 27.viii.–3.ix.2005, malaise trap No. M-9-1-9); 1 ex. (Jeolmul: 16–24.ix.2005, malaise trap No. M-9-1-12); 1 ex. (Jeolmul: 19–25.iv.2007, malaise trap No. M-9-1-1); 1 ex. (Jeolmul: 1–7.vi.2007, malaise trap No. M-9-1-3); 2 exs. (Jeolmul: 21–27.vi.2007, malaise trap No. M-9-1-2); 1 ex. (Jeolmul: 23–30.vii.2005, malaise trap No. M-9-1-4).

107. *Rhadinopus sulcatostriatus* (Roelofs, 1875) (Pls. 9-107, 21-107)

Geo-chil-beo-deul-ba-gu-mi (거칠버들바구미)

Coelosternus sulcatostriatus Roelofs, 1875: 168.

TL: Japan- Nagasaki.

Rostrum as long as the pronotum, a little broader than thick at base, gradually tapered towards apex; punctated striate at base, with a keel which gone against the head, almost smooth on the rest part, scrobes beginning before middle. Antennal club longer, indistinct articulation, velvety. Head appearing densely punctate across the vestiture. Pronotum shorter than broad, bisinuate at base, rather strongly constricted forwardly, rounded at sides; disk deeply, roughly and densely punctate, each puncture with a narrow, elongated, yellowish scale. Scutellum punctate, concave. Elytra shortly oval, trisinuate and a little broader than pronotum at base, subrounded at shoulders, regularly rounded to apex; the striae which composed of contiguous large squared punctures; the intervals as broad as striae, rough; disk with small narrow, yellowish and whitish scales forming irregular spots. Underside rugosely punctate, with yellowish filiformed scales. The first two segments of the abdomen separated by a superficial suture. Intercoxal process broad, ogival. Legs with scales of the same color, a little elongate. Femora with a small tooth. Tarsi rather narrow.

MEASUREMENTS: Body length (excl. rostrum). 4.2–5.0 mm.

COLOR: Shortly oval, brownish black, rostrum reddish, antenna and tarsi bright reddish brown; with grayish yellow scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: Central.

KOREAN RECORDS: Park et al., 2008: 122 (Central).

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Myeongjisan, Gapyeong: 25.vi.1983; 3 exs. (Mt. Chukryeongsan, Namyangju: 11.vi–16.viii.1999, malaise trap); 1 ex. (Tp. Yongjusa, Anryeong-ri, Taean-eub, Hwaseong: 28.vi–4.vii.2005, malaise trap No. M-1-2-1); 1 ex. (Tp. Yongjusa, Anryeong-ri, Taean-eub, Hwaseong: 31.v–7.vi.2007, malaise trap No. M-1-3-3). GW 1 ex. (Jinnae-ri, Dong-myeon, Chuncheon: 25–31.v.2007, malaise trap No. M-2-2-1); 1 ex. (Jinnae-ri, Dong-myeon, Chuncheon: 29.viii–4.ix.2007, malaise trap No. M-2-1-6). CB: 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 2–9.ix.2005, malaise trap No. M-3-2-10); 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 1–7.vi.2007, malaise trap No. M-3-2-2); 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 23–29.viii.2007, malaise trap No. M-3-1-6). CN: 1 ex. (Donam-ri, Banpo-myeon, Gongju: 2–8.vi.2007, malaise trap, No. M-4-1-2).

Genus *Shirahoshizo* Morimoto, 1962a: 36.

Huin-jeom-bak-i-ba-gu-mi-sok (흰점박이바구미속)

Head with frontal region rugose, depressed and a little lower than the level of vertex, not sulcate above eyes; eyes nearly pear-shaped; rostrum curved, closely punctured on the basal half, a little tapered anteriorly from the base to the middle; antennae inserted into the middle of rostrum, scape a little shorter than funicle, funicle 7-segmented, slender, each of the 4th and 5th segments a little longer than wide, 6th and 7th segments globular, club compact, oval, 3/2 times as long as wide. Pronotum with ocular lobes, posterior margin bisinuate, median keel weak. Mesosternum truncate between mesocoxae. Abdomen with the 2nd–4th segments equal in length to each other. Femora clubbed, unidentate, sulcate beneath on whole length. Tibiae longitudinally costate, dorsal margin sharply angulate and narrowed near the base. Tarsi similar in both sexes, claws simple, free. This genus is close to *Cryptorhynchus* Illiger, 1807, but may be separable from it by the unidentate femora, depressed frontal region of head and annulated tibiae near the base. Larvae developed under roots of weakened or dried needles and deciduous trees (Zherikhin, 1996).

Type species: *Cryptorhynchus rufescens* Roelofs, 1875.

SPECIES (5 in Korea), (7 in Japan), (4 in Russian Far East).

DISTRIBUTION: Korea, Japan, China, South of the Russian Far East, India.

Key to the species of genus *Shirahoshizo* (excepted for *Sh. flavonotatus* Voss)

1. Elytra adorned with granules at least on the 1st–5th intervals. Pronotum punctate and not granulate *Sh. hiurai*
– Elytra adorned with granules at most on the 1st interval 2
2. Each of the 2nd–4th segments of abdomen with transverse rows of large punctures 3
– Each segment of abdomen moderately punctate. Elytra with the punctated striae very strong, the intervals wrinkled punctate *Sh. rugipennis*
3. Pronotum parallel-sided on the basal half. 1st interval of elytra similarly punctured and scaled as in the 2nd and bearing weak granules in male. Hind femora broad, gently narrowed towards the base. Abdominal process between metacoxae triangular. Penis pointed at tip 4
– Pronotum broadest about the middle, thence slightly narrowed posteriorly. 1st interval of elytra

depressed and bearing smaller punctures and scales than in the 2nd. Femora slender. Abdominal process between metacoxae rounded. Scutellum punctured. Penis notched at tip
 *Sh. insidiosus*

4. Scutellum without smooth median line. 1st elytral interval depressed at base and subsequent intervals raised to slightly hump-like in lateral aspect. Metasternum very densely punctate. Median depression of 1st abdominal sternite in male with narrow scales *Sh. egorovi*
 – Scutellum keeled. Elytral intervals at base not raised. Median depression of 1st abdominal sternite in male with hairs *Sh. rufescens*

108. *Shirahoshizo egorovi* Zherikhin, 1991 (Pls. 10-108, 21-108)

Yeon-hae-ju-huin-jeom-bak-i-ba-gu-mi (연해주흰점박이바구미)

Shirahoshizo egorovi Zherikhin, 1991 in Zherikhin and Egorov, 1991: 104.

TL: Russia- Primorskii Terr.

Rostrum in male as long as pronotum, strongly and straightly narrowed from the basis to a place of an antennal insertion, then almost parallel-sided. Antennal scape strongly and sharply club-like thickened at apex, slightly not reached to eye. Antennal funicle a little longer than scape, 1st segment strongly thickened at apex, 2nd segment strongly extended, 3rd segment much wider and hardly longer than 1st, 3rd and 4th segments same, thin and shorter than 2nd, much longer than their broad, 5th segment a little wider and shorter, hardly longer than its broad, 6th and especially 7th segments wider, spherical, not longer than their broad. Antennal club small, considerably narrow, but clearly separated from funicle, oval, with rounded apex, twice longer than broad. Forehead strongly narrowed to posterior, 1.5 times narrower than the base of rostrum, with dense rough punctures bearing a wide slightly raised scale, with a median fovea. Pronotum distinctly transverse, 1.4 times as broad as length of median line, very slightly straightly extends from the base to the middle, then strongly roundly narrowed to anterior, with clearly constricted on sides of before apex, slightly convex, disk and lateral sides with very dense, slightly lengthwise wrinkled large and deep punctures, posterior half with very thin, rugose formed keel. Scutellum small, round, with small punctures, without smooth median line. Elytra 1.5 times as long as broad, a quarter wider than pronotum, parallel-sided in the anterior third, then very slightly narrowed to apical fourth, and then narrowed, widely dulled at apex; disk with a little hump-like convex behind of the base in lateral aspect, regularly rounded at apical third. Elytral striae thin, straight, deep, with narrow elongated punctures bearing narrow stick-formed scales, with two rows short and wide scales between punctures. Elytral intervals distinctly wider than striae, flat, 1st interval along the whole length, 2nd interval in posterior half narrower than other intervals, covered with continuous wide scales. Sutural intervals somewhat deep at base. Femora: especially hind femora wide and flat, with a tooth underneath in the middle. Tibia almost straight, with fine longitudinal keel. Claws free.

MEASUREMENTS: Body length (excl. rostrum). 6.1 mm.

COLOR: Dark reddish-brown, shining, rostrum and legs a little paler, antennae considerably paler, yellowish-red.

BIOLOGICAL NOTES: This species was collected on *Juglans mandshurica* in Primorskii Terr. (Zherikhin

and Egorov, 1991).

DISTRIBUTION: Korea (Central), Russia (Primorskii Terr.).

KOREA: Central (GG).

KOREAN RECORDS: Hong et al., 2000 (Central); Legalov, 2009: 198.

SPECIMEN EXAMINED: GG: 1 ex. (Suwon: 11.vi.1986); 1 ex. (Suwon: 17.vii.1989).

109. *Shirahoshizo flavonotatus* (Voss, 1937) (Pl. 10-109)

Huin-jeom-mu-nui-ba-gu-mi (흰점무늬바구미)

Cryptorrhynchidius flavonotatus Voss, 1937: 267.

TL: China- Yunnan.

Eyes from head outline not protruded. Forehead almost half as broad as base of rostrum, moderately strongly wrinkled punctate. Rostrum almost as long as posterior part of pronotum, conically narrowed from the base to the middle, cylindrical in anterior part and only a little widened near head; moderately strongly curved on the whole, shining and only very finely and bulky close punctate in the front part, stronger in the basal part and especially very close punctate at the sides. Antennae inserted into the middle of rostrum. Antennal scape not completely reached to eyes. 1st and 2nd segments of antennal funicle almost same length, 1st segment a little stronger and a little shorter than 2nd segment and more twice as long as broad; 3rd and 4th segments longer than broad; 5th segment as long as broad, 6th and 7th segments transverse. Antennal club oval, almost twice as long as broad. Pronotum as broad as long, the broadest at base, narrowed from here with moderately and strongly convex curvature to forwards, then shortly concaved exteriorly; the front edge only almost half as broad as the base. Punctures strong, very close pit-shaped, and finely and close punctate at frontal edge; often with fine median keel. Elytra much 1.5 times as long as broad, parallel-sided to the middle, the subapical callus with broader curvature. Striae strong which limits sides sharply, their punctures rectangular and their septa between punctures half width of the length of a punctures. Intervals a little broader than striae. Mesosternum horsefoot shaped. Femora toothed, tibia slightly curved, with fine longitudinal keel. Claws free.

MEASUREMENTS: Body length (excl. rostrum) 6.2 mm.

COLOR: Black; rostrum and antennae reddish brown. Scales mainly russet, clearly obscured here and there in the middle. In the middle of pronotum to scutellum and in a small spot on both sides of the middle with some brownish grey scales; elytra with a long spot before the middle on 3rd interval and one behind the middle on 2nd interval. Underside of body and partially on femora with brownish grey scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, China (Sichuan, Yunnan).

KOREA: Central (GW).

KOREAN RECORDS: Hong and Korotyaev, 2002: 160 (Central).

SPECIMEN EXAMINED: GW: 1 ex. (Onjeong-ri 400 m, Mt. Geumgangsán: 20.vi.1988, preserved in ZIN, Russia).

110. *Shirahoshizo hiurai* Morimoto, 1962 (Pls. 10-110, 21-110)

Wae-huin-jeom-bak-i-ba-gu-mi (왜 흰점박이바구미)

Shirahoshizo hiurai Morimoto, 1962a: 38.

TL: Japan- Honshu.

Head and rostrum with weak but distinct median keel. Antennae inserted into the middle of rostrum, scape clubbed in the apical one-fourth, 1st segment of funicle robust, conical, 1.5 times as long as wide and as long as the 2nd, 3rd segment nearly half as long as the 2nd, 4th segment as long as the 3rd, 5th segment oval, 6th and 7th segments subglobular, club oblong-oval, twice as long as wide. Pronotum broader than long (5:4), anterior margin $\frac{3}{5}$ the width of the posterior one, broadest at the posterior $\frac{1}{3}$, thence scarcely narrowed posteriorly, disc reticulate with shallow punctures, median keel fine. Scutellum round in outline, convex, sparsely with minute punctures, glossy. Elytra 1.7 times as long as wide, humeri rectangular, the sides sub-parallel from humeri to the middle, thence gently rounded and narrowed posteriorly, sub-apical swellings weak, the apices conjointly rounded, 1st interval a little flattened, the punctures and scales on the 1st interval smaller than those on the other intervals, 1st to 5th intervals with a row of glossy granules, each of which bears sub-erect scales, striae shallow and much narrower than the intervals. Abdominal process similar to *Sh. insidiosus* (Roelofs) and bearing large punctures. Posterior two parts of tibiae slightly narrowed towards the apex. Penis with the apex very shortly acuminate.

MEASUREMENTS: Body length (excl. rostrum) 4.5–5.2 mm.

COLOR: Black. Antennae, apex of rostrum and tarsi reddish brown. Derm closely covered with whitish, brownish and blackish scales, white scales forming a pair of spots on the 4th interval of elytra a little before the middle, blackish suberect scales are spotted on the median and anterior areas of pronotum.

BIOLOGICAL NOTES: Unknown.**DISTRIBUTION:** Korea, Japan (Honshu).**KOREA:** North, Central and South.

KOREAN RECORDS: Hong and Korotyaev, 2002: 161 (North); Park et al., 2008: 123 (North, Central, South).

SPECIMEN EXAMINED: GW: 1 ex. (Mt. Myeongseongsan, Cheolwon: 16.vi.1999, malaise trap). CB: 2 exs. (Mt. Wolaksan N36.51E128.05: 20.v.2004, No. 02106-02107). GB: 1 ex. (Mt. Palgongsan, Daegu: 28.v.1985).

REMARKS: Author could not confirmed the specimen from North Korea (Coll. No. 350, preserved in HNHM, Hungary) that referred to Hong and Korotyaev (2002; p. 161).

111. *Shirahoshizo insidiosus* (Roelofs, 1875) (Pls. 10-111, 21-111)

Huin-jeom-bak-i-ba-gu-mi (흰점박이바구미)

Cryptorhynchus insidiosus Roelofs, 1875: 167.

TL: Japan.

Cryptorhynchus obscurus Roelofs, 1879: 54.

TL: Japan.

Pronotum 1.4–1.5 times as broad as long, anterior margin $4/7$ times as broad as the posterior one, lateral margin rounded, broadest at the middle, thence slightly narrowed posteriorly; disc shallowly punctured; Scutellum densely punctured, matted. Elytra 2.2–2.8 times as long as pronotum, 1st interval depressed and bearing smaller punctures and scales than in the 2nd, parallel-sided to the middle part; punctured striae shallowed and narrowed; 1st interval in male with a distinct row of small tubercles and in female without one. Abdominal process between metacoxae rounded, 2nd–4th segments with two transverse rows of punctures respectively. Femora slender, narrowed towards the base. Penis notched at tip.

MEASUREMENTS: Body length (excl. rostrum). 4.2–6.0 mm.

COLOR: Blackish brown, antennae and tarsi dark reddish brown; derm covered with whitish, brownish and blackish scales, whitish scales forming 4 spots on median transverse line of pronotum, a pair of spots on the 4th interval of elytra just before the middle and a pair of spots on the 3th interval of elytra a little behind the middle, small whitish spots indistinctly scattered on elytra and lateral margin of pronotum.

BIOLOGICAL NOTES: The adult was collected on under dead bark near root of *Pinus* spp. in Japan (Morimoto, 1962a) and *Pinus densiflora*, *Pinus* spp. in Korea (Kim, 1961). The larvae feed on the cambium of the tree trunk. Pupal chamber is surrounded by an oval or subfusiform gallery in Japan (Morimoto, 1962a).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima).

KOREA: Central, South and Is. Jeju.

KOREAN RECORDS: Faust, 1887a: 28; Saito, 1931: 21 (Suwon); Kôno and Kim, 1937: 24, 29; Cho, 1957: 280; Chûjô, 1960b: 7; Kim, 1961: 24 (Jirisan Daewonsa); ZSK, 1968: 130; Ko, 1969: 269; KSPP, 1972: 198, 200; Morimoto, 1984: 341; KSPP, 1986: 196; Kwon and Lee, 1986: 82 (Central); FRI, 1991: 100 (biology); ESK/KSAE, 1994: 207; Kim, 1995a: 174 (Sobaeksan); Hong et al., 2000: 137 (Central).

SPECIMEN EXAMINED: GG: 1 ex. (Suwon: 20.viii.1981, 8108-55, on *Pinus koraiensis*); 1 ex. (NIAS, Suwon: 15.v.1998). CN: 1 ex. (Mt. Gosanbongsan, Daechon-2-ri, Godae-myeon, Dangjin N:3656356E: 12634112H:60: 26.v.2006); 1 ex. (Donam-ri, Banpo-myeon, Gongju: 21–28.vi.2005, malaise trap No. M-4-1-1); 1 ex. (Donam-ri, Banpo-myeon, Gongju: 2–9.viii.2005, malaise trap No. M-4-2-7). JB: 3 exs. (Majeong-ri, Buk-myeon, Jeongeub: 12–19.vii.2005, malaise trap No. M-5-3-2); 1 ex. (Majeong-ri, Buk-myeon, Jeongeub: 19–26.vii.2005, malaise trap No. M-5-1-3); 4 exs. (Majeong-ri, Buk-myeon, Jeongeub: 19–26.vii.2005, malaise trap No. M-5-3-3); 3 exs. (Majeong-ri, Buk-myeon, Jeongeub: 26.vii–2.viii.2005, malaise trap No. M-5-3-4); 1 ex. (Majeong-ri, Buk-myeon, Jeongeub: 2–9.viii.2005, malaise trap No. M-5-1-5). JN: 1 ex. (Goheung: 20.iv.1984); 1 ex. (Mogpo: 21.iv.1984); 5 exs. (Pungsan-ri, Dado-myeon, Naju: 8–30.ix.2005, malaise trap No. M-6-1-8); 1 ex. (Yupyeong, Seungju, Suncheon: 14.vii.1999, on *Pinus densiflora*); 14 exs. (Tp. Ssangbongsa, Hwasun: 24.vi.1997). GB: 1 ex. (Namsa-ri, Hyeongog-myeon, Gyeongju: 30.vi–14.vii.2005, malaise trap No. M-7-3-2). GN: 1 ex. [Haman (surface 1–2): 2.v.2001]; 1 ex. [Haman (surface 3–3): 2.v.2001]; 1 ex. [Haman (surface 4–1): 2.v.2001]; 1 ex. [Haman (surface 8–2): 2.v.2001]; 1 ex. [Haman (surface 8–3): 2.v.2001]; 4 exs. [Haman (surface 1–4): 5.vi.2001]; 1 ex. [Haman (surface 1–7): 5.vi.2001]; 1 ex. [Haman (surface 1–8): 5.vi.2001]; 2 exs. [Haman (surface 1–9): 5.vi.2001]; 4 exs. [Haman (surface 2–1): 5.vi.2001]; 1 ex. [Haman (surface 2–3): 5.vi.2001]; 1 ex. [Haman (surface 2–8): 5.vi.2001]; 1 ex. [Haman (surface 2–9): 5.vi.2001]; 1 ex. [Haman (surface 7–2): 5.vi.2001]; 1 ex. [Haman (lower side 5): 18.vii.2001]; 1 ex. [Haman (surface 6): 27.ix.2001]; 1 ex. [Daesam Haman (Insect trap 2): 22.vi.2001]; 2 exs. [Geumgok, Jinju (surface 1–9): 6.vi.2001]; 1 ex. [Geumgok, Jinju (surface 1–10): 8.viii.2001]; 1 ex. [Cheolma (surface 1–3): Gijang, Busan, 20.vi.2001]; 1 ex. [Mt. Guwolsan (Yunsan; surface 2–6), Geumjeong, Busan: 6.vi.2001]; 1 ex.

[Mt. Guwolsan (Yunsan; surface 1-1), Geumjeong, Busan: 8.viii.2001]; 3 exs. (Dapcheon-ri, Ibanseong-myeon, Jinju: 29.viii-12.ix.2005, malaise trap No. M-8-1-10; M-8-2-10). JJ: 1 ex. (Seonheul, Jocheon, Bukjeju: 26.viii.1997); 1 ex. (Jeolmul, Jeju: 6-13.viii.2005, malaise trap No. M-9-2-6); 1 ex. (Jeolmul: 13-20.viii.2005, malaise trap No. M-9-3-7); 2 exs. (Jeolmul: 27.viii-3.ix.2005, malaise trap No. M-9-1-9; M-9-2-9); 1 ex. (Jeolmul: 3-10.ix.2005, malaise trap No. M-9-3-10); 1 ex. (Jeolmul: 10-16.ix.2005, malaise trap No. M-9-2-11); 2 exs. (Jeolmul: 16-24.ix.2005, malaise trap No. M-9-1-12; M-9-3-12); 1 ex. (Jeolmul: 24.ix-1.x.2005, malaise trap No. M-9-3-13); 3 exs. (Donggye-dong, Jeju: 2-9.vii.2005, malaise trap No. M-9-1-1).

112. *Shirahoshizo rufescens* (Roelofs, 1875) (Pls. 10-112, 21-112)

Sol-huin-jeom-bak-i-ba-gu-mi (솔흰점박이바구미)

Cryptorhynchus rufescens Roelofs, 1875: 166.

TL: Japan.

Rostrum with a distinct longitudinal keel on the basal half, strongly keeled in male and weakly keeled in female. Pronotum $3/4$ times as long as wide, anterior margin half as broad as the posterior one, parallel-sided at posterior half, shallowly punctured; blackish scales on just before whitish spots on disc coarsely erected. Scutellum with shiny median keel or not. Elytra 2.5-3.2 times as long as pronotum, elongated, parallel-sided to the middle part; punctured striae shallowed and narrowed; 1st interval in male with a very weak row of small tubercles and in female without one. Abdominal process between metacoxae triangular, 2nd-4th segments with two transverse rows of punctures respectively, punctured rows on 2nd segment of abdomen sometimes confused. Femora unidentate, middle and hind tibiae weakly narrowed towards the apex. Penis pointed at tip.

MEASUREMENTS: Body length (excl. rostrum). 4.5-7.5 mm.

COLOR: Blackish brown, antennae and tarsi dark reddish brown; derm covered with whitish, brownish and blackish scales, whitish scales forming 4 spots on median transverse line of pronotum, a pair of spots on the 4th interval of elytra just before the middle and a pair of spots on the 3th interval of elytra a little behind the middle, small whitish spots indistinctly scattered on elytra and lateral margin of pronotum.

BIOLOGICAL NOTES: The adult lives on under bark of dead trunk of *Pinus* spp., and the larvae feed on the cambium of the tree trunk. The pupal chamber is surrounded by an oval or subfusiform gallery in Japan (Morimoto, 1962a).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Ryukyu), China, Russia (Primorskii Terr.), N. India.

KOREA: Central, South and Is. Jeju-do.

KOREAN RECORDS: Morimoto, 1984: 340; Kwon and Lee, 1986: 82 (Central, South); ESK/KSAE, 1994: 207; Hong et al., 2000: 138 (Central, South, Jeju Is.); Hong and Korotyaev, 2002: 161 (Central).

SPECIMEN EXAMINED: GG: 1 ex. (Suwon: 2.vi.1976); 1 ex. (Suwon: 2.ix.1977); 1 ex. (Gwangreung: 3.ix.1980); 2 exs. (SNU campus, Suwon: 14.v.1982); 1 ex. (Suwon: 29.iii.1983); 1 ex. (Suwon: 27.ix.1983); 2 exs. (Gwangreung: 24.v.1983); 1 ex. (Suwon: 18.v.1984); 1 ex. (Suwon: 5.vii.1985); 2 exs. (Mt. Yeogisan: 1.xi.1985, on bark of *Pinus densiflora*); 1 ex. (Suwon: 11.vi.1986); 1 ex. (Suwon: 22.vi.1986);

1 ex. (Suwon: 18.vii.1989); 3 exs. (Suwon: 17–18.vii.1989); 1 ex. (Mt. Yeogisan: 7.vii.1990); 1 ex. (Suwon: 11.vii.1990); 1 ex. (Mt. Yeogisan, Suwon: 3.vii.1991); 1 ex. (Mt. Yeogisan: 30.v.1992, light trap); 1 ex. (Mt. Yeogisan: 6–7.vi.1992, light trap); 1 ex. (Mt. Yeogisan: 29.vi.1992, light trap); 1 ex. (Mt. Yeogisan: 4–5.vii.1992, light trap); 1 ex. (Mt. Yeogisan: 7.vii.1992, light trap); 5 exs. (Suwon: 13.vii.1992, light trap); 1 ex. (Suwon: 25.v.1993); 1 ex. (Mt. Yeogisan: 11.vi.1993, light trap); 1 ex. (Suwon: 16.vi.1993, light trap); 1 ex. (Mt. Yeogisan: 25.vi.1993, light trap); 1 ex. (Suwon: 1–8.vi.1994, malaise trap); 1 ex. (Mt. Yeogisan, Suwon: 26.v.1997); 1 ex. (Gwangreung arboretum, Pocheon: 21.v.1999); 1 ex. (Mt. Chukryeongsan, Namyangju: 11.vi–16.vii.1999, malaise trap); 4 exs. (Anyang amusement park, Anyang: 13.iv.2000); 1 ex. (Baekam, Yongin: 1.vii.2000); 1 ex. (Hongreung, Cheongryang-ri, Dongdaemun-gu, Seoul: 11–18.vii.2005, malaise trap No. M-0-3-4); 1 ex. (Hongreung, Cheongryang-ri, Dongdaemun-gu, Seoul: 18–25.vii.2005, malaise trap No. M-0-2-5); 1 ex. (Hongreung, Cheongryang-ri, Dongdaemun-gu, Seoul: 25.vii–1.viii.2005, malaise trap No. M-0-3-6); 1 ex. (Tp. Yongjusa, Anryeong-ri, Taean-eub, Hwaseong: 28.vi–4.vii.2005, malaise trap No. M-1-3-1). GW: 2 exs. (Jinnae-ri, Dong-myeon, Chuncheon: 2–10.vii.2005, malaise trap No. M-2-1-1). CB: 1 ex. (Osujae, Danyang: 5.x.2000); 1 ex. (Mt. Wolaksan N3653E12804: 21.vi.2001, No. 01178). CN: 1 ex. (Buyeo: 4.vii.1986); 1 ex. (Mt. Bonghwasan, Boryeong: 21.viii.1997, on *Pinus densiflora*); 1 ex. (Mt. Mansusan, Buyeo: 11.vi.1999); 7 exs. (Donam-ri, Banpo-myeon, Gongju: 21–28.vi.2005, malaise trap No. M-4-1-1); 4 exs. (Donam-ri, Banpo-myeon, Gongju: 2–9.viii.2005, malaise trap No. M-4-1-7); 1 ex. (Yeomi-ri, Unsan-myeon, Seosan N3649489E12634230H66: 26.v.2006). JB 25 exs. (Janghwa-dong, Gimje: 9.ix.1999, on *Pinus densiflora*); 19 exs. (Majeong-ri, Buk-myeon, Jeongeub: 5–12.vii.2005, malaise trap No. M-5-1-1); 2 exs. (Majeong-ri, Buk-myeon, Jeongeub: 12–19.vii.2005, malaise trap No. M-5-3-2); 30 exs. (Majeong-ri, Buk-myeon, Jeongeub: 19–26.vii.2005, malaise trap No. M-5-1-3; M-5-2-3; M-5-3-3); 1 ex. (Majeong-ri, Bug-myeon, Jeongeub: 2–9.viii.2005, malaise trap No. M-5-1-5). JN: 1 ex. (Mokpo: 21.iv.1984); 1 ex. (Goheung: 20.iv.1984); 2 exs. (Is. Narodo, Goheung: 30.vii.1987); 4 exs. (Jungsan-ri, Mt. Jirisan, Gurye: 5.vi.1997); 1 ex. (Ssangbongsa, Hwasun: 24.vi.1997); 2 exs. (Mt. Jogyesan, Seungju, Suncheon: 6.v.1998); 1 ex. (Tp. Songgwangsa, Suncheon: 6.v.1998, light trap); 4 exs. (Pungsan-ri, Dado-myeon, Naju: 8–30.ix.2005, malaise trap No. M-6-1-8); 1 ex. (Wando: ???.2007). GB: 1 ex. (Bonghwa: 28.v.1993); 1 ex. (Onhye-ri, Dosan-myeon, Andong: 28.v.1993); 1 ex. (Mt. Hwawangsan, Changryeong: 20.iv.1998, light trap). GN: 1 ex. (Mt. Nojasan, Geojedo: 4.vi.1997); 1 ex. [Haman (surface 8–3): 2.v.2001]; 1 ex., [Haman (surface 2–1): 5.vi.2001]; 1 ex. [Haman (surface 2–3): 5.vi.2001]; 1 ex. [Haman (surface 2–7): 5.vi.2001]; 1 ex. [Haman (surface 7–3): 23.vi.2001]; 1 ex. [Haman (surface 6): 27.ix.2001]; 2 exs. [Haman (surface 7): 27.ix.2001]; 3 exs. [Geumgok, Jinju (surface 1–10): 8.viii.2001]; 1 ex. [Geumgok, Jinju (surface 5): 26.ix.2001]; 3 exs. [Tp. Borimsa, Cheolma (surface 1–2): Gijang, Busan, 3.vi.2001]; 1 ex. [Cheolma (upper side 2): Gijang, Busan, 23.v.2001]; 1 ex. [Cheolma (surface 1–3), Gijang, Busan: 3.vi.2001]; 3 exs. [Cheolma (surface 1–9), Gijang, Busan: 8.viii.2001]; 1 ex. [Mt. Guwolsan (Yunsan; surface 1–10), Geumjeong, Busan: 8.viii.2001]; 1 ex. [Mt. Guwolsan (Yunsan; surface 2), Geumjeong, Busan: 26.ix.2001]; 1 ex. (Dabcheon-ri, Ibanseong-myeon, Jinju: 4–11.vii.2005, malaise trap No. M-8-3-2); 1 ex. (Dabcheon-ri, Ibanseong-myeon, Jinju: 29.viii.–12.ix.2005, malaise trap No. M-8-1-10). JJ: 9 exs. (Seoguipo: 20.x.1983); 1 ex. (Gwaneumsa: 15.vii.1997); 1 ex. (Sanghyo-dong, Seoguipo: 19.viii.2004); 1 ex. (Jeol-mul, Donggye-dong, Jeju: 9–16.vii.2005, malaise trap No. M-9-1-2); 1 ex. (Jeol-mul, Donggye-dong, Jeju: 13–20.viii.2005, malaise trap No. M-9-3-7); 1 ex. (Jeol-mul, Donggye-dong, Jeju: 27.viii–3.ix.2005, malaise trap No. M-9-1-9); 2 exs. (Jeol-mul, Donggye-dong, Jeju: 3–10.ix.2005, malaise trap No. M-9-1-10; M-9-3-10); 1 ex. (Jeol-mul, Donggye-dong, Jeju: 16–24.ix.2005, malaise trap No. M-9-3-12); 1 ex. (Jeol-mul, Donggye-dong, Jeju: 2–9.vii.2005, malaise trap No. M-9-1-1); 1 ex. (Jeol-mul, Donggye-dong, Jeju: 23–30.vii.2005, malaise trap No. M-9-1-4).

Genus *Sternochetus* Pierce, 1917: 143.

Al-rak-jeom-bak-i-ba-gu-mi-sok (알락점박이바구미속)

SYNONYM: *Acryptorrhynchus* Heller, 1937: 70; *Paracryptorrhynchus* Morimoto, 1962c: 397.

Head not sulcate above eyes; frons rugose, separated from vertex by an arched depression and a little lower than the level of vertex, with a pair of small tubercles; small median depression between eyes shallow, eyes pear-shaped; rostrum slightly flattened at the base, strongly punctate and the punctures closer on the base in male, strongly punctate on the base and finely punctate on the distal half in female; median keel obsolescent a little before the base; antennae inserted before the middle of rostrum, scape as long as funicle, funicle 7-segmented, 1st segment as long as 2nd, each of 3rd and 4th segments a little longer than wide, the remaining segments as long as wide, club oval, compact, twice as long as wide. Pronotum with ocular lobes. Mesosternum truncate between mesocoxae. Abdomen with 2nd–4th segments equal in length to each other. Femora scarcely clavate, unidentate, not distinctly sulcate beneath. Tibiae with the inner carina of corbels strongly laminate, uncinata, longitudinally costate. Tarsi similar in both sexes, claws free, simple. This genus is closed to *Cryptorrhynchus* Illiger, 1807, and *Shirahoshizo* Morimoto, 1962, but may be separable from *Cryptorrhynchus* by the unidentate femora, and from *Shirahoshizo* by the strongly laminate inner carina of tibiae and not distinctly sulcate femora.

Type species: *Curculio mangiferae* Fabricius, 1775.

SPECIES (1 in Korea and Japan).

DISTRIBUTION: Korea, Japan, China, Solomon Is. (introduced), Hawaii (introduced), U.S.A. (introduced).

113. *Sternochetus navicularis* (Roelofs, 1875) (Pl. 10-113)

Al-rak-jeom-bak-i-ba-gu-mi (알락점박이바구미)

Cryptorrhynchus navicularis Roelofs, 1875: 165.

TL: Japan.

Rostrum a little longer than pronotum, curved, thinner than broad, covered with a confluent punctures, scaly at base, shining and finely punctate towards apex; its scrobes beginning before middle. First two segments of antennal funicle subequal, the following segments gradually bigger and rounded; funicle pubescence; club grey, velvety, oblong-oval. Head a little depressed with dense yellow scales. Pronotum a lot shorter than wide at base, which is lightly bisinuate; rounded at sides behind the middle, strongly constricted forwardly, transversely depressed behind the anterior margin, depressed area covered with very appressed yellowish brown scales, variegated by blackish scales; decorated with five more clear lines: the one median, the two others lateral, and tufts of spatulate scales located that four are on a transverse line in the middle and two are closer in the middle of the anterior margin. Scutellum depressed, oval, punctured. Elytra about twice as long as pronotum and broader than long at base, pear-shaped, subtriangular, with a little protruded

shoulders; regularly narrowed at sides towards apex; striae deeply punctured, indistinct posteriorly, intervals alternate, especially the second interval costate. Elytra covered yellowish brown scales, more or less disposed in transverse bands by variegated spots of whitish and blackish scales. Underside roughly punctate; punctures filled yellow scales. All abdominal segments separated by deep sutures. Intercoxal process angulated. Legs rather long and slender, with same scales on underside, femora with more clear and darker rings. Femora with a median tooth.

MEASUREMENTS: Body length (excl. rostrum). 6.5 mm.

COLOR: Rather short, pear-shaped; brownish black, rostrum reddish, antennae and tarsi brownish red; scales yellowish brown, variegated by more clear and blackish other scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: Is. Jejudo.

KOREAN RECORDS: Morimoto, 1984: 340 (JJ); Kwon and Lee, 1986: 82 (Jejudo); Kim, 1993: 395 (JJ); ESK/KSAE, 1994: 207; Paik et al., 1995: 433 (JJ); Hong et al., 2000: 140 (Jeju Is.).

SPECIMEN EXAMINED: JJ: 1 ♀ (Mt. Halasan: 23.vii.1981).

Subtribe *Tylodina* Lacordaire, 1866

Genus *Hyotanzo* Morimoto, 1962c: 399.

Seok-san-sseok-i-ba-gu-mi-sok (석산씩이바구미속)

Head with frons narrower than the base of rostrum; rostrum separated from head by a shallow depression, as long as pronotum, weakly curved, the sides sharply constricted at the base before eyes; antennal scrobes directing towards the lower part of eyes; antennae inserted into the middle of rostrum, funicle 7-segmented, 1st segment conical, as long as 2nd, each of 4rd–7th segments transverse, club oval, compact, sutures very fine. Pronotum broadest at the middle, the sides rounded, subapical constriction distinct, basal margin slightly bisinuate, ocular lobes weak. Scutellum minute, triangular. Elytra with humeri reduced and oblique, the apices conjointly rounded, 10th stria complete, not tuberculate. Pectorial canal reaching the middle of mesocoxa, receptacle as long as wide, with a pair of deep foveae on the bottom. Mesepisterna separated from elytra by epimera. Metasternum short, longitudinally sulcate at the middle in entire length. Metepisterna distinct throughout. Abdominal process subtruncate, as broad as hind coxa, 2nd segment as broad as 1st behind coxa and much shorter than 3rd and 4th taken together, posterior margin of 2nd–4th segments of abdomen straight. Femora weakly clavate, sulcate beneath, minutely unidentate, hind femora not reaching the apex of elytra. Tibiae more or less serrate on the dorsal margin. Tarsi with 3rd segment bilobed, transverse, broader than 2nd, claws free, simple.

Type species: *Hyotanzo uenoi* Morimoto, 1962.

SPECIES 1.

DISTRIBUTION: Korea, Japan.

114. *Hyotanzo uenoi* Morimoto, 1962 (Pl. 10-114)

Seok-san-sseok-i-ba-gu-mi (석산씩이바구미)

Hyotanzo uenoi Morimoto, 1962c: 400.

TL: Japan- Honshu, Shikoku, Kyushu.

Head closely punctured; rostrum close and confluent punctures at the base and the punctures sparser towards the apex, sulcate above the antennal scrobes, scape as long as the basal 6 segments of funicle taken together, 1st segment conical, a little longer than wide, club oval, twice as long as wide and as long as the basal two segments of funicle taken together. Pronotum transverse (7:6), broadest at the middle, the sides slightly rounded, subapical constriction distinct, anterior margin weakly arched and 2/3 the width of the posterior one, dorsum flat and reticulate with large punctures, punctures are smaller on the anterior margin and bearing a short scale respectively, shallowly depressed a little before scutellum, lateral sides of the depression slightly raised. Scutellum minute, often concealed under incrustation, shagreened. Elytra a little longer than wide (7:6), the sides gently rounded, dorsum weakly flattened, intervals separately punctured, the punctures very deep and oval, intervals scarcely broader than striae, flat, with an irregular rows of shallow punctures, intervals are often weakly wrinkled and finely shagreened. Metasternum and 1st and 2nd segments of abdomen with reticulate punctures, 3rd and 4th segments with two irregular transverse rows of punctures respectively, 1st segment flattened at the middle. Femora closely punctured, the punctures are slightly sparser to the base. Punctures of tibiae longitudinally confluent.

Female: Rostrum a little slenderer. First segment of abdomen not flattened.

MEASUREMENTS: Body length (excl. rostrum). 4.0–4.5 mm (in Japan).

COLOR: Dark brown to black; antennae, apex of rostrum and tarsi reddish brown. Derm covered with dirty amorphous incrustation in normal condition and sparsely with grayish brown short scales.

BIOLOGICAL NOTES: This species damaged on root of *Rohdea japonica* and *Lycoris radiata* in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: Is. Jeju.

KOREAN RECORDS: Morimoto, 1984: 336 (JJ); Morimoto and Lee, 1992: 13 (Oradong); ESK/KSAE, 1994: 207; Paik et al., 1995: 431 (JJ); Hong et al., 2000: 140 (Jeju Is.).

REMARKS: Authors could not find any korean specimen of this species until now. These descriptions were cited from Morimoto (1962) and the photo on plate was taken from Japanese specimen.

Genus *Simulatacalles* Morimoto, 1978: 123.

Sseok-i-ba-gu-mi-sok (씩이바구미속)

Frons between eyes much broader than rostrum. Antennal funicle with seven segments. Scape shorter than funicle and reaching the anterior margin of eye. Pronotum broadest at basal third. Scutellum absent. Elytra with reduced humeri, not wider than pronotum at base, intervals with a row of granules. Ultimate stria absent. Mesosternal receptacle produced ventrally, forming promi-

ment posterior margin of pectoral canal, its posterior wall sharply keeled. Metepisternal sutures visible throughout their length. Metasternum short. 1st abdominal segment nearly as long as 2nd–4th segments taken together, 2nd segment longer than 3rd and 4th segments together, 3rd and 4th segments very short. Femora dentate, not sulcate beneath. Tibiae straight. 3rd tarsal segment bilobed. Claws simple, free.

Type species: *Acalles simulator* Roelofs, 1875.

SPECIES (2 in Korea), (4 in Japan).

DISTRIBUTION: Korea, Japan.

Key to the species of genus *Simulatacalles*

1. Elytra with a row of shiny granules on each interval, which are of the same size and equidistant; pronotum reticulately punctate, without or at most with a few indefinite granules *S. simulator*
- Pronotum and elytra strongly postulate, pustules on elytra various in size and number, those at the bases and apices smaller and oval, the other pustules much longer *S. pustulosus*

115. *Simulatacalles pustulosus* Morimoto and Lee, 1992 (Pl. 10-115)

Je-ju-sseok-i-ba-gu-mi (제주섬이바구미)

Simulatacalles pustulosus Morimoto and Lee, 1992: 14.

TL: Japan- Hukuoka; Korea- JJ Gwaneumsa.

Head wrinkled punctate, each puncture with a small grayish brown scale, scales smaller and denser on vertex, dull, with a median fovea. Rostrum weakly curved, weakly and evenly narrowed in the middle, the apex as broad as the base, dorsum with two rows of punctures on each side, punctures of inner row 5–7 in number and obsolete on apical 1/3, punctures in the lateral row smaller, the septa between rows subcarinate. Antennae inserted in the middle of rostrum, scape clavate, funicle 7-segmented, 1st segment clavate, twice as long as broad, 2nd segment slender, slightly shorter than 1st, 3rd–5th segments as long as broad, 6th and 7th segments transverse, club as long as five preceding segments combined, basal segment 2/3 as long as the length. Pronotum a little broader than long (11:10), broadest at the middle, basal margin slightly bisinuate; disc dull, with large punctures and scattered small shiny pustules, larger punctures in the median area flat at the bottom, bearing a dark brown scale in the middle, smaller punctures in the basal and apical margins bearing a grayish brown scale each, interstices between punctures with small convex shiny pustules, various in the states of punctures and pustules. Scutellum absent. Elytra convex, broadest at basal 1/4; interval with a row shiny pustules, pustules along basal margin and apical area smaller, oval, those on the major area larger, much longer than broad, each pustule bearing a prostrate dark brownish small scale on its posterior slope, interstices between pustules on the same level as striae and evenly alutaceous, dull, 1st–3rd striae reaching apex, 4th and 5th striae conjoined at apical fourth, punctures in striae small and distant, grayish brown scales 3 to 7 in number often forming a definite patch on third interval at apical 1/3. Mesosternal receptacle prominent, keel at the middle of posterior wall; metasternum very short, as long between meso- and metacoxae as

third ventrite, with a transverse row of punctures between coxae; venter with 1st and 2nd ventrites each with 2 irregular rows of punctures, suture between them entire, 3rd and 4th ventrites impunctate, 5th ventrite densely punctate. Femora unarmed, scarcely narrowed to the base, fore femora with triangular flat area for receiving tibia before the middle, middle and hind femora flattened or shallowly depressed in entire length on the inner margin for receiving tibia, these area smooth, alutaceous and bare, derm with large punctures, which are arranged in longitudinal rows, each puncture with a grayish scale; tibiae straight, slightly bisinuate internally, punctures smaller than those on femora; tarsi with 2nd segment as long as broad, half as long as 1st, 3rd segment bilobed, claws free, small.

MEASUREMENTS: Body length (excl. rostrum). 2.6–4.0 mm.

COLOR: Black, antennae and tarsi reddish brown, anterior part of rostrum and basal part of coxae often dark reddish brown, lateral margins of metasternum and metepisterna usually dark reddish brown; derm dull, alutaceous, with shiny pustules; scales grayish brown to brown, often with an indefinite ash-grey patches on third interval behind the middle.

BIOLOGICAL NOTES: This species were collected by sifting litter in the forests (Morimoto and Lee, 1992). We collected these weevils under bark of decaying log formed ant nest in Ganghwado.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima).

KOREA: Central and Is. Jeju.

KOREAN RECORDS: Morimoto and Lee, 1992: 14 (JJ- Gwaneumsa); ESK/KSAE, 1994: 207; Paik et al., 1995: 433 (JJ); Hong et al., 2000: 141 (Jeju Is.).

SPECIMEN EXAMINED: GG: 5 exs. (Anyang: 5.ix.1998); 2 exs. (Oepo-ri, Naega-myeon, Ganghwa: 17.vii.1999).

116. *Simulatacalles simulator* (Roelofs, 1875) (Pls. 10-116, 21-116)

Sseok-i-ba-gu-mi (씩이바구미)

Acalles simulator Roelofs, 1875: 160.

TL: Japan.

Rostrum less than pronotum, broad, flattened, barely curved, covered with big punctures, longitudinally confluent at base, finer and separated towards end. 2nd segment of antennal funicle thinner and longer than 1st, the following segments gradually shorter and broader, the last segment transverse, antennal club oval. Head rugose, a little depressed on the vertex. Pronotum as long as broad, straight at base, slightly enlarged on sides until before middle, obliquely and slightly narrowed to forward, with reticulately punctate, without or at most with indefinite granules and with obsolete hair-like scales appressed and more or less transversely confluence and condensed in three small longitudinal lines which are one on each side of at base and the third in the middle of the anterior margin. Scutellum not visible. Elytra short, barely broader than pronotum at base, rounded and widening towards the middle, then narrowing until before apex which is it even obtusely rounded; striae superficially punctate, intervals narrow, a little leveled up from 2nd alternatively and with a row of small shining tubercles; dorsum decorated with unclearly transverse bands by with yellow spots. Metasternum and 1st abdominal segment with large punctures carrying small yellow scales. Legs with confluent punctate longitudinally with same vestiture as underside of body.

MEASUREMENTS: Body length (excl. rostrum). 4.0–4.5 mm.

COLOR: Matt, more or less brownish black, antennae and tarsi brown-red; with filiform ochraceous scales.

BIOLOGICAL NOTES: This species was collected on dead broad-leaf trees in Japan (Morimoto, 1984). We collected these weevils under bark of dead tree of *Robinia pseudoacacia* in Is. Jejudo.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima, Ryukyu), Taiwan.

KOREA: South and Is. Jejudo.

KOREAN RECORDS: Hong et al., 2000, 5: 141 (Jeju Is.).

SPECIMEN EXAMINED: JN: 1 ex. (Is. Jindo: 18.vii.1984); 1 ex. (Heuksando Is.: 1–30.vii.2009). JJ: 2 exs. (Is. Seopseom, Bomok-dong, Seoguipo: 30.vii.1993); 3 exs. (Hamdeok beach, Jocheon-eub, Bukjeju: 30.ix.1999, on the dead tree of *Robinia pseudoacacia*); 1 ex. (Donneko: 27.ix.2000).

Tribe Aedemonini Faust, 1898

Genus *Monaulax* Roelofs, 1875: 162.

Ju-reum-ba-gu-mi-sok (주름바구미속)

Rostrum short, basal part of rostrum not constricted at sides, as broad as the forehead between eyes, and scarcely depressed transversely; pectoral canal hardly beyond the middle of middle coxae; hind femora not reaching the apex of elytra.

Type species: *Monaulax rugicollis* Roelofs, 1875.

SPECIES (1 in Korea, Japan and Russian Far East).

DISTRIBUTION: Korea, Japan, Taiwan, South of Russian Far East.

117. *Monaulax rugicollis* Roelofs, 1875 (Pls. 10-117, 22-117)

Ju-reum-ba-gu-mi (주름바구미)

Monaulax rugicollis Roelofs, 1875: 163.

TL: Japan.

Head with dense punctures, each puncture bearing a fulvous scale, median fovea ovate, a little longer than broad. Rostrum not constricted laterally at the base, which is punctate like head, with five dorsal carinae, median carina shiny, admedian carinae weak, undulate, both carinae present on basal half, lateral carinae on basal third indefinite, dorsal margin of scrobe carinate, directing to the top of eye, disk being shiny, sparsely punctate leaving bare mesial area before the middle. Antennae inserted in the middle of rostrum, scape coriaceous, funicle pubescent and setose, 1st segment 5/4 times as long as 2nd, twice as long as 3rd, 6th segment as long as wide, 7th segment transverse, club slightly shorter than 1st and 2nd segments of funicle combined, about twice as long as broad, 1st segment as long as broad, 2nd segment transverse, suture between them

transverse. Pronotum a little broader than long (11:10), parallel-sided from the base to the middle, then narrowing to the shallow subapical constriction, dorsum gently convex longitudinally, with oval deep punctures, in fresh specimens the punctures visibly smaller and separated, but these are reticulately provided when scraped, lateral areas with larger and honeycomb punctures, the punctures smaller and denser before subapical constriction. Scutellum oval, convex, with several small punctures, each puncture with a small recumbent grayish scale in fresh specimens. Elytra twice as long as broad, subcylindrical from humeri to apical third, striae with deep punctures that diminish behind, dense at base and separated by about their own length at the middle, intervals subconvex and rugose at base, flat and broader than striae behind the basal third; scaling variable, basal margin and median transverse area darker, dorsal area before the darker median area mottled with brown and grey, postmedian grayish band variable in shape. Pectoral canal reaching the middle of mesocoxae, metasternal receptacle not prominent ventrally, weakly hollowed; metasternum opaque laterally and shiny in the middle, reticulately punctate, median sulcus narrow, terminated anteriorly by a deep puncture just behind receptacle. Venter shiny, 1st ventrite depressed in the middle, punctures a little smaller and sparser than those on metasternum, 3rd and 4th ventrites with small shallow punctures, with irregular 4-5 rows of punctures and scales in the middle, 5th ventrite with distant deep punctures. Legs rather stout, femora evenly dilated from the base to the dentate portion, not forming distinct stalk, hind femora reaching the middle of 5th ventrite, tibiae bisinuate internally, their expansion being at just proximal to the middle in fore, at the middle in middle and at apical third in hind tibiae. Aedeagus with median lobe rather thin, broadest at apical third, membranous ventrally, internal sac without sclerite.

Female: Rostrum with an abbreviate median carina and punctate like head at base, lateral areas above scrobes subsulcate with punctures, the remaining area with sparse small punctures. Antennae inserted just behind the middle of rostrum. 1st ventrite convex ventrally.

MEASUREMENTS: Body length (excl. rostrum). 5.5-8.0 mm.

COLOR: Derm dull black, with antennae and tarsi reddish brown; pronotum with an indefinite patch of fulvous scales on each side of the front margin; elytra mottled with black, brown and grey, with a broad grayish band behind the middle.

BIOLOGICAL NOTES: This species was recorded to pest of pear and sometimes damaged on twig of chestnut in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), Taiwan, Russia (Sakhalin).

KOREA: Central, South and Is. Jeju-do.

KOREAN RECORDS: Hong et al., 2000, 5: 142 (Central, South, Jeju Is.).

SPECIMEN EXAMINED: GW: 1 ex. (Samcheok: 1-5.vii.1993); 1 ex. (Micheongol, Inje: 16.vi.2005, light trap, No. 02285). CB: 1 ex. (Sagimak, Goesan: 23.v.1993). JN: 1 ex. (Yeosu: 12.vii.2007). GN: 1 ex. (Mt. Nojasan, Dongbu, Geoje: 4.vi.1997). JJ: 1 ex. (Mt. Miaksan: 23.v.1995).

Genus *Deiradocranus* Marshall, 1953: 112.

Ga-si-teol-beo-deul-ba-gu-mi-sok (가시털버들바구미속)

SYNONYM: *Deiradocranoides* Morimoto, 1962c: 401.

Head with a median carina from the back of frons to the vertex; frons narrower than the base of

rostrum; eyes suboval, very coarsely faceted, rostrum weakly flattened dorso-ventrally; antennae inserted beyond the middle of rostrum, scape reaching the anterior margin of eye, funicle 6-segmented, club oval, normally segmented. Pronotum weakly bisinuate at the base, broadest at the base, ocular lobes conspicuous, rounded. Scutellum distinct, closely scaled. Elytra with 10th stria shallowed and obsolescent towards the apex. Femora not clavate, parallel-sided, median and hind femora weakly clavate, hind femora not reaching the apex of elytra. Tibiae curved at the base, thence straight. Tarsi with 3rd segment bilobed and broader than 2nd, claws small, free, but close together. Pectorial canal extending to metasternum, which is deeply excavate to receive the apex of rostrum, posterior margin of the canal bordered with an arched costa, which is a little raised above the level of metasternum; metasternum between meso- and metacoxae as broad as 1st segment behind coxa, longitudinally sulcate behind the receptacle. 2nd segment of abdomen a little shorter than 3rd and 4th taken together, posterior margin of 2nd and 4th segments weakly curved posteriorly on each side.

Type species: *Deiradocranus latebris* Marshall, 1953.

SPECIES (1 in Korea and Japan).

DISTRIBUTION: Korea, Japan, Angola.

118. *Deiradocranus setosus* (Morimoto, 1962) (Pls. 10-118, 32-118)

Ga-si-teol-beo-deul-ba-gu-mi (가시털버들바구미)

Deiradocranoides setosus Morimoto, 1962c: 402.

TL: Japan- Nagasaki.

Head closely punctured, frons flat; rostrum as long as head and pronotum taken together, glossy, with two punctured sulci on each side; antennae with 1st segment of funicle robust, 3/2 times as long as wide and 5/2 times as long as 2nd, each of 4th-6th segments broader than long, club oval, twice as long as wide. Pronotum transverse (3:2), broadest at the base, subtrapezoidal, anterior margin 2/3 the width of the posterior one, the sides narrowing straightly to the apex, which is not constricted laterally, but weakly depressed dorsally, dorsum closely punctate. Scutellum rounded, with dense white scales. Elytra longer than wide (4:3), shoulders rectangular, basal half parallel-sided, subapical swelling obsolete, the apices conjointly rounded; striae sharply incised, narrow, intervals flat, glossy, impunctate, much broader than striae. Pectorial canal extending to metasternum, which is deeply excavate to receive the apex of rostrum, posterior margin of the canal bordered with an arched costa, which is a little raised above the level of metasternum; metasternum between meso- and metacoxae as broad as 1st segment behind coxa, longitudinally sulcate behind the receptacle. 2nd segment of abdomen a little shorter than 3rd and 4th taken together, posterior margin of 2nd and 4th segments weakly curved posteriorly on each side; metasternum and 1st segment of abdomen depressed at the middle. Femora not clavate, parallel-sided, median and hind femora weakly clavate, hind femora not reaching the apex of elytra. Tibiae slightly widened terminally. Tarsi with 3rd segment bilobed and broader than 2nd, claws small, free, but close together.

Female: Rostrum less strongly punctate sulcate. Metasternum less strongly depressed, 1st segment of abdomen convex.

MEASUREMENTS: Body length (excl. rostrum). 1.8–2.1 mm.

COLOR: Chestnut brown to blackish brown. Derm covered with recumbent white and brown scales, brown scales are faded into grey in old weevils; head, pronotum and elytra with their bases and odd-numbered intervals covered with brown scales, white scales are aggregated into spots along even-numbered intervals of elytra; undersurface and legs covered with grayish scales; derm clothed further sparsely white and black setae.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu).

KOREA: Central, South and Is. Jeju.

KOREAN RECORDS: Park et al., 2008: 124 (Central, South, Jeju Is.).

SPECIMEN EXAMINED: GG: 1 ex. (Tp. Yongjusa, Anryeong-ri, Taean-eub, Hwaseong: 5–12.vii.2005, malaise trap No. M-1-1-2). GB: 1 ex. (Namsa-ri, Hyeongog-myeon, Gyeongju: 30.vi–14.vii.2005, malaise trap No. M-7-3-2); 1 ex. (Namsa-ri, Hyeongog-myeon, Gyeongju: 25.viii–2.ix.2005, malaise trap No. M-7-3-7). JJ: 1 ex. (Jeol-mul, Donggye-dong, Jeju: 10–16.ix.2005, malaise trap No. M-9-3-11); 1 ex. (Jeol-mul, Donggye-dong, Jeju: 20–27.viii.2005, malaise trap No. M-9-8).

Genus *Rhadinomerus* Faust, 1892a: 46.

Mok-do-ri-ba-gu-mi-sok (목도리바구미속)

Femora not slightly clavate, not naked at base or the naked area limited to the anterior edge. Metasternum scarcely sulcate in the middle in female. First suture between first and second ventrites distinct throughout its length in both sexes. Male aedeagus with or without two short juxtaposed hairpin-shaped sclerites at gonopore. Larvae developed at wood of dried deciduous tree species (Morimoto, 1987b).

Type species: *Mechistocerus mastersi* Pascoe, 1870.

SPECIES (4 in Korea), [6 in Japan (1 subspecies)].

DISTRIBUTION: Korea, Japan, China, Kuril Is., Afrotropical, Oriental and Australian Regions.

Key to the species of genus *Rhadinomerus*

1. Pronotum coarsely granulate-punctate, with a short median carina, black, opaque, with three small scaly patches at anterior margin; elytra 1.6 times as long as broad, with dirty brick-red, brownish red or grayish red scales, intervals about as broad as punctures in the striae, each with a row of scales *Rh. anulipes*
- Pronotum punctate, not granulate 2
2. Male fore tibiae fringed internally with long setae; elytra with a row of scales on each interval; pronotum with the median carina vestigial or absent. Elytra variegated with brownish and blackish scaly indefinite patches, punctures in striae deeper and as broad as intervals *Rh. unmon unmon*
- Male fore tibiae not fringed internally with long setae 3
3. Elytra subcylindrical, 1.7–1.8 times as long as broad, with a conjoint broad scaly band at apical third; pronotum without median carina; 4th ventrite with an irregular row or two rows of punctures in the middle *Rh. babai*

- Elytra less than 1.7 times as long as broad; 4th ventrite with a regular row of punctures or scales in the middle; pronotum with a median carina before the middle; forehead between eyes with a deep fovea or sulcus; elytra parallel-sided on basal half, without a row of erect scales on each interval at least on basal half, prostrate scales much denser and covering the majority of derm; intervals scarcely narrower than punctures in striae on basal half, 3rd interval not sinuate on declivity; punctures in striae clear-cut and subquadrate *Rh. maebarai*

119. *Rhadinomerus annulipes* (Roelofs, 1875) (Pl. 10-119)

Ju-reum-mok-do-ri-ba-gu-mi (주름목도리바구미)

Cryptorhynchus annulipes Roelofs, 1879: 54.

TL: Japan.

Head with vertex bare, coarsely with shallow punctures, forehead minutely punctate smooth median area including a short sulcus, each puncture with a short scale. Rostrum as long as pronotum, constricted at the base, coarsely punctate and tricarinate on basal half, the median carina distinct, sparsely with very fine punctures on apical half. Antennae inserted in the middle of rostrum, scape clavate, with a few scales, three basal segments of funicle not pubescent, 1st segment as long as 2nd, robust, 3rd segment subequal to each of subsequent segment in length, 0.6 times as long as 2nd, 4th segment sparsely pubescent, 1.5 times as long as broad, 5th–7th segments pubescent, a little broader than 4th, club compact, 2.6 times as long as broad, 1st segment oblique at apex, about as long as the rest. Pronotum slightly broader than long, broadest just before the middle, straightly and weakly narrowed posteriorly, roundly narrowed anteriorly to shallow subapical constriction, dorsum longitudinally convex basally and depressed in front, granulate-punctate, with a shiny median short carina. Scutellum circular, convex, bare, dull. Elytra 1.6 times as long as broad, parallel-sided from humeri to the middle, subapical calli weak, striae with subquadrate close punctures that diminish behind the middle, intervals as broad as or slightly narrower than striae on basal half, 3rd interval a little raised at base, each interval with a row of scattered suberect scales. Underside coriarious, with slight luster; metasternum with reticulate deep punctures, more or less sulcate longitudinally in the middle, anterior and posterior ends of the sulcus deeper especially at sides, 2nd–4th ventrites with small dense punctures at sides and scattered fine punctures in the middle, each puncture with a scale, 3rd and 4th ventrites each with a row of scales in the middle, 5th ventrite with small punctures, their interstices as broad as the diameters. Legs dull black, femora predominantly with brownish red scales, with dark median and apical indefinite rings; tibiae straight externally, blackish on basal half in general.

Female: Antennae inserted in the middle of rostrum; rostrum tricarinate on basal third; metasternum with a median longitudinal depression; 1st ventrite convex ventrally.

MEASUREMENTS: Body length (excl. rostrum). 5.1–6.0 mm.

COLOR: Derm dull black; pronotum with scattered clavate short setae, one in each puncture, and with three dirty red scaly patches along anterior margin, median one usually smaller; elytra predominantly covered with dirty brick-red, brownish red or grayish red scales, basal margin except for third interval and humeri scarcely scaled and visibly black, apical area behind subapical calli with brownish black scales and/or with scarce reddish scales and visibly black.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Kyushu).

KOREA: Is. Jeju.

KOREAN RECORDS: Park et al., 2008: 124 (Jeju Is.).

SPECIMEN EXAMINED: JJ: 1 ♀ (Donggye-dong, Jeju: 2-9.vii.2005, malaise trap No. M-9-1-1); 1 ♀ (Donggye-dong, Jeju: 16-23.vii.2005, malaise trap No. M-9-3-3); 1 ♀ (Seoguipo Experimental Forest, Seoguipo: 30.vi-6.vii.2006, malaise trap).

120. *Rhadinomerus babai* Morimoto, 1987 (Pls. 11-120, 22-120)

Yu-myeong-san-mok-do-ri-ba-gu-mi (유명산목도리바구미)

Rhadinomerus babai Morimoto, 1987b: 352.

TL: Japan- Mt. Tebako.

Head with vertex reticulately punctate, forehead with small punctures, their interstices coriarius, with several scales, median fovea weak, often indefinite. Rostrum as long as pronotum, constricted at the base, sharply tricarinate on basal half, median carina slightly dilated apically from the basal two-thirds, with two rows of punctures between carinae, apical half reddish brown, with scattered fine punctures. Antennae inserted before the middle of rostrum, funicle sparsely pubescent on basal two segments, the rest densely pubescent, 1st segment robust, as long as 2nd, 3rd-7th segments subequal in length, 2/3 the length of second, 4th segment excepting the stalk as long as broad, 6th and 7th segments transverse, club as long as basal two segments of funicle combined, 2.5 times as long as broad, 1st segment oblique at apex, as long as second. Pronotum slightly broader than long, broadest at the middle, weakly and straightly narrowing posteriorly, dorsum weakly and longitudinally convex basally and slightly depressed in front, with reticulate punctures, their interstices shiny, much shorter than the diameters, median carina fine, abbreviated on basal third, often entirely absent, shiny. Scutellum punctate, with fine setae. Elytra subcylindrical, 1.7-1.8 times as long as broad, parallel-sided on basal 2/3, subapical calli weak, punctures in striae much narrower than intervals on basal half and diminished behind, their septa shorter than the width of intervals, each interval with a row of scattered suberect short scales on the grayish bands. Underside coriarius at sides; metasternum reticulately punctate at sides, separately punctate in the median smooth area, the latter area weakly depressed, not sulcate, transversely depressed along receptacle and a small depression at the base in the middle; punctures on venter smaller than those on the sides of metathorax, 3rd and 4th ventrites with one or two irregular rows of punctures, 5th ventrite with reticulate punctures; propygidium adorned with eight stout spines in a row on each side of the middle (scrapers) and their diameters are 3 times as large as those of adjacent punctures. Legs black with reddish brown tarsi; femora densely punctate, each puncture with a scale, fore femora with brownish grey scales, middle and hind femora with dense brownish grey scales on apical third; tibiae similarly scaled as on femora, exterior basal margins with darker scales. Aedeagus with penis parallel-sided, broadly rounded at apex, ventral wall not pigmented except the periphery, apical orifice normal, without special sensillum near apex, internal sac with two short juxtaposed hairpin-shaped sclerites at gonopore, without sclerites in the middle.

Female: Rostrum with a short weak carina at the base, punctate on each side of the carina and along dorsal margin of scrobe; antennae inserted in the middle of rostrum; metasternum flat in the

middle.

MEASUREMENTS: Body length (excl. rostrum). 5.0 mm.

COLOR: Derm black; pronotum with a pair of grayish brown scaly lateral stripes, which often abbreviated behind the middle and denser at anterior margin, often with a short median scaly stripe on basal half; elytra with two brownish grey to grayish scaly band, anterior band on basal third irregular and mixed with blackish patches, posterior band on apical third more definite and broader, base of third interval with brownish grey scaly stripe, the rest with blackish scales.

BIOLOGICAL NOTES: This species was collected on *Phellodendron sachalinensis* in Kunashir of S. Kuril (Zherikhin, 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Kuriles).

KOREA: Central (GG).

KOREAN RECORDS: Hong et al., 2000: 142 (Central).

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Yumyeongsan, Gapyeong: 14.vi.1997).

121. *Rhadinomerus maebarai* Chûjô and Voss, 1960 (Pls. 11-121, 22-121)

Cham-mok-do-ri-ba-gu-mi (참목도리바구미)

Rhadinomerus maebarai Chûjô and Voss, 1960: 6.

TL: Japan- Berg Takachiho, Berg Seppiko, Hyogo, Hirayu, Gifu.

Head with vertex with bare, shiny, reticulate shallowed punctures, forehead coriarius rugulose, scaled, deep median sulcus bordered laterally by narrow smooth areas. Rostrum as long as pronotum, constricted at the base, tricarinate on basal half, with two rows of scaled punctures between carina, scales denser at the base, with sparse small punctures on apical half. Antennae inserted in the middle of rostrum, funicle sparsely pubescent on 1st and apical 3 segments, 1st segment robust, 1.3 times as long as 2nd, 3rd segment a little longer than 4th, remaining segments equal in length and successively broadened, 6th segment as long as broad, club 2.4 times as long as broad, as long as three basal segments of funicle combined, 1st segment as long as broad, oblique or weakly sinuate at apex, a little longer than 2nd. Pronotum as long as broad, broadest in the middle, straightly narrowed posteriorly or very slightly constricted before the base, roundly narrowed anteriorly to the weak subapical constriction, dorsum longitudinally convex basally, median area more or less flattened and depressed in front, reticulately punctate, coriarius, with a short median carina before the middle. Scutellum bare, shiny, at most with a few minute punctures. Elytra 1.6 times as long as broad, parallel-sided from humeri to the middle, subapical calli weak, striae with subquadrate punctures that diminished behind the middle, their septa as long as the width of punctures and much narrower than intervals on basal half, intervals almost as broad as striae on basal half, each interval with a row of scattered suberect scales at least on declivity. Underside coriarius, metasternum with dense punctures, their interstices much narrower than the diameters, median sulcus deeper anteriorly, often interrupted near the base; 1st ventrite punctate as on metasternum, 2nd ventrite as densely punctate as on 1st, but they are much smaller and their interstices are broader than their diameters, 3rd and 4th ventrites each with a row of scales, punctures indistinct in the middle. Legs without scaly ring, femora scarcely clavate, not naked in ventral aspect; tibiae straight. Aedeagus with penis weakly dilated apically and broadly truncate at apex with round corners,

without a median sensillum, internal sac with two short juxtaposed hairpin-shaped sclerites.

Female: Antennae inserted behind the middle of rostrum; rostrum with weak three carinae at basal fourth and scaled at the base; metasternum with a shallow median sulcus often interrupted at basal third; 1st ventrite not flattened in the middle.

MEASUREMENTS: Body length (excl. rostrum). 5.0–6.2 mm.

COLOR: Derm dull black, septa of elytral striae often shiny and bare, pronotum with three indefinite stripes formed of scattered dirty grey scales; elytra variegated with grayish and brownish scaly small indefinite patches, each interval with a row of scattered suberect scales on apical third.

BIOLOGICAL NOTES: The adults were captured on the bait logs of *Pinus* spp. (Morimoto, 1987b).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima).

KOREA: Central and South.

KOREAN RECORDS: Park et al., 2008: 125 (Central, South).

SPECIMEN EXAMINED: CB: 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 22–29.vii.2005, malaise trap No. M-3-1-5); 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 29.vii–5.viii.2005, malaise trap No. M-3-2-6); 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 21–27.vi.2007, malaise trap No. M-3-3-3); 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 12–18.vii.2007, malaise trap No. M-3-3-4); 1 ex. (Miwon-ri, Miwon-myeon, Cheongju: 2–8.viii.2007, malaise trap No. M-3-1-5). GB: 1 ex. (Mt. Tonggosan: 13.viii.1992).

122. *Rhadinomerus unmon unmon* Nakane, 1963 (Pl. 11-122)

Mok-do-ri-ba-gu-mi (목도리바구미)

Rhadinomerus unmon Nakane, 1963: 38.

TL: Japan- Mie.

Head with vertex bare, coarsely with a shallow punctures, forehead with dense punctures, which a little smaller than those on vertex and entirely covered with brownish grey scales in fresh specimens, with a deep oval fovea. Rostrum slightly constricted at the base, tricarinate on basal half, with two rows of punctures between carinae, densely scaled towards the base, reddish brown with scattered fine punctures before the middle. Antennae inserted just before the middle of rostrum, scape clavate at apex, with a few pubescence, funicle pubescent from first segment, 1st segment robust, slightly shorter than 2nd (7:8), 2nd segment slender, 2.5 times as long as broad, remaining segments subequal in length, 6th segment 1.2 times as long as broad, 7th segment a little broader than 6th, club 3 times as long as broad, 1st and 2nd segments equal in length. Pronotum 1.12–1.22 times as broad as long, broader in larger specimens, rounded at sides, broadest at the middle, subapical constriction distinct at sides, dorsum longitudinally convex basally and depressed in front, more convex in larger specimens, reticulately punctate, median carina absent. Scutellum subcircular, with a few punctures, bare. Elytra 0.7 times as broad as long, 1.5 times as broad between humeri as the base of pronotum, parallel-sided from humeri to the middle, subapical calli weak, striae with subquadrate deep punctures that diminish behind the middle, their septa as long as the width of intervals, intervals as broad as punctures in striae at the base, each interval with a row of scattered scales, the scales blackish on blackish patches and brownish on brownish patches. Under-side coriarius at least at sides; metasternum with dense punctures, their interstices as broad as or

a little narrower than the diameters, with a deep median sulcus; 1st, 2nd and 5th ventrites with punctures smaller than those on metasternum, their interstices as broad as the diameters on the median area, 2nd ventrite impunctate along hind margin, 3rd and 4th ventrites each with a row of scaled punctures in the middle; 7th tergite with a pair of small stout spines. Legs dull black or with slight reddish tinge; femora grayish with brownish median and apical indefinite rings, median ring often broad; tibiae straight, brownish on basal third to fourth, then grayish to apex; fore tarsi with long silvery setae; these long setae indistinct in small specimens.

Female: Antennae inserted in the middle of rostrum; rostrum with median carina obliterated, lateral carinae on basal fourth weak, scaled at the base; fore tibiae and tarsi not fringed with long setae.

MEASUREMENTS: Body length (excl. rostrum). 4.9–6.5 mm (in Japan).

COLOR: Derm dull black; each puncture of pronotum with scale, brownish black scales narrower and suberect, grayish brown scales denser before subapical constriction, grayish scales forming three indefinite stripes, median one often interrupted in the middle or obliterated behind the middle, lateral ones dorso-lateral, divergent posteriorly and obliterated behind the middle; elytra variegated with brownish and blackish scaly indefinite patches, third interval with a short brownish stripe at the base, each interval with a row of scattered suberect scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu).

KOREA: Is. Jeju.

KOREAN RECORDS: Morimoto, 1984: 332 (JJ); Morimoto, 1987b: 349 (Jeju); ESK/KSAE, 1994: 207; Hong et al., 2000: 143 (Jeju Is.).

REMARKS: Authors could not find any Korean specimen of this species until now. The descriptions were cited from Morimoto (1987) and the photo on plate was taken from Japanese specimen.

Tribe Camptorhinini Lacordaire, 1866

Genus *Camptorhinus* Schoenherr, 1825: 585.

Ja-gwi-na-mu-ba-gu-mi-sok (자귀나무바구미속)

Body narrow and long, almost stick-formed. Mouthpart emagination of rostrum not longer than its width. Pectoral canal for rostrum extending into the posterior margin of prosternum and enclosed behind, inner side with contiguous tightly pressed scales. Hind coxae reached on lateral margin of elytra. Hind femora go behind apex of abdomen, and bended. 1st sternite of abdomen behind coxae shorter than 2nd sternite. Fore tibiae in male on inner margin at apical half with emagination, bearing long, weakly curly-haired. Larvae developed at dried trunks of broad-leaf species, partly and mostly recorded on forest after fire (Morimoto, 1984).

Type species: *Curculio statua* Rossi, 1790.

SPECIES (1 in Korea), (6 in Japan).

DISTRIBUTION: Korea, Japan, South of the Russian Far East, Caucasus, N. Africa, Europe, Afrotropical, Oriental and Australian Regions, Solomon Is., Marianas Is.

Key to the species of genus *Camptorhinus*

1. Prothorax strongly swollen in male, less so in female. Fore tibiae and basal 2 segments of fore tarsi with long setae in male, tibiae angulate internally at basal third *C. mangiferae*
- Prothorax and fore tibiae similar in both sexes, fore tibiae and tarsi not fringed with long setae in male *C. notabilis*

123. *Camptorhinus notabilis* (Walker, 1859) (Pls. 11-123, 22-123)

Ja-gwi-na-mu-ba-gu-mi (자귀나무바구미)

Cryptorhynchus notabilis Walker, 1859: 264.

TL: Ceylon.

Camptorrhinus albizziae Marshall, 1933: 572.

TL: Assam and Dehra Dun.

Camptorrhinus albizziae pumilio Heller, 1937: 65.

TL: Java.

Camptorrhinus minoensis Nakane, 1963: 38.

TL: Japan- Osaka.

Rostrum strongly punctate and with a median carina on basal half, scaled on basal third, apical shiny are with 4 irregular rows of small punctures in each side. Antennae with 1st segment of funicle 1.25 times as long as 2nd. Pronotum a little longer than wide (10:9), broadest and rounded at the middle, then straightly narrowing posteriorly, disk with an abbreviated median carina. Scutellum longer than broad, Elytra with 3rd and 5th intervals strongly carinate and unevenly granulate, 2nd and 4th intervals narrower than the punctures of the striae and zigzag. Basal 4 ventrites each with a pair of suberect setae. Tibiae angulate internally at the middle. Aedeagus with penis bluntly angulate at apex.

Female: Rostrum with very fine sparse punctures on apical 2/3.

MEASUREMENTS: Body length (excl. rostrum). 4.0–7.2 mm.

COLOR: Derm black, antennae, rostrum and tarsi reddish brown, with dense imbricate shiny scaling; scales predominantly grayish to leaden grayish brown, pronotum with a white antescutellar stripe from the base to the middle, each side of the stripe darker, lateral margin of prothorax with a blackish stripe from the middle posteriorly in a line to 10th stria of elytron, which extends to 9th stria a little behind shoulder; scutellum white; elytra leaden grey, with a white curved fascia between 5th interval at apical third, anterior and posterior areas of the fascia darker, 1st interval blackish on basal third, 10th interval blackish from the base to above 3rd ventrites or tessellate behind hind coxa, 9th interval also blackish behind shoulder to above 2nd ventrite; venter with a pair of indefinite dark brown stripes, often the stripes enlarged internally and forming a transverse large patch on 2nd to 4th ventrites; femora each with 2 or 3 indefinite brown patches, which are often indistinct on anterior 4 femora and the basal patch usually broader on the median part of the stalk of hind femora; tibiae with a dark spot or ring just proximal to the middle.

BIOLOGICAL NOTES: This species was collected on dead broad-leaf trees in Japan (Morimoto, 1984), on *Quercus* in *Primorskii* Terr. (Zherikhin, 1996) and *Albizzia* spp. and *Shorea robusta* (Marshall, 1933).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu, Tsushima), Taiwan, Russia (Primorskii Terr.), India, Sri Lanka, Java.

KOREA: North, Central and South.

KOREAN RECORDS: Hong et al., 2000: 143 (Central, South); Legalov, 2009e: 198 (North).

SPECIMEN EXAMINED: GG: 1 ex. (Mt. Yeogisan, Suwon: 21.vi.1993, light trap); 1 ex. (Crop Protection - NIAST, Suwon: 14-15.ix.1996, light trap); 1 ex. (Crop Protection - NIAST, Suwon: 14-15.vi.1997, light trap); 1 ex. (Crop Protection - NIAST, Suwon: 25.vi.1997, light trap); 1 ex. (Mt. Yeogisan, Suwon: 19-26.iv.1999); 1 ex. (Baekam, Yongin: 1.vii.2000, light trap); 1 ex. (Mt. Surisan, Anyang: 25.vii.2002); 1 ex. (Forest Environmental Research Institute, Suchang, Osan: 20.iv.1998, light trap); 3 exs. (Forest Environmental Research Institute, Suchang, Osan: 25.v.1998, light trap); 1 ex. (Forest Environmental Research Institute, Suchang, Osan: 26.v.1998, light trap); 1 ex. (Osan: 25.v.1998, No. 01226). JN: 1 ex. (Is. Wando: 18.v.1992); 2 exs. (Tp. Songgwangsa, Mt. Jogyesan, Seungju, Suncheon: 6.v.1998).

124. *Camptorhinus mangiferae* Marshall, 1925 (Pl. 11-124)

Dung-geun-ja-gwi-na-mu-ba-gu-mi (둥근자귀나무바구미)

Camptorrhinus mangiferae Marshall, 1925: 341.

TL: India- Bihar and Orissa.

Camptorrhinus rotundicollis Nakane, 1963: 37.

TL: Japan- Kyoto.

Rostrum scarcely curved, closely and rugosely punctuate throughout. Antennae with 2nd segment of funicle 1.2-1.4 times as long as 1st. Pronotum slightly longer than broad, strongly rounded at sides and gently convex, with a trace of abbreviated median carina only visible at apical third. Scutellum convex, longer than broad. Elytra with punctured striae narrower than intervals, their punctures partly or almost concealed by scales, 1st interval weakly convex on declivity, 3rd and 5th interval weakly costate and the latter terminating abruptly forming subapical callus. Posterior wall of pectoral canal produced well beyond the basal margin of prothorax. Tibiae angulate internally at basal third. Fore and middle tibiae, basal 2 segments of fore tarsi and basal segment of middle tarsi with long hairs. Aedeagus with penis U-shapedly concave at apex.

Female: Pronotum less rounded laterally and less convex dorsally. Fore tibiae shorter, tibiae and tarsi without long hairs. Venter with dark areas broader.

MEASUREMENTS: Body length (excl. rostrum). 5.0-8.5 mm (in Japan).

COLOR: Derm black, with grayish to brownish scaling; pronotum with a broad median blackish brown to blackish stripe, with a small black patch below the hind angle, which extends onto the base of elytra below shoulder and onto the tip of the mesepimeron, and with two pairs of whitish small spots in dark stripe before and behind the middle formed by 3-4 scales and with a whitish small antescutellar patch; scutellum with brownish scales in the center and grayish at the periphery; elytra with a large, common blackish brown patch between 5th intervals from apical third to basal fourth and between 3rd intervals on basal fourth, a variable irregular common black patch on declivity between 5th intervals, lateral 2 or 3 intervals dark brownish above metepisternum and 2 basal ventrites, with a pair of whitish irregular small patches at basal third on 4th interval, which often expand into adjoining interval; underside paler, ventral margin of mesepisternum and ante-

rior portion of metepisternum often darker, with 3 darker stripes on venter, median one narrower and paler at base; femora with shafts brownish excepting the base, and each with an indefinite brown ring a little basal to the tooth; tibiae with a dark patch at basal third.

BIOLOGICAL NOTES: The larva were bred from mango trees, *Mangifera indica* (Marshall, 1925).

DISTRIBUTION: Korea, Japan (Honshu), India.

KOREA: Is. Jeju.

KOREAN RECORDS: Lee et al., 1985: 415 (JJ- Gwaneumsa); Kim, 1993: 392 (JJ); Paik et al., 1995: 429 (JJ); Hong et al., 2000: 144 (Jeju Is.).

REMARKS: Authors could not find any korean specimen of this species until now. The descriptions were cited from Morimoto (1986) and the photo on plate was taken from Japanese specimen.

Tribe Gasterocercini Zherikhin, 1991

Genus *Gasterocercus* Laporte and Brullé, 1828: 198.

Huin-ga-seum-ba-gu-mi-sok (흰가슴바구미속)

Rostrum straight, flat. Scutellum present. Pectorial canal for rostrum on mesosternum usually not go behind anterior margin of middle coxae, receptacle costate on the posterior wall. Length of metasternum between middle and hind coxae longer than diameter of middle coxae. 2nd abdominal sternite subequal to 3rd sternite. Fore legs longer than the others in male. Apical fringed bristles on exterior surface of hind tibiae reduced. Larvae developed in wood of dried deciduous tree (Zherikhin, 1996).

Type species: *Gasterocercus dumerilii* Laporte and Brullé, 1828=*Curculio depressirostris* Fabricius, 1792.

SPECIES (1 in Korea), (4 in Japan).

DISTRIBUTION: Palaearctic, Oriental, Australian Regions.

125. *Gasterocercus tamanukii* Kôno, 1932 (Pls. 11-125, 22-125)

Huin-ga-seum-ba-gu-mi (흰가슴바구미)

Gasterocercus tamanukii Kôno, 1932: 175.

TL: Japan- Sapporo.

Forehead with a blackish median depression. Rostrum in the middle slightly narrowed, with a median keel at the base, without transversely preapical keel, coarsely and very densely punctate on the upper side, almost 3 times as long as its width. Antennae inserted behind half of rostrum; scape as long as 3 basal segments of antennal funicle taken together; 2nd segment of funicle nearly as long as 1st, the following segments more or less shorter than broad; club robust. Pronotum nearly as long as broad, parallel-sided at the basal half, with a blackish median sulcus at the anterior half, with 2 blunted oblique bands at anterior margin, disc with scattered blackish raised scales. Scutellum broader than long, strongly elevated. Elytra at the base a little broader than pronotum, parallel-

sided at the sides; Punctures in striae large, alternate intervals of the stria arched, basal part of 2nd intervals raised tubercles, odd intervals slightly raised. Mesosternum heart-shaped, inclined down in anteriorly. first 2 abdominal ventrites covered with dark long hairs. Abdominal apex with a large depression. Foreleg straight and slightly longer than middle and hind ones in male; fore femora with indistinct tooth internally, fore tibia as long as middle femora; fore tarsi a little shorter than fore tibia.

Female: Rostrum finely and sparsely punctate on the upper side, slightly deeper rugosely punctate at the sides. Fore femora a little longer than middle femora.

MEASUREMENTS: Body length (excl. rostrum). 9.5 mm.

COLOR: Derm black with very dense, grey or brownish grey scales; Rostrum blackish red, with greyish scales at base. Antennae blackish red. Base of pronotum with large dark almost quadrate median spot; scutellum, scutellar part of elytra, transverse stripe of elytra on posterior half, and apex of hind femora with brownish scales.

BIOLOGICAL NOTES: This species was collected on *Quercus* in Primorskii Terr. (Zherikhin, 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), Russia (Primorskii Terr.).

KOREA: Is. Jeju.

KOREAN RECORDS: Hong et al., 2000: 144 (Jeju Is.)

SPECIMEN EXAMINED: JJ: 1 ex. (Seongsan, Bukjeju, 28.vi.1990).

Genus *Orochlesis* Pascoe, 1871b: 194.

Dung-geun-ga-seum-ba-gu-mi-sok (둥근가슴바구미속)

SYNONYM: *Acacallis* Pascoe, 1883: 96; *Queenslandica* Lea, 1903: 664; *Apocallus* Marshall, 1939: 583.

Body oblong-oval. Pronotum broadest a little before the base. 9th elytral interval costate at the base, forming outer margin of shoulder and connate to 10th one a little behind the base, so that 9th elytral stria does not reaching the base. 2nd abdominal sternite at least as long as 3rd and 4th sternites combined. Femora edentate, sulcate beneath.

Type species: *Acacallis personata* Pascoe, 1883.

SPECIES (1 in Korea), (3 in Japan).

DISTRIBUTION: Korea, Japan, Taiwan, Sulawesi, Malacca, Philippines, Aru Is., Australia, Fiji, Moluccas, New Guinea, Samoa, Society Is., Solomon Is.

126. *Orochlesis takaosanus* Kôno, 1932 (Pls. 11-126, 22-126)

Dung-geun-ga-seum-ba-gu-mi (둥근가슴바구미)

Orochlesis takaosanus Kôno, 1932: 173.

TL: Japan- Takao.

Rostrum evenly, finely and scattered punctate, naked, roughly and in rows punctate at the base, densely scaling. Distance between antenna as broad as forehead between eyes. Antennal funicle 6-segmented, 2 basal segments almost equal in length, much longer than broad, the following segments transverse; club compact. Pronotum transverse, almost two times broader than long, parallel-sided on one-fourth of basal part, strongly converged to frontal part from the middle at the sides. Scutellum very small, semicircular shaped, naked. Elytra a little broader than pronotum, longitudinal ridge upward until one-fourth, then oblique and abruptly fall off at posterior part; punctured striae narrow and fine. All femora unarmed; all tibiae curved at the base.

MEASUREMENTS: Body length (excl. rostrum). 3.2–4.6 mm.

COLOR: Derm blackish brown, antennae reddish brown. Scaling very densely clothed, mostly clay colored, partly whitish; pronotum with large blackish pattern at base; elytra with lateral pattern at base, a larger semicircular shape at base and a transverse band at behind of blackish surface.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima).

KOREA: South, Is. Jeju and Is. Ulreungdo.

KOREAN RECORDS: Hong et al., 2000: 145 (Jeju Is.).

SPECIMEN EXAMINED: GB: 1 ex. (Is. Ulreungdo: 15.viii.1995); 1 ex. (Mt. Sobaeksan, Yeongju: 11-14.vi.1999, malaise trap). JJ: 1 ex. (Seohong: 27.vi.1994).

Genus *Syrotelus* Pascoe, 1874: 38.

Keun-jeom-bak-i-ba-gu-mi-sok (큰점박이바구미속)

SYNONYM: *Catarrhinus* Roelofs, 1875: 163.

Rostrum in male shorter and wider than in female, slightly curved, roughly punctate. Pronotum granulate on each side. Scutellum bare. 1st elytral interval same as the level of 2nd. Conjoint apices of elytra more or less mucronate. Anal sternite of abdomen in male with depression and 2 brush hairs at distal margin. Fore legs much longer than hind ones in male. Femora not sulcate beneath, dentate. Fore tibia straight, serrate internally.

Type species: *Cyamobolus falleni* Boheman, 1837.

SPECIES (1 in Korea), (2 in Japan), (2 in Russian Far East).

DISTRIBUTION: Korea, Japan, Kuril Is., South of the Russian Far East, India, Java.

127. *Syrotelus septentrionalis* (Roelofs, 1875) (Pls. 11-127, 22-127)

Keun-jeom-bak-i-ba-gu-mi (큰점박이바구미)

Catarrhinus septentrionalis Roelofs, 1875: 132.

TL: Japan.

Rostrum in male shorter and wider than in female, slightly curved, roughly punctate. 1st segment of antennal funicle almost twice shorter than 2nd. Foveae on frons often indistinct. Pronotum granulate on each side and deep indistinctly sulcate at basal half. Scutellum bare. 1st elytral interval same as the level of 2nd. Conjoint apices of elytra more or less mucronate. Apex of excavation for inserting rostrum on mesosternum in female flattened, gradually smoothed, often limited, with sparse pubescence, edges of excavation part slightly raised. Mesosternum in male between coxae with long raised pubescence. Anal sternite of abdomen in male with depression and 2 brush hairs at distal margin. Fore legs much longer than hind ones in male. Femora not sulcate beneath, dentate. Fore tibia straight, serrate internally and with long hairs which are longer and more dense in male. Opening of aedeagus edged 2 non-contiguous lateral sclerites.

MEASUREMENTS: Body length (excl. rostrum). 10.0–15.0 mm.

COLOR: Body brown, disk of pronotum between bright stripes with bright scales.

BIOLOGICAL NOTES: This species was collected on *Betula*, *Populus* and *Quercus* in Khabarovsk and Primorskii Terr. (Zherikhin, 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu, Tsushima), Russia (Khabarovsk and Primorskii Terr.).

KOREA: Central and South.

KOREAN RECORDS: Morimoto, 1984: 337; Kwon and Lee, 1986: 81 (South); ESK/KSAE, 1994: 207; Hong et al., 2000: 145 (Central, South); Legalov, 2009: 198.

SPECIMEN EXAMINED: GG: 1 ex. [Koryo (=Gwangreung): 1.vi.1924]; 1 ex. (Gwangreung: 10.viii.1983); 1 ex. (Gwangreung: 24.v.1983); 1 ex. (Suwon: 23.x.1997). GN: 1 ex. [Daigenji (=Daeweonsa, Mt. Jirisan): 1.viii.1924].

Subfamily Molytinae Schoenherr, 1823

Cham-ba-gu-mi-a-gwa (참바구미아과)

Like Curculioninae, this subfamily is also somewhat of a conglomerate of likely unrelated forms. They are grouped together here primarily because they all share a large, hook-like apical tooth on the hind tibia, or have various modifications to the apex of the hind tibia related to the development of the tooth. Small or middle size, occasionally large, brown or dark, if yellowish, then with slightly distinct pattern of spots or stripes. Sculpture of integument often coarse, often with tubercles or costate on pronotum and elytra. Pubescence non-metallic, sometimes body naked. Pattern on body, if present, often with visible narrow transverse stripes, sometimes speckled; sometimes found thin coating hairs.

Most taxa of molytines are associated with woody plants and have larvae that feed in dead wood or other dead and decaying plant material. Larvae developed on dicotyledonous or needle plants, sometimes live in beds or in soil. Usually moisture favorite, occasionally live in arid region, not aquatic form. Larvae mostly endophytic, at vegetative organ, often wood-biotic, in crypto-biotic form of soil or beds.

Key to the tribes of subfamily Molytinae

1. Fore coxae separated 2
 - Fore coxae contiguous (in genus *Seleuca* belongs to tribe Lithinini, narrowly separated) 7
2. Claws appendiculate, inner branches connate to each other; basis of elytra strongly produced anteriorly, covering the basal part of pronotum; hind angles of pronotum angulate; fore femora much thicker and a little longer than the posteriors Mecysolobini
 - Claws separated; basis of elytra not laminate in general, basal part of pronotum entirely exposed 3
3. Prosternum canaliculate 4
 - Prosternum flat or depressed 6
4. Rostrum very short, broader than long, subquadrate in cross-section; antennae short, scape nearly as long as the first two segments of funicle taken together Styanacini
 - Rostrum slender, cylindrical; antennae slenderer, scape nearly as long as all the segments of funicle taken together 5
5. Tarsal claws toothed near the base; pectoral canal not extending behind fore coxae Cleogonini
 - Tarsal claws simple; pectoral canal not extending behind fore coxae (in genus *Catabonops*, extending onto metasternum) Ithyporini
6. Antennal scrobes oblique, the posterior ends closely approximated or confluent under the base of rostrum; ocular lobes of pronotum developed; rostrum longer than pronotum, antennae inserted behind the middle; abdominal process between hind coxae very broad, broader than caxa Trachodini
 - Antennal scrobes separated throughout; ocular lobes of pronotum very weak or absent; antennae inserted into the middle-apical 1/3 of rostrum Pissodini
7. Labial palpi absent; claws connate; rostrum robust, as broad as or broader than long, female rostrum swollen; 5th tarsal segment not longer than the 3rd Galloisiini
 - Labial palpi 3-segmented; claws usually separated 8
8. Basis of elytra laminate, strongly produced anteriorly and covering the basal part of pronotum; metepimera concealed, hind angles of pronotum simply rounded; 5th tarsal segment armed with a pair of laminate projections behind claws; body rhombic Trigonocolini
 - Basis of elytra not produced anteriorly, basal margin of pronotum entirely exposed; ocular lobes often present; 3rd tarsal bilobed segment much broader than the 2nd, 4th segment concealed, 5th tarsal segment longer than the 3rd 9
9. Prosternum before coxae with excavation for rostrum, edged with protruded dentate keels 10
 - Prosternum from below without excavation or keel 11
10. Rostrum robust, contiguous with frons; antennal scrobes weakly oblique, entirely visible laterally; abdominal process narrower than a coxa; claws appendiculate Aminyopini
 - Rostrum separated from forehead by a transverse impression or its dorsal outline forming an angle with foreheads; antennal scrobes oblique, passing beneath the base of rostrum; abdominal process broader than or as broad as a hind coxa; claws simple Lithinini
11. Eyes rounded; metepimera partly concealed by elytra, more or less strongly punctate, with pubescence at apical parts; hind femora not reached on apex of 3rd ventrite of abdomen; apical fringed bristles on hind tibiae transverse; 2nd segment of tarsi not shorter than 1st segment; body with contiguous densely pubescence Lepyrini
 - Eyes transverse; metepimera completely concealed by elytra, with smooth sculpture and naked; hind femora reached on base of 5th ventrite of abdomen; apical fringed bristles on hind tibiae

sloped; 2nd segment of tarsi much shorter than 1st segment; body mostly with spots or stripes of hairs or hair-like scales on almost naked background Hylobiini

Tribe Aminyopini Voss, 1956

Genus *Niphades* Pascoe, 1871b: 174.

Geom-jeong-hok-ba-gu-mi-sok (검정흑바구미속)

More than 7.0 mm. Body with more or less spots of arranged hairs or battledore formed scales, often more or less tubercles or granules. Black, antennae and tarsi brown. Eyes transverse. Frons not wider than base of rostrum. Rostrum robust, contiguous with frons. Antennal scrobes weakly oblique, entirely visible laterally. Pronotum on disk and lateral sides with large tubercles and coarse wrinkles, with strong subapical constriction behind postocular lobes. Postocular lobes large, partly concealed eyes. Elytra 3 times as wide as pronotum, parallel-sided at basal 2/3, with rectangular shoulders, flattened from above, with rows of tubercles on third, fifth and seventh intervals and condensed with spot of whitish scales between them. 9th and 10th striae united on the level of the posterior margin of 2nd sternite of abdomen. Prosternal sulcus deeply excavated with side margins sharp carinate. Abdominal process narrower than width of hind coxa. Anal bristles distinct. Claws appendiculate.

Type species: *Niphades pardalotus* Pascoe, 1871.

SPECIES (2 in Korea), (2 in Japan), (2 in Russian Far East).

DISTRIBUTION: Korea, Japan, China, South of Russian Far East, Bangla Desh, Borneo, India, Moluccas, Nepal, Philippines, Aru Is., New Guinea, Cameroon, Congo, Equatorial Guinea, Kenya, Sao Thome, Tanzania, Zaire.

REFERENCE: Moriimoto (1982).

Subgenus *Scaphostethus* Roelofs, 1873: 191.

SYNONYM: *Pseudoconotrachelus* Voss, 1932.

Key to the species of subgenus *Scaphostethus*

1. Elytra relatively shorter; tubercles on third, fifth and seventh intervals oblong, with depressed hairs on the tubercles, the other intervals with small tubercles *N. (S.) variegates*
- Elytra relatively longer; tubercles on third, fifth and seventh intervals rather rounded, with erected hairs on the tubercles, the other intervals with indistinct small tubercles
..... *N. (S.) verrucosus*

128. *Niphades (Scaphostethus) variegatus* (Roelofs, 1873) (Pl. 11-128)

Geom-jeong-hok-ba-gu-mi (검정흑바구미)

Scaphostethus variegatus Roelofs, 1873: 192.

TL: Japan.

Hylobius gibbosus Matsumura, 1911: 130.

Rostrum robust, contiguous with frons. Frons flat. Antennal scrobes weakly oblique, entirely visible laterally. Pronotum transverse, with strongly protruded before middle of lateral sides, with foveae at middle on disk, margined with high coarse longitudinal wrinkles and tubercles. Postocular lobes strongly produced toward eyes. Elytra short, 1.4–1.48 times as long as its width, 3 times as wide as pronotum, parallel-sided at basal 2/3, with rectangular shoulders, flat from above, sloped posteriorly. 3rd, 5th and 7th intervals with rows of large, oblong and high tubercles, condensed with spot of whitish scales between them, punctures on them with appressed brownish hairs. 1st and even intervals with small tubercles, punctures on them with bearing 1 long hair-like brownish scales. Prosternum before coxae with depression and keel. Abdominal process narrower than width of hind coxa. Claws appendiculate.

MEASUREMENTS: Body length (excl. rostrum) 8.0–10.0 mm (in Russia). Body oblong.**COLOR:** Derm black, antennae and tarsi brown.**BIOLOGICAL NOTES:** Larvae developed under bark of *Pinus*, *Abies* and *Picea*. (Morimoto, 1982).**DISTRIBUTION:** Korea (?), Japan (Hokkaido, Honshu, Shikoku, Kyushu), NE China, Russia (Sakhalin, Kuriles).**KOREA:** The voucher specimens of Kwon and Lee (1986) were misidentified of *Niphades verrucosus* (Voss). Authors could not find any Korean specimen of this species until now. The descriptions were cited on Roelofs (1873) and the photo on plate was taken from Japanese specimen.**KOREAN RECORDS:** Kôno, 1938: 143; Ko, 1969: 268; KSPP, 1972: 200; Morimoto, 1984: 330; KSPP, 1986: 195; Kim and Kim, 1998: 177 (Odaesan); Hong et al., 2000: 225.**129. *Niphades (Scaphostethus) verrucosus* (Voss, 1932) (Pls. 11-129, 22-129)**

Sol-geom-jeong-hok-ba-gu-mi (솔검정흑바구미)

Pseudoconotrachelus verrucosus Voss, 1932: 65.

TL: China- Sichuan.

Rostrum robust, contiguous with frons. Frons depressed. Antennal scrobes weakly oblique, entirely visible laterally. Pronotum transverse, with slightly widened before middle of lateral sides, without foveae at middle on disk, more or less uniformly covered with separated low tubercles. Postocular lobes rounded. Elytra long, 1.5–1.58 times as long as its width, 3 times as wide as pronotum, parallel-sided at basal 2/3, with rectangular shoulders, flattened from above, sloped posteriorly. 3rd, 5th and 7th intervals with rows of round or elongate and low tubercles, condensed with spot of whitish scales between them, punctures on them with semi-appressed blackish hairs. 1st and even intervals with indistinct small tubercles, with puncture bearing 1 very short scales.

Prosternum before coxae with depression and keel. Abdominal process narrower than width of hind coxa. Claws appendiculate.

MEASUREMENTS: Body length (excl. rostrum). 7.0–9.0 mm. Body oblong.

COLOR: Derm black, antennae and tarsi brown.

BIOLOGICAL NOTES: Larvae developed under bark of weakened and withered trees of *Abies nephrophylla*, and adults injured young *Abies* trees on cutting and burning (Egorov et al., 1996).

DISTRIBUTION: Korea, Japan (?), China (Guangdong, Shanghai, Fujian, Jiangxi, Hunan, Sichuan), Russia (Amur Prov., Khabarovsk and Primorskii Terr.).

KOREA: Whole country.

KOREAN RECORDS: Kwon and Lee, 1986: 79 (Central - misidentified with *Niphades verrucosus* (Voss)); ESK/KSAE, 1994: 206; Egorov et al., 1996: 447 (North); Hong et al., 2000: 225 (Central, South); Legalov, 2009e: 197 (North).

SPECIMEN EXAMINED: GG: 2♂♂, 1♀ (Gwangreung: 15.iv.1983); 1♀ (Gwangreung: 20.vi.1984); 1♀ (Cheongryangri Seoul: 27.v.1987); 1♀ (Mt. Surisan: 2.v.1997); 2 exs. (Banghwa-dong Seoul: ?.viii.2007); 1♀ (Namhansanseong Gwangju: 1.vi.2007). GW: 1♀ (Jinae-ri Dong-myeon Chuncheon: ???.2005); JN: 1♂ (Chusan: 24.vi.1995); 1♂ (Mt. Mohusan Hwasun: 25.v.2008). GN: 1♂, 2♀♀ (Jirisan Jungsan-ri Sicheon-myeon Sancheong: 5.vi.1997). JJ: 1♂, 1♀ (Jeolmul Donggye-dong: 10–16.ix.2005).

Tribe Cleogonini Gistel, 1856

Genus *Catagmatus* Roelofs, 1875: 157.

Ma-sak-jul-ba-gu-mi-sok (마삭줄바구미속)

Type species: *Catagmatus japonicus* Roelofs, 1875.

Body black and shiny. Rostrum about three times longer than head and shorter than pronotum, robust, slightly curved. Eyes wide, transverse, oval, slightly separated above, partly touching by postocular lobes of prothorax. Antennal scape reached to eyes; funicle with the first two segments almost equal length, 1st segment much larger than 2nd, following segments a little wider and wider to last segment, the latter (7th segment) strongly transverse and adjacent to club. Pronotum transverse, convex, obliquely narrowed in front. Scutellum small, elongated. Elytra navicular, not wider than pronotum at base, their shoulders oblique. Femora toothed, canaliculated below, tibiae bent and angled outside at base, straightened for the rest, obliquely truncated at apex. Pectorial canal on prosternum open behind. Procoxae widely separated. Mesosternal process slightly sloping ventrad and merging with metasternum in lateral view.

SPECIES (1 in Korea), (1 in Japan).

DISTRIBUTION: Korea, Japan, Taiwan, China.

130. *Catagmatus japonicus* Roelofs, 1875 (Pls. 11-130, 22-130)

Ma-sak-jul-ba-gu-mi (마삭줄바구미)

Catagmatus japonicus Roelofs, 1875: 158.

TL: Japan.

Rostrum robust, half longer than head and shorter than pronotum, slightly flattened and expanded towards apex, covered with a confluent longitudinally punctuation. Eyes slightly separated above, partly touching by postocular lobes of prothorax. Antennae with pale pubescence; funicular segments a little widened gradually and last segment transverse. Pronotum transverse, obliquely narrowed forward; slightly sinuate at base; with large punctures or dimples, which are longitudinally confluent. Scutellum small, elongated, slightly protruding. Elytra elongate, navicular, convex, weakly and obliquely extended shoulders, regularly narrowed posteriorly, with a smooth ridge near the suture; vaguely punctate and covered with rows of large and elongated dimples longitudinally confluent, with a few prominent tuberculate, less profound to apex and separated by narrow corrugated intervals. Procoxae widely separated. Mesosternal process slightly sloping ventrad and merging with metasternum in lateral view.

MEASUREMENTS: Body length (excl. rostrum). 4.5 mm.**COLOR:** Body extended, navicular; shiny black. Antennae and tarsi reddish-brown.**BIOLOGICAL NOTES:** This species was collected on *Trachelospermum* sp. in Japan (Morimoto, 1984).**DISTRIBUTION:** Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima, Ryukyu), Taiwan, China (Fujian, Sichuan, Yunnan).**KOREA:** South.**KOREAN RECORDS:** Hong et al., 2000: 226 (Sobaeksan).**SPECIMEN EXAMINED:** GB: 1 ♀ (Sobaeksan: 8.vii.1988); 1 ♀ (Sango-ri Hwabuk-myeon Sangju: 1.vi.2008); 1 ♂ (Sango-ri Hwabuk-myeon Sangju: 6.vii.2008).**Tribe Hylobiini W. Kirby, 1837****Subtribe Hylobiina W. Kirby, 1837****Key to the genus of subtribe Hylobiina**

1. Antennal club oval, 1st segment as long as or longer than 2nd; 7th segment of funicle dilated apically and annexed to club; rostrum with furrows above antennal scrobes and without dorsal furrows; fore tibiae straight at apex externally; outer setose fringe of hind tibiae weakly oblique; metasternum without a transverse depression behind middle coxae; penis with internal sac long, extending internally far beyond the base *Hylobius*
- Antennal club oval to oblong oval, 1st segment shorter than 2nd; 7th segment of funicle free from club; rostrum often with two dorsal furrows; fore tibiae more or less curved internally at apex; outer setose fringe of hind tibiae weakly to strongly oblique; metasternum with transverse depression behind middle coxae; penis with internal sac not extending beyond the base, invisible in repose condition, without a pair of sclerites at gonopore *Pimelocerus*

Genus *Hylobius* Germar, 1817: 340.

Sol-gom-bo-ba-gu-mi-sok (솔곰보바구미속)

Type species: *Curculio pineti* Fabricius, 1792=*Curculio piceus* DeGeer, 1775.

Dorsum of body with granulate or rugulous, but not tuberculous sculpture. Frons as wide as base of rostrum. Rostrum with furrows above antennal scrobes and without dorsal furrows. 1st segment of antennal funicle as long as or longer than 2nd, 7th segment of funicle enlarged, truncate-conical or slightly goblet-form, tightly close to club. Club short, 1st segment as long as 2nd. Elytra on apex with rounded together. Fore tibiae straight at apex externally, outer setose fringe of hind tibiae weakly oblique. Metasternum without a transverse depression behind middle coxae. Penis with internal sac long, extending internally far beyond the base.

SPECIES (5 in Korea), (8 in Japan), (12 in Far Eastern Russia).

DISTRIBUTION: Korea, Japan to Burma, China, Mongolia, Russia, Kyrgyzstan, Kazakhstan, Caucasus, Europe, U.S.A., Canada, Kenya.

REFERENCE: Morimoto (1982).

Key to the subgenus of genus *Hylobius*

1. Pronotum strongly wrinkled-punctate, depressed on each side of the median carina; aedeagus with penis evenly rounded laterally, widest at basal third, subtriangularly acuminate apically, without hairs at apex; internal sac long, extending internally beyond the middle of struts, gonopore terminal, without sclerite, asperate brown area divided into five regions seen dorsally in repose condition, anterior one paired by ostium, second one transverse, third one visibly paired, fourth one reverse U- or V-shaped, and fifth one embraced between the arms of the fourth *Hylobius*
- Pronotum densely punctate; aedeagus with penis flat, widely rounded at apex, ventral surface widely membranous, with hairs at apical margin; internal sac not beyond the middle of struts, with a pair of ()-shaped sclerites at gonopore, innermost part divided into ventral and small dorsal lobes, to the latter ejaculatory duct open *Callirus*

Subgenus *Callirus* Dejean, 1821: 88.SYNONYM: *Hylobitelus* Reitter, 1923: 24; *Poityaunbus* Kôno, 1934: 241.Type species: *Curculio abietis* Linnaeus, 1758.**Key to the species of subgenus *Callirus***

1. Bare depression of metasternum much longer than wide; pronotum rather reticulately punctate in the median area; elytra parallel-sided in basal half; fore tibiae with inner expansion narrower; penis thicker *H. haroldi*
- Bare depression of metasternum much wider than long 2

2. Ventrites with dense yellowish scales at sides; elytra parallel-sided in basal half; scutellum a little longer than wide; penis gradually narrowing apically and shortly pointed at apex, rather strongly curved ventrad at apex *H. montanus*
 – Ventrites with sparse setiform scales; elytra widest at the middle, the sides more or less rounded; scutellum at least as wide as long; penis not bent at apex 3
3. Body length 11–14 mm (excl. rostrum); black, with white small spots on elytra *H. gebleri*
 – Body length 7–10 mm (excl. rostrum); hind tibiae hardly dilated distally; penis rounded near apex and almost truncate at tip, membranous part of parameres interrupted in the middle at the notch *H. pinastri*

131. *Hylobius (Callirus) gebleri* Boheman, 1834 (Pl. 11-131)

Geom-jeong-gom-bo-ba-gu-mi (검정곰보바구미)

Hylobius Gebleri Boheman, 1834 in Schoenherr, 1833: 338.

TL: Siberia.

Hylobius signatipennis Roelofs, 1873: 187.

Rostrum long, narrow, punctate, subcarinate at base, with an elongated impression. 1st segment of antennal funicle a little longer than 2nd, 7th segment adjacent to club. Pronotum longer than wide, straight at the base, rounded on sides, narrowed near anterior margin, covered with a confluent irregular punctuation, not depressed on lateral sides from median keel, their intervals give to reticulate appearance; subcarinate forwardly. Scutellum at least as wide as long. Elytra widest at the middle, the sides more or less rounded. Punctured striae oblong, larger and deeper than at basal half, narrower and not deeper on apex. Intervals granules-rugose, wider and less coarse on apex, middle parts of 2nd, 4th, 6th, 7th and 10th intervals with some large spots of decumbent bristles, declivity of elytra with narrow transverse stripes of whitish scales on 2nd to 8th intervals and whitish spots before apex on 2nd, 3rd, 8th and 10th intervals.

Metasternum with bare depression area much wider than long. Ventrites with sparse setiform scales. Femora toothed.

MEASUREMENTS: Body length (excl. rostrum) 11.0–14.0 mm (in Japan).

COLOR: Derm black, antennae and tarsi brown, with white small spots on elytra.

BIOLOGICAL NOTES: This species was collected under stone at high mountain in Japan (Morimoto, 1984). Larva developed at roots of *Bergenia pacifica* in Primorsky and at roots of *Sedum roseum* in Altai (Zherkhin and Egorov, 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), Russia (Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Kuriles, E. and W. Siberia, Altai).

KOREA: Whole country.

KOREAN RECORDS: Kamijo, 1933: 54 (Bulguksa); Kōno and Kim, 1937: 22; Ishii, 1940: 54 (Soyosan); Cho, 1957: 278; ZSK, 1968: 130; Kim, 1978: 301 (GG, GW, GB, JJ); Yoon and Nam, 1979: 148 (Donghaksa). Chang and Choe, 1982: 528 (Gyeryongsan); Morimoto, 1984: 327; Lee et al., 1985: 416 (JJ); Kwon and Lee, 1986: 78 (Central, South, JJ); Kim and Chang, 1987: 108 (Taebaeksan); Kim, 1993: 393 (JJ); ESK/KSAE, 1994: 206; Paik et al., 1995: 431 (JJ); Kim and Kim, 1998: 177 (Odaesan); Hong et al., 2000: 228 (Central, South, JJ); Legalov, 2009e: 196 (North).

REMARKS: We could not find any Korean specimen of this species until now. The descriptions were cited on Roelofs (1873) and the photo on plate was taken from Far Eastern Russian specimen.

132. *Hylobius (Callirus) haroldi* Faust, 1882 (Pls. 12-132, 22-132)

Sol-gom-bo-ba-gu-mi (솔곰보바구미)

Hylobius Haroldi Faust, 1882: 273.

TL: Amur.

Hylobius abietis var. *haroldi* Roelofs, 1873: 187.

Rostrum with stronger carina. Pronotum rather reticulately punctate in the median area, not depressed on lateral sides from median carina. Elytra parallel-sided in basal half. Striae strongly punctate, larger and deeper at basal half. Intervals slightly uneven, not wider than striae at base, with large granules, widened toward apex, shining. Prosternal and mesosternal processes with sparse greyish setiferous scales as on the other part of sterna. Bare depression of metasternum much longer than wide. Fore tibiae with inner expansion narrower. Penis thicker, with marginal sclerite of the same width at apex, parameres with sclerotized parts separately attached to basal ring.

MEASUREMENTS: Body length (excl. rostrum) 9.0–13.0 mm. Body slenderer.

COLOR: Derm reddish-brown with yellowish brown scales.

BIOLOGICAL NOTE: This species is one of the pest insects of pine tree (Kim, 1978). The larvae of this species feed on the root of dead needle-leaf trees and adults feed on the young trees and small branches of *Pinus* spp., *Cryptomeria japonica* and *Larix kaempferi* in Japan (Morimoto, 1982; 1984), collected on *Pinus koraiensis*, sparsely on *Pinus pumila* at Primorsky and injured *Pinus funebris* and planting of *Pinus silvestris* (Egorov et al., 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima), NE China (Heilongjiang, Jilin, Liaoning, Hebei, Shanxi, Shaanxi, Sichuan, Yunnan), Russia (Khabarovsk and Primorskii Terr., Kuril Isl.).

KOREA: Whole country.

KOREAN RECORDS: Faust, 1887a: 28; Okamoto, 1924: 187 (JJ); Saito, 1931: 20 (Geumgangsan); Kôno, 1934: 230 (Taiyudong, Shakoji (=Anbyeon Seokwangsa); Haku, 1936: 122 (Palgongsan); Kôno and Kim, 1937: 21; Mochizuki and Tsunekawa, 1937: 89 (Soyosan); Narita, 1939: 50 (Soyosan); Saito, 1941: 52 (Biology); Cho, 1955: 167; Cho, 1957: 278; Chûjô, 1960b: 5; Cho, 1963: 214 (JJ); Cho et al., 1968: 263; ZSK, 1968: 130; Ko, 1969: 266; Hyun and Woo, 1970: 80 (Jirisan Jongseokdae); KSPP, 1972: 199; Kim and Kim, 1973a: 83 (Mujugucheondong); Kim, 1978: 298 (HB, HN, PB, GG, GW, CB, JB, GB, GN, JJ); Chao and Chen, 1980: 139; Morimoto, 1982: 60; Morimoto, 1984: 327; Lee et al., 1985: 416 (JJ); Kwon and Lee, 1986: 78 (North, Central, South, JJ, Ulreung Is.); KSPP, 1986: 195; Kim et al., 1991: 184 (CB- Sokrisan); Park et al., 1993: 184 (GN- Jirisan); Kim, 1993: 393 (JJ); ESK/KSAE, 1994: 206; Kim, 1995a: 174 (GB- Sobaeksan); Paik et al., 1995: 431 (JJ); Kim and Kim, 1996, 37: 131 (Bangtaesan); Egorov et al., 1996: 444; Kim and Kim, 1998: 177 (GW- Odaesan); Hong et al., 2000: 229 (North, Central, South, Ulreung Is., JJ); Hong and Korotyaev, 2002: 167 (North, Central).

SPECIMEN EXAMINED: HN: 1♂ [Shakuoji (=Seokwangsa Anbyeon): 10.ix.1921]; 1♀ [Shakuoji (=Seokwangsa Anbyeon): 24.vii.1925]. GG: 2♂♂, 2♀♀ [Koryo (=Gwangreung): 10.iv.1923]; 1♂ (Mt. Taehwasan: 23.v.1982); 1♀ (Gwangreung: 29.v.1983); 1♂ (Gwangreung: 13.viii.1994); 1♂

(Suwon: 4.vii.1996); 1♂ (Mt. Gwangdeoksan: 17.v.1998). GW 1♂ [Onseiri (=Geumgangsan Onjeong-ri): 25.vii.1924]; 1♂, 1♀ (Mt. Chiaksan: 30.v.1974); 1♀ (Yeongwol: 24.v.1993); 1♂ (Hongcheon: 24.v.1993); 1♀ (Hwacheon: 25.v.1993); 1♀ (Goseong: 26.v.1993); 1♀ (Hangyeryeong, Mt. Seolaksan: 27.v.1993); 1♀ (Inje: 27.v.1993); 1♂ (Jinbu Pyeongchang: 27.v.1993); 1♂ (Jinbu Pyeongchang: 11.vii.1995); 1♀ (Chuncheon: 13.vi.1996); 1♂ (Yongpyeong: 4.vi.2000). CB: 1♀ (Jecheon: 23.v.1993). CN: 1♀ (Donam-ri Banpo-myeon Gongju: 23-30.viii.2005). JB: 2♂♂, 2♀♀ (Majeong-ri Buk-myeon Jeongeub: 12-19.vii.2005); 1♂ (Majeong-ri Buk-myeon Jeongeub: 5-12.vii.2005); 2♂♂ (Majeong-ri Buk-myeon Jeongeub: 19-26.vii.2005). JN: 1♀ (Simwon Mt. Jirisan: 4.viii.1996); 1♀ (Jungsan-ri Mt. Jirisan: 5.vi.1997). GB: 1♂, 1♀ (Bonghwa: 28.v.1993); 1♀ (Huibangsa Mt. Sobaeksan: 9.v.1997). GN: 1♀ (Haeinsa: 14.viii.1980). JJ: 1♂ (Seoguipo Forest Experimental Station: 30.vi-6.vii.2006).

133. *Hylobius (Callirus) montanus* Kôno, 1934 (Pl. 12-133)

Gal-saek-teol-gom-bo-ba-gu-mi (갈색털곰보바구미)

Hylobius montanus Kôno, 1934: 231.

TL: Japan.

Rostrum with a clear long furrow between antennal insertions in female. Pronotum densely punctate, not depressed on lateral sides from median carina. Scutellum longer than wide. Elytra parallel-sided in basal half. Metasternum with bare depression area much wider than long. Ventrites with dense yellowish scales at sides. Anal ventrite distinctly depressed in the middle in male.

MEASUREMENTS: Body length (excl. rostrum) 8.6-10.6 mm (in Japan). Body larger and straighted than *H. pinastri* (Gyllenhal).

COLOR: Derm reddish-brown with yellowish brown scales.

BIOLOGICAL NOTES: This species was collected on *Pinus pumila*, *Abies sachalinensis*, *Picea jezoensis* in Japan (Morimoto, 1982).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), Russia (Sakhalin).

KOREA: North and Central.

KOREAN RECORDS: Kusanagi, 1936: 42 (Baekdusan); Kim et al., 1974: 228 (Seolaksan). Kwon and Lee, 1986: 78 (Central); ESK/KSAE, 1994: 206; Hong et al., 2000: 230 (North, Central).

REMARKS: We could not find any Korean specimen of this species until now. The descriptions were cited on Kôno (1934) and the photo on plate was taken from Japanese specimen.

134. *Hylobius (Callirus) pinastri* (Gyllenhal, 1813) (Pls. 12-134, 22-134)

Ga-mun-bi-gom-bo-ba-gu-mi (가문비곰보바구미)

Rhynchaenus pinastri Gyllenhal, 1813: 168.

TL: Sweden.

Hylobius pinastri karafutonis Kôno, 1934: 231.

Hylobitelus pinastri montivagus Nakane, 1964 in Nakane et al., 1964: 37.

Rostrum with stronger carina. Pronotum densely punctate, not depressed on lateral sides from median carina. Scutellum at least as wide as long. Elytra widest at the middle, the sides more or less rounded. Punctured striae deep and dense at basal half, thinner and weaker toward apically. Intervals narrow, rugose. Metasternum with bare depression area much wider than long. Ventrites with sparse setiform scales and homogeneous hair-like scales at base. Hind tibiae hardly dilated distally. Penis 1.8 times as long as wide, rounded near apex and almost truncate at tip, with short hairs on apex, membraneous part of parameres interrupted in the middle at the notch.

MEASUREMENTS: Body length (excl. rostrum) 7.0–10.0 mm.

COLOR: Derm reddish-brown with yellowish brown scales.

BIOLOGICAL NOTES: This species injured young and weakened host trees. This species was collected on *Pinus pumila*, *Abies sachalinensis* and *Picea jezoensis* in Japan (Morimoto, 1982) and on *Pinus pumila*, *Pinus koraiensis*, *Picea jezoensis*, *Picea koraiensis* and *Abies sachalinensis* at Primorsky (Egorov etc., 1996).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), NE China, Russia (Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Kuriles, Yakutia, Transbaikalia, E. and W. Siberia, European part), Kazakhstan, Europe.

KOREA: Whole country.

KOREAN RECORDS: Kusanagi, 1936: 42 (Baekdusan); Morimoto, 1982: 64 (Geumgangsan (=Gongsan)); Kwon and Lee, 1986: 79 (?Central); ESK/KSAE, 1994: 206; Egorov et al., 1996: 445 (North); Hong et al., 2000: 230 (North, Central, South, JJ); Hong and Korotyaev, 2002: 167 (North).

SPECIMEN EXAMINED: GW: 1 ♀ (Mt. Odaesan: 27.v.1993); 1 ♂ (Gangwon Univ. Experimental Plantation: 12.vi.?). 1 ♀ (Mt. Odaesan: 16.vii.1999); 1 ♀ (Mt. Taebaeksan: 13.viii.1999). JN: 1 ♀ (Jongseokdae Mt. Jirisan: 14.vii.1967). GB: 1 ♀ (Bonghwa: 28.v.1993). JJ: 1 ♂ (Seonheul: 18.vi.1993).

Subgenus *Hylobius* Germar, 1817

SYNONYM: *Hypomolyx* LeConte, 1876 in LeConte and Horn, 1876: 139.

Type species: *Hylobius pinicola* Couper, 1864.

135. *Hylobius (Hylobius) excavatus* (Laicharting, 1781) (Pl. 12-135)

Buk-bang-gom-bo-ba-gu-mi (북방곰보바구미)

Curculio excavatus Laicharting, 1781: 212.

TL: Austria/Italy - Tirol, Südtirol.

Hylobius (Hylobius) sibiricus Egorov, 1996 in Egorov et al., 1996: 443.

TL: Russia, NE China, Korea.

Rostrum with dense punctures and deep lateral furrows above antennal scrobes. Antennae with 7th segment of funicle dilated distally, club compact, 1st segment as long as 2nd. Pronotum strongly

wrinkled-punctate, depressed on each side of the median carina. Scutellum weakly convex, with setigerous punctures and minute setae. Elytra parallel-sided at basal two-thirds, with regularly punctured striae and flat, wrinkled-punctated and weakly granulated intervals, mostly not formed distinct spot with whitish hair-like scales. Hind wings not shortened. Metasternum without a transverse depression behind middle coxae. Fore tibiae straight externally, weakly dilated internally at basal third; hind tibiae with outer setose fringe of tarsal groove oblique and weakly ascended.

MEASUREMENTS: Body length (excl. rostrum) 13.5 mm.

COLOR: Derm with grayish scales.

BIOLOGICAL NOTES: This species distinctly injured on *Picea*, *Pinus* and *Larix* in Far Eastern Russia (Egorov et al., 1996), and collected on *Picea grehni* and *Abies sachalinensis* in Japan (Kôno, 1938).

DISTRIBUTION: Korea, Japan (Hokkaido), NE China (Heilongjiang, Jilin), NE Mongolia, Russia (Magadan and Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Yakutia, Transbaikalia, E. and W. Siberia, northern European part), NE Europe.

KOREA: North and Central.

KOREAN RECORDS: Hong et al., 2000: 227 (HH); Hong and Korotyayev, 2002: 167 (North). Misidentification and re-citation with *Hylobius albosparsus* (Boheman): Kôno and Kim, 1937: 21; Kôno, 1938: 143; Cho, 1957: 278; ZSK, 1968: 130; Ko, 1969: 266; KSPP, 1972: 199; KSPP, 1986: 195; Kwon and Lee, 1986: 78; ESK/KSAE, 1994: 206.

SPECIMEN EXAMINED: HH: 1 ♀ [Sharel (=Sariwon): 9.vii.1923].

Genus *Pimelocerus* Lacordaire, 1863: 455.

Gom-bo-ba-gu-mi-sok (곰보바구미속)

SYNONYM: *Dyscerus* Faust, 1892b, 198; *Okikuruminus* Kôno, 1934: 241; *Hypohylobius* Voss, 1934: 78.

Middle size and large (5.4–16.0 mm). Dorsum with tuberculous sculptures. Frons narrower than base of rostrum. Rostrum often with two dorsal edges over antennal scrobes. 1st segment of antennal funicle as long as 2nd, 7th segment hardly wider than 6th, spherical, separated from club distinctly, club elongated oval, their 1st segment shorter than 2nd. Elytra with separately pointed on apex. Metasternum with transverse depressed behind middle coxae. Fore tibiae more or less curved on inner apex. Apical fringed bristles of hind tibiae strongly sloped. Penis with internal sac not extending beyond the base, invisible in repose condition, without a pair of sclerites at gonopore

Type species: *Hylobius macilentus* Boheman, 1842.

SPECIES (5 in Korea), (12 in Japan), (2 in Far Eastern Russia).

DISTRIBUTION: Korea, Japan, China, Kuril Is., Taiwan, Bangla Desh, Borneo, India, Java, Malaysia.

REFERENCE: Morimoto (1982).

Key to the species of genus *Pimelocerus*

1. Body length 5.4–8.0 mm (excl. rostrum); dorsal outline of rostrum forming an angle with forehead; 1st ventrite with a pair of hair tufts in male; elytra with a V-shaped hairy fascia from the

- side margins a little behind humeri to the middle of suture and with a transverse or weakly arched band between 6th intervals at basal fourth; fresh specimens with white waxy powder on these bands and on declivity; antennal club compact, oval; penis not membraneous on the ventral side, widest at basal third, gently narrowing apically and with small point at apex; pronotum strongly wrinkled-punctate; elytra about twice as long as wide; dark reddish brown to black *P. elongatus*
- Body length 7.9–16.0 mm (excl. rostrum); rostrum continuous to forehead in lateral view; fresh specimens not or partly covered with white powder 2
2. Elytra with two bands formed of small hairy spots 3
- Elytra with dense scales and amorphous powder on declivity 4
3. Body length 7.9–10.9 mm (excl. rostrum); penis widely rounded and weakly notched at apex; pronotum strongly tuberculate, with a short or without median carina; elytra with large punctures in striae and transversely wrinkled; black, with ochreous scaly patches *P. cribratus*
- Body length 11–16 mm (excl. rostrum); penis rapidly narrowed at apex, with indistinct small membraneous area on ventral surface; 7th segment of antennal funicle strongly dilated apically and transverse; Scutellum rounded posteriorly, shiny, with sparse punctures at base; elytra conjointly rounded at apex; setose fringe of tarsal groove weakly ascended, yellowish brown to brown *P. exsculptus*
4. Rostrum with a small median projection at tip; pronotum wrinkled-granulate; elytra with an oblique short scaly band behind shoulder, 3rd, 5th and 7th intervals with shiny granules; penis parallel-sided, narrowed near ostium, membraneous on dorsal and ventral surface *P. hylobioides*
- Rostrum without a median projection at tip; pronotum on each side and elytra around shoulders densely covered with scales and powder as on declivity; pronotum with conical granules, widest before the middle, rounded at sides; elytra with distinct tubercle on the declivity of 5th interval; each elytron triangularly acuminate at apex; penis strongly sclerotized, a narrow area around ostium and a semicircular area on the ventral surface membraneous, strongly bent, the sides narrowed towards ostium, then widening distally *P. perforates*

136. *Pimelocerus cribratus* (Roelofs, 1873) (Pl. 12-136)

Gom-bo-ba-gu-mi (곰보바구미)

Hylobius cribratus Roelofs, 1873: 190.

TL: Japan.

Rostrum continuous to forehead in lateral. Pronotum strongly tuberculate, with a short or without median carina. Elytra parallel-sided on basal half, with large punctures in striae and transversely wrinkled, with scaly bands formed of small hairy spots. Metasternum and venter punctate. 1st ventrite without hair tufts at least in female.

MEASUREMENTS: Body length (excl. rostrum). 9.5 mm.

COLOR: Black with ochreous scaly patches.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: Central.

KOREAN RECORDS: Hong et al., 2000: 231 (Central).

SPECIMEN EXAMINED: GG: 1 ♀ (Suwon: 25.x.1985).

137. *Pimelocerus elongatus* (Roelofs, 1873) (Pls. 12-137, 23-137)

Huin-mo-mu-nui-gom-bo-ba-gu-mi (흰모무늬곰보바구미)

Hylobius elongates Roelofs, 1873: 190.

TL: Japan.

Eyes emarginated along with basal margin of rostrum. Rostrum almost as long as pronotum, moderately curved; dorsal outline forming an angle with forehead; dorsum with five indefinite keels and roughly punctured furrow which reach to the apical fourth of rostrum; apical area finely punctate. Antennae inserted at the apical fourth of rostrum; scape reached at base of rostrum, as long as funicle and club taken together; 1st segments of funicle twice as long as the width and as long as 2nd and 3rd taken together, 2nd segment twice as long as 3rd, 3rd-7th segments transverse; club oblong oval and as long as the last four funicular segments taken together. Pronotum as long as broad, subparallel, broadest at the middle, slightly and somewhat roundly narrowed anteriorly. Dorsum strongly pustulate except small pustules on the apical constriction and three large pustules composed of several tubercles on the apical third. Scutellum oblique, bare and finely punctate. Elytra about twice as long as wide, parallel-sided from humeri to the apical third, subapical calli strong, basal area of odd intervals slightly raised, third interval distinctly raised to the subapical area. Procoxae close to each other, mesosternal process projected posteriorly and divided to the mesocoxae and reach to the metasternum between the middle of mesocoxae. Metasternum grooved behind the mesocoxae and the groove bisinuate to the middle. 1st ventrite grooved along with the anterior margin, with a pair of hair tufts in male. Hind femur somewhat longer than others, only reach to the subapical area of elytra. Femora slender, clavate, femoral teeth strong; tibiae uncinatae, slightly arched and internally enlarged the middle, and obliquely fringed at each sides. Tarsi with third segment widely bilobed, much wider than preceding, claws free.

MEASUREMENTS: Body length (excl. rostrum) 5.2-7.8 mm.

COLOR: Derm brownish black, antennae and tarsi reddish brown. Body covered with white hairs excepting pronotum. Pronotum with white hairs on anterior margin and basal area before scutellum. White powdery patch which is easily removed, on the basal triangular area before scutellum, on the diamondback patch area at dorsum of elytra and on apical declivity.

BIOLOGICAL NOTES: Fresh specimens are usually covered with white waxy powder on elytra, and often parasitized externally by mites on declivity. Adults are often captured on the dead pine trees after firing in forest.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Izu Is., Tsushima, Yakushima).

KOREA: Central and South, including JJ.

KOREAN RECORDS: Park et al., 2008: 118 (Central, South, Is. Jeju-do).

SPECIMEN EXAMINED: GG: 1 ex. (Gwangreung: 27.viii.1998); 1 ex. (Gwangreung: 6.viii.1999); 1 ex. (Namhansanseong Gwangju: 21.viii.2007); 1 ex. (Mt. Bulamsan Seoul: 25.v.2008). GW: 1 ex. (Gang-

won Univ, Chuncheon: 6.v.1997); 1 ex. (Jukwang-myeon, Goseong: 26.vii.1999); 1 ♀ (Cheolwon: 4.x.1997); 1 ex. (Hoengseong: 1.v.2006). CB: 1 ex. (Osujae Danyang: 5.x.2000). CN: 1 ex. (Cheonan: 18.vi.2006). JN: 1 ♂ (Mt. Baekunsan Gwangyang: 22.vii.2007); 1 ex. (Mt. Mohusan Hwasun: 25.v.2008). GN: 1 ex. (Mt. Jirisan Samjeong-ri Macheon-myeon Hamyang: 5.v.2006). JJ: 1 ex. (Donneko, Seoguipo: 27.ix.2000); 2 ♀ ♀ (Gwaneumsa Jeju: 11.vi.1997); 2 exs. (Jeolmul Donggye-dong Jeju: 19-25.iv.2007); 1 ♂ (Seoguipo Forest Experimental Station: 30.vi-6.vii.2006).

138. *Pimelocerus exsculptus* (Roelofs, 1875) (Pls. 12-138, 23-138)

Sa-gwa-gom-bo-ba-gu-mi (사과곰보바구미)

Hylobius exsculptus Roelofs, 1875: 130.

TL: Japan.

Hylobius freyi Zumpt, 1932: 128.

Hylobius matsumurai Zumpt, 1938: 82.

Rostrum as long as pronotum, punctured and wrinkled with several fine longitudinal keels, interrupted in part by the wrinkles. Antennal scrobes run obliquely to underside margin of eye. Antennae inserted before half of rostrum, 1st segment of funicle 1.5 times as long as wide, 2nd segment slightly shorter, the following segments transverse, 7th segment almost twice as wide as long and well separated from club, club only 1.5 times as long as broad. Head wrinkled punctured, frons between eyes distinctly wider than rostrum at base, eye transverse oval. Pronotum slightly wider than long, slightly narrowed towards anterior and posterior parts, the widest part in the middle. The surface sculptures deep, strongly wrinkled, with more or less distinct and irregular median keel. Ocular lobe only weakly developed. Scutellum shiny, not acute but broadly rounded, with sparse punctures at base. Elytra wider than pronotum, with broadly rounded and strong shoulders, parallel-sided until the posterior third, then narrowed constricted part before apex on each side with a strong callus, conjointly rounded at apex. Striae deep, rectangular and partly overlapping wrinkled. Intervals narrower than striae and also with a strongly wrinkled puncture. Underside widely punctured, 1st and 2nd abdominal ventrites in male shortly deepened, in female only a weak impression on 1st ventrites or also uniformly convex. Setose fringe of tarsal groove weakly ascend, yellowish brown to brown. Penis short, parallel-sided and very shortly acuminate.

MEASUREMENTS: Body length (excl. rostrum) 13.0-16.0 mm.

COLOR: Derm blackish brown, antennae and tarsi dark brown. Body covered widely all over the dorsum and underside with short yellow bristles and formed markings but due to the less dense hairs. Thinner, lighter and slightly obliquely raised hairs on antennae and legs.

BIOLOGICAL NOTE: The larvae of this species feed on the subcortical part of the chestnut tree trunk a little below the ground surface, and cause severe damage in some orchards in Japan (Morimoto, 1982). This species was collected on *Malus pumila*, *Prunus* spp., *Ulmus* spp. and *Salix* spp.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu).

KOREA: Central and South.

KOREAN RECORDS: Ko, 1969: 266; KSPP, 1972: 199; KSPP, 1986: 195; Kwon and Lee, 1986: 79 (?Central); Yoon et al., 1990: 114 (Gayasan); ESK/KSAE, 1994: 206; Kim, 1995b: 143 (Byeonsanbando); Hong et al., 2000: 232 (Central, South).

SPECIMEN EXAMINED: GG: 1 ♂, 2 ♀ ♀ [Koryo (=Gwangreung): 1.vi.1924]; 1 ♂ (Mt. Surisan: 7.vi.1968); 1 ex. (Suwon: 29.v.1985); 1 ex. (Gwangreung: 27.vi.1986); 1 ♀ (Mt. Taehwasan: 14.vii.1991); 1 ex. (Mt. Gwanggyosan: 12.v.1992); 1 ex. (Mt. Myeongjisan: 7.vi.1992); 1 ex. (Singal: 12.vi.1992); 1 ex. (Mt. Gwanggyosan: 24.vi.1992); 1 ex. (Suwon: 26.vi.1992); 1 ex. (Uiwang: 23.vi.1996); 1 ♂ (Mt. Gwanggyosan: 9.vi.1998); 1 ♀ (Aengmubong: 25.vi.1972); 1 ♂, 1 ♀ (Aengmubong: 28.v.1973). GW: 1 ex. (Chuncheon: 6.vi.1988); 1 ex. (Chuncheon: 14.vi.1991); 1 ex. (Chuncheon: 29.v.1992). CB: 1 ex. (Mt. Wolaksan: 18.vi.1992). JB: 1 ♂ (Imsil: 1.vi.1986). JN: 1 ♂ [Mt. Hakuyosan (=Baekyangsan Jangseong): 20.vi.1922]; 1 ♀ (Gwangyang: 29.iv.1990); 1 ♀ (Suncheon: 11.vi.1995); 1 ♂ (Yeongoksa Gurye: 31.viii.1995); 1 ♀ (Goheung: 10.v.1996); 1 ♂ (Gurye: 11.vii.1996). GB: 1 ex. (Wolseong: 5.vi.1987); 3 ♀ ♀ (Mt. Gajisan, Ulju: 12.vii.2000). GN: 1 ♂ (Hadong: 11.viii.1988); 1 ♂ (Gimhae: 27-31.vii.1994).

139. *Pimelocerus hylobioides* (Desbrochers, 1891) (Pl. 12-139)

Nok-na-mu-gom-bo-ba-gu-mi (녹나무곰보바구미)

Aclees hylobioides Desbrochers, 1891: 352.

TL: China.

Hylobius orientalis (non Motschulsky, 1866): Zumpt, 1932: 132.

Hylobius okinawanus Kôno, 1934: 237.

Frons coarsely punctured, with a weak depression in the middle. Rostrum nearly as long as head and pronotum together, strongly wrinkled punctured, with an indistinct longitudinal median keel in male, with 2 weak longitudinal furrows at each side in both sexes, with a small median projection at tip. 1st segment of antennal funicle twice as long as wide, 2nd segment shorter than 1st, 3rd segment about as long as broad, 4th segment a little shorter, 5th and 6th segments transverse, 7th segment as long as 4th, club oval, pointed at apex. Pronotum wider than long, strongly rounded at sides, strongly wrinkled punctate on dorsum, scattered with callus-shaped or nodular tubercles, hump-like tuberculate at sides, with a longitudinal median keel in the anterior half, postocular lobe strongly developed. Scutellum small, as long as wide, fine punctured and hairy. Elytra wider than pronotum, about twice as long as broad, pointed at apex, shoulders strong. Punctured striae strong and deep, intervals narrower and curved, 4th interval thickened to callus at end, with an oblique short scaly band behind shoulder, third, fifth and seventh intervals with shiny granules. Underside sparsely punctured, 1st abdominal sternite in male with a longitudinal depression. Femora strongly clubbed, with strong tooth.

MEASUREMENTS: Body length (excl. rostrum) 14.0 mm.

COLOR: Derm red-brown to dark brown. Body sparsely covered with brown hairs, elytra with a W-shaped hair band at the basal third, declivity with brownish bristles.

BIOLOGICAL NOTE: This species injured to *Cinnamomum camphora*, *Illicium religiosum* and *Machilus thunbergii* in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Ryukyu), China.

KOREA: JJ.

KOREAN RECORDS: Kôno, 1926: 89 (Seokwangsa); Kôno and Kim, 1937: 21; Cho, 1957: 278; Ko, 1969: 267; KSPP, 1972: 199; Morimoto, 1984: 329; KSPP, 1986: 195; Kwon and Lee, 1986: 79 (North);

ESK/KSAE, 1994: 206; Hong et al., 2000: 233 (North).

SPECIMEN EXAMINED: JJ: 1 ♀ (Seoguipo Forest Experimental Station: 24.vii-4.viii.2006).

REMARKS: *Pimelocerus orientalis* (Motschulsky) was firstly reported by Kôno (1926) based on specimen which collected from Seokwangsa in the Korean fauna. After then, research papers of many researchers (Kôno and Kim, 1937; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; etc) were made the distribuional data based on his paper. On the other hand, Morimoto' paper (1982) was treated *Dyscerus hylobioides* (Desbrochers) with a synonym of *Dyscerus orientalis* (Motschulsky), but his other paper (1984) was reported that these were different species each other and *Dyscerus hylobioides* (Desbrochers) only distributed in the Korean fauna. We determined an collected specimen from Jeju Island to *Pimelocerus hylobioides* (Desbrochers), and tentatively treated in this paper that *Pimelocerus orientalis* (Motschulsky) was not distributed in the Korean fauna.

140. *Pimelocerus koreanus* (Kôno, 1934)

Gin-gom-bo-ba-gu-mi (긴곰보바구미)

Hylobius koreanus Kôno, 1934: 233.

TL: Korea; Suigen (=Suwon), Shakoji (=Anbyeon Seokwangsa).

Hylobius fatuus (non Rossi): Kôno, 1926: 89.

Head irregularly coarsely punctured. Frons indistinctly concaved. Rostrum slightly curved, wrinkled punctured, with 6 longitudinal furrows in the basal two thirds, which are arranged roughly punctured between antennal scrobe and longitudinal furrow. Antennal scrobes runs obliquely to underside margin of eye. 2 basal segments of antennal funicle considerably longer than wide, 2nd segment slightly shorter than 1st, 4th segment a little shorter than 3rd, the other segments transverse. Pronotum wider than long, the sides moderately strongly rounded, slightly narrower in the anterior part than in the posterior part, coarse and strong wrinkled punctured in the median weak carina, postocular lobes weakly developed. Scutellum shiny, raised, rounded posteriorly. Elytra much wider than pronotum with strong shoulders, rounded together at apex. Punctuation and pattern quite like *P. exsculptus* (Roelofs). Underside sparsely punctured. Anal segment rough and irregular rather densely punctured. All femora strongly clubbed and finely serrated. Fore tibia with a sharp tooth on the inner corner of apex in female, tooth-like extended in male. Tarsi with reddish brown bristles.

MEASUREMENTS: Body length (excl. rostrum) 12.0 mm.

COLOR: Derm black. Antennae and tarsi dark reddish brown. Hairy pattern same as *Pimelocerus exsculptus* (Roelofs).

BIOLOGICAL NOTE: This species is one of the pest of fruit trees: *Pyrus pyrifolia* Nakai var. *culta* Nakai, *Prunus persicae* Batsh., *Malus pumila* Mill., *Prunus salicina* Lindl. var. *typica* Nakai and *Prunus mume* Sieb. and Zucc (Kim, 1978).

DISTRIBUTION: Korea, Japan (?Honshu).

KOREA: North, Central and South.

KOREAN RECORDS: Kôno, 1926: 89 (HN- Seokwangsa); Kôno and Kim, 1937: 21 (PB- Myohyangsan); Cho, 1957: 278; ZSK, 1968: 130; Kim, 1978: 299 (HN, PB, GG, GW, JN, GB); Kwon and Lee, 1986: 79

(North, Central, South); ESK/KSAE, 1994: 206; Hong et al., 2000: 232 (Central).

REMARKS: According to original description by Kôno (1934), this species was very similar to *Pimelocerus exsculptus* (Roelofs), but differs by more rounded scutellum and finely toothed femora. Hong et al. (2000) reported this species with specimen which have above similar characters collected at Aengmubong, Gyeonggi Province on 27th. May, 1973. Examined on male genitalia of this specimen, it is identified with *Pimelocerus exsculptus* (Roelofs). Therefore, we need to investigate the type specimen in future. It is not provided the photo of this species on plate.

141. *Pimelocerus perforatus* (Roelofs, 1873) (Pl. 12-141)

Ol-ri-beu-gom-bo-ba-gu-mi (올리브곰보바구미)

Hylobius perforatus Roelofs, 1873: 188.

TL: Japan.

Aclees Roelosi Desbrochers, 1891: 351.

Dyscerus cribripennis Matsumura and Kôno, in Kôno, 1928: 168.

Hylobius desbrochersi Zumpt, 1932: 130.

Hylobius galloisi Kôno, 1934: 235.

Head densely finely punctured. Forehead in the middle with a round, deep depression. Rostrum a little shorter than pronotum, slightly curved at apex, somewhat widened to spatula-shaped, between antennal insertions with a longitudinal furrow, punctuations at base arranged rows, finer and denser at anterior part. 2nd segment of antennal funicle shorter than 1st. Pronotum slightly wider than long, strongly granulated, with a broad longitudinal carina in the middle of anterior half, postocular lobes strongly developed. Elytra 1.6–1.8 times as long as wide, widest at shoulders, almost parallel-sided to the 1/3 from apex, gradually tapered posteriorly, acuminate at apex, with distinct tubercle on the declivity of 5th interval. Punctured striae from declivity to apex fine, intervals narrow, 3rd and 5th intervals higher than the others, 5th interval humped at apex. Underside scattering punctured, sparsely hairy. Anal sternite coarsely and densely punctured. Legs sparsely hairy. Each femora strongly clubbed, with a sharp tooth inside. All tibiae strongly curved inside.

MEASUREMENTS: Body length (excl. rostrum) 13.0 mm.

COLOR: Derm black, tarsi reddish. Elytra behind humeri and on the posterior third sparsely scaled and very densely powdered.

BIOLOGICAL NOTE: This species was collected on *Ligustrum japonicum*, *L. obtusifolium*, *Olea europaea* and *Syringa vulgaris* in Japan (Morimoto, 1982).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyu), China (Shandong, Guangdong, Fujian, Sichuan, Guangxi, Yunnan), Taiwan, Russia (Primorskii Terr.).

KOREA: North, Central and South.

KOREAN RECORDS: Sin and Noh, 1970: 37 (Soheuksando); Kim and Kim, 1973a: 83 (Mujugucheon-dong); Kim and Kim, 1974: 113 (Baekyangsan); Morimoto, 1984: 329; Kwon and Lee, 1986: 79 (Central, South); ESK/KSAE, 1994: 206; Kim and Kim, 1998: 177 (Odaesan); Hong et al., 2000: 234 (Central, South); Legalov, 2009e: 197 (North).

SPECIMEN EXAMINED: GG: 1 ♀ [Koryo (=Gwangreung): 10.iv.1923].

Tribe Ithyporini Lacordaire, 1866

Key to the genus of tribe Ithyporini

1. Antennal scrobes subcontiguous under the base of rostrum; Fore coxae approximate *Ectatorhinus*
 – Antennal scrobes separate throughout their length; scutellum present 2
2. Antennal funicle 6-segmented; mesosternum lamellae; intercoxal process of metasternum forming an acute transverse edge bordering the posterior margin of canal; femora edentate *Catabonops*
 – Antennal funicle 7-segmented; antennal insertions median at least in female, scrobes invisible from above; eyes equidistant above and below rostrum; postocular lobes present; scutellum bare; pectoral canal not extending beyond middle of metasternum, the latter between meso- and meta-coxa longer than the 3rd ventrite; intercoxal process of metasternum narrower than middle coxa; hind femora clavate 3
3. Elytra oval, humeri reduced; mesosternal process sloping ventrad, its anterior margin not truncate *Acallinus*
 – Elytra with rectangular humeri; mesosternal process sloping ventrad, its anterior margin sharply truncate and forming short vertical wall *Colobodes*

Subtribe Ithyporina Lacordaire, 1866

Genus *Ectatorhinus* Lacordaire, 1866: 53.

Ot-na-mu-ba-gu-mi-sok (옫나무바구미속)

SYNONYM: *Marmarochelus* Desbrochers, 1890: 217.

Antennal scrobes subcontiguous under the base of rostrum; Fore coxae approximate.

Type species: *Ectatorhinus wallacei* Lacordaire, 1866.

SPECIES (1 species in Korea), (1 species in Japan).

DISTRIBUTION: Korea, Japan, China, Taiwan, Andaman Is., Borneo, Cambodia, Malacca, Moluccas, New Britain, New Guinea, Philippines, Sri Lanka, Sumatra.

REFERENCE: Heller (1926).

142. *Ectatorhinus adamsi* Pascoe, 1872 (Pls. 12-142, 23-142)

Ot-na-mu-ba-gu-mi (옫나무바구미)

Ectatorhinus Adamsi Pascoe, 1872: 478.

TL: Japan.

Mecocorynus humerosus Fairmaire, 1889: 53.

Mecocorynus tuberosus Fairmaire, 1900: 634.

Body egg-shaped. Rostrum long and reaching onto metasternum. Antennal scrobes subcontiguous under the base of rostrum. Antennal funicle 7-segmented and distinctly longer than club; 3rd segment longer than 2nd, 2nd segment longer than 1st, 4th segment a little shorter than 1st, 5–7th segments as long as broad; culb elongated oval. Eyes not convex. Pronotum as long as broad, broadest in the middle. Scutellum longer than wide. Elytra with strongly protruded humeri; intervals narrower than striae; 3rd interval with 3 tubercles which are one tubercle at base, the other approximate each other; 5th interval with 3 tubercles which are two tubercles before middle, 3rd tubercle near apex; 7th interval with 1 tubercle behind middle. Groove for insertion of rostrum extending on to front of prosternum. Underside of body scattered with large punctures. Fore coxae approximate. Femora clavate with tooth, tibiae straight.

MEASUREMENTS: Body length (excl. rostrum) 13.0–16.0 mm.

COLOR: Derm reddish brown to dark brown on the dorsal surface. Dorsal surface densely marked with white, grayish yellow, yellow brown, dark brown or black short scale-hairs. Underside clothed with pale scales.

BIOLOGICAL NOTE: *Rhus verniciflua*, *Pyrus serotina* and *Rhus javanica* are known as the hosts in Korea (Kim, 1978) and adults were collected on *Quercus glauca* and *Rhus chinensis* in Japan (Morimoto, 1984). In China, *Rhus potanini* Maxim are known as the host and adults emerged in April and oviposited from the late of April to the late of June. Larvae mine to cambium layer, make a cocoon cell for pupation at cambium layer, and pupate at the late of August. Overwintering with pupae (Chao and Chen, 1980).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima), China (Shandong, Shaanxi, Jiangsu, Zhejiang, Anhui, Jiangxi, Fujian, Guangdong, Guangxi).

KOREA: Central and South, including JJ.

KOREAN RECORDS: Faust, 1887a: 28; Haku, 1936: 122 (Daegu); Kōno and Kim, 1937: 29; Mochizuki and Tsunekawa, 1937: 89 (Soyosan, Seoul); Mochizuki and Masui, 1939: 72 (Soyosan); Ishii, 1940: 54 (Soyosan, Seoul); Ko, 1969: 266; KSPP, 1972: 199; Kim, 1978: 302 (GG, GW, JB, GB, JJ); Kim and Lee, 1979: 83 (Sinan Uido); Morimoto, 1984: 335; KSPP, 1986: 195; Kwon and Lee, 1986: 81 (Central, South, JJ); Kim, 1993: 393 (JJ); ESK/KSAE, 1994: 207; Paik et al., 1995: 430 (JJ); Hong et al., 2000: 235 (Central, South, JJ).

SPECIMEN EXAMINED: GG: 1♂ (Deokjeokdo: 5.viii.1970); 1♂ (Mt. Gwanaksan: 20.vi.1975); 1♀ (Hwaseong: 29.vii.1987); 1♂ (Mt. Gwanggyosan: 12.vi.1990); 1 ex. (Gwangju: 24.vii.1996); 1♀ (Seoul: 14.v.?). GW: 1♂ (Mt. Soyosan: 10.vi.1987); 1 ex. (Hoengseong: 29.vii.1987); 1♀ (Wonju: 19.v.1989). CB: 1♂ (Mt. Wolaksan: 20.vi.1992); 3♂♂ (no data).

Subtribe Colobodina Voss, 1958

Genus *Acallinus* Morimoto, 1962: 387.

Du-kkeo-bi-ba-gu-mi-sok (두꺼비바구미속)

Derm closely covered with scales and each tubercle bearing a scaly tuft. Frons as broad as the

base of rostrum, depressed. Eyes subpyriform, entirely concealed by postocular lobes in repose. Rostrum nearly as long as pronotum, curved, antennal scrobes oblique, directing towards the lower ends of eyes. Antennae with funicle 7-segmented, nearly as long as scape, 1st segment robust, as long as 2nd, 3rd–7th segments globular, club compact, oval. Pronotum broadest at the middle, subapical constriction distinct, almost concealing head from above, dorsum with 4 tubercles on a median transverse line. Scutellum small, triangular. Elytra with humeri reduced, 9th stria abbreviate behind hind coxa, 3rd, 5th and 7th intervals with 4–6 tubercles respectively. Hindwings vestigial. Fore coxae separated. Mesosternal process lying on the same level as metasternum. Metepisterna parallel-sided. Abdomen with the process subtruncate, as broad as metacoxa, 2nd segment as long as 1st behind coxa and as long as 3rd and 4th taken together at side. Femora weakly clavate, not sulcate beneath, unidentate. Tibiae weakly bisinuate. Tarsi with 3rd segment bilobed, claws simple, free.

Type species: *Acallinus tuberculatus* Morimoto, 1962.

SPECIES (1 in Korea and Russian Far East), (2 in Japan).

DISTRIBUTION: Korea, Japan, South of the Russian Far East.

143. *Acallinus tuberculatus* Morimoto, 1962 (Pls. 12-143, 23-143)

Min-du-kkeo-bi-ba-gu-mi (민두꺼비바구미)

Acallinus tuberculatus Morimoto, 1962c: 388.

TL: Japan.

Head closely punctured. Frons as broad as the base of rostrum, depressed. Eyes subpyriform, entirely concealed by postocular lobes in repose. Rostrum a little shorter than pronotum, curved, scarcely narrowed from the base to the antennal insertions, transverse oval in cross-section, finely punctured and naked on the anterior half, the punctures are robuster towards the base, with three pairs of sulci and a keel on the basal half, antennal scrobes oblique, directing towards the lower ends of eyes. Antennae inserted into the apical 1/3 of rostrum, antennal funicle 7-segmented, nearly as long as scape, 1st segment robust, 3/2 times as long as wide and as long as 2nd, 3rd–7th segments globular, 7th segment slightly transverse, club compact oval, 3/2 times as long as wide. Pronotum as long as wide, convex, broadest at the middle, anterior margin arched and 4/5 the width of the posterior one, subapical constriction distinct, almost concealing head from above, disc closely punctured, each puncture bearing a scale, with 6 scaly tufts, two on the anterior margin and the other on a median transverse line. Suctellum small, triangular, naked. Elytra convex, 5/4 times as long as wide, the sides gently rounded. Striae narrow, 9th stria abbreviate behind hind coxa. Intervals flat, 1st interval with 6–8 small scaly tufts, 3rd interval with 6 tubercles, 5th interval with 4, 7th interval with 5 and 9th interval with one tubercles, each tubercle bearing a scaly tuft, basal tufts on 3rd and 5th intervals larger than the others, tuberculate intervals a little broader than the others. Hindwings vestigial. Metasternum and basal two segments of abdomen reticulately punctured, 3rd and 4th segments with a row of punctures respectively.

Female: Rostrum as long as pronotum. Antennae inserted a little before the middle of rostrum.

MEASUREMENTS: Body length (excl. rostrum) 4.3–4.7 mm.

COLOR: Derm brown to blackish brown. Body closely covered with recumbent brownish grey oval and round scales, erect and oblong oval dark brown scales, underside covered with yellowish grey scales, which are sparser on abdomen.

BIOLOGICAL NOTE: This species was collected by shifting litter in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu), Russia (Primorskii Terr.).

KOREA: North, Central and JJ.

KOREAN RECORDS: Morimoto, 1984: 335 (JJ); Kwon and Lee, 1986: 81 (Central, JJ); Morimoto and Lee, 1992: 13 (Yeongsil); Kim, 1993: 392 (JJ); ESK/KSAE, 1994: 207; Paik et al., 1995: 428 (JJ); Hong et al., 2000: 236 (Central, JJ); Legalov, 2009e: 196 (North).

SPECIMEN EXAMINED: GW: 1 ♀ (Mt. Odaesan: 31.vii.1976). JJ: 1 ♀ (Mt. Halrasan: 22.vii.1981).

Genus *Catabonops* Roelofs, 1875: 161.

Ba-da-du-kkeo-bi-ba-gu-mi-sok (바다두꺼비바구미속)

Antennal scrobes separate throughout their length. Antennal funicle 6-segmented. Scutellum present. Pectoral canal extending onto metasternum, its margins hill-shaped. Mesosternum lamellae. Intercoxal process of metasternum forming an acute transverse edge bordering the posterior margin of canal. Femora edentate.

Type species: *Catabonops monachus* Roelofs, 1875.

SPECIES (1 in Korea), (1 in Japan).

DISTRIBUTION: Korea, Japan.

144. *Catabonops monachus* Roelofs, 1875 (Pl. 12-144)

Ba-da-du-kkeo-bi-ba-gu-mi (바다두꺼비바구미)

Catabonops monachus Roelofs, 1875: 162.

TL: Japan.

Rostrum punctured, scaly at base. Antennal funicle 6-segmented; club black at base and gray at apex. Pronotum longer than wide, bisinuate at base, slightly broadened at base, narrowed anteriorly, but rather strongly constricted at latero-anteriorly, slightly depressed in the median line. Elytra about twice as long as pronotum, slightly angled shoulders, not wider than prothorax at base, punctured striae; odd intervals elevated, with a diagonal whitish stripe on a little behind the middle, anterior and posterior part of this stripe a little darker. Groove for insertion of rostrum extending on to metasternum, its margins hill-shaped. Legs with erected scales as body. Femora without tooth.

MEASUREMENTS: Body length (excl. rostrum) 3.0 mm.

COLOR: Rostrum black-brown to brown-red, antennae and legs testaceous. Body densely cover-

ed with small yellowish-gray scales and spatulate-formed few erect yellowish-gray and brown scales on pronotum and elytra.

BIOLOGICAL NOTES: This species was distributed in the seacoast and collected on dead branch of broad-leaf trees in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Ryukyu).

KOREA: South.

KOREAN RECORDS: Morimoto, 1984: 335; Kwon and Lee, 1986: 81 (South); ESK/KSAE, 1994: 207; Hong et al., 2000: 237 (South).

SPECIMEN EXAMINED: GN: 1 ♀ (Yokjido: 9.x.1980); 1 ♀ (Jukdo: 17.viii.1995).

Genus *Colobodes* Schoenherr, 1837: 465.

Mu-nui-du-kkeo-bi-ba-gu-mi-sok (무늬두꺼비바구미속)

SYNONYM: *Aryptaeus* Pascoe, 1882: 451.

Type species: *Colobodes billbergi* Boheman, 1837.

Head densely covered scales, sulcate along dorsal margins of eyes, vertex bare, punctate, frons between eyes a little narrower than the base of rostrum, with a median fovea, flattened or slightly depressed. Rostrum robust to slender, carinate behind antennal insertions in male. Antennal funicle 7-segmented, 2nd segment slender, longer than or subequal to 1st, club compact. Prothorax with ocular lobes, with 2 fascicles of scales at anterior margin and 4 fascicles in the middle, weakly produced anteriorly, but not fully covering head. Scutellum bare. Elytra broader than pronotum, almost parallel-sided, with more or less protruded rectangular shoulders, with 10 striae, ultimate stria weaker behind hind coxa, alternate intervals more or less fasciculate and often tuberculate or nodular, basal margins grooved for interlocking the posterior margin of pronotum in repose. Prosternum canaliculated before coxae. Fore coxae separated. Mesosternal process slightly to steeply declivous, passing off into a plane with metasternal process between middle coxae, narrower than middle coxa. Metasternum between middle and hind coxae as long as or shorter than 1st ventrite behind coxa. Hind coxae reaching metepisterna. 1st suture between 1st and 2nd ventrites deeper on each side. Femora clavate, fore femora often less clavate, dentate. Tibiae curved at base, straight or slightly bisinuate to apex, carinate internally. Tarsi with 3rd segment much wider than 2nd, more or less notched anteriorly, claws simple, free.

SPECIES (2 species in Korea), (11 species in Japan), (3 species in Russian Far East).

DISTRIBUTION: Korea, Japan, China, South of the Russian Far East, Taiwan, Bangla Desh, Borneo, Burma, Cambodia, Java, Malacca, Moluccas, New Guinea, Philippines, Sumatra.

REFERENCE: Morimoto (1988).

Key to the species of genus *Colobodes*

1. Body smaller; pronotum 1.1–1.2 times as wide as long; basal margin of elytra not fringed with whitish scales, 3rd interval not curved inwards at base *C. matsumurai*

- Body robust; pronotum 1.2–1.5 times as wide as long; elytra narrowly fringed with whitish scales at basal margin, 3rd interval tapered basally, curved inwards and grayish to whitish before subbasal fascicle *C. ornatus*

145. *Colobodes matsumurai* Kôno, 1932 (Pl. 13-145)

Mu-nui-du-kkeo-bi-ba-gu-mi (무늬두꺼비바구미)

Colobodes matsumurai Kôno, 1932: 179.

TL: Japan.

Frons between eyes transversely depressed. Scaling of head dark brown, inside of eyes and longitudinal line in the middle whitish. Rostrum curved, smooth at the anterior half, finely punctured, with 6 more or less distinct long furrows in the basal half. Antennae inserted behind a third of rostrum. Pronotum 1.1–1.2 times as wide as long. Scaling very dense, brownish, median, anterior margin and each side of longitudinal line whitish, also with 6 bundles of erected, long, brownish yellow scales. Scutellum flat, tongue-shaped, longer than broad, bare. Elytra much wider than pronotum at base, ornamented with pustules on the upper side. Striae fine, line-like; scaling very dense, brown to black, partially formed a short, black transverse band, a longitudinal line of 3rd interval not curved inwards at base and a rather large ax-shaped stigma behind the middle white, with the erected, brownish yellow scales on the pustules; with a pair of large whitish patches behind middle from suture to 5th or 7th intervals. Prosternal process between coxae narrow, 1/3–1/4 times the width of mesosternal process, the latter as broad as base of middle femur. Metasternum between middle and hind coxae 0.8 times the length of 1st ventrite behind coxa. Abdominal process 3/4 times as broad as hind coxa. Middle coxal cavities and mesepimera margined with grey. All femora with a sharp tooth inside. Tibiae weakly curved at base.

Female: Rostrum smooth, fine punctured, each side of basal half with 2 longitudinal furrows. Antennae inserted closely into the middle of rostrum.

MEASUREMENTS: Body length (excl. rostrum) 7.0 mm.

COLOR: Derm blackish brown, apex of rostrum, antennae and tarsi reddish brown. Elytra with whitish patches on each subtriangular ranging from the posterior margin of second fascicle and anterior margin of third fascicle on third interval, to fourth fascicle on fifth interval, and with a internal branch oblique backwards from the anterior part to suture. Underside and legs dark brown, partially white scaly.

BIOLOGICAL NOTES: Larvae, pupae and immature adults were captured on the underside of bark of dead *Ulmus davidiana* var. *japonica* in Japan (Morimoto, 1988).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu), Russia (Primorskii Terr., Kuriles).

KOREA: Central.

KOREAN RECORDS: Kwon and Lee, 1986: 81 (Central); Morimoto, 1988: 53 (GW); ESK/KSAE, 1994: 207; Hong et al., 2000: 237 (Central).

SPECIMEN EXAMINED: GW: 1 ♀ (Mt. Odaesan: 3.viii.1983); 1 ♀ (Hoengseong: 1.v.2005).

146. *Colobodes ornatus* Roelofs, 1875 (Pls. 13-146, 23-146)

Je-ju-du-kkeo-bi-ba-gu-mi (제주두꺼비바구미)

Colobodes ornatus Roelofs, 1875: 156.

TL: Japan.

Rostrum with a median and two pairs of lateral sharp carinate, distance between apex and antennal socket slightly longer than apical width. Pronotum 1.2–1.5 times as wide as long. Elytra with a V-shaped common grayish to whitish patch combining third fascicles on 3rd intervals. Prosternal process between coxae 0.41–0.52 times as broad as mesosternal process, the latter much narrower than base of middle femur. Mesosternum with a small tubercle on each side before middle coxa. Metasternum between middle and hind coxae 5/7 times the length of 1st ventrite behind coxa. Tibiae distinctly angulate at basal third. 3rd tarsal segment triangularly notched at apex.

Female: Rostrum before antennal socket 1.2–1.3 times as long as apical width.

MEASUREMENTS: Body length (excl. rostrum) 7.0–8.0 mm.

COLOR: Scaling predominantly blackish on pronotum with grayish median stripe and basal fringe, elytra with short grayish stripe on 3rd interval before subbasal fascicle, postmedian fascicle on 3rd interval conspicuous, whitish, and much larger than median black fascicle.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu, Tsushima), Russia (Primorskii Terr., Kuriles).

KOREA: Central and South including JJ.

KOREAN RECORDS: Hong et al., 2000: 238 (JJ).

SPECIMEN EXAMINED: CN: 1 ♂ (Yeomi-ri Unsan-myeon Seosan: 26.v.2006). GB: 1 ♂ (Namsa-ri Hyeongok-myeon Gyeongju: 30.vi–14.vii.2005). JJ: 1 ♀ (Gwaneumsa: 19.vi.1982); 1 ♂ (Jeju Is.: 26.vi.1989); 1 ♂ (Sinyang: 19.iii.1994); 1 ♀ (Donggye-dong Jeju: 16–23.vii.2005); 1 ♀ (Jeolmul, Donggye-dong Jeju: 13–20.viii.2005).

Tribe Lepyriini W. Kirby, 1837**Genus *Lepyrus* Germar, 1817: 340.**

Ssang-mu-nui-ba-gu-mi-sok (쌍무늬바구미속)

SYNONYM: *Dirus* Dejean, 1821: 88.

Type species: *Curculio colon* Fabricius, 1771=*Curculio palustris* Scopoli, 1763.

Middle size and large (8.0–16.0 mm), ovate or oblong ovate. Pronotum with narrowed toward anterior part and elytra sharply narrowed toward apex. Body covered with contiguous densely pubescence. Dorsum of head, lateral sides of pronotum, disk and lateral sides of elytra, lateral sides of sternites of abdomen with patterns of bright spots or stripes. Eyes rounded and convex.

Mandibles with hairs laterally. Lateral margin of prementum with bristles. Rostrum and pronotum with median keel, small punctures, naked, pronotum and intervals of elytra granulous rugulous, with dense, decumbent hair-like or flat scales. Odd intervals sometimes wider and higher than even ones. Shoulders smooth or slightly protruded, dorsum uniformly convex, without preapical tubercle, the widest part at middle, sparsely parallel-sided at basal 2/3. Mesosternal process very steep on the anterior part. Metepimera partly concealed by elytra, more or less strongly punctate, with pubescence at apical parts. Hind femora not reached on apex of 3rd sternite of abdomen. Apical fringed bristles on hind tibiae transverse. 2nd tarsal segment not shorter than 1st.

SPECIES Holarctic 15 (6 in Korea), (5 in Japan), (10 in Russian Far East).

DISTRIBUTION: Korea, Japan, China, Mongolia, Siberia, Kazakhstan, Kyrgyzstan, Europe, Alaska, Canada, U.S.A.

REFERENCE: Morimoto (1982).

Key to the species of genus *Lepyrus*

1. Femora with small tooth, often concealed from erected scales 2
 - Femora without tooth 3
2. Elytra with medial \wedge -formed greyish or yellowish stripes on 4th to 6th intervals *L. japonicus*
 - Elytra with large spots of dense white scales before middle of 3rd–5th intervals and on apex of 4th–6th intervals *L. kanoi*
3. Pronotum more or less smooth on disk, slightly rugulous punctuate, with indistinct postocular lobes; preapical constriction hardly view 4
 - Pronotum not smooth, strongly rugulous punctuate, granulous, with distinct postocular lobes; preapical constriction distinct on lateral sides and below *L. merkli* Korotyaev
4. Pronotum with preapical construction, more distinct on lateral sides and prosternum; postocular lobes large. 1st segment of antennal funicle longer than 2nd. Elytra with middle and preapical whitish spots *L. quadrinotatus*
 - Pronotum with hardly view preapical construction; postocular lobes small 5
5. 2nd segment of antennal funicle slightly shorter than 1st; elytra with flat intervals, septa between punctures in striae not beneath level of intervals *L. nordenskioldi*
 - 2nd segment of antennal funicle as long as 1st; elytra with slightly convex at even intervals and more convex at odd intervals; septa between punctures in striae beneath level of intervals *L. nebulosus*

147. *Lepyrus quadrinotatus* Boheman, 1842

Sa-da-ri-ssang-mu-nui-ba-gu-mi (사다리쌍무늬바구미)

Lepyrus quadrinotatus Boheman, 1842 in Schoenherr, 1842: 295.

TL: Irkutsk.

Curculio arcticus Paykull, 1792: 30.

TL: Sweden (Lapland).

Antennae with 2nd segment of funicle a little longer than 1st. Pronotum weakly wrinkled-punc-

tate, with subapical constriction well marked on lateral and ventral surface, postocular lobes well developed. Elytra with intervals weakly wrinkled, 1st stria half as wide as second interval. Femora edentate.

MEASUREMENTS: Body length (excl. rostrum) 10.5–12.0 mm (in Russia).

COLOR: Elytra usually with a median and subapical greyish spots.

BIOLOGICAL NOTES: Weevils were collected on *Salix* and *Alnus* (Egorov et al., 1996).

DISTRIBUTION: Korea, Japan (Hokkaido), Russia (Sakhalin, Far East, Siberia, European part), N. Mongolia, Kazakhstan, Europe.

KOREA: North.

KOREAN RECORDS: Cho, 1934: 77 (Gwanmubong); Kôno and Kim, 1937: 29; ESK/KSAE, 1994: 206; Hong et al., 2000: 238 (North).

REMARKS: The voucher specimens of Kwon and Lee (1986) were misidentified of *L. konoii* Zumpt. Authors could not find any Korean specimen of this species until now. It is not provided the photo of this species on plate.

148. *Lepyrus japonicus* Roelofs, 1873 (Pls. 13-148, 23-148)

No-rang-ssang-mu-nui-ba-gu-mi (노랑쌍무늬바구미)

Lepyrus japonicus Roelofs, 1873: 186.

TL: Japan.

Rostrum with a well developed carina in the middle and two obsolete keels next to it. Head depressed on the front, trimmed with yellowish scales, paler around eyes. Pronotum covered with shiny granules, with a elevated median line and two elongated depression in the middle of base, obliquely toward the center of the disc; transversely depressed before the middle, decorated with two rows of pale yellow scales approaching forward and going to the corners of base, looming with another yellow line above the anterior branches. Scutellum with yellowish-gray scales. Elytra parallel-sided, with subapical callus, separated subacuminate at apex. Punctures in striae shallower towards the end, transversely wrinkled on dorsum forward. 3rd, 5th and 7th intervals somewhat elevated. Yellow line of prothorax continued on elytra, this line on the edge of shoulder and at base broader and whitish, a median yellow ^-shape spot on fourth to sixth intervals and a smaller one on subapical callus. Underside strongly punctured, trimmed grayish yellow scales and large yellow patches on sides of abdominal ventrites. Legs with grayish yellow scales and whitish hairs, tarsi more dense. Femora small dentate, often concealed by erect scales.

MEASUREMENTS: Body length (excl. rostrum) 8.0–10.5 mm.

COLOR: Body black-brown, tarsi lighter, trimmed with yellow scales, antennae, legs and underside more grayish scales.

BIOLOGICAL NOTES: Weevis were usually found on *Salix* spp.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Kyushu), China (Heilongjiang, Jilin, Liaoning, Neimenggu, Beijing, Hebei, Shanxi, Shaanxi, Shandong, Anhui, Jiangsu, Zhejiang, Fujian), Russia (Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Kuriles).

KOREA: Whole country.

KOREAN RECORDS: Faust, 1887a: 28; Okamoto, 1924: 187 (JJ); Anonymous, 1932: 120 (Gwangreung); Csiki, 1934: 7; Zumpt, 1936a: 27; Haku, 1936: 122 (Daegu); Kôno and Kim, 1937: 20; Mochizuki and Tsunekawa, 1937: 89 (Seoul); Cho, 1957: 278; Kôno and Morimoto, 1960: 83; Cho, 1963: 214 (JJ); Cho et al., 1968: 263; ZSK, 1968: 130; Ko, 1969: 267; KSPP, 1972: 199; Kim and Kim, 1973a: 82 (Mujugucheondong); Kim, 1978: 300 (GG, GW, CB, CN, JB, GB, GN, JJ); Chao and Chen, 1980: 107; Morimoto, 1982: 93; Morimoto, 1984: 326; Lee et al., 1985: 416 (JJ); KSPP, 1986: 195; Kwon and Lee, 1986: 78 (Central, South); Kim et al., 1991: 184 (Sokrisan); Park et al., 1993: 184 (Jirisan); Kim, 1993: 394 (JJ); ESK/KSAE, 1994: 206; Paik et al., 1995: 431 (JJ); Egorov et al., 1996: 446; Hong et al., 2000: 239 (Central, South, JJ); Hong and Korotyayev, 2002: 167 (Central); Legalov, 2009e: 196 (North).

SPECIMEN EXAMINED: GG: 2♂♂, 1♀ [Koryo (=Gwangreung): 10.iv.1923]; 1♂ [Koryo (=Gwangreung): ?.vi.1924]; 1♀ (Suwon: 11.vi.1925); 1 ex. (Yangji: 14.v.1970); 1 ex. (Namyang: 3.vi.1990); 1 ex. (Mt. Gwanggyosan: 12.v.1992). GW: 1♀ (Mt. Seolaksan: 16.x.1974); 1 ex. (Uiamdaem: 6.vi.1991); 1 ex. (Chuncheon: 8.vi.1991); 1 ex. (Deokduwon: 2.vi.1992); 1♂ (Inje: 27.v.1993); 1♀ (Gangreung: 27.v.1993); 1 ex. (Myeongju: 27.v.1993); 2♂♂ (Myeongju: 1.vi.1993); 1 ex. (Cheolwon: 17.viii.2000). CB: 1 ex. (Mt. Wolaksan: 23.vi.1985). CN: 1♀ (Mt. Gyeryongsan: 12.v.2000). GB: 1♀, 1 ex. (Andong Univ. Campus: 30.viii.1996). JJ: 1♂ [Saishuto (=Jeju Is.): ?.vi.1919]; 4 exs. (no data).

149. *Lepyrus konoï* Zumpt, 1936 (Pl. 13-149)

Ko-no-ba-gu-mi (코노바구미)

Lepyrus konoï Zumpt, 1936b: 25.

TL: Korea.

Rostrum in basal half rather slender, in apex strongly widened, near apex 1.2 times as wide as at base, and 1.4 times as wide as the narrowest part, 2.2 times as long as width near apex, dorsum transversely moderately convex, with slender, not high medial carina widened near apex, lateral sides distinctly marked by weak fold, between this fold and upper margin of antennal groove in basal half with weak longitudinal depression. Frons 0.84 times as wide as base of rostrum, near eyes slightly convex, near posterior margin with deep pit-like punctation. Eyes moderately convex. Antennae with 1st segment of funicle twice as long as width, 2nd segment as long as 1st and slightly slenderer, 3rd–5th segments approximately as long as wide, strongly rounded, 6th segment distinctly longer than wide, 7th segment considerably larger than 6th. Pronotum 1.24 times as wide as long, sides moderately and before apex weakly constricted. Disc moderately convex, with shallow transverse depression before apical third extending posterior of apical constriction. Median carina rather strongly convex, extending to apical margin and effaced at base. Scutellum convex. Elytra 1.6 times as wide and 3.1 times as long as pronotum, 1.6 times as long as wide. Humeral tubercles weakly convex, sides moderately rounded, disc rather strongly convex transversely. Punctations in striae large and deep, septa between punctations at some places weakly convex. Intervals considerably wider than striae, 2nd and 4th intervals approximately 2.5 times as wide and weakly convex, 3rd and 5th intervals 1–1.5 times as wide as striae. Legs rather long and slender, femora in apical part moderately swollen, fore and middle femora with distinct acute tooth. Tibia straight, only hind tibia weakly curved, all tibia weakly widened to apex. 2nd segment of fore tarsi barely

wider than long (9/8), steep-triangular; 3rd segment 1.5 times as wide as 2nd.

MEASUREMENTS: Body length (excl. rostrum) 10.0–11.0 mm.

COLOR: Derm black and antennae brown. Body covered with long and narrow, moderately dense and white and yellowish scales. Elytra with large spots of dense white scales before middle of 3rd–5th intervals and on apex of 4th–6th intervals. Underside with moderately dense fine pubescence.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: Central and JJ.

KOREAN RECORDS: Zumpt, 1936b: 25; Kôno and Kim, 1937: 21; Cho, 1957: 278; ZSK, 1968: 130; Kwon and Lee, 1986: 78 (Central); ESK/KSAE, 1994: 206; Hong et al., 2000: 240 (Central, JJ).

SPECIMEN EXAMINED: GW: 1 ♀ (Mt. Seolaksan: 29.vii.1982); 1 ♀ (Mt. Seolaksan: 19.vi.1978). JJ: 1 ♀ (Mt. Halrasan: 7.vii.1972).

150. *Lepyrus merkli* Korotyaev, 1994 (Pls. 13-150, 23-150)

Baek-du-san-ssang-mu-nui-ba-gu-mi (백두산쌍무늬바구미)

Lepyrus merkli Korotyaev, 1994b: 879.

TL: Korea- Baekdusan.

Rostrum as in *Lepyrus konoi* Zumpt, but may be stronger and rather evenly curved, dorsal part with transverse depression well distinct in lateral view. Pronotum somewhat strongly rounded on sides, usually widest distally of middle. Apical constriction always distinct. Disc moderately and quite evenly convex, transverse depression in upper 1/3 and at base often almost or completely not developed. Median carina broad, usually not quite reaching base of pronotum. Elytra 1.4–1.5 times as long as wide and 2.9–3.2 times as long as pronotum. Sides sometimes rounded evenly from humeri, sometimes in middle part almost parallel. Disc rather evenly weakly or moderately convex. Striae slender, punctations in striae somewhat elongate. Intervals flat, mat, with distinct sculpturation of very small punctuations and granules. Legs approximately as in *Lepyrus konoi* Zumpt, but tooth on femora barely distinct or absent. 2nd segment of fore tarsi transverse, 1.4 time as wide as long, 3rd segment 1.3 times as wide as 2nd. Aedeagus slightly shorter than in *Lepyrus konoi* Zumpt.

MEASUREMENTS: Body length (excl. rostrum) 10.0–11.0 mm.

COLOR: Body black, antennae brown. Elytra rather densely covered with narrow, almost ciliate scales. Sometimes color of dorsal side uniform, ferruginous brown, sometimes indistinctly finely spotted because of alternation of dense areas of white and brown scales.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea.

KOREA: North.

KOREAN RECORDS: Korotyaev, 1994b: 879 (North); Hong et al., 2000: 240 (North); Hong and Korotyaev, 2002: 167 (North).

SPECIMEN EXAMINED: HN: 1 ex. (Mt. Baekdusan 2,700 m: 28.vi.1988).

151. *Lepyrus nebulosus* Motschulsky, 1860 (Pl. 13-151)

Eol-ruk-sa-da-ri-ssang-mu-nui-ba-gu-mi (얼룩사다리쌍무늬바구미)

Lepyrus nebulosus Motschulsky, 1860: 165.

TL: Amur.

Antennae with 2nd segment of funicle as long as 1st. Pronotum more or less smooth on disk, slightly rugulose punctate, preapical constriction hardly view, with indistinct postocular lobes. Elytra with intervals weakly convex, with slightly convex at even intervals and more convex at odd intervals, septa between punctures in striae beneath level of intervals, 1st stria half as wide as width of 2nd interval. Femora without tooth.

MEASUREMENTS: Body length (excl. rostrum) 10.0 mm.**COLOR:** Body black. Elytra with large round white spots just before middle of 3rd–5th intervals.**BIOLOGICAL NOTES:** Unknown.**DISTRIBUTION:** Korea, Japan (Hokkaido, Honshu, Kyushu), China (Heilongjiang, Jilin, Liaoning, Shandong, Shaanxi, Sichuan), Russia (Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin).**KOREA:** North and Central.**KOREAN RECORDS:** Morimoto, 1984: 327; Kwon and Lee, 1986: 78 (Central); ESK/KSAE, 1994: 206; Egorov et al., 1996: 446; Hong et al., 2000: 240 (Central); Legalov, 2009e: 196 (North).**SPECIMEN EXAMINED:** GG: 1 ♀ (Suwon: 16.vi.1987).**152. *Lepyrus nordenskioldi* Faust, 1885 (Pl. 13-152)**

Min-ssang-mu-nui-ba-gu-mi (민쌍무늬바구미)

Lepyrus nordenskioldi Faust, 1885: 34.

TL: Russia (Chukchi Peninsula).

Antennae with 2nd segment of funicle slightly shorter than 1st. Pronotum more or less smooth on disk, slightly rugulose punctate, preapical constriction hardly view, with indistinct postocular lobes. Elytra with flat intervals, septa between punctures in striae not beneath level of intervals, 1st stria half as wide as width of 2nd interval. Femora without tooth.

MEASUREMENTS: Body length (excl. rostrum) 9.5–12.2 mm (in Russia).**COLOR:** Body black.**BIOLOGICAL NOTES:** Unknown.**DISTRIBUTION:** Korea (?), Japan (Hokkaido, Honshu), NE China (Manchuria), Russia (Magadan Prov., Kamchatka, Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin), Alaska, Canada.**KOREA:** JJ (?).**KOREAN RECORDS:** Kwon and Lee, 1986: 78 (JJ); Kim, 1993: 394 (JJ); ESK/KSAE, 1994: 206; Egorov et al., 1996: 446; Paik et al., 1995: 431 (JJ); Hong et al., 2000: 241 (?JJ).**REMARKS:** Author could not find any specimen of this species until now. The photo on plate was taken from Russian specimen.

Tribe Lithinini Lacordaire, 1863

Subtribe Lithinina Lacordaire, 1863

Genus *Seleuca* Pascoe, 1871b: 173.

Don-ne-ko-cham-ba-gu-mi-sok (돈네코참바구미속)

SYNONYM: *Coptorhamphus* Wollaston, 1873: 463; *Ergias* Pascoe, 1885: 219.

Rostrum separated from forehead by depression. Antennal scrobes oblique, passing beneath the base of rostrum. Fore coxae narrowly separated. Claws simple. Internal sac of penis with two pairs of characteristic appendages.

Type species: *Seleuca amicta* Pascoe, 1871.

SPECIES (1 in Korea), [1 in Japan (2 subspecies)].

DISTRIBUTION: Korea, Japan, China, Malacca, Borneo, Java, New Guinea.

153. *Seleuca chujoi* Voss, 1957 (Pls. 13-153, 23-153)

Don-ne-ko-cham-ba-gu-mi (돈네코참바구미) (신칭)

Seleuca chujoi Voss, 1957: 34.

TL: Japan- Kurosan.

Head flat and spherical, with finer and denser punctures; forehead same level as rostrum at base. Eyes transverse-oval, leveled. Rostrum not longer than pronotum, separated from the head by a sharp transverse furrow, with fine dorsal median keel, with an stronger longitudinal groove in apical third of rostrum. Antennal scrobes almost a straight line, toward the lower basal corner of rostrum. Antennae inserted before the apical third of rostrum. 1st segment of funicle not quite 1.5 times as long as wide; 2nd segment little shorter and the remaining segments transverse, club robust, oval. Pronotum almost square, slightly rounded sides in male and slightly longer than wide in female, the base slightly rounded and not straighted forwardly, without an unpunctured bare depression. Scutellum rather small, triangular. Elytra not quite twice as long as on the broad shoulders (3.2:1.75), wider than the pronotum on the shoulders, almost parallel-sided from shoulders to middle, then strongly rounded, subapical callus stronger. Striae strong, square punctures; intervals only half as wide as striae, finely punctured. Hindwings short, not functional. Underside finely and densely punctured, somewhat less densely punctured in 2nd abdominal ventrite. 2nd ventrite slightly longer than 1st behind coxa and as long as the 3rd and 4th together. Femora with strong sharp tooth. Tibiae bisinuate inner side, slightly curved outer side. 2nd tarsal segment hardly as long as wide. Claws simple. Internal sac of penis with two pairs of characteristic appendages.

MEASUREMENTS: Body length (excl. rostrum) 4.0–4.5 mm.

COLOR: Derm reddish brown, tarsi somewhat brighter. Underside covered with little tight-fitting short yellowish hairs.

BIOLOGICAL NOTES: This species is commonly found on the dead or a little rotten trunk of the various broadleaved trees, and also collected by sifting the litter in Japan (Morimoto, 1982).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima).

KOREA: JJ.

SPECIMEN EXAMINED: JJ: 1 ex. (Donneko: 27.ix.2000); 1 ex. (Donneko: 9.vi.2004).

REMARKS: This species is first recorded from Korea in this study.

Tribe Mecysolobini Reitter, 1913

REFERENCE: Morimoto and Kojima (2007).

Key to the genus of tribe Mecysolobini

1. Metasternum between meso- and metacoxae much longer than mesocoxa; 5th tarsal segment projecting more than half its length out of 3rd segment in general; body more or less parallel-sided; 7th segment of antennal funicle narrower than 1st segment of club and more or less separated from club; procoxae separated; metasternum plane towards each hind coxa; pronotum granulate; prosternum between procoxae mostly narrower than mesosternal process *Merus*
 - Metasternum between meso- and metacoxae about as long as mesocoxa, more or less bulged 2
2. 7th segment of antennal funicle narrower than 1st segment of club and separate from club; mesosternal process short and very wide, about as great as the length of metasternum between meso- and metacoxae, almost as wide as prosternal process; femora almost of the same width throughout; body elliptical; elytra without scaly definite markings *Neomecyslobus*
 - 7th segment of antennal funicle almost as wide as 1st segment of club and continuous with club; subapical tooth of fore tibiae conspicuous, sharp triangular; procoxae lying in the middle of prosternum between submarginal sulcus and basal margin; body elliptic *Sternuchopsis*

Genus *Merus* Gistel, 1857: 606.

Tong-ba-gu-mi-sok (통바구미속)

SYNONYM: *Mecysolobus* Reitter, 1905: 248.

Similar to genus *Lixus*, but fore legs longer than middle and especially hind ones, and femora with tooth. Body narrow, roller-shaped, the widest part at shoulders. Frons flat. Rostrum almost not separated from frons in lateral. Prementum without bristle. Elytra slightly tapered toward apex, rounded together. Fore and middle coxae separated narrowly, prosternum without median foveae. Metasternum much longer than diameter of middle coxa. 1st sternite of abdomen behind coxa as long as 2nd. Tibiae uncinatae, the uncus arisen from the lower end of the inner carina.

Type species: *Lixus fasciatus* Redtenbacher, 1848.

SPECIES (4 in Korea), (4 in Japan), (1 in Far Eastern Russia).

DISTRIBUTION: Korea, Japan, China, South of the Russian Far East, Taiwan to New Guinea, India, Sri Lanka, Afrotropical, Madagascar.

Subgenus *Merus* Gistel, 1857

Key to the species of subgenus *Merus*

1. Elytra colored entirely or predominantly dark red or reddish brown on background 2
 - Elytra colored black on background, covered sparsely with yellowish hairs and indistinctly bright hairy band *M. flavosignatus*
2. Elytra at base dark or black 3
 - Elytra dark red on background, with an oblique band in the middle and a straight grayish hairy band in apical 1/3, pronotum with a narrow median hair line and very dense grayish hairy pattern at sides *M. nipponicus*
3. Body smaller; 3rd and 5th intervals of elytra distinctly carinate, higher than other intervals *M. piceus*
 - Body larger; the alternate intervals a little higher than the others *M. erro*

154. *Merus (Merus) erro* (Pascoe, 1871) (Pls. 13-154, 23-154)

Ot-na-mu-tong-ba-gu-mi (옫나무통바구미)

Alcides erro Pascoe, 1871b: 182.

TL: China.

Body cylindrical. Rostrum as long as pronotum, scattered coarse punctures. Frons with deep fovea. Antennae funicle 7-segmented; 1st segment as long as 2nd, 7th segment funnel formed and adhere to club. Pronotum broader than long, with dense granules. Scutellum broader than long, rounded at apex. Elytra a little broader than pronotum, intervals narrower than striae, odd intervals a little higher than even ones. Underside of body and legs scattered rugose punctures, sparse scales. Fore femora with tooth. Tibiae swollen at apex of internal margin, fore tibiae with bluntly tooth in the middle, middle and hind tibiae very slightly swollen.

MEASUREMENTS: Body length (excl. rostrum) 6.5–7.0 mm.

COLOR: Derm rusty red. Rostrum black. Antennae reddish brown. Pronotum black, covered with finger-like forked scales and whitish powder laterally. Elytra colored entirely or predominantly dark red or reddish brown on background, dark at base. Propleuron, mesopleuron and sternum with grayish finger-like forked scales.

BIOLOGICAL NOTES: Adults laid eggs on young branch of *Rhus succedanea* and *Rh. chinensis* in Japan

(Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima), China (Anhui, Zhejiang, Jiangxi, Fujian, Guangdong, Guangxi, Sichuan, Yunnan), Taiwan.

KOREA: Central and South.

KOREAN RECORDS: Morimoto, 1984: 288; Kwon and Lee, 1986: 75 (Central); ESK/KSAE, 1994: 205; Kim, 1995b: 143 (Byeonsanbando); Hong et al., 2000: 242 (Central).

SPECIMEN EXAMINED: GG: 1 ♀ (Mt. Taehwasan: 23.v.1982). CB: 1 ex. (Okcheon: 15.v.1998). CN: 1 ♂ (Geumgang: 15.v.1998); 1 ♂ 1 ♀ (Dangsan Songsan-ri Ugang-myeon Dangjin: 26.v.2006); 1 ex. (Gahak-ri Sangak-myeon Dangjin: 19.v.2006). JB: 1 ♀ (Tp. Seonunsa, Gochang: 25.vi.1991).

155. *Merus (Merus) flavosignatus* (Roelofs, 1875) (Pls. 13-155, 23-155)

Eong-geong-kwi-tong-ba-gu-mi (영경귀통바구미)

Alcides flavosignatus Roelofs, 1875: 151.

TL: Japan- Kobe.

Alcides scenicus Faust, 1894b: 256.

Alcides lixoides Reitter, 1905: 248.

Rostrum slightly curved, as long as head and prothorax together; covered with coarse and confluent punctures at base, more regularly punctuated on anterior half, with a smooth space between antennal insertions. Head a little depressed between eyes, irregularly punctured, covered with denser yellow hairs around eyes. Antenna inserted in front of middle part of rostrum in male, but on middle part in female. Pronotum shorter than wide, strongly lobed at base, slightly rounded at sides, rather abruptly narrowed in front, covered with irregular small granules, trimmed with yellow hairs and whitish scales splitted at base with 3 or 4 parts, forming a median line and another oblique lines from shoulders to eyes. Scutellum very small. Elytra scarcely wider than prothorax, parallel-sided, elongated, rounded apically. Striae deep, with elongate punctures. Intervals rough, covered with same hairs as pronotum, with a bright oblique line from shoulder to suture behind the middle, another oblique line also from lateral margin to suture on the posterior declivity and two lines forming a V-shaped on apex. Legs moderate, roughly punctured and covered with same yellow hairs as underside. Fore coxae slightly separated. Femora with a broad tooth at base. Tibiae slightly expanded on inner edge. Claws separated.

MEASUREMENTS: Body length (excl. rostrum) 7.0–10.0 mm. Body elongated, 2.5 times as long as its width.

COLOR: Body pitch-colored, lighter on antennal funicle, tarsal claws reddish brown, covered with yellow ochraceous hairs.

BIOLOGICAL NOTES: Adults laid eggs on the stalk of *Boehmeria longispica* and collected on *Cirsium* spp. in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), SE China (Zhejiang, Fujian, Guangdong, Sichuan, Yunnan), Russia (Primorskii Terr.), Burma, Indochina.

KOREA: North, Central and South.

KOREAN RECORDS: Egorov, 1976a: 838 (North); Morimoto, 1984: 288; Kwon and Lee, 1986: 75 (Cent-

ral); Egorov et al., 1996: 439 (North); ESK/KSAE, 1994: 205; Hong et al., 2000: 242 (Central, South).

SPECIMEN EXAMINED: GW: 1 ♀ (Gangwon Univ. Campus: 24.v.1992); 1 ♂ (Inje: 27.v.1993); 1 ♂ (Chuncheon: 12.vi.1996); 1 ♀ (Gangchon: 26.v.?) ; 1 ♀ (Hoengseong: ?.vi.2006). JB: 1 ♂ (Naejangsan: 10.vi.1975); 1 ♂, 1 ♀ (Naejang-dong Jeongeub: 13.v.2000).

156. *Merus (Merus) nipponicus* (Kôno, 1930) (Pl. 13-156)

Su-guk-tong-ba-gu-mi (수국통바구미)

Alcides nipponicus Kôno, 1930b: 139.

TL: Japan- Chichibu.

Mecyslobus [sic] *kuatunensis* Voss, 1958: 40.

MEASUREMENTS: Body length (excl. rostrum) 7.2 mm. Body cylindrical, elongate.

COLOR: Reddish black; elytra, tibiae and basal half of femora reddish. Pronotum narrow strip-like in the middle and whitish hairs at sides. Elytra with a oblique band in the middle and with a transverse hairy band in the basal 1/3, oblique band starts at the suture on the anterior third and connects to the end of transverse band. Underside sparsely brown hairs. Head densely punctured, frons a little depressed in the middle. Rostrum nearly as long as fore femur, coarsely and very densely punctured, between antennal insertions with a short longitudinal line. Antenna inserted before middle of rostrum, 1st segment of funicle distinctly longer than 2nd, 2nd segment as long as 2 following segments together, 2 basal segments of club nearly same length. Pronotum strongly constricted just behind anterior margin, strongly granulated on the upper side. Elytra parallel-sided, striae with strongly punctured behind the transverse band. Intervals slightly arched, scatteredly punctured. Underside not densely and coarsely punctured. Metasternum transversely wrinkly granulated. 1st abdominal ventrite slightly depressed on entire length in the middle. All femora toothed. Hind femur over the posterior margin of 3rd abdominal ventrite. Fore tibia with blunt tooth in the middle.

BIOLOGICAL NOTES: Adults laid eggs on the stalk of *Hydrangea* spp. in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), China (Zhejiang, Fujian, Guangdong, Sichuan).

KOREA: South.

KOREAN RECORDS: Morimoto, 1984: 288; Kwon and Lee, 1986: 76 (South); ESK/KSAE, 1994: 205; Hong et al., 2000: 243 (South).

SPECIMEN EXAMINED: JN: 1 ♀ (Jindo: 19.vii.1984).

157. *Merus (Merus) saitoi* (Kôno, 1937) (Pls. 13-157, 23-157)

Sa-i-to-ba-gu-mi (사이토바구미)

Alcides saitoi Kôno, 1937: 49.

TL: Korea- Suigen (=Suwon).

Vertex fine, but forehead roughly and densely punctured, frons weakly depressed in the middle. Rostrum much longer than head and pronotum together, slightly curved, roughly and quite densely punctured, with a smooth median carina at the posterior half. Antennae inserted behind the middle of rostrum, 1st segment of funicle nearly as long as the following 2 segments together. Pronotum much wider than long, coarsely and densely granulated, strongly bisinuate at base. Scutellum small. Elytra parallel-sided, wider than pronotum at base, Stiraе regularly punctured, with their punctures larger in the black parts than in the red parts. Intervals wrinkly punctured and irregularly granulated on the black parts. All femora toothed, hind femur short. Fore and middle tibiae curved.

MEASUREMENTS: Body length (excl. rostrum) 5.5–6.0 mm.

COLOR: Derm black, underside and partly legs reddish, elytra with a lateral transverse band before the middle (not overwhelming to 3rd stria) and blood-red at the posterior 1/3. Body covered sparsely with hairs, quite dense on underside, without scaly pattern.

BIOLOGICAL NOTES: Adults feed on the sprout of *Quercus* spp. and *Castanea* spp. on May to June in Korea (Saito, 1941).

DISTRIBUTION: Korea.

KOREA: Central.

KOREAN RECORDS: Kôno, 1937: 49 (Suwon); Saito, 1941: 52 (Biology); Cho, 1955: 167; Cho, 1957: 280; ZSK, 1968: 131; Ko, 1969: 264; KSPP, 1972: 198; KSPP, 1986: 195; Kwon and Lee, 1986: 75 (Central); ESK/KSAE, 1994: 205; Hong et al., 2000: 243, 244 (Central).

SPECIMEN EXAMINED: GG: 1 ♀ (Mt. Gwanggyosan: 3.v.1959); 1 ex. (Gwangreung: 21.v.1982); 1 ♀ (Yongin: 4.vi.1983); 1 ♂ (Yunggeonreung Suwon: 14.vi.2000); 1 ♀ (Mt. Gwanggyosan: 15.v.2006).

REMARKS: We could not observed a holotype of *Alcides saitoi* Kôno collected from Suigen, on August 1930 by K. Saito, but have observed with photos on dorsal and lateral views of a specimen preserved in museum of Kyushu University in Japan which labeled with Suigen, May 5, 1931 and determined to *Sternuchopsis saitoi* Kôno. And, all specimens which were determined to *Merus piceus* (Roelofs) by Hong et al. (2000) and collected recently, are redetermined to *Sternuchopsis (Alcidodes) saitoi* (Kôno, 1937) and their morphological characters agree to original descriptions of *Alcides saitoi* Kôno, 1937. Consequently, we believe that *Mecyslobus* [sic] *piecus* [sic] reported by Bae and Moon (1993) would have been misidentified. Any specimen of *Merus piceus* (Roelofs) has not collected from the Korean fauna until now.

Genus *Neomecyslobus* Pajni and Dhir, 1987: 31.

Tti-tong-ba-gu-mi-sok (띠통바구미속)

Similar to genus *Larinus*, but fore legs longer than middle and especially hind ones, femora with tooth. Body wide and short oval, with coarse rugulous-granules. Rostrum separated from frons with shallow decline in lateral, longer than pronotum, thick, almost straight. Prementum with 2 pairs of bristles. Elytra with 2 blackish bands, with sparsely short hairs. Fore and middle coxae separated widely, prosternum with hair-like median foveae at the front. Metasternum not longer than diameter of middle coxa. 1st sternite of abdomen behind coxa slightly longer than 2nd.

Type species: *Alcidodes loratus* Marshall, 1922.

SPECIES (1 in Korea), (2 in Japan), (1 in Far Eastern Russia).

DISTRIBUTION: Korea, Japan, Russian Far East, Burma, India.

Subgenus *Nipponomerus* Morimoto and Kojima, 2007: 229.

Type species: *Neomecyslobus (Nipponomerus) masatakai* Morimoto and Kojima, 2007.

158. *Neomecyslobus (Nipponomerus) nigrofasciata* (Kôno, 1928) (Pls. 14-158, 23-158)

Geom-eun-tti-tong-ba-gu-mi (검은띠통바구미) (신칭)

Alcides nigrofasciata Kôno, 1928: 175.

TL: Japan- Hokkaido.

Alcidodes korotyaevi Egorov, 1976b: 39.

TL: Russia- Primorskii.

Head quite strongly and densely punctured; Frons between eyes a little transversely depressed. Eyes slightly ovoid. Rostrum nearly as long as head and pronotum together, with a fine carina at base, posterior part strong and very dense, but anterior part fine and not very densely punctured. Antennae inserted into the middle of rostrum, 1st and 2nd segments of funicle elongate, 3rd, 4th and 7th segments as long as wide, 5th segment wider than long, club compacted. Pronotum granulate, densely hairy at anterior margin, ocular lobes clearly, shortly ciliate. Long and whitish scales splitted to base with 3 or 4 parts, formed pattern at anterior third of pronotum (behind postocular lobes) and 2 weak stripes from humeral tubercles toward head. Elytra 1.5 time as long as wide, punctures on striae deeply sculptured, intervals wider than striae, finely and densely granulate, 2nd and 4th intervals higher than the others, with fine, not dense hairs, with large dark-reddish spots and small spots at basal half near apex. Underside strongly and densely punctured, finely and densely hairy. Legs strongly and densely punctured, sparsely hairy. Fore and middle legs elongate, hind leg short. Each femur with a fine sharp tooth.

MEASUREMENTS: Body length (excl. rostrum) 5.5–6.0 mm.

COLOR: Derm reddish, inside of each leg, tarsi and 2 transverse bands of elytra black, with greyish hairs. Body and elytra without scaly pattern.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), Russia (Primorskii Terr.).

KOREA: Central.

SPECIMEN EXAMINED: GW: 1 ♀ (Jinae-ri Dong-myeon Chuncheon: 1–8.viii.2005).

REMARKS: This species is first recorded from Korea in this study.

Genus *Sternuchopsis* Heller, 1918: 212.

Bae-ja-ba-gu-mi-sok (배자바구미속)

Body robust and elliptic. Frons between eyes deeply depressed. 7th segment of antennal funicle almost as wide as 1st segment of club and continuous with club. Elytra in basal half very dense white hairs, with shoulders strongly expanded laterally. Procoxae lying in the middle of prosternum between submarginal sulcus and basal margin. Metasternum between meso- and metacoxae about as long as mesocoxa, more or less bulged. Tibiae mucronate and further uncinata, fore tibiae with conspicuous sharp triangular subapical tooth.

Type species: *Alcides pectoralis* Boheman, 1836.

SPECIES (1 in Korea, Japan and Russian Far East).

DISTRIBUTION: Korea, Japan, China, Taiwan, Philippines, Vietnam, Thailand, Burma, Siberia, Kazakhstan, C Asia.

Subgenus *Mesalcidodes* Voss, 1958: 41.

Type species: *Alcides trifidus* Pascoe, 1870.

159. *Sternuchopsis* (*Mesalcidodes*) *trifidus* (Pascoe, 1870) (Pls. 14-159, 24-159)

Bae-ja-ba-gu-mi (배자바구미)

Alcides trifidus Pascoe, 1870: 460.

TL: N. China (Manchuria), Japan.

Body robust and elliptic. Frons between eyes deeply depressed. 7th segment of antennal funicle almost as wide as 1st segment of club and continuous with club. Elytra in basal half very dense white hairs, with shoulders strongly expanded laterally. Procoxae lying in the middle of prosternum between submarginal sulcus and basal margin. Metasternum between meso- and metacoxae about as long as mesocoxa, more or less bulged. Femora with acute tooth on the underside. Tibiae mucronate and further uncinata, fore tibiae with conspicuous sharp triangular subapical tooth.

MEASUREMENTS: Body length (excl. rostrum) 8.5–10.5 mm.

COLOR: Derm black. Sides of the pronotum, hind half of the elytra except the apex and underside of the thorax covered densely with feather-like scales.

BIOLOGICAL NOTES: Adults laid eggs on vine of *Pueraria thunbergiana*.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), China (Manchuria, Shandong, Shaanxi, Anhui, Jiangsu, Fujian, Jiangxi, Guandong, Guangxi, Sichuan), Taiwan.

KOREA: Whole country.

KOREAN RECORDS: Kamijo, 1933: 55 (Bulguksa); Klima, 1934: 44; Kôno and Kim, 1937: 25 (Myohyangsan); Mochizuki and Tsunekawa, 1937: 88 (Soyosan); Mochizuki and Masui, 1939: 71 (Soyo-

san); Cho, 1957: 280; ZSK, 1968: 131; Hyun and Woo, 1969: 191 (Jirisan Piagol); Ko, 1969: 267; KSPP, 1972: 199; Kim et al., 1974: 228 (Hwacheon, Yanggu); Kim et al., 1976: 105 (Wonju Sinrim); Kim and Nam, 1977: 133 (Seonamsa); Kim, 1978: 296 (PB, GG, GW, CB, CN, JB, JN, GB, GN); Yoon and Nam, 1979: 148 (CN- Chilgabsan, Gyeryongsan); Kim, 1980: 347 (Namyangju); Nam and Kim, 1982: 130 (Jirisan Piagol); Chang and Choe, 1982: 528 (Gyeryongsan); Morimoto, 1984: 288; Kim and Nam, 1984: 104 (Baekunsan); Kim et al., 1985: 106 (Juwangsan); KSPP, 1986: 195; Kwon and Lee, 1986: 75 (Central, South); Kim et al., 1991: 183 (Sokrisan); ESK/KSAE, 1994: 205; Kim, 1995a: 174 (Sobaeksan); Kim, 1995b: 143 (Byeonsanbando); Hong et al., 2000: 244 (North, Central, South, JJ).

SPECIMEN EXAMINED: HN: 1 ♀ [Shinkori (=Hyesan Sinheungri): 25.vii.1924]. GG: 2 ♂♂, 3 ♀♀ [Koryo (=Gwangreung): 1.vi.1924]; 1 ex. (Mt. Surisan: 7.vi.1968); 1 ♂ (Suwon: 19.iv.1983); 1 ♂ (Suwon: 5.i.1984); 1 ♂, 1 ♀ (Mt. Surisan: 27.v.1984); 1 ♀ (Mt. Gwanggyosan: 10.v.1986); 1 ex. (Gwangreung: 14.vi.1986); 1 ♀ (Yongin: 21.vi.1986); 1 ♀ (Mt. Gwanggyosan: 1.v.1987); 1 ♂ (Suwon: 3.vii.1989); 1 ♀ (Suwon: 13.vi.1991); 1 ♀ (Suwon: 25.vi.1991); 1 ♀ (Suwon: 9.vii.1991); 1 ♀ (Namyang: 20.v.1993); 1 ♀ (Mt. Yeogisan: 15.vi.1993); 1 ex. (Namhansanseong: 28.viii.1996); 2 ♂♂, 1 ♀ (Mt. Surisan Banwol: 24.iv.1998); 1 ♀ (Suwon: 20.vi.1999); 1 ex. (Giheung Yongin: 12.vii.2000); 1 ex. (Anyang arboretum: ?.vi.2002); 1 ♀ (NPQS Suwon: 21.iii.2005). GW: 1 ex. (Chuncheon: 28.v.1985); 1 ex. (Mt. Myeongjisan: 23.v.1986); 1 ex. (Soyangdaem: 4.vi.1987); 1 ex. (Mt. Palbongsan: 7.vi.1987); 1 ex. (Soyangdaem: 21.vi.1987); 1 ex. (Soyangdaem: 29.vi.1987); 1 ex. (Chuncheon: 21.v.1989); 1 ex. (Chuncheon: 30.v.1992); 1 ♂ (Yeongwol: 24.v.1993); 2 exs. (Mt. Gaebangsan: 4.x.2002). CB: 1 ♂, 1 ♀ (Goesan: 23.v.1993); 1 ♀ (Saenggeuk-myeon Eumseong: 15.v.1998). CN: 1 ♂ (Gyeryongsan: 11.vii.1995); 1 ex. (Mt. Sanjesan Nae3-ri Iwon-myeon Taean: 20.v.2006). JN: 1 ex. (Tp. Hwaeomsa: 26.viii.1970); 1 ex. (Piagol: 22.vii.1971); 1 ♂ (Jindo: 24.viii.1975); 1 ex. (Jindo: 3.v.1988); 1 ex. (Mt. Jukyeobsan: 21.v.1994). GB: 1 ♀ (Andong: 10.v.1988); 1 ♂ (Gunwi: 3.vi.1997); 1 ♂ (Mojeon-dong Mungyeong: 29.vi.2008). GN: 1 ♀ [Daigenji (=Jirisan Daewonsa): 1.viii.1924]; 1 ♀ (Upo Changryeong: 21.iv.1998). JJ: 1 ♂ (Jeju: 10.ix.1974); 1 ♀ (Mt. Halrasan: 24.viii.1994); 1 ♂ (Eorimok: 14.x.1996); 1 ♀ (Jeju Univ: 27.viii.1997).

Tribe Pissodini Gistel, 1856

Key to the subtribe of tribe Pissodini

1. Abdominal process between hind coxae subtruncate, nearly as broad as coxa; rostrum a little shorter than pronotum; eyes closely approximated to or partly concealed by the anterior margin of pronotum Cotasterominina
- Abdominal process much narrower than coxa; rostrum slenderer, cylindrical; temples of head as broad as the diameter of eye Pissodina

Subtribe Pissodina Gistel, 1856

Genus *Pissodes* Germar, 1817: 340.

No-rang-jeom-ba-gu-mi-sok (노랑점바구미속)

Body with sparsely, more or less elongated, usually hair-like scales, tightly decumbent (above

eyes be raised) and formed separating spots or stripes on almost naked background, erected scales or bristles on body and legs absent. Pronotum and elytra without tubercle (not considered preapical tubercles of elytra). 1st segment of antennal club with rarely pubescence comparatively, more or less shining. Prosternum with shallowly extended emagination and long cilia. Anal sternite of abdomen without erected bristle in apical margin, with raised pubescence. Femora without tooth. Apical fringed bristles on tibiae reduced, oblique. Hind tibiae straight.

Type species: *Curculio pini* Linnaeus, 1758.

SPECIES Palearctic 16 (3 in Korea), (6 in Japan), (7 in China), (11 in Russian Far East).

DISTRIBUTION: Holarctic, Haiti, Dominican R., Uruguay (introduced), Brazil (introduced).

REFERENCE: Lu et al. (2007).

Subgenus *Pissodes* Germar, 1817

Key to the species of subgenus *Pissodes*

1. 3rd and 5th intervals of elytra distinctly higher than the others 2
 - 3rd and 5th intervals of elytra only slightly higher than the others; dark red to black; elytra with 2 yellowish transvers band and with some indistinct yellowish spots before apex *P. pini*
2. Reddish; elytra with 2 transverse bands - the anterior band brown, the posterior band predominantly whitish, and brown on 6th interval *P. nitidus*
 - Dark brown; elytra with 3 yellowish transverse bands - the anterior band sometimes reduced *P. obscurus*

160. *Pissodes (Pissodes) nitidus* Roelofs, 1874 (Pls. 14-160, 24-160)

No-rang-mu-nui-sol-ba-gu-mi (노랑무늬솔바구미)

Pissodes nitidus Roelofs, 1874: 121.

TL: Japan.

MEASUREMENTS: Body length (excl. rostrum) 6.0–7.5 mm. Body elongate.

COLOR: Derm reddish, shining, darker on apex of rostrum, antennae and tarsi. Rostrum punctuated with a depression between eyes. Pronotum longer than wide, a slightly enlarged on the sides, covered with a strong and dense punctuation, its median keel elevated and covered with white hairy two lateral lines and four points in the median transverse line. Scutellum densely covered with yellowish white hairs. Elytra elongate, subparallel-sided, with a little prominent and rectangular shoulder, subapical callus sufficiently strong, punctures on striae well marked, 3rd and 5th intervals elevated, a transverse white band but brown on 6th interval on the apical third interrupted in the middle, another transverse yellow band before the middle. Underside and legs trimmed with white scales, forming a ring to apex of femur.

BIOLOGICAL NOTES: This species is a pest of *Pinus* spp. and overwintered with adult and oviposited

in spring (Saito, 1941).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), China (Heilongjiang, Liaoning, Henan).

KOREA: North, Central and South.

KOREAN RECORDS: Haku, 1936: 122 (Daegu); Kôno and Kim, 1937: 22 (Jaeryeong); Saito, 1941: 52 (Biology); Cho, 1955: 167; Cho, 1957: 278; Kim, 1961: 24 (Jirisan Byeoksongsu); ZSK, 1968: 130; Ko, 1969: 268; KSPP, 1972: 200; Egorov, 1976a: 833; Morimoto, 1984: 322; KSPP, 1986: 195; Kwon and Lee, 1986: 76 (Central, South); FRI, 1991: 99 (biology); Park et al., 1993: 184 (Jirisan); ESK/KSAE, 1994: 205; Hong et al., 2000: 246 (Central, South); Hong and Korotyaev, 2002: 167 (North).

SPECIMEN EXAMINED: GG: 1 ex. (Suwon: 16.vii.1928); 1 ex. (Suwon: 1.iv.1969); 2 exs. (Suwon: 18.vii.1977); 1 ex. (Suwon: 4.vi.1982); 1 ex. (Suwon: 8.iv.1983); 1 ex. (Suwon: 29.iv.1986); 1 ♂ (Mt. Gwanggyosan: 1.v.1987); 2 exs. (Suwon: 22.iii.1990). GW: 1 ex. (Chuncheon: 4.x.1983). CB: 31 exs. (Geomseung-ri Goesan: 28.vi.2004).

161. *Pissodes (Pissodes) obscurus* Roelofs, 1874 (Pls. 14-161, 24-161)

No-rang-jeom-ba-gu-mi (노랑점바구미)

Pissodes obscurus Roelofs, 1874: 122.

TL: Japan.

Rostrum punctuated at base, nearly smoothed toward apex. Head punctured, with an elongated depression between eyes. Pronotum as long as broad, almost parallel-sided, slightly narrowed in front, coarsely and regularly punctured, weakly carinate, with a yellow spot on the latero-middle. Scutellum densely covered with yellow scales. Elytra relatively short, not wider than prothorax at shoulders, striae well marked by large square punctures, intervals rough, 3rd, 5th and 7th intervals a little elevated, droplets and two transverse bands formed by yellow scales. Underside strongly punctured, covered same yellow hairs as legs.

MEASUREMENTS: Body length (excl. rostrum) 6.0–8.0 mm.

COLOR: Derm dark brown, base of antennae reddish.

BIOLOGICAL NOTES: The adult oviposited on the weaken trees of *Pinus* spp. in autumn.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), Russia (Khabarovskii and Primorskii Terr.).

KOREA: Central and South including JJ.

KOREAN RECORDS: Ko, 1969: 269; KSPP, 1972: 200; KSPP, 1986: 196; Kwon and Lee, 1986: 76 (Central); ESK/KSAE, 1994: 205; Hong et al., 2000: 246 (Central, JJ).

SPECIMEN EXAMINED: GG: 1 ♂, 1 ex. (Uidong: 13.viii.1982). GW: 1 ex. (Mt. Myeongseongsan: 16.vi.1999). GB: 1 ex. (Namsa-ri Hyeongok-myeon, Gyeongju: 30.vi–14.vii.2005). GN: 3 exs. (Dabcheon-ri Ibanseong-myeon Jinju: 12–26.ix.2005). JJ: 1 ♂ (Ilchulbong: 30.ix.1978); 1 ex. (Udo: 22.v.1982).

162. *Pissodes (Pissodes) pini* (Linnaeus, 1758) (Pl. 14-162)

Bun-bi-na-mu-no-rang-jeom-ba-gu-mi (분비나무노랑점바구미)

Curculio pini Linnaeus, 1758: 340.

TL: Europe.

Pissodes cembrae Motschulsky, 1860: 158.*Pissodes japonicus* Nijima, 1913: 10.

Antennae attached just forward of the middle of rostrum. Pronotum with 4 yellow spots. Elytra with 3rd and 5th intervals only slightly higher than the others and with 2 yellowish transverse bands with some indistinct yellowish spots before apex.

MEASUREMENTS: Body length (excl. rostrum) 8.0 mm.**COLOR:** Derm dark brown or reddish. Elytra dark red to black.

BIOLOGICAL NOTES: This species infests only trees weakened which are mainly the pine, sporadically the spruce and larch. The larvae feed on the weaken trees of *Abies sachalinensis* in Japan (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu), China (Heilongjiang, Liaoning), Russia (Amur Prov., Khabarovsk and Primorskii Terr., Yakutia, Chita and Irkutsk Prov., Altai), Caucasus, Europe.

KOREA: Central and JJ (?).

KOREAN RECORDS: Kôno, 1938: 144; Kim, 1984: 207 (Sujangwon); Kim et al., 1991: 184 (Sokrisan); Hong et al., 2000: 245 (Central, ?JJ).

SPECIMEN EXAMINED: GW 1 ♀ (Hoengseong, ?.viii.2006).**Subtribe Cotasterominina Morimoto, 1962****Genus *Cotasteromimus* Chûjô and Voss, 1960: 10.**

Heuk-bit-ba-gu-mi-sok (흙빛바구미속)

Head spherical, separated from the rostrum by a transverse constriction. Eyes flat, transverse, tapering downward. Rostrum length as pronotum, moderately strong, bent down at base, roughly punctured. Antennae inserted before the middle of rostrum, antennal scrobes slanted downward to the lower of eyes. Antennal funicle 7-segmented. Pronotum about as long as wide, weakly rounded laterally, with postocular lobes. Scutellum absent. Fore coxae closed together, anterior margin of prosternum as long as diameter of coxa. Metasternum a little longer than diameter of middle coxa. 1st and 2nd ventrites of abdomen indistinctly separated, 3rd and 4th ventrites short, anal ventrite as long as these two ventrites together. Femora edentate. 3rd tarsal segment bilobed. Claws free.

Type species: *Cotasteromimus morimotoi* Chujo and Voss, 1960.**SPECIES** (1 in Korea), (2 in Japan).**DISTRIBUTION:** Korea, Japan.

163. *Cotasteromimus squamiger* Morimoto and Miyakawa, 1985
(Pls. 14-163, 24-163)

Heulk-bit-ba-gu-mi (흑빛바구미)

Cotasteromimus squamiger Morimoto and Miyakawa, 1985: 48.

TL: Japan- Izu Is., Kyushu, Tsushima, Ryukyu; Taiwan.

Head with dense punctures, each puncture with a small scale, forehead between eyes a little narrower than the base of rostrum, transversely depressed for separating rostrum from head, without median fovea. Rostrum parallel-sided, weakly curved, with five carinae including dorsal edges of scrobes between the base and antennal sockets, interspaces between carinae with suberect scales, apical area visibly bare, with a few minute hairs. Antennae inserted in the apical fourth of rostrum, scape clavate, with a few branched scales, funicle with first segment clavate, a little longer than three following combined, second to seventh transverse, successively broader, club oval compact, first segment longer than the rest. Pronotum slightly wider than long, broadest at apical third, then weakly and straightly narrowed posteriorly and shortly narrowed anteriorly to subapical constriction in a curve, disc with dense shallow punctures, being sparser at apical margin, grayish scales a little denser at hind angles, and sparse at lateral and basal margins and median area, anterior area with bent longer scales. Scutellum absent. Elytra $5/3$ times as long as wide, parallel-sided from humeri to the middle, then evenly narrowed in a curve to the apex, striae narrower than intervals, with the septa on the same plane of intervals before the middle, intervals flat, with a row of grayish scales in a variable distance on dorsal intervals and more regularly on lateral intervals, scales along side margins longer and bent posteriorly. Underside with dense shallow punctures, each puncture with a small scale. Metasternum and fifth ventrite flat longitudinally in the middle. Femora clavate, unarmed, not sulcate beneath, punctate, scaled. Tibiae punctate, which confluent longitudinally, fore tibiae slightly incurved. Tarsi with third segment much wider than second, deeply bilobed, claws simple, free. Penis blunt triangular at apex.

Female: Antennae inserted in the apical third of rostrum, first and second ventrites slightly convex longitudinally.

MEASUREMENTS: Body length (excl. rostrum) 2.2 mm.

COLOR: Derm rusty brown, with grayish scales, which forming following indefinite patches; a pair of small patches at the middle of elytra on second and third intervals, a pair of short stripes on the base of third intervals, and often with a pair of small patches on fifth intervals just before the middle.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: JJ.

KOREAN RECORDS: Hong et al., 2000: 247 (JJ).

SPECIMEN EXAMINED: JJ: 1 ex. (Seogwipo Seopseom: 30.vii.1993); 2 exs. (Donneko: 27.ix.2000); 2 exs. (Donneko: 9.vi.2004).

Tribe Trachodini Gistel, 1848

Key to the genus of tribe Trachodini

1. 6th–7th segments of antennal funicle slightly wider than long; hind femora almost as large as or smaller than fore pair; middle and hind femora with teeth smaller than those on fore femora; tarsi with third segment truncate or shallowly concave at apical margin; scutellum minute or concealed; hind wing atrophied *Trachodes*
- 6th–7th segments of antennal funicle longer than wide; hind femora greater than fore and middle pairs, with triangular larger tooth, outer margin of tooth knife-edged to subapical constriction; tarsi with third segment deeply emarginate and bilobate; scutellum normal size; hind wings normal size *Acicnemis*

Genus *Acicnemis* Fairmaire, 1849: 511.

Go-mok-ba-gu-mi-sok (고목바구미속)

SYNONYM: *Oplocnemus* Dejean, 1835: 277; *Hoplocnemus* Agassiz, 1846: 262; *Berethia* Pascoe, 1872: 463.

Body narrow and strongly elongated, elytra more or less parallel-sided. 2nd segment of antennal funicle not shorter than 1st, longer than 3rd, 6th–7th segments longer than wide, last segment not enlarged, distinctly separated from club. Club elongated, not clearly divided. Scutellum normal size, lying at flat with sutural intervals or to rise above it. Elytra with 10th striae distinct with all length, and odd intervals covered with erected scales, not gathered at bundle. Hind wings normal size. Metasternum separated from the 1st visible segment of abdomen between coxae and metasternum. Suture between 1st and 2nd sternites of abdomen even if lateral sides distinct. Hind femora greater than fore and middle pairs, with triangular larger tooth, outer margin of tooth knife-edged to subapical constriction. Tarsi with third segment deeply emarginate and bilobate.

Type species: *Acicnemis variegata* Fairmaire, 1849.

SPECIES (5 in Korea), (16 in Japan).

DISTRIBUTION: Korea, Japan, China, South of the Russian Far East, Oriental Region, Australia, New Guinea, Aru, Tahiti, New Hebrides, Fiji, Tonga, Society Is., Rotuma Is., Wallis, Samoa.

REFERENCE: Morimoto and Miyakawa (1995).

Key to the species of genus *Acicnemis*

1. Antennae with 5th and 6th segments almost as long as or 0.8–1.2 times as long as broad, club without neck at base 2
- Antennae slender, 5th and 6th segments more than 1.5 times as long as broad, club with narrow neck at base *A. luteomaculata*
2. Hind tibiae slightly dilated internally behind the middle, inner apical corners of tibiae rounded in male; elytra without post-median pale band *A. suturalis*
- Hind tibiae strongly dilated internally at apical 1/3, inner apical corners of tibiae pointed or

- angulated in both sexes 3
3. Elytra with 1st interval yellowish brown to grayish ochreous in the middle between basal black stripe and black patch on declivity in contrast to grayish brown general scaling *A. azumai*
– Elytra with 1st interval similarly colored to the neighboring intervals in the middle 4
4. Funicles with 2nd segment shorter than 1st; blackish V-shaped patch behind post-median white patch; postmedian patch extending laterally to 4th interval at most; small species *A. shibatai*
– Funicles with 2nd segment slender, at least as long as 1st; without black patch behind post-median grayish patch; post-median patch extending laterally to 5th interval at least *A. palliata*

164. *Acicnemis azumai* Morimoto and Miyakawa, 1995

(Pls. 14-164, 24-164)

Ja-gwi-na-mu-go-mok-ba-gu-mi (자귀나무고목바구미)

Acicnemis azumai Morimoto and Miyakawa, 1995: 40.

TL: Japan- Okinawa.

Rostrum slightly narrowing anteriorly, and then weakly widening at apical area. Antennae inserted in the basal 2/5 in male or more closely inserted to the base in female. Pronotum broadest just before the middle, thence scarcely narrowing posteriorly, disk with dense punctures, one or two pairs of punctures longer and deeper in front of scutellum. Scutellum ovate. Elytra almost parallel-sided on basal 3/5, subapical calli weak. Suture between 1st and 2nd ventrites obscure at middle. 1st and 2nd ventrites long, 3rd and 4th short, 5th ventrite almost as long as 3rd and 4th combined. Legs slender, femora clavate with sharp tooth. Hind femora almost reach to apex of elytra, widening apically from the middle. Hind tibiae dilated internally at apical 1/3.

MEASUREMENTS: Body length (excl. rostrum) 3.8–4.7 mm.

COLOR: Derm reddish brown, scaling dense, with short white and black stripes and long grayish patches. Dorsum with somewhat long suberect scale, especially odd intervals on elytra. Basal part of 3rd intervals with whitish scales. Underside and legs with somewhat short and pale suberect scales.

BIOLOGICAL NOTES: A specimens was captured on *Albizzia* sp. at late of September in Jeju Island. Other specimens were collected with malaise trap or by sweeping on bushes.

DISTRIBUTION: Korea, Japan.

KOREA: Central and South including JJ.

KOREAN RECORDS: Park et al., 2009: 7 (Central, South, JJ).

SPECIMEN EXAMINED: GW: 2exs. (Hoengseong: 10.vi.2007). CN: 1 ex. (Donamri, Banpomyeon, Gongju City: 19–26.vii.2005). JJ: 1 ex. (Sinheung, Namjeju: 23.ix.1998); 1 ex. (Jeolmul, Donggyedong, Jeju City: 10–16.ix.2005); 1 ex. (Jeolmul, Donggyedong, Jeju City: 21–27.vi.2007).

165. *Acicnemis luteomaculata* Morimoto and Miyakawa, 1995
(Pl. 14-165)

Je-ju-go-mok-ba-gu-mi (제주고목바구미)

Acicnemis luteomaculata Morimoto et Miyakawa, 1995: 39.

TL: Japan- Mt. Hikosan.

Rostrum slightly narrowing anteriorly, then weakly widening at apical area, antennae inserted just behind the middle in male. Pronotum broadest around the middle, almost parallel-sided posteriorly, not keeled just before the scutellum. Scutellum oblong, with grayish brown scales. Elytra 1.5 times as long as broad, parallel-sided on basal half, 2nd and 3rd intervals widened around the middle, much broader than striae. Abdomen with 1st and 2nd ventrites long, 3rd and 4th ventrites short, 5th ventrite almost as long as 3rd and 4th combined. Legs slender, femora with sharp tooth, stalk of hind femora as long as the club, dilated internally at middle.

MEASUREMENTS: Body length (excl. rostrum) 5.0 mm.

COLOR: Derm blackish brown except for reddish brown antennae, rostrum, unci of tibiae and tarsi, scaling similiatr to *A. azumai*. Elytra with a pair of whitish patch on basal area of third intervals, a whitish M-shaped wide patch on sub-apical area apart by 1st intervals and a blackish M-shaped patch.

BIOLOGICAL NOTES: Weevils were captured on bed log of Shiitake mushroom in Japan (Morimoto and Miyakawa, 1995).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu).

KOREA: JJ

KOREAN RECORDS: Hong et al., 2000: 223 (JJ); Park et al., 2009: 8 (JJ).

SPECIMEN EXAMINED: JJ: 1 ♀ (Gwaneumsa: 15.vii.1997).

REMARKS: This species very similar to *A. azumai*, but easily distinguish from the latter by following characters. Antennal funicles loosely articulated, not short. Basal part of 3rd intervals of elytra with whitish scale patches. Hind femoral tooth almost same size of others, but those of *A. azumai* much bigger than fore and mid femoral teeth.

166. *Acicnemis palliata* Pascoe, 1872 (Pls. 14-166, 24-166)

Deung-na-mu-go-mok-ba-gu-mi (등나무고목바구미)

Acicnemis palliata Pascoe, 1872: 462.

TL: Japan.

Rostrum somewhat slender, antennae inserted in 2/5 of rostrum from base. Punctures of rostrum minute except basal 2/5. Pronotum 1.05–1.08 times as broad as long, almost parallel-sided on basal half, with dens punctures. Scutellum tongue-shaped. Elytra 1.8 times as long as broad, parallel-sided on basal 3/5, intervals flat, much broader than striae. Abdomen with 1st and 2nd ventrites long, 2nd ventrite almost as long as 3rd–5th combined. Hind femoral tooth greater than fore and mid femoral teeth. Hind tibiae strongly expanded internally at apical 1/3.

MEASUREMENTS: Body length (excl. rostrum) 4.8–7.0 mm.

COLOR: Derm blackish brown, except for dark reddish brown antennae, rostrum and tarsi, with dense scales and brownish grey and blackish patches. Middle of pronotum and elytra with blackish patch on dorsal area. Underside and legs almost brownish grey except a pair of blackish patches on second ventrite. Apical area of femora and basal area of tibiae black.

BIOLOGICAL NOTES: Weevils are usually found on dead or woody stem of ornamental *Wistaria floribunda* from early May to mid September and larvae mine the large stem.

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima), China (?).

KOREA: Central and South.

KOREAN RECORDS: Park et al., 2009: 9 (Central, South).

SPECIMEN EXAMINED: GG: 19 exs. (Mangpodong Suwon: 24.viii.2003); 2 exs. (Mangpodong Suwon: 16.ix.2003); 19 exs. (Mangpodong Suwon: 1.v.2007); 4 exs. (Mt. Soyosan, Dongducheon: 26.v.2004). GN: 21 exs. (Nopodong, Busan: 28.vi.2006).

167. *Acicnemis shibatai* Voss, 1971 (Pls. 14-167, 24-167)

Ae-go-mok-ba-gu-mi (애고목바구미)

Acicnemis shibatai Voss, 1971: 52.

TL: Japan.

Antennae inserted in basal 2/5 of rostrum in male and 1/3 in female. Pronotum about 1/1 times as broad as long, broadest in the middle, scarcely narrowed basally. Scutellum tongue-shaped. Elytra 1.6–1.7 times as long as broad, parallel-sided on basal 2/3, intervals flat, much broader than striae. Hind femur not reached to the end of elytra. Hind tibiae triangularly expanded internally at apical 1/3.

MEASUREMENTS: Body length (excl. rostrum) 3.0–3.6 mm. Small species.

COLOR: Derm reddish brown with ash-colored, pale black, and white scales. Ashed oval patch in the middle surrounded with blackish patch, blackish V-shaped patch behind post-median white patch extending laterally to 4th interval at most.

BIOLOGICAL NOTES: Most of specimens were collected with malaise trap or by sweeping on bushes.

DISTRIBUTION: Korea, Japan, Taiwan.

KOREA: Central.

KOREAN RECORDS: Park et al., 2009: 9 (Central).

SPECIMEN EXAMINED: GG: 3 exs. (Hwado-eub Namyangju: 27.v.2007); 1 ex. (Dongbaek-ri Guseong-eub, Yongin: 27.vi–9.vii.2007); 1 ex. (Anyang arboretum: 31.v–13.vi.2008); 1 ex. (Mt. Taehwasan Docheok-myeon Gwangju: 9–24.vi.2007); 1 ex. (Mt. Taehwasan Docheok-myeon, Gwangju: 15–25.vii.2008). CN: 1 ex. (Ibjang-myeon, Cheonan: 1.vi.2008).

168. *Acicnemis suturalis* Roelofs, 1875

Deung-go-mok-ba-gu-mi (등고목바구미)

Acicnemis suturalis Roelofs, 1875: 154.

TL: Japan- Kobe.

Antennae robust, 2nd segment of funicle shorter than 1st, club without neck at base. Hind tibiae slightly dilated internally behind the middle, inner apical corners of tibiae rounded in male.

MEASUREMENTS: Body length (excl. rostrum) 3.5–4.0 mm (in Japan).

COLOR: Derm blackish. Elytra without postmedian pale band, predominantly dark brownish to brownish blackish, with humeral and declivity grayish brown, and with conspicuous black stripe behind scutellum on basal third of first interval. Hind tibiae slightly dilated internally behind the middle, inner apical corners of tibiae rounded in male.

BIOLOGICAL NOTES: Many weevils were found on dead vine of *Wistaria brachybotrys* (Morimoto and Miyakawa, 1995).

DISTRIBUTION: Korea, Japan (Honshu, Shikoku, Kyushu), Taiwan.

KOREA: JJ.

KOREAN RECORDS: Morimoto, 1984: 326 (JJ); Morimoto and Lee, 1992: 13 (Yeongsil); ESK/KSAE, 1994: 205.

REMARKS: A specimen determined to this species by Hong et al. (2000) was misidentified (Park et al., 2009) and lost. It is not provided the photo of this species on plate.

Genus *Trachodes* Germar, 1824: 325.

Mu-nui-go-mok-ba-gu-mi-sok (무늬고목바구미속)

SYNONYM: *Blastophila* Gistel, 1856: 370; *Metrachodes* Marshall, 1948: 427; *Atrachodes* Morimoto, 1962c: 405.

Body wide and short, elytra egg-shaped. 2nd segment of antennal funicle shorter than 1st, as long as 3rd, 6th–7th segments slightly wider than long, last segment enlarged, formed conversion toward club. Club short, 1st segment longer than the others combined. Pronotum and elytra with naked spots. Scutellum minute or concealed, lying beneath of level on sutural interval. Humeral callus obsolescent. Elytra with 10th striae interrupted on level of hind coxae. 3rd and 5th intervals with bundles of scales. Hind wing atrophied. Metasternum contiguous with the 1st visible segment of abdomen between coxae and metepisterna. Suture between 1st and 2nd sternites of abdomen obscure. Hind femora almost as large as or smaller than fore pair, middle and hind femora with teeth smaller than those on fore femora. Tarsi with third segment truncate or shallowly concave at apical margin.

Type species: *Curculio squamifer* Paykull, 1800 (non Müller, 1776)=*Curculio hispidus* Linnaeus, 1758).

SPECIES (2 in Korea and Russian Far East), (7 in Japan).

DISTRIBUTION: Korea, Japan, Russia (Far Eastern), Java, India, Syria, Egypt, Caucasus, Europe, Canada (introduced).

REFERENCE: Morimoto (2001).

Subgenus *Trachodes* Germar, 1824

Key to the species of subgenus *Trachodes*

1. Elytra oblong-ovate, 1.1–1.2 times as long as broad; pronotum rounded laterally and rapidly narrowing anteriorly to subapical constriction from middle in general; scaly vestiture concolorous ochreous behind postmedian band, blackish tufts on 3rd and 5th intervals conspicuous *T. ovipennis*
- Elytra oblong-ovate, 1.3 times as long as broad; pronotum weakly rounded laterally and weakly narrowed to subapical constriction; scaly vestiture predominantly dark brownish behind postmedian band, blackish tufts usually much smaller and inconspicuous on 5th interval than on 3rd *T. subfasciatus*

169. *Trachodes (Trachodes) ovipennis* Morimoto and Miyakawa, 1995 (Pl. 14-169)

Dung-geun-nal-gae-go-mok-ba-gu-mi (둥근날개고목바구미)

Trachodes (Trachodes) ovipennis Morimoto and Miyakawa, 1995: 22.

TL: Japan.

Rostrum almost same length with pronotum. Pronotum slightly depressed longitudinally in the middle and the depression obsolete at middle. Elytra 1.1–1.2 times as long as broad. Hind femur not reached to the end of elytra.

MEASUREMENTS: Body length (excl. rostrum) 3.9 mm.

COLOR: Derm dark brown, except for reddish brown rostrum, antennae, tarsi and ends of tibiae. Body covered with ochreous white, grayish brown and blackish brown scales. Pronotum with round blackish brown patch at middle surrounding with grayish brown scale patches. The round patch opened and pale to anterior margin, Elytra with grayish brown scale patches continued to humeral angle, declivity with grayish brown scales behind ochreous white band.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan.

KOREA: JJ.

KOREAN RECORDS: Park et al., 2009: 7 (JJ).

SPECIMEN EXAMINED: JJ: 1 ♀ (Eorimok, Mt. Halrasan: 27.viii.1998).

170. *Trachodes (Trachodes) subfasciatus* Voss, 1957 (Pls. 14-170, 24-170)

Mu-nui-go-mok-ba-gu-mi (무늬고목바구미)

Trachodes subfasciatus Voss, 1957: 36.

TL: Japan- Hoki-Daisen.

Pronotum not depressed longitudinally in the middle. Elytra 1.3 times as long as broad. Hind femur reached to the end of elytra.

MEASUREMENTS: Body length (excl. rostrum) 3.9 mm.

COLOR: Derm blackish brown, except for reddish brown rostrum, antennae, tarsi and ends of tibiae. Body covered with ocherous, light brown, dark brown, and black scales. Pronotum with round and blackish brown patch at middle surrounding with grayish brown scale patches, and the round patch opened and paled to anterior margin. Apical margin of pronotum with a pair of blackish brown tufts and some brownish erected scales in each side of the tufts. A transverse row of four tufts at a little in front of the middle of pronotum, of which the median pair blackish. Elytral declivity with light brown scales behind ocherous band.

BIOLOGICAL NOTES: Weevils were captured on dead trunks and branches of the broad-leaved trees, and often collected by shifting litter of the forest floor in Japan (Morimoto and Miyakawa, 1995).

DISTRIBUTION: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Kuriles).

KOREA: South and JJ.

KOREAN RECORDS: Morimoto, 1984: 325 (JJ); Morimoto and Lee, 1992: 13 (JJ- Seongpanak); ESK/KSAE, 1994: 205; Paik et al., 1995: 433 (JJ); Hong et al., 2000: 224 (JJ); Park et al., 2009: 7 (South, JJ).

SPECIMEN EXAMINED: GB: 1 ♂ (Mt. Sobaeksan, Yeongju: 11-14.vi.1999).

Tribe Trigonocolini Lacordaire, 1863**Genus *Trigonocolus* Lacordaire, 1863: 593.**

O-ttu-gi-ba-gu-mi-sok (오투기바구미속)

SYNONYM: *Megarhinus* Schoenherr, 1835: 397; *Lystrus* Pascoe, 1874: 64.

Body and femora brownish-black, antennae, tibiae and tarsi red or yellow. Pronotum formed 5 longitudinal stripes, one narrow stripe in the middle and 2 pairs of wide stripes on lateral sides with long semi-decumbent whitish scales which splitted with 2, 3 or 5 parts to base. Elytra with row of same scales at base of 1st interval, in the middle of 2nd interval, at base and on apex of 3rd to 5th and 7th intervals. Underside with dense whitish widened scales. Wide-rhombic. Head large. Rostrum thick, slightly curved, widened on apex. Pronotum large narrowing toward head, disk with narrowly separated, shallow punctures. Elytra longer than head and pronotum combined, wide at shoulders, triangularly narrowed toward separated apex. Striae narrow, line-like, 2 times as narrow as flat intervals at the middle and costately raised on exterior margin of intervals. Prosteronum from below on anterior margin without extended emagination. Metepisterna triangular nar-

rowed posteriorly. 1st and 2nd sternites of abdomen on each side not longer or slightly longer than 3rd and 4th, posterior-lateral angles of sternites of abdomen not protruded posteriorly. Fore and middle femora and tibiae with large tooth on inner margin.

Type species: *Megarhinus firmus* Gyllenhal, 1835.

SPECIES (2 in Korea), (2 in Japan), (2 in Far Eastern Russia).

DISTRIBUTION: Korea, Japan, China, South of the Russian Far East, Taiwan to Philippines, Java, Moluccas, Burma, Sri Lanka, Cameroon, Chad, Congo, Gabon, Guinea, Liberia, Madagascar, Senegal, S. Africa, Zaire.

Key to the species of genus *Trigonocolus*

1. Smaller than 3.5 mm; dorsum of rostrum in male convex before antennal scrobe, in female at base of rostrum; lateral sides of pronotum more or less straightly tapered toward head; scutellum more or less reversely trapezoid, slightly sloped toward pronotum, densely and uniformly punctures; tooth on inner margin of fore tibiae large, obtuse angle, arranged at the middle; apical half of tibiae widened, uncus and mucro small; intervals of elytra more or less matted, pubescence of white splitting scales slightly developed; tarsi yellow *T. sulcatus*
- Larger than 3.5 mm; dorsum of rostrum in male convex above antennal scrobe, in female uniformly curved; lateral sides of pronotum convex at the middle; scutellum rounded, more sloped toward pronotum, thinly punctated at anterior part, posterior shining; tooth on inner margin of fore tibiae small, acute angle, nearer toward base of tibiae; apical half of tibiae not widened, uncus and mucro long; intervals of elytra shining, pubescence of white splitting scales well developed; tarsi reddish-brown *T. tibialis*

171. *Trigonocolus sulcatus* Roelofs, 1874 (Pl. 14-171)

Si-gol-o-ttu-gi-ba-gu-mi (시골오투기바구미)

Trigonocolus sulcatus Roelofs, 1874: 168.

TL: Japan.

Lysturus elegans Kôno, 1928: 174.

Rostrum more than twice as long as head, slightly broadened towards antennal insertions, stronger and slightly flattened at apex; moderately curved, strongly punctured, subcarinate on posterior half, punctured at least towards apex, with a longitudinal impression at lateral parts over with antennal scrobes. Antennal funicle covered with whitish hairs. Head strongly and densely punctured, covered with whitish hairs on sides and around eyes. Pronotum shorter than wide, the widest part at base, subtubulate forward and gradually narrowed at sides, median basal lobe large, very dense and rather large but shallow punctuation; white hairs emerged several longitudinal lines forming a broader line at sides. Scutellum large, triangular, punctured, raised backwards. Elytra short, obliquely broad behind shoulders, gradually narrowing towards apex, separated to round apex, regularly striae, bottom of striae crenate; intervals wide, smooth, covered with a little dense white hairs. Pygidium rough pubescent. Underside with small white hairs. Last abdominal segment smooth at apex, subcarinate in the middle. Fore femur intermediate toothed; hind femur

unarmed. Fore tibiae extended to anglar inside in the middle.

MEASUREMENTS: Body length (excl. rostrum) 3.2 mm. Body subrhombic.

COLOR: Derm black, covered with white hairs, antennae and legs reddish brown, lateral sides of head, 5 longitudinal rows of pronotum and 2nd, 3rd and 5th intervals of elytra with grayish hairs.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Honshu, Tsushima), China (Manchuria, Guangdong), Russia (Primorskii Terr.).

KOREA: South.

KOREAN RECORDS: Morimoto, 1984: 288; Kwon and Lee, 1986: 74 (South); ESK/KSAE, 1994: 204; Egorov et al., 1996: 453; Hong et al., 2000: 248 (South).

SPECIMEN EXAMINED: GB: 1 ♀ (Mt. Palgongsan: 10.vi.1981). GN: 1 ♀ (Mt. Yeongchwisan: 11.v.1981).

172. *Trigonocolus tibialis* (Kôno, 1928) (Pls. 14-172, 24-172)

O-ttu-gi-ba-gu-mi (오투기바구미)

Lysturus tibialis Kôno, 1928: 175.

TL: Taiwan.

Head with 2 narrow longitudinal strips of fine hairs; punctuations very close. Rostrum densely punctured, slightly widened at apex. Pronotum evenly hairy, with 5 narrow longitudinal stripes of fine hairs, wider than long, rounded at sides, tapered to anterior margin, rounded strongly, the widest just before base, without median carina, strongly deepened at base before scutellum. Scutellum transverse. Elytra strongly tapered posteriorly; striae furrow; intervals rib-like, with short and dense hairs, 3rd, 5th and 7th intervals higher than the others. Pygidium finely and densely punctured, with moderately fine hairs. Underside not very densely hairy and densely scaled. Fore femur with a little sharp, tooth inside. Middle and hind femora weakly toothed. Fore and middle tibiae less extended inside in the middle, slightly bisinuate, hump-like dentate on apex outwardly.

MEASUREMENTS: Body length (excl. rostrum) 3.8–4.0 mm. Body larger.

COLOR: Derm black, antennae and legs reddish, with greyish hairs.

BIOLOGICAL NOTES: Unknown.

DISTRIBUTION: Korea, Japan (Tsushima), Taiwan, Russia (Primorskii Terr.).

KOREA: Central and South.

KOREAN RECORDS: Morimoto, 1984: 288; Kwon and Lee, 1986: 74 (South); ESK/KSAE, 1994: 204; Hong et al., 2000: 248 (Central, South).

SPECIMEN EXAMINED: GG: 1 ex. (Seolak-myeon Gapyeong: 27.v.2007). GW: 1 ex. (Goseong: 25.v.1993). CN: 1 ex. (Baekripo: 16.v.2008). JB: 1 ex. (Mt. Naejangsan: 10.vi.1975). JN: 1 ex. (Mt. Mohusan, Hwasun: 25.v.2008).

Subfamily Orobittidinae Thomson, 1859

Al-jop-ssal-ba-gu-mi-a-gwa (알좁쌀바구미아과)

Genus *Orobittis* Germar, 1817: 340.

Al-jop-ssal-ba-gu-mi-sok (알좁쌀바구미속)

SYNONYM: *Sphaerula* Villa et Villa, 1833: 22; *Phytotranes* Gistel, 1856: 370.

Body convex and semi-spherical. Posterior margin of metasternum on each side contiguous with 1st sternite of abdomen, hind coxae not reached metepisterna laterally. Metasternum with large hanging tooth-shaped precoxal projection. Hind coxae widely separated and almost completely separated from 1st sternite of abdomen, which shorter than 2nd sternite; Intercoxal process almost 4 times as wide as its length. Tibiae without uncus. Found on Violaceae (*Viola* spp.) (Egorov et al., 1996).

Type species: *Attelabus globosus* Fabricius, 1792=*Curculio cyaneus* Linnaeus, 1758.

SPECIES (1 in Korea), (1 in Japan).

DISTRIBUTION : Transpalaeartic.

173. *Orobittis cyaneus* Linnaeus, 1758 (Pl. 14-173, 24-173)

Al-job-ssal-ba-gu-mi (알좁쌀바구미)

Orobittis cyaneus Linnaeus, 1758: 378.

TL: Europe.

Orobittis apicalis Kôno, 1935: 60.

TL: Etorofu (=Iturup I.).

Head closely wrinkled punctured; frons between eyes clearly narrower than the base of rostrum; rostrum longer than pronotum, slender, weakly curved, gradually increasing the thickness towards the inserted point of antenna and then, decreasing towards the apex of rostrum with a fine median keel; antenna inserted into the basal one-third of rostrum; scape as long as the basal 2 funicular segments taken together; funicle 7 segments, 1st segment of funicle robust, as long as the next 2 segments of funicle taken together, 2nd and 3rd segments almost twice as long as wide, 4th segment a little shorter than the 3rd segment, 5th segment shorter than the 3rd segment, 7th segment shorter than wide, each segment with several long hairs; club spindle-shape, 3 segment, each segment almost same length. Pronotum much wider than long, gradually decreasing the thickness towards the anterior like cone-shaped, with uniformly fine punctures, basal part of before scutellum with clearly ovate white scales. Scutellum large, oval form. Elytra strong arch-shaped, behind scutellum with clearly ovate white scales; punctured striae distinct; interval flat and broad, each interval with sparsely minute punctures. Underside of body, legs and pygidium with densely gray to brown scales; procoxae broadly separated; prosternal canal bordered with keels; abdomen concave, 1st to

4th abdominal segments almost same length, 5th segment very long. Hindcoxa contiguous to the 2nd segment of abdomen; femora very broad, without tooth; tibia almost straight, corbel fringed with black bristles, inner sides of apex with mucro; claw appendiculate, inner branches fused each other.

Female: Inner side of apex of tibia without mucro.

MEASUREMENTS: Body length (excl. rostrum). 2.0–2.4 mm.

COLOR: Body dark metallic luster, oval form, apex of elytra reddish brown, antenna, tibia and tarsi dark brown, covered with sparsely ovate white scales.

BIOLOGICAL NOTES: Adults were found on *Viola* spp. (Morimoto, 1984).

DISTRIBUTION: Korea, Japan (Hokkaido), Russia (Kuriles, Primorskii Terr., Siberia, European part), Europe.

KOREA: Central, South.

KOREAN RECORDS: Hong et al., 1999b: 191 (Central); Hong et al., 2000: 249 (Central, South).

SPECIMEN EXAMINED: GW: 1 ♀ (Daegwanryong, Pyongchang: 11.vi.1997); 1 ♂ (Daegwanryong, Pyongchang: 25.vii.1997). GB: 1 ex. (Mt. Sobaeksan: 11–14.vi.1999).

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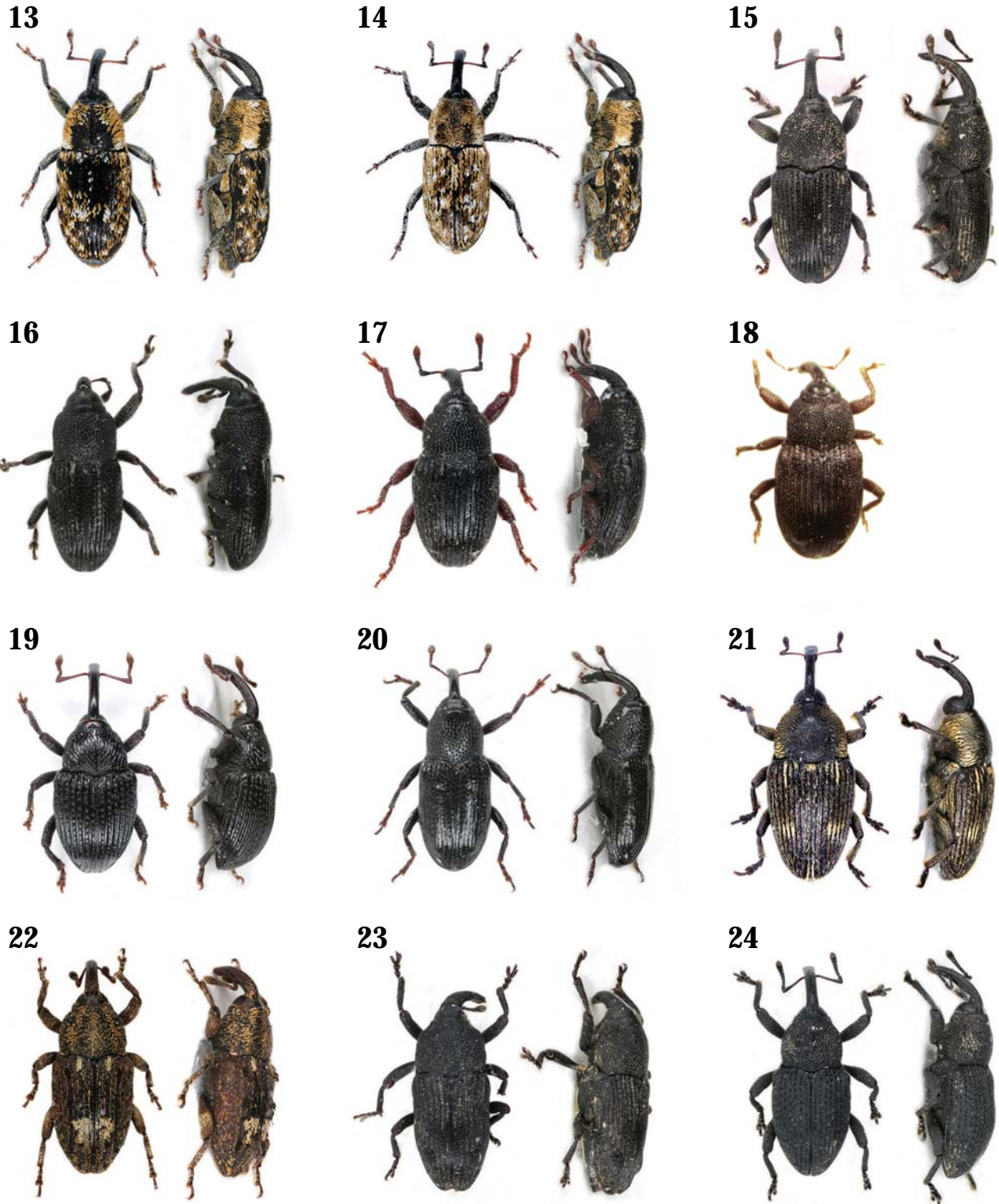
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Plates



1. Bagoninae and Baridinae. 1. *Bagous alismatis*; 2. *Bagous bipunctatus*; 3. *Bagous fritodes*; 4. *Bagous kagiashi*; 5. *Bagous occultus*; 6. *Bagous tersus*; 7. *Bagous youngi*; 8. *Barinomorphus antennatus*; 9. *Baris artemisiae*; 10. *Baris ezoana*; 11. *Baris pilosa*; 12. *Baris ussuriensis*.



2. Baridinae. 13. *Cosmobaris orientalis*; 14. *Cosmobaris scolopacea*; 15. *Moreobaris deplanata*; 16. *Nespilobaris parabasimaculatus*; 17. *Pharcidobaris piliventris*; 18. *Pharcidobaris suvorovi*; 19. *Phrissoderes rufitarsis*; 20. *Psilarthroides czerskyi*; 21. *Anthinobaris dispilota*; 22. *Dendrobaris maculata*; 23. *Pellobaris melancholica*; 24. *Orchidophilus ran.*

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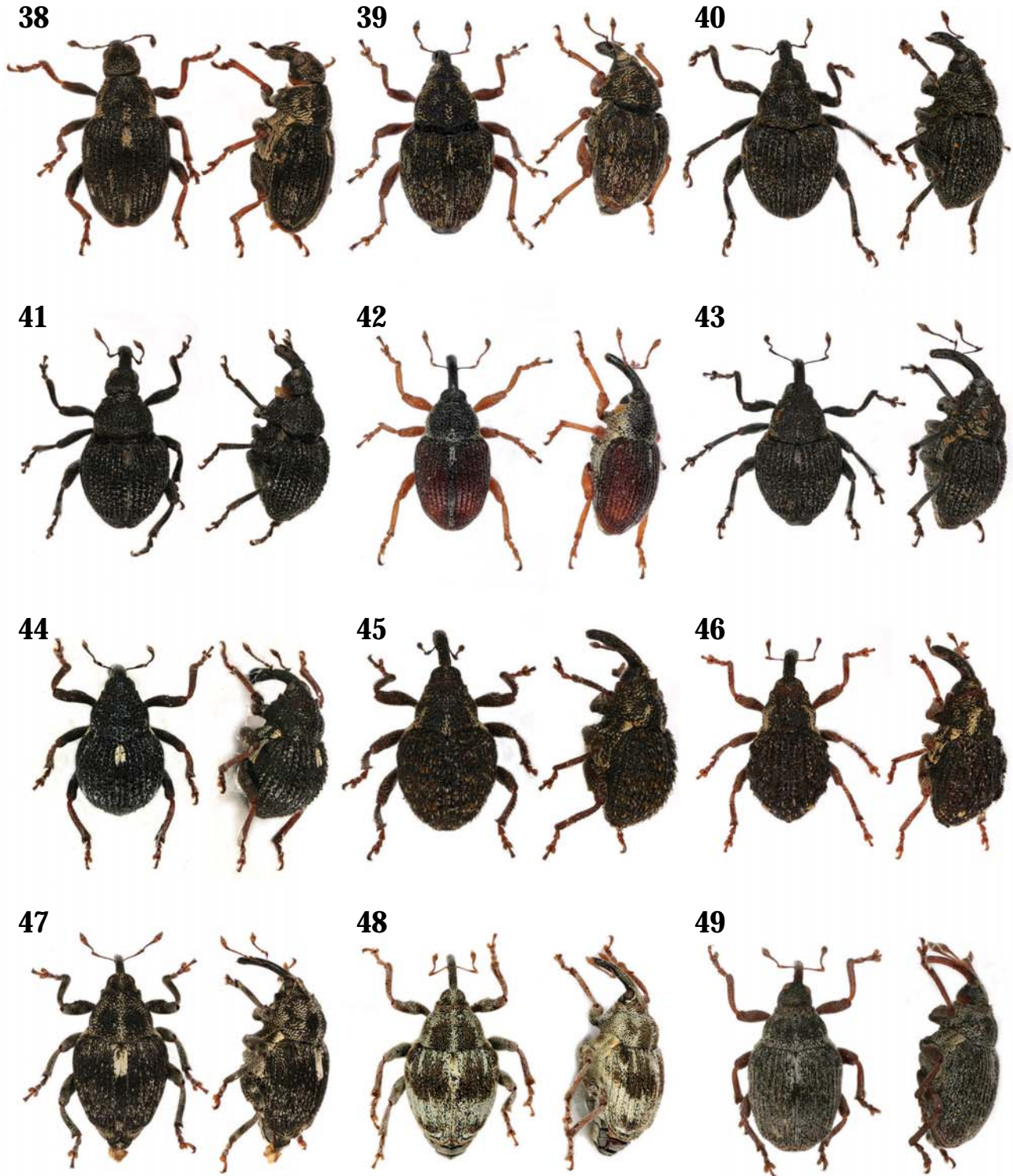
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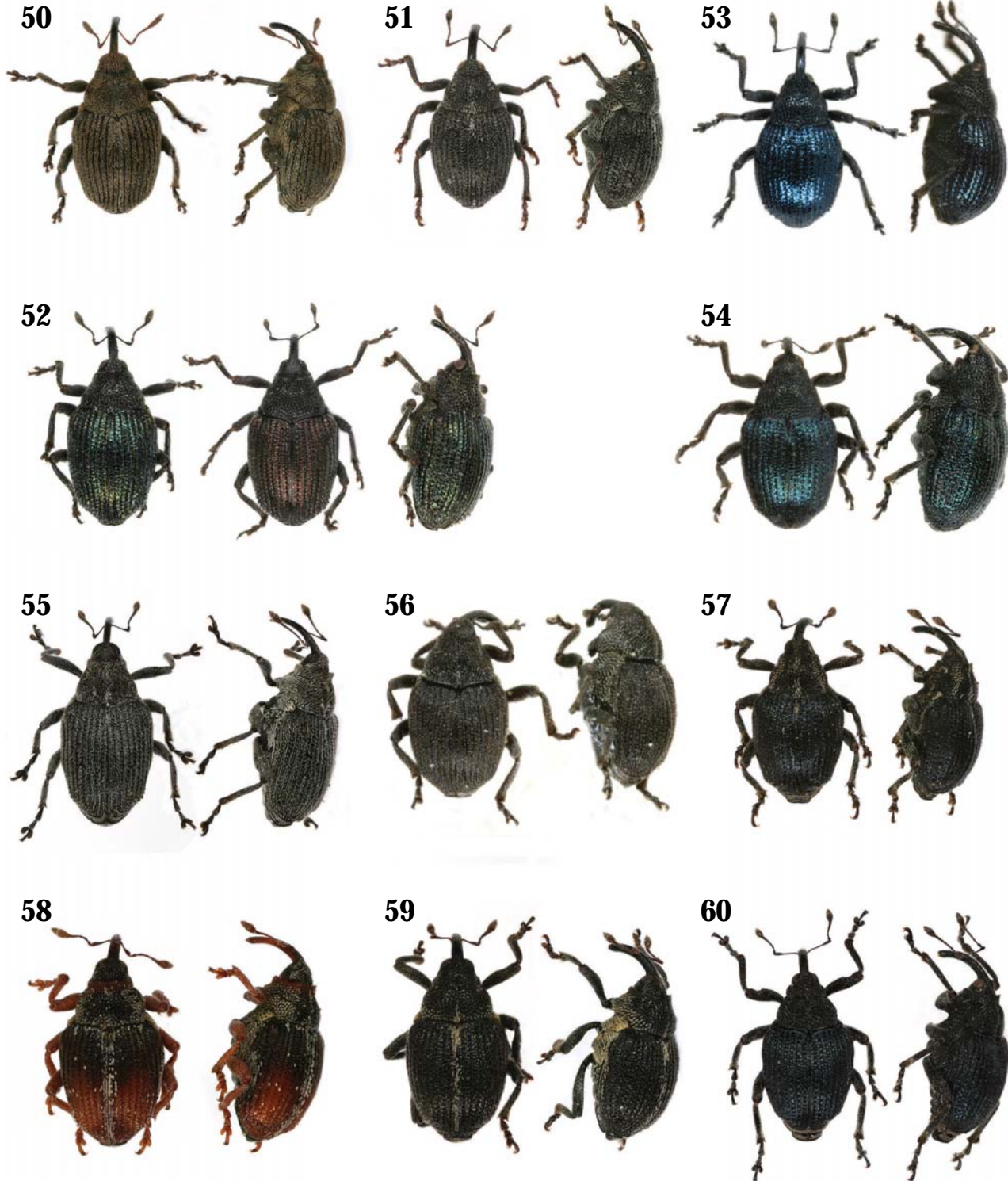
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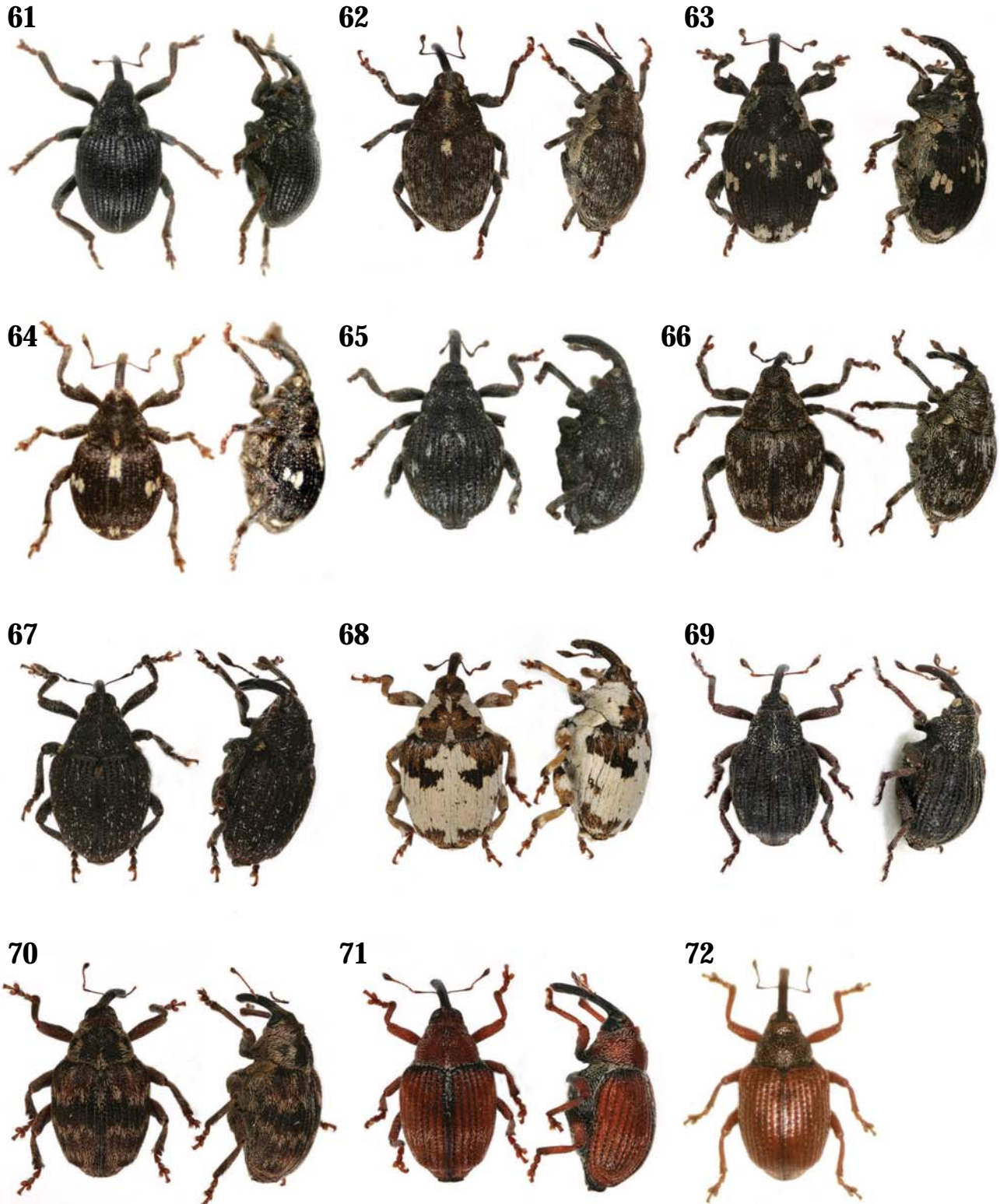
3. Baridinae and Ceutorhynchinae. 25. *Centrinopsis nitens*; 26. *Calyptopygus albosparsa*; 27. *Limnobaris jucunda*; 29. *Pelenomus roelofsi*; 30. *Pelenomus waltoni*; 31. *Phytobius japonicus*; 32. *Phytobius leucogaster*; 33. *Rhinoncus bosnicus*; 34. *Rhinoncus cribricollis*; 35. *Rhinoncus jakovlevi*; 36. *Rhinoncus koreanus*; 37. *Rhinoncus nigrotibialis*.



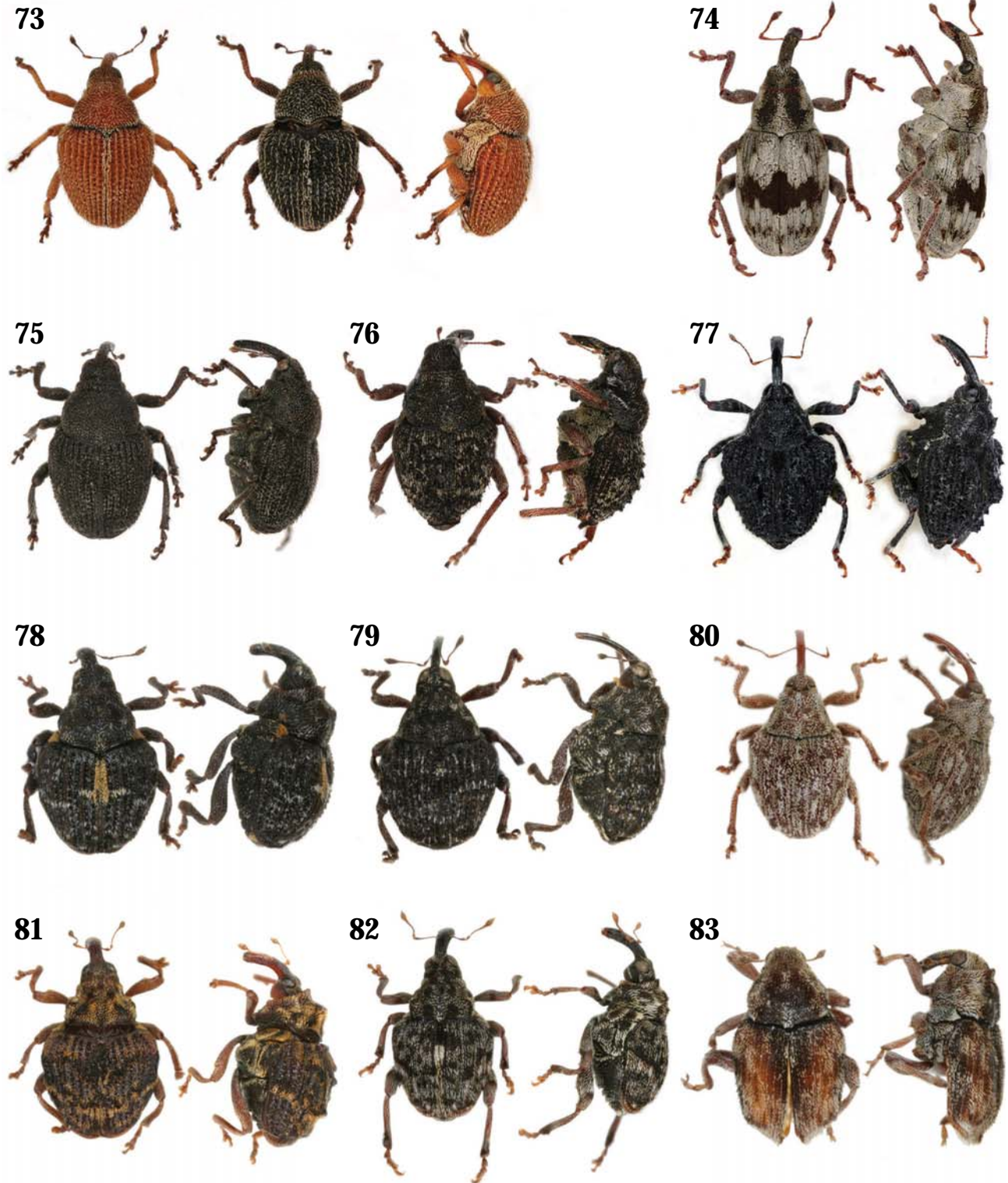
4. Ceutorhynchinae. 38. *Rhinoncus perpendicularis*; 39. *Rhinoncus sibiricus*; 40. *Rhinoncomimus* (*Homorosomulus*) *latipes*; 41. *Rhinoncomimus* (*Homorosomulus*) *rhytidosomoides*; 42. *Amalus scortillum*; 43. *Homorosoma asperum*; 44. *Rutidosoma* (*Heorutidosoma*) *koreanum*; 45. *Scleropteroides hypocrita*; 46. *Scleropterus rubi*; 47. *Cardipennis shaowuensis*; 48. *Cardipennis sulcithorax*; 49. *Ceutorhynchus* (*Ceutorhynchus*) *albosuturalis*.



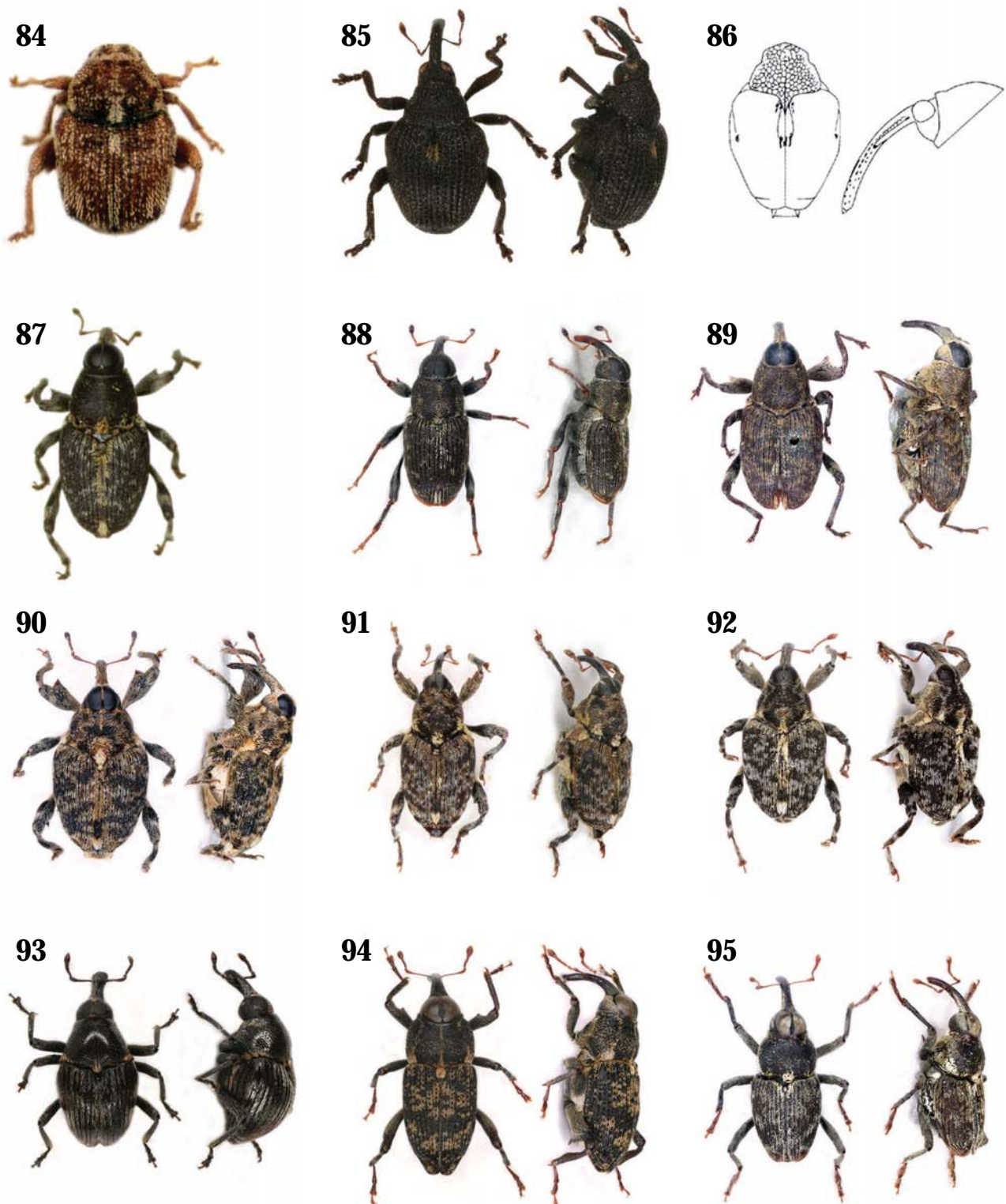
5. Ceutorhynchinae. 50. *Ceutorhynchus* (*Ceutorhynchus*) *asiaticus*; 51. *Ceutorhynchus* (*Ceutorhynchus*) *dauricus*; 52. *Ceutorhynchus* (*Ceutorhynchus*) *filiae*; 53. *Ceutorhynchus* (*Ceutorhynchus*) *murzini*; 54. *Ceutorhynchus* (*Ceutorhynchus*) *nitidulus*; 55. *Ceutorhynchus* (*Ceutorhynchus*) *obstrictus*; 56. *Ceutorhynchus* (*Ceutorhynchus*) *robustus*; 57. *Ceutorhynchus* (*Ceutorhynchus*) *scapularis*; 58. *Ceutorhynchus* (*Ceutorhynchus*) *sinicus*; 59. *Ceutorhynchus* (*Ceutorhynchus*) *ussuricus*; 60. *Ceutorhynchus* (*Heorhynchus*) *ibukianus*.



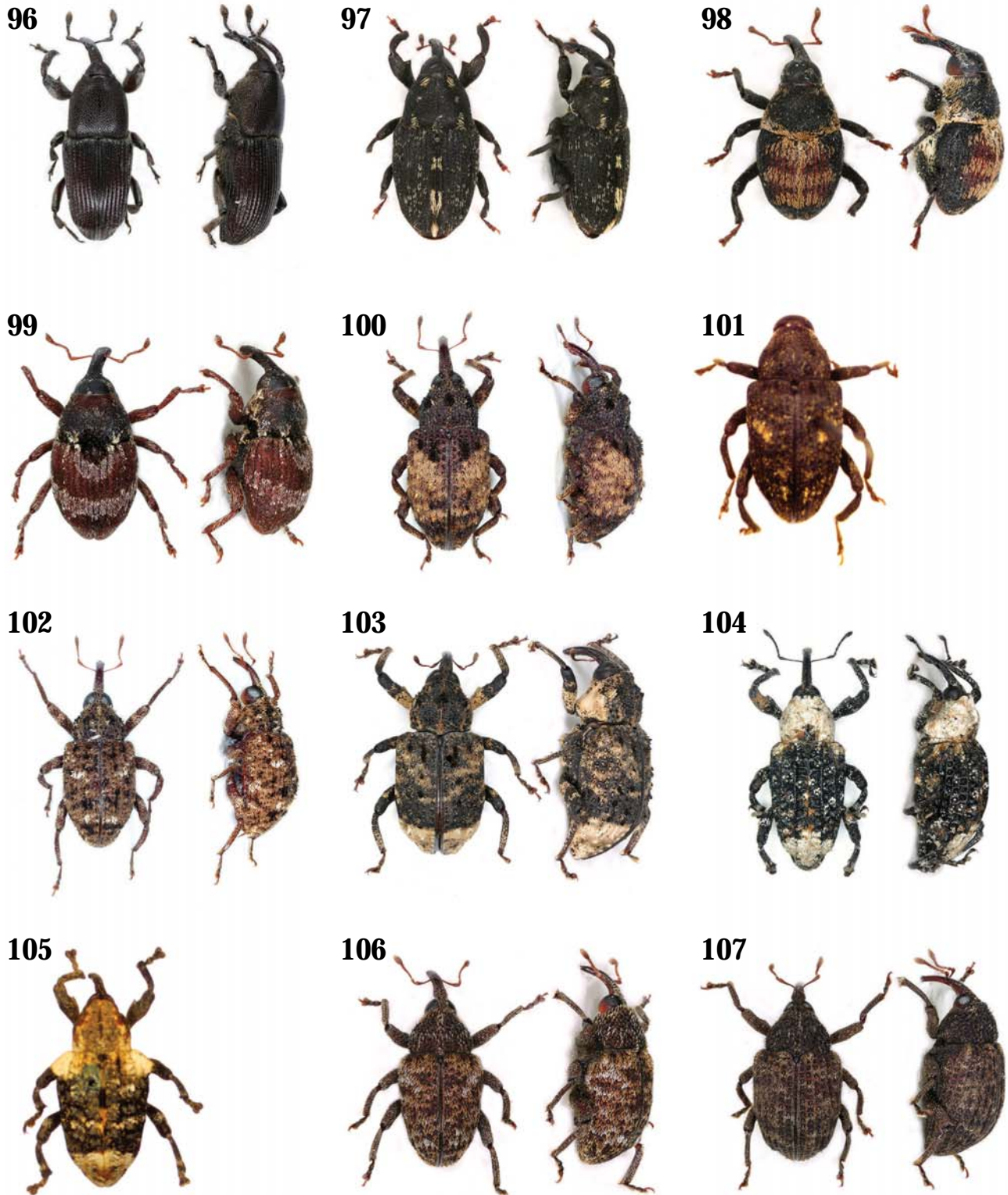
6. Ceutorhynchinae. 61. *Calosirus kwoni*; 62. *Glocianus (Glocianus) fennicus*; 63. *Hadroplontus ancora*; 64. *Mogulones koreanus*; 65. *Mogulones kwoni*; 66. *Sirocalodes notatus*; 67. *Sirocalodes umbrinus*; 68. *Thamicolus kerzhneri*; 69. *Wagnerinus costatus*; 70. *Coeliodes babai*; 71. *Coeliodes nakanoensis*; 72. *Coelioidinus sibiricus*.



7. Ceutorhynchinae. 73. *Trichocoeliodes excavatus*; 74. *Tapeinotus sellatus*; 75. *Zacladus (Zacladus) geranii*; 76. *Zacladus (Angarocladus) radula*; 77. *Augustinus koreanus*; 78. *Sinauleutes bigibbosus*; 79. *Cyphosenus grouvellei*; 80. *Ceutorhynchoides koreanus*; 81. *Cyphauleutes bifasciatus*; 82. *Phytobiomorphus variegatus*; 83. *Hypurus bertrandi*.



8. Ceutorhynchinae and Conoderinae; 84. *Pericarticus aequatorialis*; 85. *Mecysmoderes (Coelioderes) nigrinus*; 86. *Mecysmoderes (Coelioderes) koreanus*; 87. *Euryommatus konoj*; 88. *Euryommatus maria*; 89. *Euryommatus tokioensis*; 90. *Metialma cordata*; 91. *Metialma pusilla*; 92. *Metialma signifera*; 93. *Lobotrachelus minor*; 94. *Mecopomorphus amurensis*; 95. *Phylaitis maculiventris*.



9. Conoderinae and Cryptorhynchinae. 96. *Keibaris babai*; 97. *Macrotelephae ichihashii*; 98. *Egiona konoi*; 99. *Egiona picta*; 100. *Caenocryptorrhynchus frontalis*; 101. *Coniferocryptus tamanukii*; 102. *Cryptorhynchus electus*; 103. *Cryptorhynchus lapathi*; 104. *Eucryptorrhynchus brandti*; 105. *Eucryptorrhynchus chinensis*; 106. *Rhadinopus confinis*; 107. *Rhadinopus sulcostriatus*.

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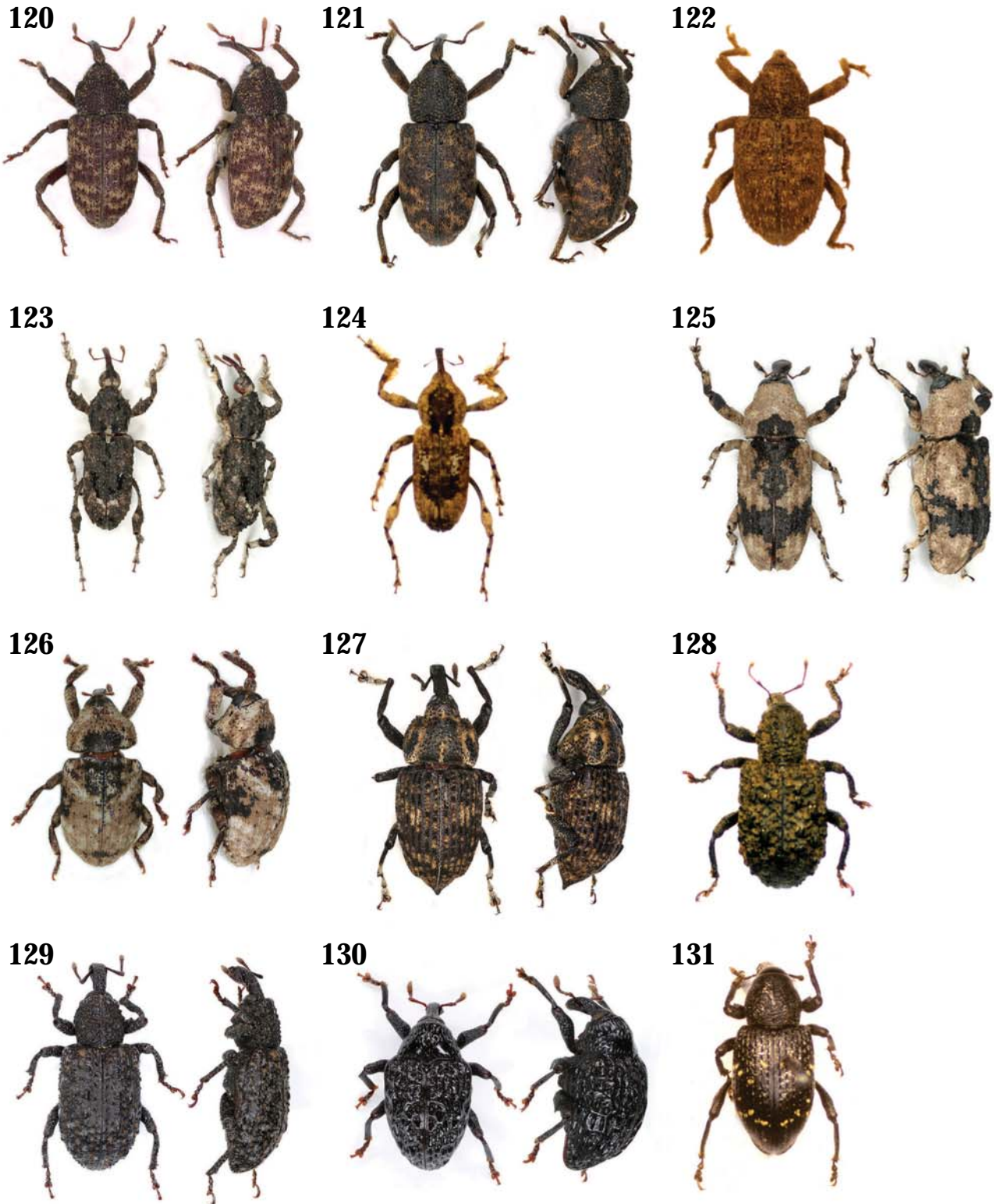
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10. Cryptorhynchinae. 108. *Shirahoshizo egorovi*; 109. *Shirahoshizo flavonotatus*; 110. *Shirahoshizo hiurai*; 111. *Shirahoshizo insidiosus*; 112. *Shirahoshizo rufescens*; 113. *Sternochetus navicularis*; 114. *Hyotanzo uenoi*; 115. *Simulatacalles pustulosus*; 116. *Simulatacalles simulator*; 117. *Monaulax rugicollis*; 118. *Deira-docranus setosus*; 119. *Rhadinomerus annulipes*.



11. Cryptorhynchinae and Molytinae. 120. *Rhadinomerus babai*; 121. *Rhadinomerus maebarai*; 122. *Rhadinomerus unmon unmon*; 123. *Camptorhinus notabilis*; 124. *Camptorhinus mangiferae*; 125. *Gasterocercus tamanukii*; 126. *Orochlesis takaosanus*; 127. *Syrotelus septentrionalis*; 128. *Niphades variegatus*; 129. *Niphades verrucosus*; 130. *Catagmatus japonicus*; 131. *Hylobius (Callirus) gebleri*.



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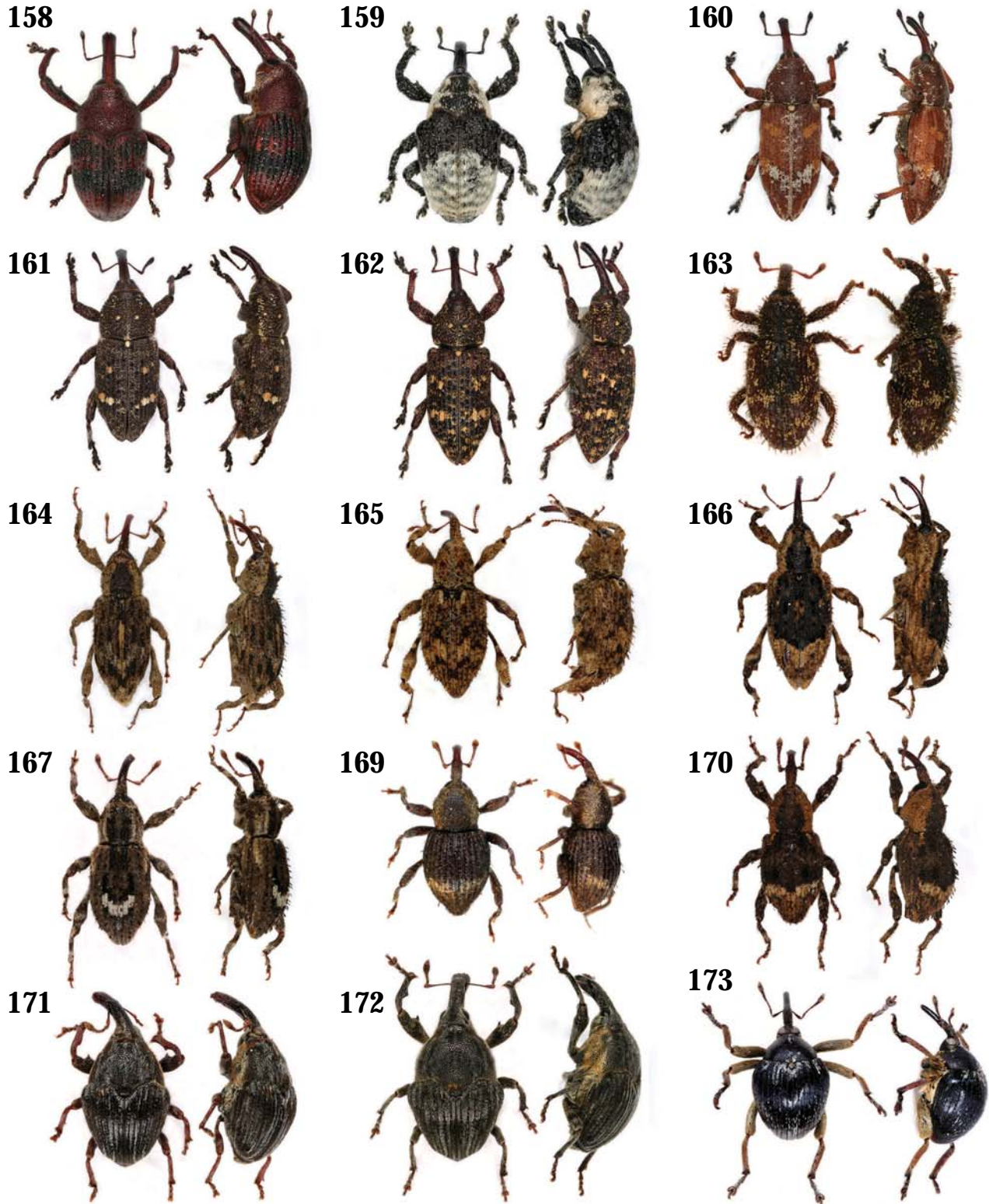
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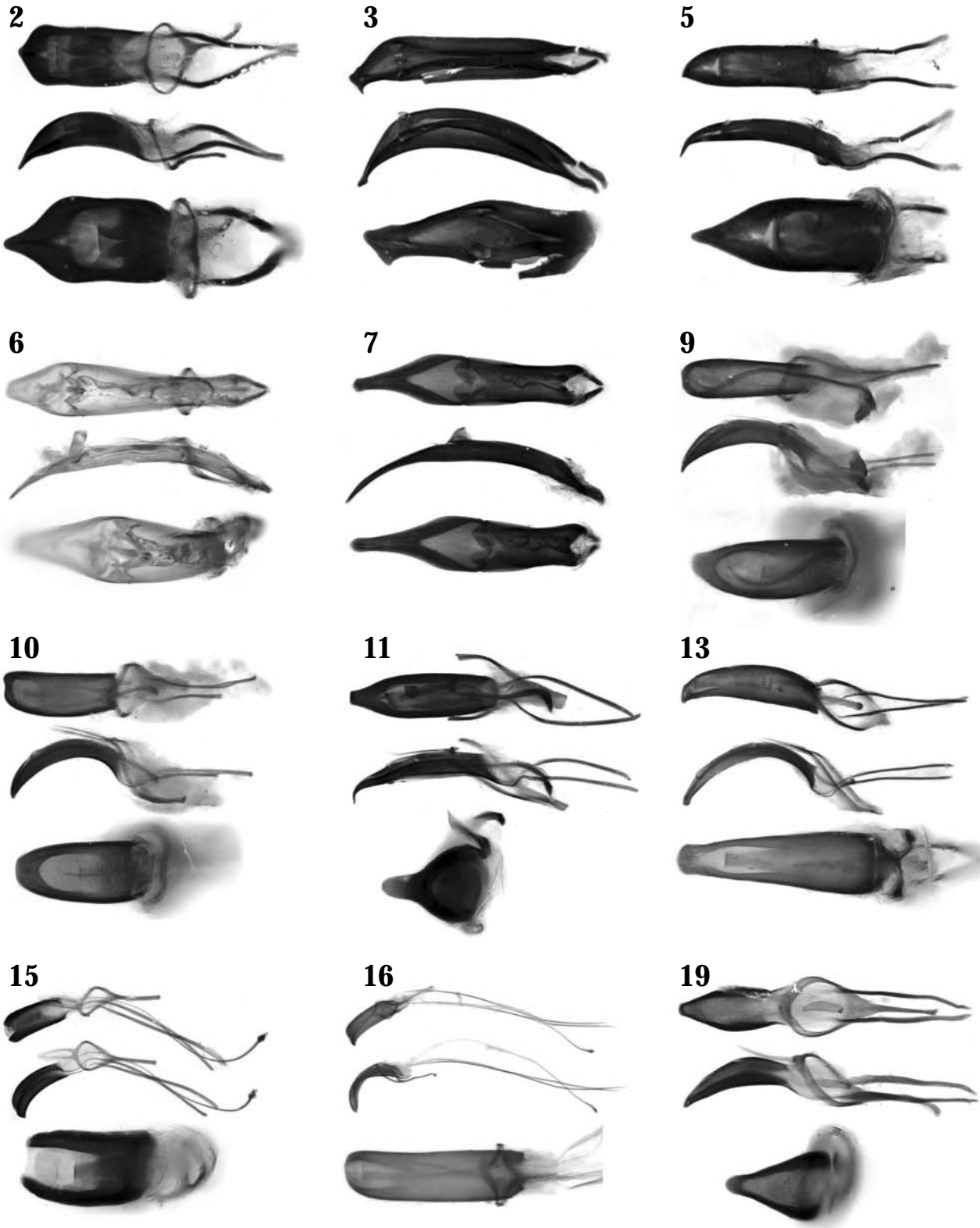
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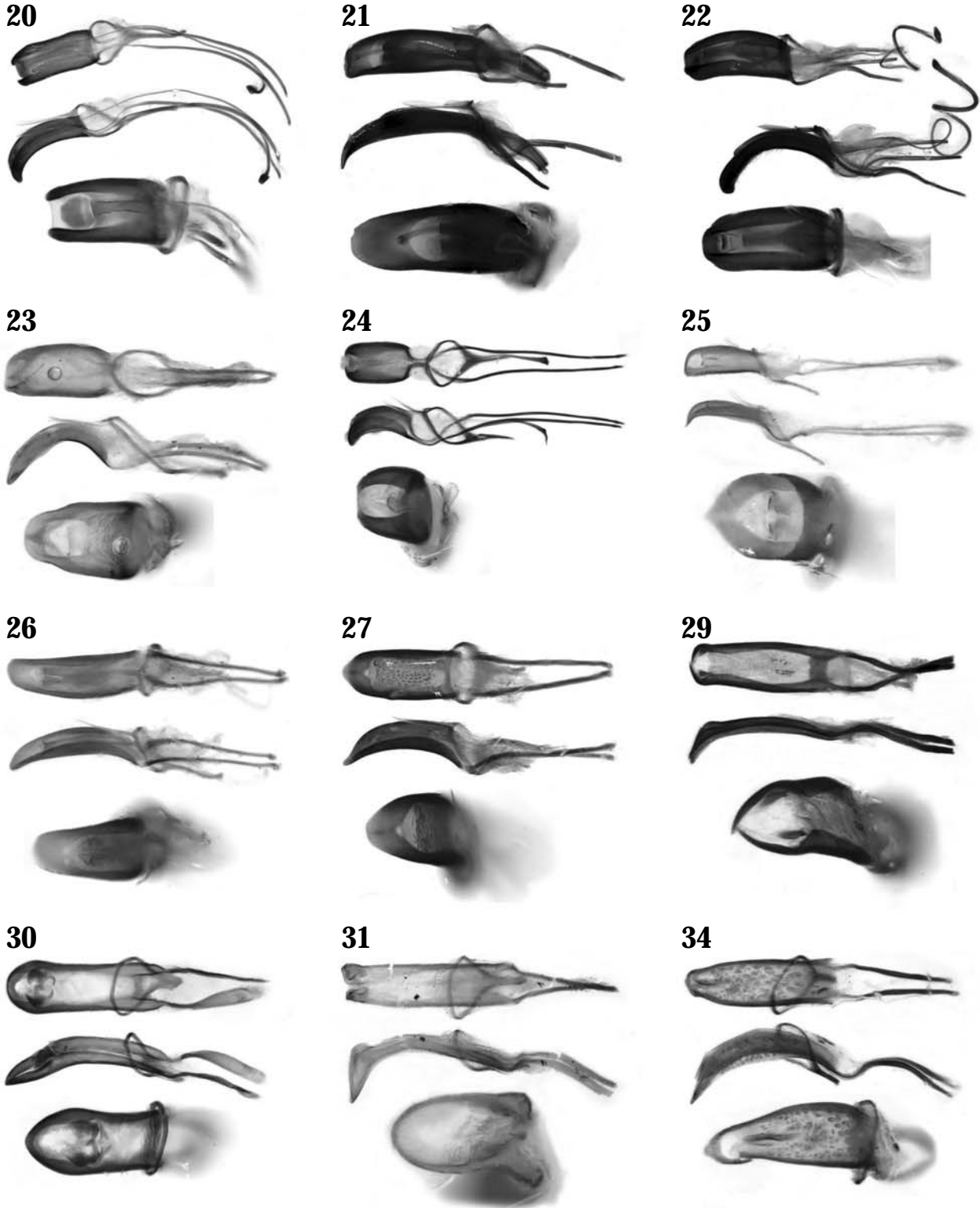
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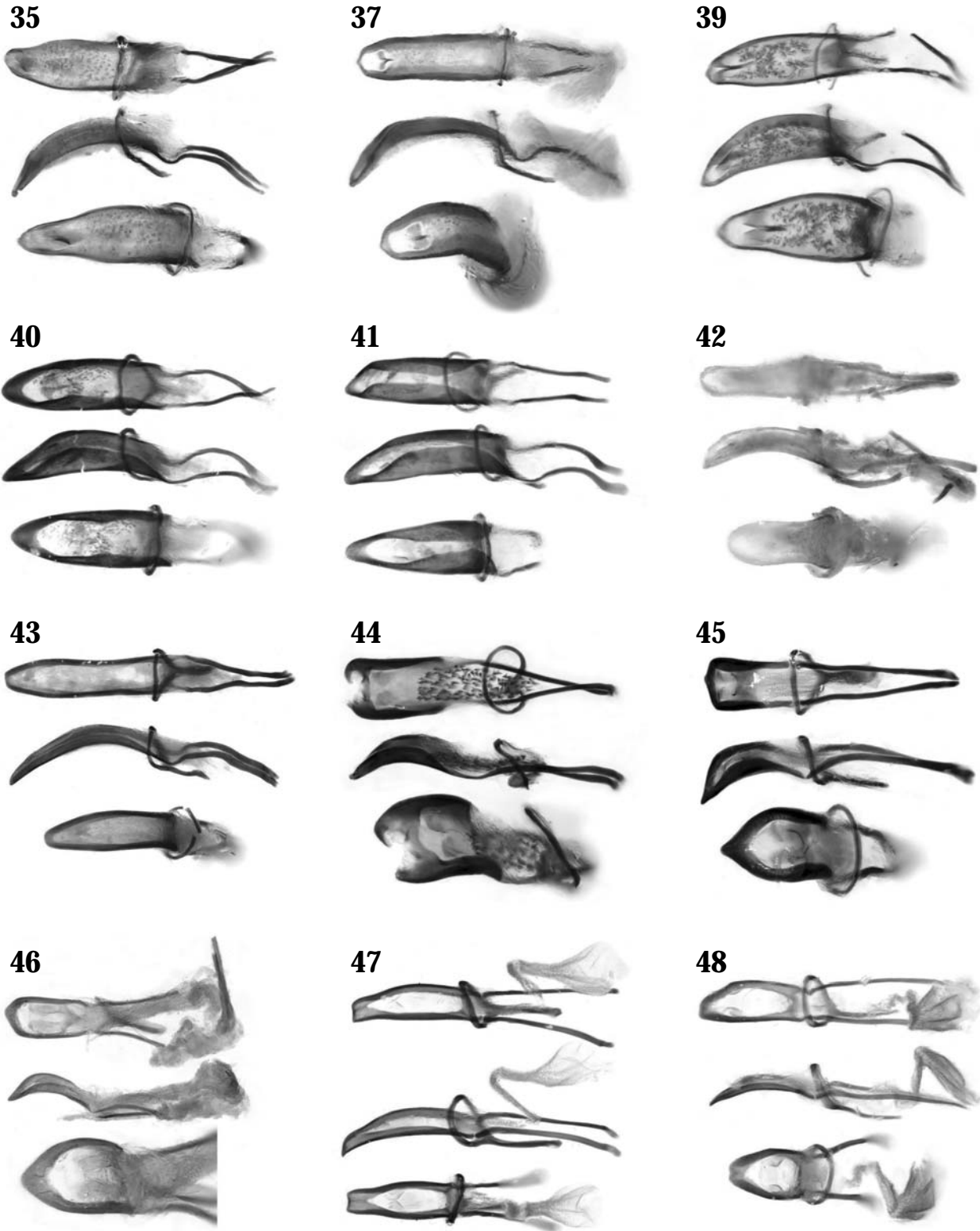
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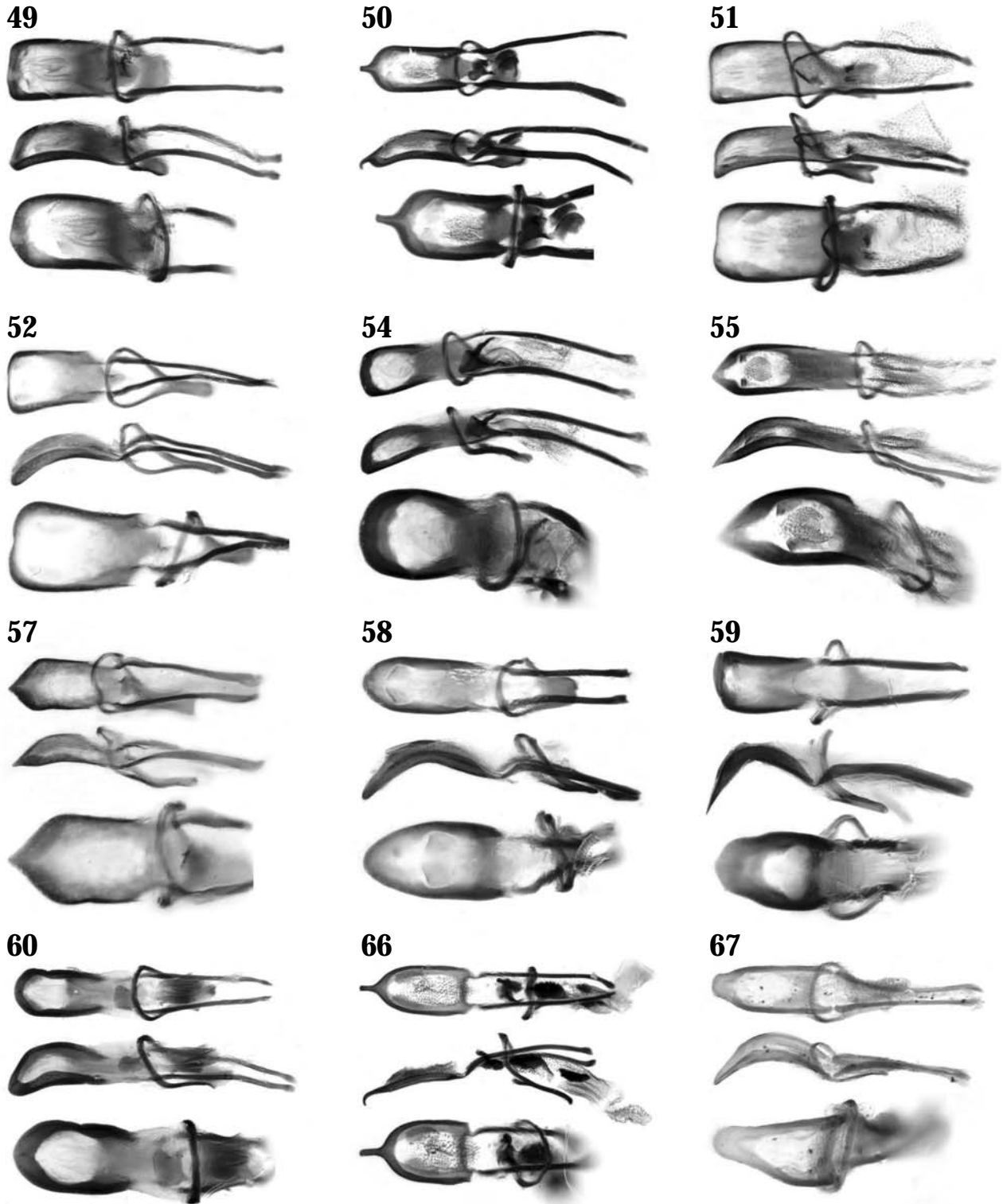
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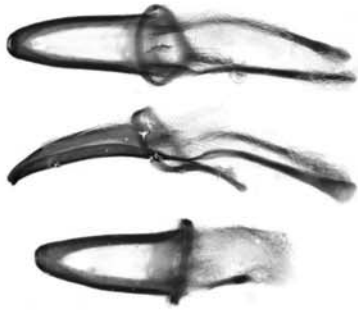


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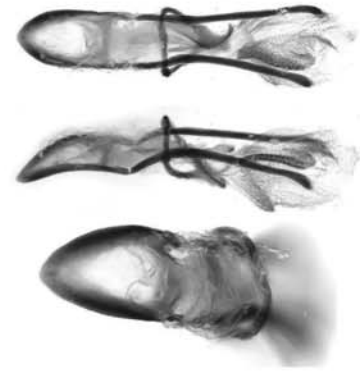
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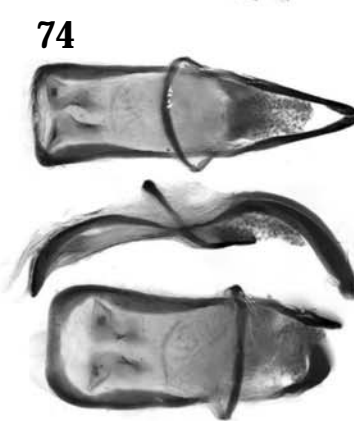
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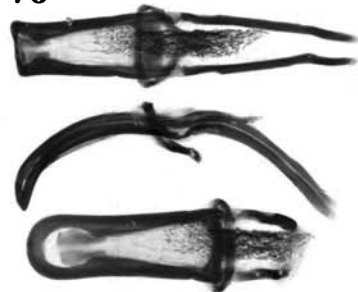
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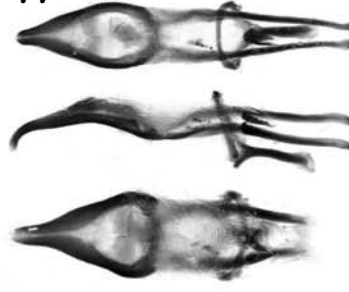
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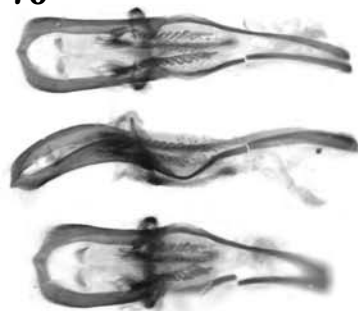
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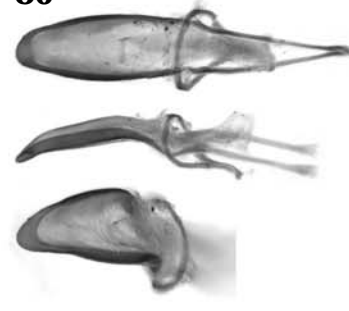
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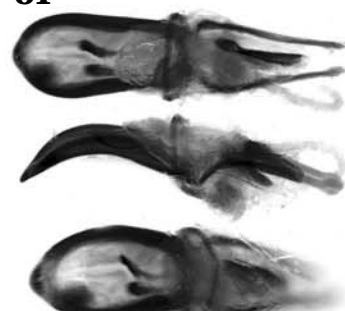
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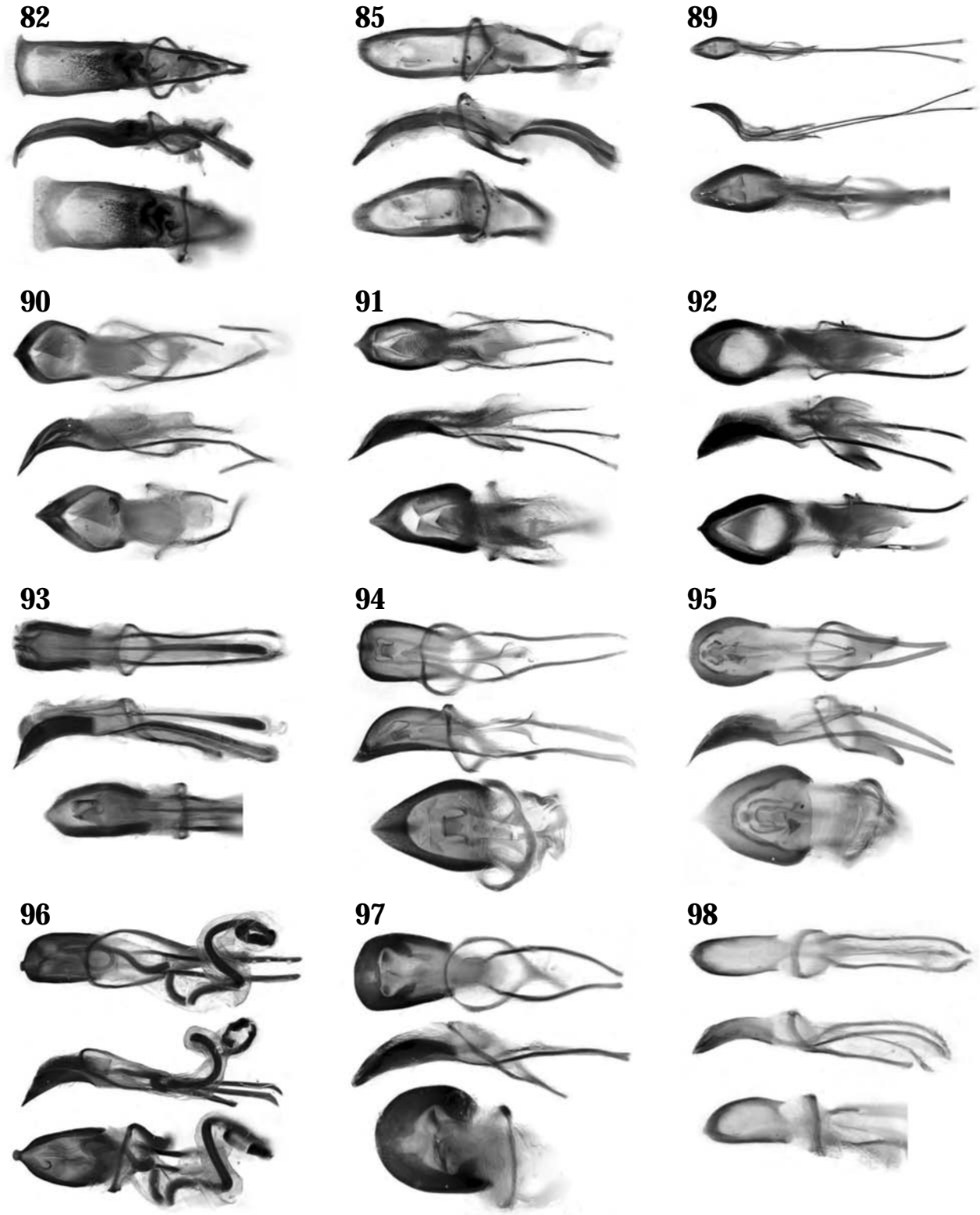
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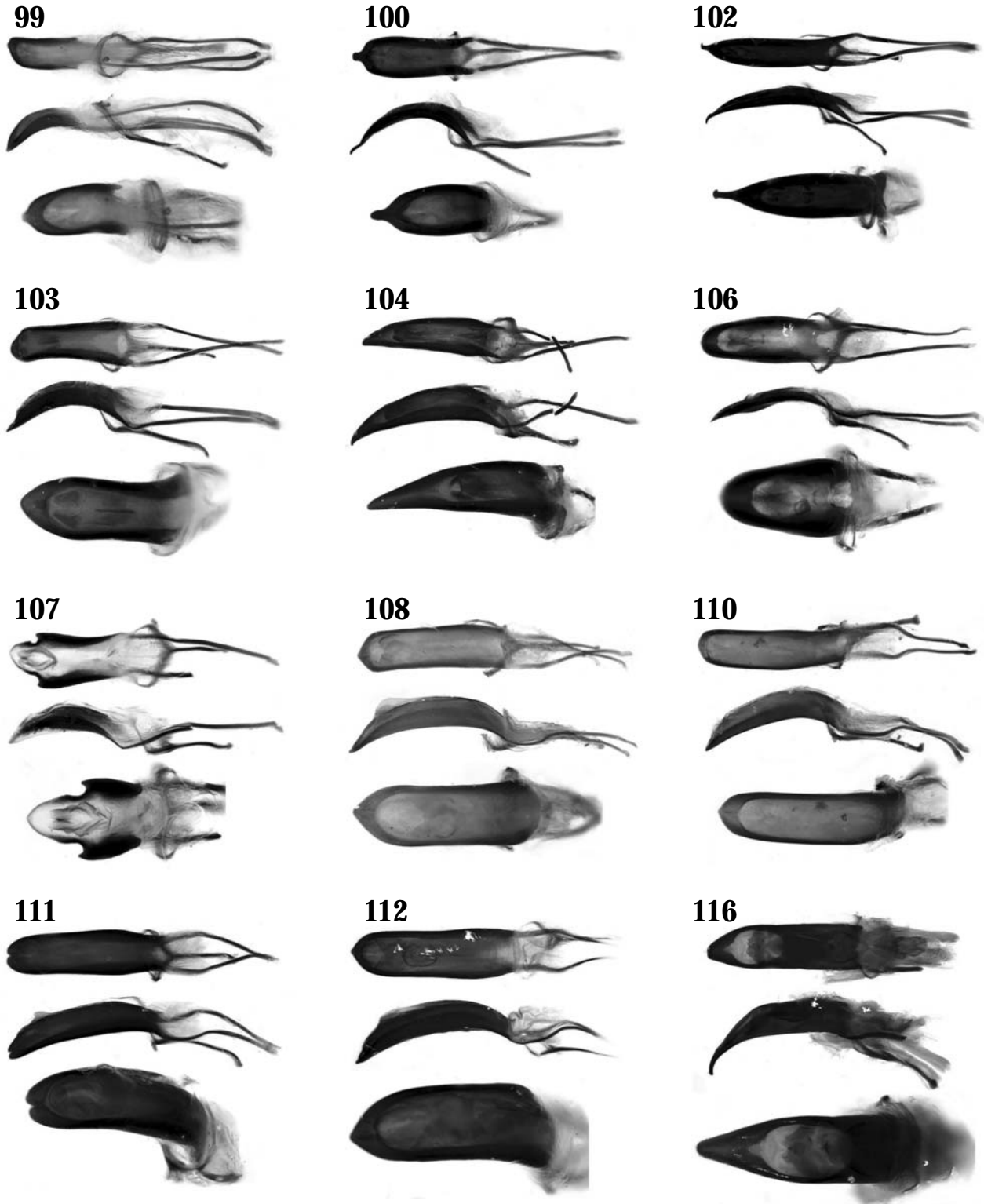
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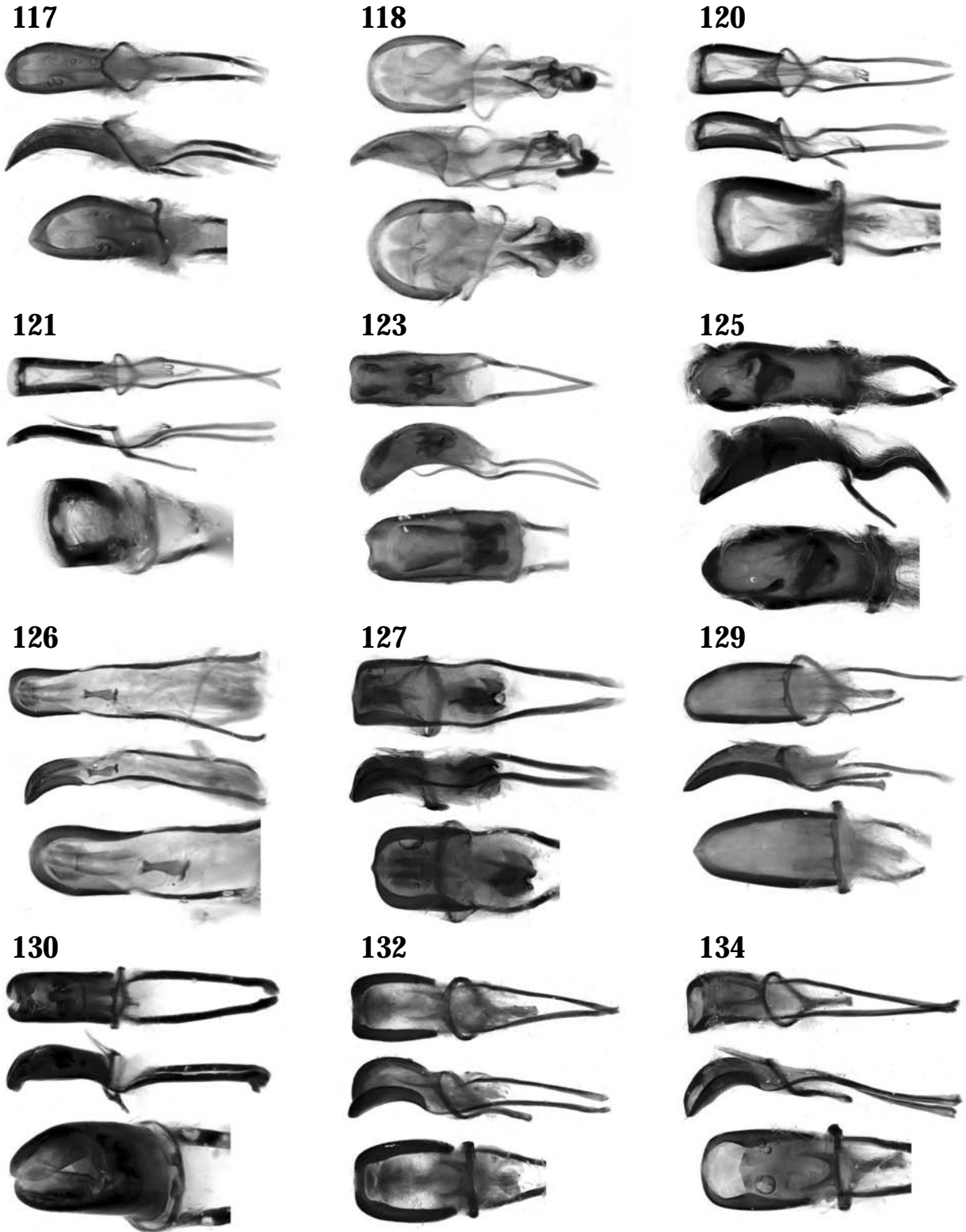
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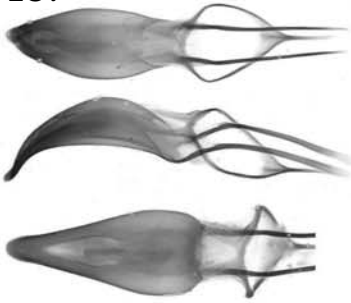


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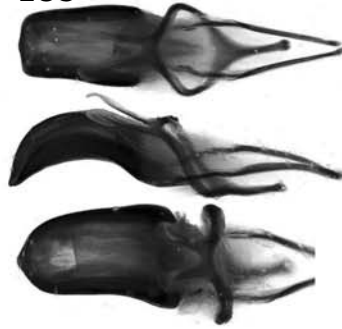


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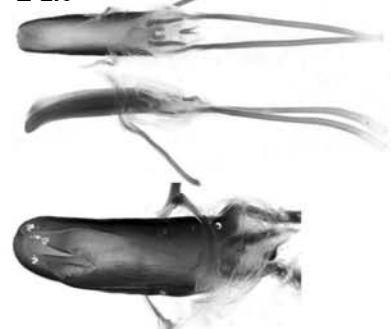
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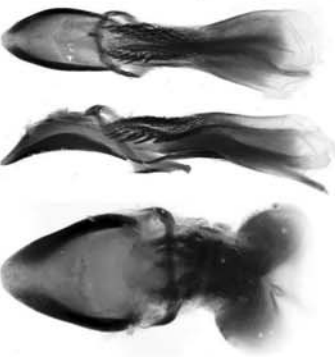
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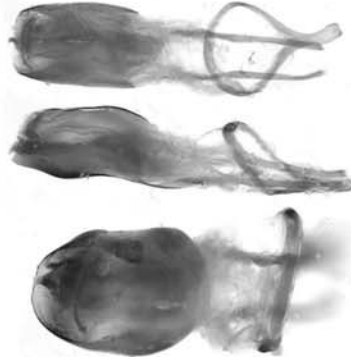
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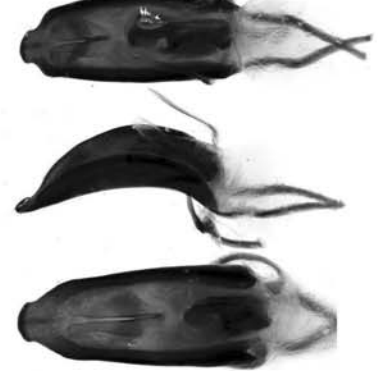
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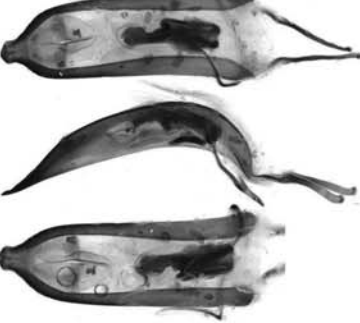
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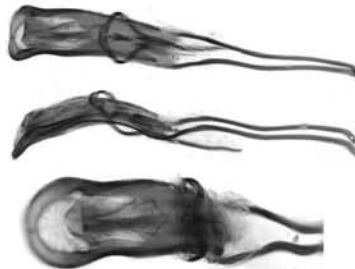
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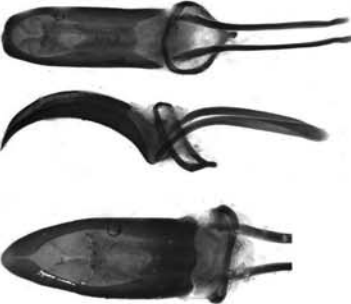
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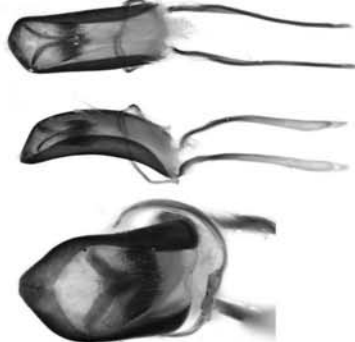
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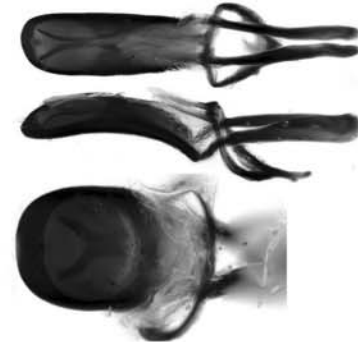
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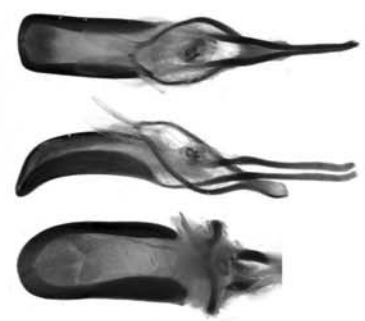
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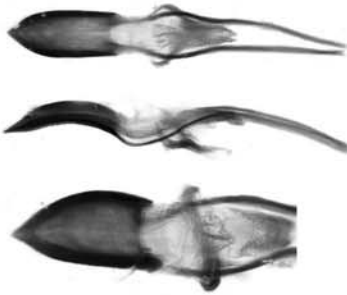
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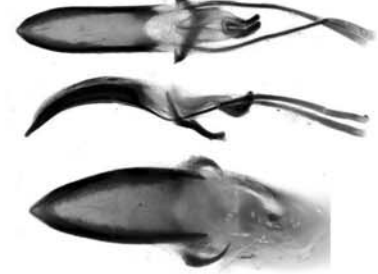
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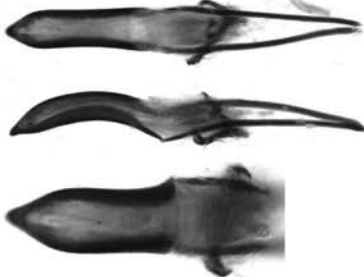
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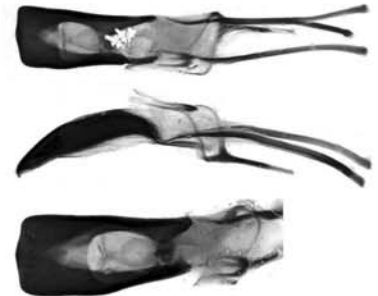
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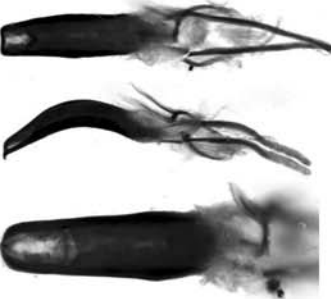
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