# Insect Fauna of Korea

**Volume 12, Number 20**

Arthropoda: Insecta: Coleoptera:
Curculionidae: Entiminae

## Weevils III

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Arthropoda: Insecta: Coleoptera:
Curculionidae: Entiminae

Weevils III

Kyungduk Han, Ki-Jeong Hong[1], Sangwook Park[2]
and Nikolai Yunakov[3]

Korea University
[1]Sunchon National University
[2]Research Institute of Forest Insects Diversity
[3]University of Oslo

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Publisher : Kim, Sang-Bae
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Project Staff : Ki Gyoung Kim, Hong-Yul Seo, Jin Han Kim

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A Korean translation of this issue is simultaneously published for Korean speaking readers. This English version therefore should be regarded as an original publication that has nomenclatural priority.

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.

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# Introductuon

An outline of Curculionoidea was discussed in Weevils volume I of this series (Hong et al., 2011). We reviewed subfamily Entiminae of the family Curculionidae in this work. This book is written as the third part on weevils in the series of the "Insect Fauna of Korea". Consequently, a total of 78 species belonging to 35 genera are enumerated for the fauna of Korea.

# Materials and Methods

Specimens included in this book are based on various collections in Korea and Europe, including universities and institutes. For morphological study, weevils were observed directly by ordinary methods under stereoscopic microscopes (X5-160). We used a Canon D-450 and D-600 Camera, Canon Macro Photo lens MP-E 65 mm, and Auto montage program (Helicon Focus 6) for taking color photos of dorsal and lateral aspects. The species number in the text corresponds with the numbers in the checklist and in the colored plates. The type locality is indicated as "TL", citing their present localities (modified from the spellings in the original descriptions). All available synonyms of the genera and species are listed. In the descriptions of the species, while there are no full descriptions given, the original description, general diagnoses, or major charatereristics are provided when possible. The **Specimens examined** section includes all label data of the available specimens from various collections in Korea and abroad, as well as some personal collections, particularly in the case of N. Korea. The **Korean records** section includes specimen information reported in journals, reports, or in books by local workers, indicating author and year. The **Biological notes** section cites all host plants related to the larvae. The **Distribution** section lists the countries and regions where the taxa are distributed. When **Korea** is mentioned it means a local distribution, indicating North (the northern part: HB, HN, YG, 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 **Remarks** section provides information on the reports of a species in Korea and other relevant taxonomic information. Abbreviations of the provinces which served as collecting sites are as follows:

SL: Seoul, HB: Hamgyeongbukdo, HN: Hamgyeongnamdo, YG: Yanggangdo; JG: Jagangdo; PB: Pyeonganbukdo, PN: Pyeongannamdo, HH: Hwanghaedo, GW: Gangwondo, GG: Gyeonggido (sometimes including new Seoul Area treated as GG Area in the old times), CB: Chungcheongbukdo, CN: Chungcheongnamdo, JB: Jeonlabukdo, JN: Jeonlanamdo, GB: Gyeongsangbukdo, GN: Gyeongsangnamdo (including Busan), JJ: Jejudo.

Specimens examined are mostly preserved in the collection of Korea University [KU-K], Kyushu University [KU-J] in Japan, Kyungpook National University [KNU], National Academy of Agricultural Science [NIAST], Research Institute of Forest Insect Diversity [RIFID], Institute of Zoology [IOZ] in China, Natural History Museum, London [NHM], Hungarian Natural History Museum, Budapest [HNHM], Zoological Museum in Dresden [MTD], Zoological Institute of the Russian Academy of Sciences [ZIN].

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# Taxonomic Notes

## Subfamily Entiminae Schoenherr, 1823

**Diagnosis.** Mandibles with a scar caused by a deciduous cusp (except Alophini and Sitonini); if without a scar, elytra separate from mesepistern, procoxae contiguous, rostrum short, broader than long, or all tarsi spongy beneath and outer surface of mandibles strongly compressed; antennae inserted near the apex of rostrum; antennae funiculus with 7 antenomeres; hind femora not thicker than the anterior one; tibia mucronate; tarsi with 5 tarsomeres, 4$^{th}$ tarsomere small and often invisible; mesepimera not ascended; mandibular motion horizontal; posterior margins of 2–4 visible sternites (sternite 3–5) straight

**Key to the tribes of the subfamily Entiminae from Korea**

1. Mandibles without a scar on Exterior surface ····· 2
– Mandibles with a scar caused by a deciduous cusp ····· 3
2. Exterior surface of mandibles clothed with scales and hairs; rostrum broader than long ····· Sitonini
– Exterior surface of mandibles clothed with several hairs; rostrum short, broad, longer than wide ····· Alophini
3. Antennal scrobes lateral position, long, curved downwards before eye or direct to eye, posterior margin open ····· 4
– Antennal scrobes dorsal or dorso-lateral position and curved upward shortly, posrterior margin enclosed ····· 10
4. Second ventrite not or hardly longer than the third or fourth, separated from the first by a deep straight suture ····· Blosyrrini
– Second ventrite much longer than the third, separated from the first at most by a weak suture ····· 5
5. Prothorax with vibrissae ····· Tanymecini
– Prothorax without vibrissae ····· 6
6. Claws free ····· 7
– Claws connate at base ····· 8
7. Mesepimera small, mesepisterna broadly contiguous with the margin of elytra Trachyphloeini
– Mesepimera moderate in size, mesepisterna distant from the margin of elytra; Eyes partly encroaching on dorsal surface, frons narrower than the base of rostrum ····· [Tropiphorini]
8. Corbel of hind tibia open or semi-enclosed; eyes located more dorsal on head when viewed laterally; antennal scapes long, exceed anterior margin of prothorax ····· Polydrosini
– Corbel enclosed (apex of hind tibia with outer bevel) ····· 9
9. Humeri developed ····· Dermatodini
– Humeri reduced ····· Cneorhinini
10. Claws free; 1$^{st}$ segment of antennal club not longer than 2$^{nd}$ ····· Cyphicerini
– Claws connate at base ····· 11

11. Corbels enclosed ····· Episomini
– Corbels open or semienclosed; ····· 12
12. Elytra oval, without humeri ····· Omiini
– Elytra with rectangular humeri ····· Phyllobiini

## Tribe Alophini LeConte, 1874: 461

**Diagnosis.** Mandibles nearly flat externally, punctured, pincers-shaped, with a sharp edge at the apex, without scar and deciduous cusp. Mentum fairly large, trapezoidal, flat, retracted with the gular peduncle; the posterior edge of gular peduncle prominent, so that the mouth appears hollow. Maxillae exposed; rostrum stout, a little wider at apex, with distinct apical lobe like as pterygium on the rostral apex, longer than wide; antennal scrobes prolonged to the rostral apex, well-defined, narrow, reaching nearly to the lower angle of the eye; antennal club oval pointed. Elytra convex oval, without humeral angles, the posterior part strongly bent downward, added to the more or less rounded prothorax. Prothorax with subocular lobes at the anterior margin, front coxae contiguous, prominent. Tibia truncate at apex, hind pair not mucronate at the inner angle. Claws separate. First, second and fifth ventral sternites long.

## Genus *Trichalophus* LeConte, 1876: 118

Type species: not yet designated.

**Diagnosis.** The upper surface of body is clothed with hairs, not at all squamose, and becoming so only on the sides of sternal pieces. Rostrum with a lateral sulcus on each side, and with a fine median longitudinal sulcus on dorsal surface. The second funicular antennomere a little longer than the first. Head and prothorax densely punctured. Prothorax usually channeled and carinate, then anterior tranverse impression strong, sometimes extending on the dorsal surface. Elytra coverd with the rows of fine punctures densely, but almost or quite obliterated forming obsolete striae. The tarsi broad, brush-like beneath.

**Distribution**: Holarctic.

**Key to species of the genus *Trichalophus* from Korea**

1. Body clothed with light yellowish hairs densely; without large spots on the elytra ····· ····· *Trichalophus maklini*
– Body clothed with short reddish brown hairs; each elytron with two large white spots at the anterior and posterior parts of the 4$^{th}$, 5$^{th}$ and 6$^{th}$ interval ····· *Trichalophus rubripes*

## 1. *Trichalophus maklini* (Faust, 1890) (Plate 1-1)
은빛털바구미

*Alophus maklini* Faust, 1890: 70 (TL: Altai).
*Trichalophus maecklini*: Egorov et al., 1996d, 3(3): 497 (Korea).

**Measurements.** 9.7–12.3 mm (in Russia).
**Diagnosis.** Body black, covered with variable light-colored hairs. Eyes more or less convex, prominent behind contour of head. Pronotum granulate-punctate, with median carina and shallow depression on disk; subocular lobes hardly distinct. Elytra on apex abruptly sloped, with more or less transverse rugose granules, without sharp bright spot, usually with indefinite speckled.

**Specimens examined**: Russia, Siberia (1 ex., 16.vii.1968).
**Korean record**: Egorov et al., 1996d; Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013a.
**Distribution**: Korea (North), NE. China, Russia (Khabarovsk and Primorskii Terr., Sakhalin, Yakutia, Chita and Irkutsk Prov., southwestern E. Siberia).
**Remarks**: Authors could not examine any Korean specimen of this species in this work.

## 2. *Trichalophus rubripes* Zherikhin and Nazarov, 1990 (Plate 1-2)
적빛털바구미

*Trichalophus rubripes* Zherikhin and Nazarov, 1990: 100 (Russian Far East)
*Trichalophus albonotatus* ab. *rubripes* Reitter, 1913: 456 (TL: E. Siberia).
*Trichalophus rubripes*: Egorov et al., 1996d, 3(3): 498 (Korea).

**Measurements.** 7.5–11.0 mm (in Russia).
**Diagnosis.** Body black, covered with metallic copper-colored or copper-greenish hairs, more or less shining. 2$^{nd}$ segment of antennal funicle hardly thinner and 1.25–1.3 times as long as 1$^{st}$. Punctures of intervals of elytra diffused, smooth, elytra not rough. The before and behind of middle part of 4$^{th}$ to 6$^{th}$ intervals with white large spots.

**Specimens examined**: Russia, Arboretum, Vladivostok (1 ex, 12.v.2002).
**Korean record**: Egorov et al., 1996d; Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013a.
**Distribution**: Korea (North), Japan (Hokkaido, Honshu), NE. China, Russia (Khabarovsk and Primorskii Terr., Sakhalin, Kuril Is.).
**Remarks**: Authors could not examine any Korean specimen of this species in this work.

# Tribe Blosyrini Lacordaire, 1863: 27

# Genus *Dactylotus* Schoenherr, 1847: 21

Type species: *Dactylotus sedakoffi* Schoenherr, 1847.
**Distribution**: Korea, Japan, Kuril Is., China, Mongolia, Siberia, Kazakhstan, Kyrgyzstan, Tibet, Nepal.

**Key to the species of genus *Dactylotus* from Korea**

1. Body covered with copper greenish piliform scales without round scales. Elytra elongate ····· ····· *D.* (*Nipponoblosyrus*) *falcatus*
− Body covered with round scales. Elytra slightly longer than width ····· 2
2. Pronotum shiny with small punctures; elytral intervals flat, without hump on declivity of 5th interval ····· *D.* (*Dactylotinus*) *globosus*
− Pronotum not shiny, coarsely punctate and granulate; elytral intervals slightly convex, with a hump on declivity of 5th interval ····· 3
3. Pronotum not shiny, granulate; in male, apex of hind tibia widened ···· *D.* (*Dactylotinus*) *koreanus*
− Pronotum not shiny, coarsely punctate and granulate; in male, apex of hind tibia slightly rounded inwards ····· *D.* (*Dactylotinus*) *orientalis*

# Subgenus *Dactylotinus* Korotyaev, 1996

## 3. *Dactylotus* (*Dactylotinus*) *globosus* Gebler, 1830 (Plate 1-3)
둥글바구미

*Thylacites* (*Strophosomus*) *globosus* Gebler, 1830: 150 (TL: Siberia).
*Dactylotus globosus*: Egorov, 1976a: 827 (Korea).

**Measurements.** 5.5–7.5 mm (in Russia).
**Diagnosis.** Body black, covered with grey scales. Pronotum with sculptures and punctures. Rostral dorsum and frons flat, with sculptured punctures. Eye asymmetrical and convex. Elytra oval, elytral length 1.2 times of its width, without hump on the 5th interval of declivity.

**Specimens examined**: Russia - Tuva (1 ex, 14–16.vii.1996).
**Korean record**: Egorov, 1976a; Hong et al., 2000; Yunakov, 2013b.
**Distribution**: Korea (North), Mongolia, Siberia.
**Remarks**: Authors could not examine any Korean specimen of this species in this work.

## 4. *Dactylotus* (*Dactylotinus*) *koreanus* Korotyaev, 1994 (Plate 1-4)
한국둥글바구미

*Dactylotus koreanus* Korotyaev, 1994a: 872 (TL: Korea).

**Measurements.** Body length 7.0 mm.
**Diagnosis.** Body black, covered with grey scales. Pronotum with granules. Apex of hind tibia expended in male. Mandibles with 5 long setae and many short setae. Rostral dorsum flat or slightly tumid, with side longitudinal carina. Ptrygi not developed. Antenna shorter than the half length of body, antennal scape not exceed middle of eye. First segment of antennal funicle as long as 2$^{nd}$, 3$^{rd}$ as long as 4$^{th}$. Head with transverse sulcus between frons and rostrum. Intervals of elytra with granules; 3-, 5-, 7-interval and joint part of 3+9-interval with humps.

**Specimens examined**: Holotype, male, HN - 1 ex., Sinpo, 14.vii.1990.
**Korean record**: Korotyaev, 1995; Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013b.
**Distribution**: Korea (North).
**Remarks**: This species differs well in twice as deep and large punctures of elytra, granulose sculpture of pronotum, slightly less symmetrically convex eyes, situation of the dorsal side of the rostrum and frons in one plane, well developed triangular convex part surrounding the epistome, slightly slender antennae, including club, slightly slenderer foretibia from *D. orientalis* Korotyaev and Egorov.

## 5. *Dactylotus* (*Dactylotinus*) *orientalis* Korotyaev and Egorov, 1992 (Plate 1-5)
동양둥글바구미

*Dactylotus orientalis* Korotyaev and Egorov, 1992, in Korotyaev,: 820 (TL: Russia; Khabarovsk and Primorskii Terr.; N. Korea; Abrokgang basin).

**Measurements.** Body length 6.5–7.5 mm.
**Diagnosis.** Body black, covered with dark brown scales; antennae and tarsus light brown. Pronotum wider than length, with sculptures and punctures. Intervals of elytra without granules; 5$^{th}$ interval with small hump.

**Specimens examined**: PB - 1 ex., Abrokgang basin, 25–27.vii.1897; Paratype, Male, Russia, Primorie South 15 km Benevske, 1 male, 24.vii.1975, V. N. Kuznetsov (ZIN).
**Korean record**: Korotyaev, 1992; Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013b.
**Distribution**: Korea (North), Russia (Khabarovsk and Primorskii Terr.).

## Subgenus *Nipponoblosyrus* Korotyaev, 1996

### 6. *Dactylotus* (*Nipponoblosyrus*) *falcatus* (Faust, 1882) (Plate 1-6)
처녀둥글바구미

*Blosyrus falcatus* Faust, 1882: 262 (TL: Amur).
*Blosyrus japonicus* Sharp, 1896: 88 (TL: Japan; Awomori, Sapporo); Sin and Noh, 1970, 1: 37 (Korea; Soheuksando).

**Measurements.** Body length 5.4–6.6 mm (in Japan).
**Diagnosis.** Body black, covered with densely grayish scales. Pronotum with 5 dark brown longitudinal rows. Elytra scattered with samll brown spots.
"Antennae short, third joint scarcely longer than the second. Rostrum very short, not longer than broad, flat, with distinct angular transverse depression in front of the eyes. Thorax short and broad, very strongly transverse, rounded at the sides, with and obscure carina on the middle, most distinct in front; the surface squamose; with a few very minute shining granules. Elytra much broader than the thorax, convex and globose, with series of rather coarse punctures, the interstices broad, slightly convex, and set with very short setae. The sculpture and clothing in this insect are more or less obscured by the dirt with which the insect becomes covered. There is a longitudinal channel on the middle of the head in two examples; in two others it can scarcely be detected, perhaps owing to its being obliterated by dirt mixed with an exudation" (Sharp, 1896: 88).

**Specimens examined**: *Blosyrus japonicus* Type (Sharp Coll. 1905-313, NHM); Cotype (Coll. J. Faust. 1911-393, NHM)
**Korean record**: Sin and Noh, 1970; Morimoto, 1994a; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Yunakov, 2013b.
**Distribution**: Korea, China, Japan (Hokkaido, Honshu), Mongolia, Russia (Kuril Is., Sakhalin).
**Remarks**: The first record from Korea was done by Sin andt Noh (1970). Several specimen collected by Sin and Noh (1970) and determined as *Blosyrus japonicus* were indetified as a new species (*Pseudocneorhinus soheuksandoensis* Han and Yoon, 2000). Authors could not examine any Korean specimen of this species in this work.

## Tribe Cneorhinini Lacordaire, 1863

## Genus *Catapionus* Schoenherr, 1842

Type species: *Catapionus basilicus* Boheman, 1842.
**Distribution**: C. and E. Palaearctic, India.

**Key to the species of genus *Catapionus* from Korea**

1. Pronotum with median sulcus ····· 2

– Pronotum without median sulcus, with naked area slightly rising up ····· *C. fossulatus*
2. The second funicular antenomere short and stubby, 1.7–2.3 times as long as wide ···· *C. modestus*
– The second funicular antenomere much long and slander, 2.3–2.7 times as long as wide ····· ····· *C. obscurus*

## 7. *Catapionus fossulatus* (Motschulsky, 1860) (Plate 2-7)
둥근혹바구미

*Cneorhinus viridimetallicus* Motschulsky, 1860: 21 (TL: Siberia).
*Cneorhinus viridimetallicus* var. fossulatus Motschulsky, 1860: 168 (TL: Amur).
*Catapionus viridimetallicus* f. *frequens* Kôno, 1930: 171, 172 (TL: South of the Russian Far East).
*Catapionus viridimetallicus* f. *naipoensis* Kôno, 1930: 171, 173 (TL: Kuril Is.).
*Catapionus viridimetallicus* f. *jezoensis* Kôno, 1930: 171, 173 (TL: Sakhalin).
*Catapionus viridimetallicus*: Doi, 1938, 11: 97 (Korea; Gaemagowon); Kim et al., 1974, 7: 228 (Korea; Hyangrobong).
*Catapionus viridimetallicus fossulatus*: Egorov, 1976a: 828 (Korea).

**Measurements.** Body length 9.0–13.0 mm.
**Diagnosis.** Prementum with 8 setae. Mandibles with 5 long setae and few short piliform setae. Apex of rostrum wider than base. Pterygia of rostrum developed. Antennal scrobes lateral position, curved downward under the eye. Posterior part of scrobe widen, open, without scales, with short piliform setae sparsely. Antennal a little shorter than half of body length. Antennal scape shorter than funicle, not exceed anterior margin of eye. Antennal scape from base to middle part thick, distal part strongly clavate. Antennal scape without scales, with piliform setae sparsely. Antennal funicle 4–6 segments elongate. Antennal funicle without scales, with long setae and piliform setae sparsely. First segment of antennal funicle as long as 2$^{nd}$, 3$^{rd}$ segment longer than 4$^{th}$ segment. Club ovate, wider than 2 times of width of 6$^{th}$ funicle. Frons wider than 2/3 width of rostrum, narrower than 1.5 times of eye width, with transverse sulcus in front of eye, anterior part flat. Eye lateral position, transverse, convex. Pronotum oval rounded, without a median sulcus, posterior margin rounded and slightly bisinuate, pronotal disk wrinkled. Subocular lobes indistinct. Vibrissae absent. Femur with semi-round and short spatulate scales densely, without tooth inside of clavate part. Fore tibia thick, external margin not carinate. Internal edge of fore tibia without teeth and with dark brown bristles. Internal edge of fore tibia straight to slightly rounded. Apex of fore tibia enlarged. Internal edge of hind tibia without teeth, with dark brown bristles. Corbels of hind tibia enclosed. Base of claws fused together. Suture between metepisternum and metasternum distinct. Metepisternum slightly covered with elytra. Scutellum so much small, indistinct, V-shape. Elytra oval, without humeri, behind of humeri part gently rounded. Basal margin of elytra not raised and weakly projected anteriorly. Elytra covered with small round greenish and copper metallic round scales densely. Odd intervals of elytra weakly costate, anterior part of interval 2–4 not tumid. Erected setae on each interval very short piliform, shorter than 1/2 width of 2$^{nd}$ interval, arranged 2–3 rows alternatively. Striae on the elytra indistinct. Puctures large, deep, round.

**Specimens examined**: GW - Mt. Bangtaesan Guryongddukbang, 15♂14♀, 6.vi.1999; Mt. Daeamsan Yongneup, 1♂2♀, 7.vii.1995; 1♀, 30.v.1992; Yanggu Gachilbong, 1♀, 31.v.1992; Yanggu Mt.

Dusolsan, 1♂1♀, 7.vii.1995; Hyangrobong, 1♀, 18.vi.1967; 1 ex., Yaksusan, 9.viii.1989; 1 ex., Hangyeryeong, 10.vi.1994; 1 ex., Daegwanryeong, 28.v.1997; GB - Mt. Sobaeksan, 1♀, 6.vi.1981; North Korea, HB - Mt. Rorinsan, 4♂3♀, 27.vii.1936.

**Korean record**: Doi, 1938; Kim et al., 1974; Egorov, 1976a; Krivolutskaja et al., 1978; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Hong and Korotyaev, 2002; Alonso-Zarazaga, 2013.

**Distribution**: Korea (North, Central), Japan (Hokkaido, Honshu), China (Heilongjiang, Liaoning, Anhui), Russia (Kuril Is., Sakhalin, Khabarovsk and Primorskii Terr.).

## 8. *Catapionus modestus* Roelofs, 1873 (Plate 2-8)

어리둥근혹바구미

*Catapionus modestus* Roelofs, 1873: 156 (TL: Japan; Kawatchi).
*Catapionus modestus*: Okamoto, 1924, 1(2): 186 (Korea; Jejudo).

**Measurements.** Body length 7–10 mm.

**Diagnosis.** The 2nd funicular segment of antennae 1.7–2.3 times as long as wide, longer than 1st one and 4th funicular segment 0.9–1.1 times as long as wide. Pronotum with median sulcus. Odd intervals of elytra convex.

**Specimens examined**: Holotype, Japan, G. Lewis. 1910-320, NHM.

**Korean record**: Okamoto, 1924; Kôno and Kim, 1937; Kwon and Lee, 1986; Kim, 1993; ESK/KSAE, 1994; Paik et al., 1995; Hong et al., 2000; Alonso-Zarazaga, 2013.

**Distribution**: Korea (Jejudo), Japan (Honshu, Shikoku).

**Remarks**: Authors could not examine any Korean specimen of this species in this work.

## 9. *Catapionus obscurus* Sharp, 1896 (Plate 2-9)

참둥근혹바구미

*Catapionus obscurus* Sharp, 1896: 90 (TL: Japan; Honshu).
*Catapionus obscurus*: Cho, 1963, 6: 214 (Korea; JJ).

**Measurements.** 6.5–9.3 mm.

**Diagnosis.** The 2nd funicular segment of antennae 2.3–2.7 times as long as wide, longer than 1st one and 4th funicular segment 1.1–1.6 times as long as wide. Pronotum with midian sulcus. Odd intervals of elytra slightly convex.

**Specimens examined**: Type, Japan, G. Lewis, Sharp. Coll. 1905-313, NHM.

**Korean record**: Cho, 1963; Cho et al., 1968; Lee et al., 1985; Kwon and Lee, 1986; Kim, 1993; ESK/KSAE, 1994; Paik et al., 1995; Hong et al., 2000; Alonso-Zarazaga, 2013.

**Distribution**: Korea? (Central, Jejudo), Japan (Honshu), Russia (Kuril Is.).

**Remarks**: The first record from Korea was done by Cho (1963), but, this report on “Insect Fauna

of Jejudo" cited only like Okamoto (1924). It seems to be written *C. modestus* Roelofs to *C. obscurus* Sharp by mistake at that time, and after, many reports had been same mistakes. However, we could not find neither voucher specimen that collected from central in the distributed record of Kwon and Lee (1986) nor any other Korean specimen of this species.

## Tribe Cyphicerini Lacordaire, 1863

**Key to the subtribes of the tribe Cyphicerini from Korea**

1. Prothorax without vibrissae nor ocular lobes in the sides of anterior margin behind eyes ····· Myllocerina
− Prothorax with ocular lobes and vibrissae ····· 2
2. Elytra ovate, with reduced humeri; hind wings not functional ····· Acanthotrachelina
− Elytra with rectangular or rounded rectangular humeri; hind wings functional ····· 3
3. Epistome very short, not beyond the middle of pterygia; rostrum much longer than broad ····· [Phytoscaphina]
− Epistome beyond the middle of pterygia; rostrum about as long as or shorter than wide ····· Cyphicerina

## Subtribe Acanthotrachelina Marshall, 1944

## Genus *Calomycterus* Roelofs, 1873: 175

Type species: *Calomycterus setarius* Roelofs, 1873.

**Diagnosis.** Head with frons wider than the length of eye, continuously flat from dorsum of rostrum; eyes ovate, weakly convex laterally beyond the side margin of head in dorsal aspect; rostrum transverse, dorsolateral carinae indefinite, parallel from base of rostrum to the base of swinging fossae, then divergent to apex, lateral carinae above scrobes obtuse, indefinite; epistome U-shaped, shiny, rugose, with setae and a few scales, postepistomal area with transverse ridge. Prementum with 2 setae. Antennae with scape normal, each segment of funicle longer than wide, 1st segment much longer than 2nd, club spindle shaped. Prothorax transverse, basal margin scarcely narrower than apical margin, apical margin shallowly concave in an arc from ocular lobes, basal margin truncate; ocular lobes broad, definite, partly touching eyes; vibrissae usually absent. Scutellum minute. Elytra ovate, obtuse angularly rounded at humeri, widest in the middle, conjointly rounded at apex, striae regular, ultimate striae complete, intervals flat. Femora armed with a small sharp tooth; tibiae neither costate nor sulcate, mucronate, without bare carina at apex; tarsi with 1st segment shorter than following 2 segments combined. Metasternum shorter than 1st ventrite. Scaling grayish, variegated above owing to the density of scales (Morimoto et al., 2006).

**Distribution**: Korea, Japan, China, South of the Russian Far East, Afghanistan, Burma, India, USA (introduced).

## 10. *Calomycterus setarius* Roelofs, 1873 (Plate 2-10)

털줄바구미

*Calomycterus setarius* Roelofs, 1873: 175 (TL: Japan).

**Measurements.** Body length 3.12–3.38 mm.

**Diagnosis.** Body reddish black. Prementum with 2 setae. Base of the mandibular scar not projected. Mandibles with 3 setae. Epistomal plate rounded V-shape. Epistomal plate without scales. Postepistome without scales. Anterior part of epistomal plate with 2–4 pairs of setae. Post epistomal carina raised up sharply. Rostral dorsum depressed and tumid, without a median sulcus, with a median carina, with side-longitudinal carinaes. Apex of rostrum as long as width of base. Antennal scrobes dorso-lateral position, direct to the eye. Posterior part of antennal scrobes widened, enclosed, without scales. Pterygia developed, enlarged. Antennae longer than 1/2 length of body length. Antennal scape as long as funicle. Antennal scape not exceed anterior margin of pronotum, exceed posterior margin of eye. Basal part of antennal scape thick. Distal part of antennal scape weakly clavate. Antennal scape weakly curved. Antennal scape with short broad spatulate scales and long narrow spatulate setae densely. Antennal funicle with long setae and short piliform setae densely. First funicular segment longer than 2$^{nd}$ segmen. Third funicular segment as long as 4$^{th}$ segment. 4$^{th}$–6$^{th}$ segments elongate. Club spindle-shaped, 2 times wider than 6$^{th}$ funicular segment. Frons wider than the 2/3 width of rostrum. Frons wider than 1.5 times of eye width. Frons without transverse grooves anteriorly of eyes. Anterior part of frons depressed. Eyes dorso-lateral, oblique, flat to slightly rounded. Pronotum rounded truncate, without a median sulcus and a median carina. Pronotum without vibrissae, with subocular lobes. Pronotum anterior margin not projected. Pronotum posterior margin truncate. Depressed pit on the side of pronotum absent. Dorsal surface of pronotum flat to slightly rounded, punctured. Femur dentate. Femur with round broad shell-like scales sparsely. Internal edge of fore tibia without teeth, with bristles. Internal edge of fore tibia slightly sinuate and curved. Fore tibia thick, external edge not sharp. Apex of fore tibia simple, emarginate. Internal edge of hind tibia without teeth and bristles. Corbels of hind tibia open. Claws free, separate. Metepisternum broad, half of metepisternum covered with elytra, with transverse groove weakly. Suture between meterpisternum and metasternum distinct. Scutellum very small, distinct, V-shape. Elytra oval, without humeri. Elytra as long as 1.5 times of width. Behind humeri of elytra gently rounded. Odd intervals of elytra flat. Elytral basal margin not raised up. Basal margin of elytra not projected anteriorly. Elytra covered with light brown round shell-like scales. Erected setae on each interval of elytra slander needle-like, a little shorter than width of 2$^{nd}$ interval, ordered a regular row. Punctures on elytra shallow, small, round. Striae on the elytra distinct. End of elytra simple obtuse angle. Anterior margin of 2$^{nd}$ sternite weakly bisinuate. Sternites 2–4 stairs-shaped, posterior part slightly raised. Middle width of 2$^{nd}$ sternite wider than 3$^{rd}$+4$^{th}$. Middle width of 5$^{th}$ sternite narrower than 3$^{rd}$+4$^{th}$. Posterior margin of 2–4 sternites straight.

**Specimens examined**: GG - 1 ex., Seoul Bulamsan, 19.vii.1970; 1 ex., Suwon, 25.x.1974; 1 ex., Bi-

bong, 1.vii.1975; 1 ex., Suwon, 8.vi.1976; 1 ex., Suwon, 16.vi.1976; 1 ex., Suwon, 29.viii.1984; GW - 4 exs., Chiaksan, 23–24.vi.1977; 1 ex., Hoengseong, 30.viii.1987; 1 ex., Chuncheon, 28.vi.1989; 1 ex., Gangwon Univ. Campus, 31.v.1994; 4 exs., Daegwanryeong, 25.vii.1997; CN - 1 ex., Chilgabsan, 20.viii.1981; JN - 3 exs., Soheuksando, 3.vii.1973; 1 ex., Mudeungsan, 10.ix.1975; 1 ex., Jirisan Simwon, 4.viii.1996; GB - 1 ex., Andong, 10.v.1988; JJ - 1 ex., Yeongsil, 5.vi.1981; 2 exs., Seongpanak, 12.vi.1982; 1 ex., Gwaneumsa, 19.vi.1982; 1 ex., Seongpanak, 3.vii.1982; 1 ex., Cheonhwangsa, 21.v.1983; 1 ex., Seongpanak, 28.vi.1990.

**Korean record**: Kim, 1980; Kwon and Lee, 1986; Morimoto and Lee, 1992; ESK/KSAE, 1994; Morimoto, 1994; Paik et al., 1995; Kim, 1995; Kim and Kim, 1996; Yunakov, 2013c.

**Biological note**: This weevil is parthenogenetic and common in Korea, it is taken by sweeping and beating the grasses and bushes.

**Distribution**: Korea (Central, South and Jejudo Is.), Japan (Honshu, Shikoku, Kyushu, Tsushima), NE. China, Far East Russia, USA (introduced).

## Subtribe Cyphicerina Lacordaire, 1863

**Key to the genera of the subtribe Cyphicerina**

1. Epistome asymmetrical; postepistomal area bare, concave and with transverse carina at hind margin; pronotum a little broader at anterior margin than at base ..... *Oedophrys*
− Epistome symmetrical; postepistomal area without transverse carina; pronotum at most as wide at anterior margin as at base ..... 2
2. Epistome sharp, less than right angle at hind angle; prothorax with well produced ocular lobes ..... *Ptochidius*
− Epistome obtuse at hind angle; prothorax with weak ocular lobes; dorsal area of pronotum and elytra usually devoid of scales ..... *Cyrtepistomus*

## Genus *Cyrtepistomus* Marshall, 1913: 186

Type species: *Phyllobius jucundus* Redtenbacher, 1844.

**Diagnosis.** Eyes dorsolateral, weakly convex, scarcely expanded laterally beyond the sides in lateral aspect. Rostrum about as long as to longer than wide at the base, dorsolateral carinae definite, almost parallel-sided from base to the middle, then divergent apically; lateral carinae above posterior scrobes indefinite; prementum with 4 setae; epistome bare, shiny, symmetrical, obtusely angulate at base and not exceeding posteriorly beyond the antennal sockets, parepistomes scaled, postepistomal area without transverse carina. Antennae with scape round in cross section, weakly thickened apically, without any erect setae, funicle slender, each segment longer than wide, 1$^{st}$ segment shorter than 2$^{nd}$, club elongate spindle-shaped. Prothorax transverse, subtruncate or feebly produced caudally in a shallow curve at base, ocular lobes feeble, vibrissae fine. Scutellum evident.

Elytra with roundly rectangular humeri, almost parallel-sided on basal half, conjointly rounded at apex. Femora dentate, tibiae straight externally, corbel of hind tibiae open, tarsi rather slender, 1st segment of hind tarsi longer than two following combined (Morimoto et al., 2006).

**Distribution**: Korea, Japan, China, Burma, India, USA (introduced).

## 11. *Cyrtepistomus castaneus* (Roelofs, 1873) (Plate 2-11)

밤색주둥이바구미

*Myllocerus castaneus* Roelofs, 1873: 168 (TL: Japan).
*Myllocerus capito* Faust, 1887: 32 (TL: Peking).
*Myllocerus chlorizans* Faust, 1887: 33 (TL: Peking).
*Myllocerops fortis* Reitter, 1915: 120 (TL: China; Kiautschou).

**Measurements.** Body length 5–6 mm.

**Diagnosis.** Variable in coloration and scaling, entirely yellowish brown with black eyes, or entirely chestnut brown with black eyes, or dark brownish with chocolate brown elytra, or almost entirely blackish; scaling with round scales metallic green to ash green on head, sides of thorax and lateral intervals of elytra, basal area of pronotum with grayish plumose small scales, dorsal broad area of pronotum visibly bare, but with fine pale pubescence, with a row of curved suberect setae on each interval; in some fresh specimens scales often forming some indefinite irregular patches on the periphery of visible bare area of elytra; vesture on the underside like that on pronotum; scales and pubescence easily denuded by depilation (Morimoto et al., 2006).

Prementum with 4 setae. Epistomal carina pentagonal, obtuse angle, obtuse raised. Epistomal plate without scales. Postepistome with few scales. Pterygia of rostrum developed and enlarged. Antennal scrobes dorso-lateral position, direct to the eye, posterior part of scrobe widened, open, without scales. Rostral dorsum tumid. First segment length of antennal funicle shorter than 2nd, 3rd segment as long as 4th segment. Club spindle-shaped, 2 times as wide as 6th funicular segment. Frons narrower than 2/3 width of rostrum, narrower than 1.5 times of eye width. Eye dorso-lateral position, round, slightly convex. Pronotum oval, tumid, posterior margin weakly bisinuate. Subocular lobes distinct. Vibrissae present. Femur with short piliform setae sparsely, with tooth inside of clavate part. Elytra rectangular, with humeri, behind of humeri part gently rounded. Basal margin of elytra not costate and weakly projected anteriorly. Elytra covered with greenish and reddish metallic circular scales sparsely and with short piliform setae densely. Intervals of elytra not costate, anterior part of interval 1–4 tumid. Erected setae on each interval needle-like to stick-like, as long as or longer than width of 2nd interval, arranged many rows alternatively. Striae on the elytra distinct. Functures deep, medium size, and circular.

**Specimens examined**: GG - 2 exs., Deokjeokdo, 5.viii.1970; 6 exs., Suwon, 17.viii.1980; 2 exs., Gwangreung, 20.vi.1983; 1 ex., Anseong, 14.v.1988; 1 ex., Yeogisan, 27.viii.1993; 1 ex., Gwanggyosan, 4.ix.1996; CN - 2 exs., Gyeryongsan, 27.ix.1991; JN - 1 ex., Jirisan Nogodan, 24.vii.1971; 1 ex., Jogyesan, 5.vii.1975; 2 exs., Jirisan Piagol, 2.viii.1996; 2 exs., Jirisan Simwon, 4.viii.1996; 1 ex., Jirisan Jungsanri, 5.vi.1997; GB - 1 ex., Juwangsan, 16.viii.1980; 1 ex., Jikjisa, 28.ix.1980; GN - 9 exs., Haeinsa, 14.viii.1980; 2 exs., Jinju, 14.vii.1993; JJ - 1 ex., Yeongsil, 5.vi.1981; 1 ex., Yeongsil, 6.viii.1981; 1 ex., Seongpanak, 11.ix.1983; 1 ex., Seogwipo, 14.iv.1985.

**Korean record**: Kôno and Kim, 1937; Cho, 1957; ZSK, 1968; Egorov, 1976; Kim and Kim, 1972; Kim and Kim, 1974; Chang and Choe, 1982; Lee et al., 1985; Kwon and Lee, 1986; Yoon et al., 1990; Morimoto and Lee, 1992; Kim, 1993; ESK/KSAE, 1994; Morimoto, 1994; Paik et al., 1995; Kim and Kim, 1998; Yunakov, 2013c.

**Biological notes**: This species is known to be parthenogenetic. Weevils are commonly found and fed on the leaves of *Castanea crenata*, *Quercus serrata* and *Quercus acutissima* from late April to August in Korea and Japan (Morimoto et al., 2006).

**Distribution**: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima), China, North America (Introduced).

**Korea**: Whole country including Is. Jejudo.

## Genus *Oedophrys* Marshall, 1941: 361

Type species: *Myllocerus convexifrons* Faust, 1897.

**Diagnosis.** Head with frons wider than dorsal area of rostrum; eyes ovate, weakly convex. Rostrum transverse, dorsolateral carinae convergent from the base to the middle, then divergent to apex; epistome short, slightly exceeding middle of swinging fossae, faintly to strongly asymmetrical; parepistomes definite, bare, postepistomal area with transverse ridge. Prementum with 4 setae. Antennae with scape moderately stout, gradually thickening distally, funicle with 2$^{nd}$ segment almost as long as or shorter than 1$^{st}$, club fusiform. Prothorax transverse, almost as wide as or faintly wider at apex than at base, weakly bisinuate at base; ocular lobes feeble or obsolete, vibrissae consisted of a few fine setae. Scutellum bare or shiny with a few scales. Elytra much wider at the rectangularly rounded humeri than prothorax, widest behind the middle in both sexes, conjointly rounded at apex. Legs with femora with a small sharp tooth; hind tibiae with open corbel (Morimoto et al., 2006).

**Distribution**: Korea, Japan, China, Burma, India.

### 12. *Oedophrys sakaguchii* (Kôno, 1930)
내장산뭉뚝바구미

*Myllocerus sakaguchii* Kôno, 1930: 212 (TL: Japan; Okinawa).

**Measurements.** Body length 3.6–4.0 mm.

**Diagnosis.** Entirely reddish brown to brownish black, antennae and legs usually a little paler; scaling predominantly grayish, often with coppery and/or greenish shimmer in parts, with following brownish patches on dorsum; head with a pair of indefinite patches on posterior part, the patches often enlarged anteriorly as far as rostrum or entirely absent; pronotum with 3 stripes, median stripe narrow and often obsolete; elytra with a conjoint crescent patch between the middle of 5$^{th}$ striae and arcuate caudally to the top of declivity, 3$^{rd}$ and 5$^{th}$ intervals usually tessellate, 4$^{th}$ interval often with short stripe at base (Morimoto et al., 2006).

**Specimens examined**: None.
**Korean record**: Kim and Kim, 1974; Hong et al., 2000; Yunakov, 2013c.
**Biological note**: This species is polyphagous and collected on various trees by beating and common from March to September in Japan. Host plants on Hachijojima Is. in Japan are *Eurya emarginata*, *Morus alba*, *Boehmeria japonica* and *Prunus* spp., but not on Fagaceae (Morimoto et al., 2006).
**Distribution**: Korea (South?), Japan (Kyushu, Ryukyu).
**Remarks**: Authors could not examine any Korean specimen of this species in this work.

## Genus *Ptochidius* Motschulsky, 1858: 87

Type species: *Ptochidius lineatus* Motschulsky, 1858.
Synonym: *Cyphicerinus* (nec. Marshall, misidentified): Kôno and Morimoto, 1960: 78; Morimoto, 1962: 212; Chao and Chen, 1980: 56; Zherikhin and Egorov, 1990: 155; Hong et al., 2000: 155.

**Diagnosis.** Head with frons much wider than dorsum between dorsolateral carinae of rostrum. Head and rostrum longitudinally multisulcate visible when denuded. Rostrum as long as broad, dorsolateral carinae almost parallel to the base of pterygia, then divergent to apex; epistome bare, cordiform, as long as wide, its hind angle a little narrower than right angle, a little exceeding the level between hind margin of antennal sockets; prementum with 4 setae. Antennae with scape weakly thickened apically, curved, funicle with 1st segment as long as or shorter than 2nd. Prothorax transverse, rounded laterally, faintly bisinuate at base; ocular lobes well developed, vibrissae fine. Scutellum evident. Elytra much wider than pronotum at base, with roundly rectangular humeri. Femora armed with a small sharp tooth, corbel of hind tibiae open (Morimoto et al., 2006).
**Distribution**: Korea, NE. China, Russian Far East.

### 13. *Ptochidius tessellatus* Motschulsky, 1858 (Plate 2-13)
뭉뚝바구미

*Coelosternus tessellatus* Motschulsky, 1858: 77 (TL: Amur).
*Ptochidius tessellatus* Motschulsky, 1860: 160 (TL: Amur).

**Measurements.** Body length. 4.0–5.2 mm.
**Diagnosis.** Body black, antennae and tarsi reddish brown; scaling dense, predominantly ash brown on dorsum, circum ocular area, sides of thorax and venter, sides of elytra grayish with coppery shimmer, grayish ion the median area of underside (Morimoto et al., 2006). Premetum with 4 setae. Mandibles with deciduous cusp and scar, with 3 setae, without scales. Epistomal carina rounded V-shape, acute angle, obtuse raised. Epistomal plate without scales. Postepistome without scales. Pterygia of rostrum developed enlarged. Antennal scrobes dorso-lateral position, direct to the eye, posterior part of scrobe widen, enclosed, without scales. Rostral dorsum with a medinan carina, with side-longitudinal carinae and with side sulcus on each side. Apex of rostrum as wide

as base. Antennal length longer than half of body length. Antennal scape as long as funicle, exceed anterior margin of pronotum. Antennal scape from base to middle part not slander, distal part weakly clavate. Antennal scape with short piliform setae densely. Antennal funicle 3rd–6th segments elongated form. First segment length of antennal funicle as long as 2nd, third segment shorter than 4th segment. Club spindle-shaped, narrower than 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, without transverse sulcus in front of eye, anterior part weakly depressed. Eyes dorso-lateral position, oblique, flat to weakly rounded. Pronotum oval, punctured, posterior margin weakly bisinuate. Subocular lobes distinct. Vibrissae present. Femur with circular shell-like scales, with tooth inside of clavate part. Corbels of hind tibia open. Claws free. Scutellum distinct, narrow U-shape. Elytra rectangular, with humeri, behind of humeri part gently rounded. Basal margin of elytra not costate and weakly projected anteriorly. Elytra covered with suberected broad shell-like scales and with yellowish powder-like incrustation. Erected setae on each interval stick-like, shorter than shorter than width of 2nd interval but longer than half of width of 2nd interval, arranged many rows alternatively. Striae on the elytra distinct. Punctures shallow, circular sharpened posteriorly.

**Specimens examined**: GG - 3 exs., Yeogisan, 3.iv.1973; 1 ex., Surisan, 22.iv.1976; 2 exs., Gwangreung, 23.v.1987; GW - 2 exs., Obongsan, 10–11.v.1985; 2 exs., Chuncheondaem, 2.vi.1985; 1 ex., Yaksusan, 9.viii.1989; 1 ex., Jeombongsan, 20.vi.1992; 3 exs., Chuncheon, 25.v.1993; 5 exs., Goseong Geonbongsa, 26.v.1993; 9 exs., Odaesan, 27.v.1993; 8 exs., Inje, 27.v.1993; 1 ex., Seolaksan Oknyeobong, 27.v.1993; 1 ex., Seolaksan Hangyeryeong, 27.v.1993; 1 ex., Unduryeong, 27.v.1993; 1 ex., Odaesan, 27.v.1993; 2 exs., Chuncheon, 12.vi.1996; 3 exs., Daegwanryeong, 25.vii.1997; CB - 1 ex., Jecheon, 23.v.1993; 3 exs., Goesan, 23.v.1993; 3 exs., Jungwon, 8.v.1997; 1 ex., Danyang, 10.v.1997; CN - 2 exs., Gongju Magoksa, 4.v.1997; JB - 1 ex., Naejangsan, vi.1975; 1 ex., Muju, 11.IX.1996; JN - 1 ex., Jirisan, 15.vi. 1991; 2 exs., Jirisan Simwon, 24.vi.1993; 1 ex., Baekunsan, 5.viii.1994; 1 ex., Ulreungdo, 12.viii.1995; 2 exs., Jirisan Simwon, 4.viii.1996; GB - 1 ex., Ulreungdo, 25.viii.1988; 1 ex., Yeongju Buseoksa, 30. viii.1992; 8 exs., Sobaeksan Huibangsa, 10.v.1997; 1 ex., Gimcheon Chupungryeong, 2.vi.1997; 1♂ 1 ♀ (ZIN) Kengi Prov.: Begyon nan, Bagyon popo about 27 km SW from Keasong, 7.vi.1970, Mahunka S. and Steinmann H.; 1♀ (ZIN) Keasong Mts., Pakyon popo, 27 km NE from Keasong, 8.ix. 1971, Horvatovich S. and Papp J.; 1♂ (ZIN) Keasong Mts., Pakyon popo, 27 km NE from Keasong, 9.ix.1971, Horvatovich S. and Papp J.; 1♀ (ZIN) Kangwon Prov., Kungang-san, 21.vi. 1988, Merkl O. and Szel Gy.; 1♀ (ZIN) Gapsan, Khamgyon Namdo Province, 9.vii.1950, Barkhsenius; 1♀ (ZIN) Gapsan, Khamgyon Namdo Province, 10.vii.1950, Barkhsenius.

**Korean record**: Egorov, 1976: 828; ESK/KSAE, 1994: 203; Zherikhin et al., 1996: 311; Yunakov, 2013c.

**Biological note**: This weevil is common on *Quercus* spp. from May to September, but is not found on Jejudo Is. and Japan.

**Distribution**: Korea (North, Central, South and Ulreungdo Is.), NE. China (Shansi, Heilongjiang, Jilin, Liaoning, Shansi), Siberia (Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Chita Prov.).

# Subtribe Myllocerina Pierce, 1913

**Key to the genera of the subtribe Myllocerina (Morimoto et al., 2006)**

1. Eytra ovate, with humeral angles reduced; hind wings not functional. Epistome not or shortly exceeding the anterior margin of pterygia, sharply delimited posteriorly by carinae; metepisternal sutures complete; metacoxae narrowly distant from elytra; prementum with 6 to 8 setae ····· *Myosides*
− Eytra with rectangular or rectangularly rounded humeri; hind wings functional ····· 2
2. Mandibles with more than 3 setae and scales; prementum with 4 or more setae; width of forehead greater than length of eye; 1st segment of antennal funicle longer than 2nd ····· 3
− Mandibles with 3 setae ····· 4
3. Epistome obtuse at hind angle; apex of rostrum and epistome asymmetrical; scaling brownish in general, with postmedian band on elytra; antennae of the normal length, not exceeding beyond the middle of elytra, 1st segment of funicle much shorter than pronotum ····· *Pseudoedophrys*
− Epistome sharp at hind angle, symmetrical; scaling concolorous metallic greenish; antennae very slender, exceeding beyond the middle of elytra, 1st segment of funicle about as long as pronotum ····· *Eumyllocerus*
4. Rostrum produced trapezoidal and upturned at visible apex, with a small median notch; epistome indefinite, vertical, invisible dorsally, with a row of stout setae along anterior margin in the middle; pronotum bisinuate at basal margin; fore tibiae triangularly produced internally at basal third in male, less so in female ····· *Anosimus*
− Rostrum normal at apex, not produced, without a row of stout setae along anterior margin in the middle ····· 5
5. Epistome indefinite or very short, not beyond the middle of pterygia; minimal distance between swinging fossae about a third of the frontal width; rostrum very short, shorter than eye; pronotum truncate at base; femora often unarmed; small, concolorous greenish weevils ····· *Hyperstylus*
− Epistome sharply delimited laterally and basally by carina, its hind angle exceeding the middle of pterygia; rostrum usually longer than eye, femora dentate ····· 6
6. Prementum with more than 4 setae ····· 7
− Prementum with 2 setae ····· 9
7. Epistome with scales ····· *Lepidepistomus*
− Epistome without scales, bare, shiny ····· 8
8. Epistome and apex of rostrum asymmetrical; pronotum hardly bisinuate at base; derm clothed with round scales and appressed hairs, dorsal surface visibly bare owing to the absence of scales; elytra vertical and flat at sides exterior from costate 7th interval ····· *Phyllolytus*
− Epistome symmetrical; pronotum bisinuate at base; derm with dense scales and a row of setae on each interval; elytra evenly convex transversely ····· *Nothomyllocerus*
9. Epistome with scales ····· *Lepidepistomodes*
− Epistome without scales, bare, shiny, sharp at hind angle, exceeding posterior beyond hind margin of antennal sockets; postepistomal area without scales ····· *Corymacronus*

# Genus *Anosimus* Roelofs, 1873: 173

Type species: *Anosimus decoratus* Roelofs, 1873.
**Distribution**: Korea, Japan, South of the Russian Far East.

## 14. *Anosimus decoratus* Roelofs, 1873 (Plate 3-14)
다리가시뭉뚝바구미

*Anosimus decoratus* Roelofs, 1873: 174 (TL: Japan, ♂).
*Anosimus pallidus* Roelofs, 1873: 174 (TL: Japan, ♀).

**Measurements.** Body length 3.8–4.0 mm.
**Diagnosis.** Body black, antennae and legs dark reddish brown; scaling generally grayish with coppery metallic reflection, often with ash green tinge, variegated with dark brownish to blackish patches. Pronotum grayish with dark median broad area or stripe and a pair of latero-dorsal narrow stripes on anterior half, or predominantly blackish brown with a pair of lateral narrow grayish stripes. Scutellum with grayish scales. Elytra grayish with blackish brown large oblique patch behind the middle and an irregular transverse band before the apex, with several small indefinite dark patches in addition, in most dark specimens elytra predominantly brownish black, with grayish oblique band from side a little behind humeri to the middle of 2nd interval, and less oblique band on declivity. Underside and legs with grayish scales mixing ash brown and ash green ones (Morimoto et al., 2006). Mandibles with only 3–5 setae without hairs. Epistomal plate with a medinan carina. Rostral dorsum with a median sulcus, not tumid. Frons flat. Apex of rostrum pointed out like as horn-shaped and curved upwards in male. Rostrum not longer than width. Pits on the each side of pronotum strongly depressed. Eye semicircular. Female. Apex of rostrum not curved upwards.

**Specimens examind**: GW - 1 ex., Inje, 27.v.1993; 1 ex., Chiaksan, 24.vii.1997; CB - 2 exs., Goesan, 23.v.1993; JB - 4 exs., Naejangsan, 10.vi.1975; JN - 1 ex., Jindo, 29.vi.1973; 1 ex., Baekunsan, 19.viii.1992; 2 exs., Jirisan Simwon, 4.viii.1996; GB - 1 ex., Jikjisa, 28.ix.1980; 1 ex., Gimcheon Chupungryeong, 2.vi.1997; 1 ex., Palgongsan, 27.vii.1998; 1 ex., GN - 3 exs., Haeinsa, 14.viii.1980; 1 ex., Goseong Munsuam, 3.vi.1997; 1 ex., Geoje Nojasan, 4.vi.1997; 1♂ (ZIN) South Pyongan, Prov., Za-mo san, 60 km NE from Pyangyan, 2.ix.1971, Horvatovich S. and Papp J.; 2♂ (ZIN, HNHM) Gang-von Prov., On-dzong distr., Kum-gang san, near Hotel Go-song, 5.viii.1975, Papp J. and Vojnits A.; 2♂ (ZIN, HNHM) Keasong Mts., Pakyon popo, 27 km NE from Keasong, 9.ix.1971, Horvatovich S. and Papp J..
**Korean record**: Kwon and Lee, 1986; Morimoto and Lee, 1992; Kim, 1993; ESK/KSAE, 1994; Morimoto, 1994; Paik et al., 1995; Kim, 1995; Hong et al., 2000; Yunakov, 2013c.
**Biological notes**: Adults are commonly found on leaves of *Quercus dentata*, *Quercus serrata*, *Quercus mongolica*, *Quercus acutissima* and *Castanea crenata* from early May to mid August (Morimoto et al., 2006).
**Distribution**: Korea (Central, South and Jejudo), Japan (Honshu, Shikoku, Kyushu, Tsushima).

# Genus *Corymacronus* Kojima and Morimoto, 2006: 203

Type species: *Myllocerus naso* Sharp, 1896.

**Diagnosis.** Head with forehead much wider than the length of eye, flat; rostrum with distinct pterygia, dorsolateral carinae often concealed under scales, slightly diverging posteriorly behind swinging fossae, subsidiary carinae obsolete; epistome symmetrical, deep V-shaped, bare, sharply costate at posterior margin, its hind angle less than 90° and exceeding posteriorly beyond antennal fossae; parepistomes bare in entire length, continuously rounding hind angle of episome, postepistomal transverse ridge absent. Antennae with scape normal, each segment of funicle longer than wide. Prementum with 2 setae. Mandibles each with 3 setae. Prothorax transverse, with weak ocular lobes at sides, weakly bisinuate at base. Sutellum evident. Elytra distinct humeri, striae regular, intervals weakly costate in 1st, 3rd and 5th intervals weakly costate at least on declivity. Femora with an obtuse tooth; tibiae normal, mucronate; tarsi with 1st segment as long as 2 followings combined, 2nd segment longer than wide; claws free (Morimoto et al., 2006).

**Distribution**: Korea, Japan, N. China, E. Siberia.

## 15. *Corymacronus costulatus* (Motschulsky, 1860) (Plate 3-15)
아무르주둥이바구미

*Ptochidius costulatus* Motschulsky, 1860: 159 (TL: Amur).
*Myllocerops obliquesignatus* Formanek, 1916: 45, 49 (TL: China, Mandschuria).
*Haeckeria shansiensis* Kôno and Morimoto, 1960: 79 (TL: Shansi).
*Myllocerops pennatus* Formanek, 1922: 78 (TL: Kashmir).

**Measurements.** Body length 5–7.1 mm.

**Diagnosis.** Rusty brown to dark brown; scaling predominantly ash brown, with grayish indefinite oblique triangular band from the middle of side margin to apical third of suture, and transverse band on declivity in dorsum of elytra, brownish gray on the underside; pronotum with 3 indefinite brownish stripes, median one often obsolete; elytra usually with series of spaced, indefinite and small brownish spots on 1st, 3rd, 5th and 7th intervals, the spots blackish and conspicuous in front of the grayish band in 3rd and 5th intervals, and small blackish spots on declivity between grayish bands, these spots often combined to form transverse dark bands; scutellum grayish in contrast to brownish neighboring areas (Morimoto et al., 2006)

Antennal clubs robust, less than 2.5 times of width, 1st segment shorter than wdith. First segment of antennal funicle as long as 2nd. Epistome as deepas apical width. Scutellum grayish in contrast to brownish neighboring areas. Elytra with wide transverse grayish band on middle.

**Specimens examined**: China Shaanxi, 22.viii.2013; 2♂1♀ (ZIN) North Korea, Tumen'-ula River, Russian-Korean frontier, 3.vii.1913, Tshersky; 1♂1♀ (ZIN) idem, 30.vii.1913, Tshersky.

**Korean record**: Egorov, 1976; Yunakov, 2013c.

**Distribution**: Korea (North), Japan (Honshu), N. China, Russia (Khabarovsk and Primorskii Terr., Amur Prov.)

# Genus *Eumyllocerus* Sharp, 1896: 109

Type species: *Eumyllocerus gratiosus* Sharp, 1896.
**Distribution**: Korea, Japan, China, South of the Russian Far East.

## 16. *Eumyllocerus malignus* (Faust, 1887) (Plate 3-16)
긴더듬이주둥이바구미

*Myllocerus malignus* Faust, 1887: 34 (TL: Korea; GW Keumhwa).
*Myllocerus viridiaureus* Suvorov, 1915: 328 (TL: Ussuri).
*Myllocerops filicornis* Reitter, 1915: 119 (TL: Ussuri).
*Eumyllocerus longulus* Egorov and Zherikhin, 1990: 156 (TL: Primoriskii Terr.).

**Measurements.** Body length. ♂ 4.2–4.9 mm, ♀ 4.7–5.8 mm.
**Diagnosis.** Body black to light brown, covered with bluish-green or yellowish-green scales. Prementum with 6–8 setae (often 7 setae visible), covering buccal cavity entirely. Mandibles with many setae (3 long and many short) and short hairs. Epistomal plate narrow V-shape, without scales, behind area of epistomal carina with bamboo-leaf-like scales. Epistomal carina acute angle. Rostral dorsum slightly depressed longitudinally, with a medinan carina, with side carinae. Apex of rostrum as wide as basal width. Antennal scrobes dorsal position, curved upward. Posterior part of antennal scrobes not widened, enclosed, without scales. Pterygia developed. Antennae long, slightly shorter than body length. Antenna without scales, with piliform setae densely. Antennal scape shorter than funicle, beyond anterior margin of pronotum reaching middle of pronotum, basal part of antennal scape thick, distal part of antennal scape weakly clavate, antennal scape strongly curved. Antennal funicle length of 1$^{st}$ segment longer than 2$^{nd}$, 3$^{rd}$ segment shorter than 4$^{th}$, 4–6 segments elongate. Club spindle-shaped, narrower than 2 times of 6$^{th}$ segment of funicle. Frons wider than the 2/3 width of rostrum, 1.6–1.8 times of eye length in male and 1.9–2.3 times in female, anterior part of frons weakly depressed transversely. Eye lateral position, small, oblique, convex. Pronotum saddle-like, anterior margin straight, posterior margin weekly bi-sinuate. Femur dentate, with circular or semicircular scales. Fore tibia flat, external margin weakly carinate. Internal edge of fore tibia without teeth, with spur-like bristles, inside margin straight to slightly rounded. Apex of fore tibia enlarged. Corbels of hind tibia open. Claws free. Metepisternum broad, with a sculptured sulcus and carina between subelytral part, covered by latero-elytral lobe (anterior part of 11th interval) partly (half width). Metepimeron narrow, elongate, rounded half moon-shape, naked, without scales. Scutellum distinct, U-shape. Elytra rectangular with humeri, longer than 1.5–1.8 times of width in female and 1.9–2.1 times in male. Posterior part of humeri of elytra slightly constrict and enlarged at the part of the elytral declivity in female. Anterior part of elytral intervals 2–4 or 3–5 tumid. Basal margin of elytra weakly projected anteriorly. Ground scales on elytra semicircular. Erected setae on each interval of elytra: needle-like to steak-like, shorter than width of 2$^{nd}$ interval, line up in a straight file or a alternative double file. Striae on the elytra distinct. Punctures on elytra deep and dense. Apex of elytra obtuse angle. Anterior margin of 2$^{nd}$ sternite bisinuate, mid-width of 2$^{nd}$ sternite wider than 3$^{rd}$+4$^{th}$, mid-width of 5$^{th}$ sternite as long as 3$^{rd}$+4$^{th}$, posterior margin of 2$^{nd}$–4$^{th}$ sternites straight or slightly rounded (Han and Hong, 2003).

**Specimens examined**: GG - Mt. Yongmunsan, 3♀, 29.v.1982; Mt. Cheonmasan, 1♂. 27.vi.1984; Mt. Soyosan, 1♂, 18.iv.1984; Bogwangsa, 1♂, 15.v.1977; GW - Hongcheon, Gachilbong, 10♂, 1♀, 23.vi.1984; CB - Mt. Wolaksan, 2♂2♀, 29.v.1987; JB - Mt. Naejangsan, 2♂, 4.vii.1985; Muju, Mt. Deokyusan, 1♀, 22.v.1983; JN - Mt. Jirisan, 1♂, 25.vi.1986; GB - Mt. Sobaeksan, 1♂, 7.vi.1974; 8♂1♀, 6.vi.1981; Mungyeongsaejae, 1♂, 11.vii.1977, Song; Mt. Taehaengsan, 1♂, 27.vii.1984, Park; Mt. Juwangsan, 8♂7♀, 14–15.v.1987; 20♂4♀, 4–6.vi.1987; Cheongdo, Mt. Unmunsan, 4♂4♀, 23–24.v.1989; Gyeongsan Yeongnam Univ, 2♂9♀, 23–25.v.1990; Mt. Cheongnyangsan, 1♂, 29.vii.1990; GN - Milyang, Mt. Cheonhwangsan, 1♂, 24.v.1987; Far East Russua - 1♀ (ZIN) Ussuri Nizhe Mikhailovskaya, 19.vi.1899, G. Suvorov and Ussuri st. Vyazemskaya; 1♂ (ZIN), 25.vi.1899, G. Suvorov (det. by Suvorov as *Myllocerus viridiaureus* Suvorov); 1♂ (ZIN) Seoul, Herz (det. by Faust, Type series No. 14); 1♂1♀ (ZIN, HNHM) Keengi Prov., Bagzon nan, Bagzon pope about 27 km SW from Kaesong, 7.vi.1970, Mahunka S. and Steinmann H.

**Korean record**: *Myllocerus malignus* Faust, 1887; Kono, 1930; Kwon and Lee, 1986; Ramamurthy and Ghai, 1988; Han and Hong, 2003; *Eumyllocerus longulus*: Egorov and Zherikhin, 1996; Hong et al., 2000; *Eumyllocerus filicornis*: Hong et al, 2000; Hong and Korotyaev, 2002; *Eumyllocerus gratiosus*: Park et al., 1993; Kim and Kim, 1997; Zherikhin et al., 1996; Hong et al., 2000; Hong and Korotyaev, 2002; Haku, 1936; Kôno and Kim, 1937; Kwon and Lee, 1986; Park et al., 1993; ESK/KSAE, 1994; Kim and Kim, 1996; Han and Hong, 2003; Yunakov, 2013c.

**Distribution**: Korea (Central, South), Far East Russia (Ussuri).

## Genus *Hyperstylus* Roelofs, 1873: 171

Type species: *Hyperstylus pallipes* Roelofs, 1873.

**Distribution**: Korea, Japan, China, Russian Far East, India.

### 17. *Hyperstylus pallipes* (Roelofs, 1873) (Plate 3-17)

싸리주둥이바구미

*Hyperstylus pallipes* Roelofs, 1873: 172 (TL: Japan).

**Measurements.** body length 2.27–2.31 mm.

**Diagnosis.** Body black; rostrum, antenna and legs light reddish brown. Prementum with 6 setae, covered buccal cavity entirely. Base of the mandibular scar not projected. Mandibles with 3 setae. Epistomal plate rounded V-shape, without scales. Postepistome without scales. Anterior part of epistomal plate with 3 pairs of setae. Post epistomal carina sharply raised up. Epistomal carina carving angle obtuse. Rostral dorsum tumid, with a medinan carina weakly. Apex of rostrum as long as width of base. Antennal scrobes lateral position dorsal position, curved upward. Posterior part of antennal scrobes widened, enclosed, without scales. Pterygia developed, enlarged. Antennae longer than 1/2 length of body length. Antennal scape as long as funicle, Antennal scape exceed anterior margin of pronotum. Basal part of antennal scape thick. Distal part of antennal scape weakly clavate. Antennal scape strongly curved. Antennal scape with short narrow spatulate setae

sensely. Antennal funicle with long and short piliform setae. First segment of antennal funicle longer than 2nd segment. Third segment of antennal as long as 4th segment. Antennal funicle 4th–6th segments short elongated form. Club short spindle-shaped. Club as wide as 2 times of 6th funicle segment width. Frons wider than the 2/3 width of rostrum. Frons narrower than 1.5 times of eye width. Frons without transverse sulcus in front of eyes. Anterior part of frons flat. Eye lateral position, oblique, slightly convex, large. Pronotum shape rounded truncate. Pronotum without a median sulcus and a medinan carina. Pronotum without vibrissae, without subocular lobes. Pronotum posterior margin truncate. Dorsal surface of pronotum slightly rounded, punctured. Femur without a tooth inside of distal clavate part. Femur with short narrow and broad spartulate setae densely. Internal edge of fore tibia without teeth, with bristles. Internal edge of fore tibia straight to slightly rounded. Fore tibia thick, external margin not carinate. Apex of fore tibia enlarged. Internal edge of hind tibia without teeth, without bristles. Corbels of hind tibia open. Claws free. Scutellum distinct, U-shape. Elytra rectangular, with humeri, longer than 1.5 times of width. Behind humeri of elytra straight to gently rounded. Basal margin of elytra weakly projected anteriorly. Elytra covered with circular scales densely. Erected setae on each interval of elytra short broad spatulate, as long as 1/2 width of 2nd interval, ordered a regular row. Functures on elytra shallow, elongate spindly. Striae on the elytra distinct. Anterior margin of 2nd sternite strongly bisinuate. Sternites 2–4 stairs-shaped.

**Specimens examined**: GG - 7 exs., Suwon, 21.vi.1960; 1 ex., Suwon, 16.x.1984; JN - 8 exs., Yeocheon, 20–21.vii.1993; 1 ex., Yeosu Geumodo, 4.viii.1993; JJ - 1 ex., Jeju, 27.vi.1990; 2 exs., Eoeum, 14.vii. 1993; Chju Unversity campus, 2 exs, 18.vii.1983; Oradong, 1 ex, 15.vii.1982.

**Korean record**: Kwon and Lee, 1986; Morimoto and Lee, 1992; ESK/KSAE, 1994; Morimoto, 1994; Paik et al., 1995; Hong et al., 2000; Yunakov, 2013c.

**Biological notes**: Adults feed on *Lespedeza bicolor* and *Castanea crenata* in rather dry and grassy area in July and August in Kyushu, Japan (Morimoto et al., 2006). They are frequently captured at light in the Ryukyu (Morimoto et al., 2006).

**Distribution**: Korea (Central, South and Jejudo Is.), Japan (Honshu, Shikoku, Kyushu, Tsushima, Ryukyu), China (Fukien, Beijing, Hunan, Fujian, Guansi).

## Genus *Lepidepistomodes* Kojima and Morimoto, 2006: 187

Type species: *Myllocerus nigromaculatus* Roelofs, 1873.
**Distribution**: Korea, Japan, China.

**Key to the species of genus *Lepidepistomodes* from Korea**

1. Pronotum clothed only with round scales, devoid of recumbent setae in the median area, slightly bisinuate at base, its median part hardly produced beyond the level between hind corners ····· ..... *L. griseoides*
− Pronotum clothed with scales and recumbent scale-like setae, distinctly bisinuate at basal margin, its median part distinctly produced posteriorly beyond the level between hind corners; larger in size, more than 4.6 mm in length; vagina stouter in basal half, strongly wrinkled, with 3 sclerites at apex; spermatheca with ramus strongly bulbous, collum shorter than ramus ····· 2

2. Pronotum more or less produced anteriorly in an arc at anterior margin, at most with a trace of median line; scaling on the dorsal side ash brown variegated with brown irregular patches, grayish on the underside; spermatheca with collum J-shaped ····· *L. fumosus*
– Pronotum truncate at anterior margin in general; scaling greenish, pronotum with 3 black stripes, of which the median stripe obsolete at apex, elytra with black irregular patches in various shape; spermatheca with ramus strongly bulbous ····· 3
3. Last ventrite clothed with small grayish scales densely on the median third longitudinally in contrast to metallic oval scaled area at sides ····· *L. kokurohoshi*
– Last ventrite clothed with metallic oval scaled on basal two-thired in entire width ····· ····· *L. nigromaculatus*

## 18. *Lepidepistomodes fumosus* (Faust, 1882) (Plate 3-18)
주둥이바구미

*Myllocerus fumosus* Faust, 1882: 261 (TL: Japan).
*Myllocerus otsukai* Kôno, 1930: 212, 218 (TL: Japan; Honshu: Ibukisan).
*Myllocerus nipponensis* Zumpt, 1938: 85 (TL: Japan; Iwate).

**Measurements.** Body length 5.0–6.0 mm.

**Diagnosis.** Body Black, antennae and tarsi dark reddish brown, covered with ash brown scales forming dark brown irregular patches on dorsal and lateral sides. Elytral interval of elytra with a row of decumbent or suberect setae, which are so variable in length and shape as setaceous with truncate apex, as long as 2–3 times of a ground scale. Eyes ovate, convex. Antennae with scape reaching posteriorly a little beyond the middle of pronotum. Femora with tooth on inside. Tibiae weakly bisinuate internally. Pronotum weakly constricted in front of hind corners, anterior margin produced anteriorly, posterior margin bisinuate distinctly.

**Specimens examined**: GG - 1 ex., Banwol, 16.v.1986; 1 ex., Banwol, 30.v.1992; 2 exs., Hwaseong Bibong, 1.vi.1994; 2 exs., Ganghwado, 27.v.1997; GW - 5 exs., Yanggu, 26.v.1993; 1 ex., Goseong, 1.vi.1993; CB - 3 exs., Goesan, 23.v.1993; CN - 1 ex., Geumsan Gaedeoksa, 22.v.1993; JJ - 1 ex., Sajebi-dongsan, 9.v.1983.

**Korean record**: ESK/KSAE, 1994; Kim, 1995b; Kim and Kim, 1996; Kim and Chang, 1987; Kim et al., 1991; Morimoto and Lee, 1992; Morimoto, 1994a; Paik et al., 1995; Kim and Kim, 1996; Hong et al., 2000; Yunakov, 2013c.

**Biological notes**: This species is probably parthenogenetic; no male had been found. Weevils feed on the young leaves of *Castanea cuspidata*, *Castanopsis siboldii*, *Quercus acutissima*, *Quercus serrata* and *Pasania edulis* from April to August, and often abundant on browse (Morimoto et al., 2006).

**Distribution**: Korea (Central, South, Jejudo Is.), Japan (Honshu, Shikoku, Kyushu, Tsushima).

## 19. *Lepidepistomodes griseoides* (Zumpt, 1937) (Plate 3-19)
작은왕주둥이바구미

*Myllocerops griseoides* Zumpt, 1937: 10 (TL: Japan; Tokyo).

**Measurements.** Body length 4.0–4.5 mm.

**Diagnosis.** Body Blackish, antennae and legs reddish brown to dark reddish brown, covered with predominantly ash brown, usually variegated with brownish scales, brownish scales forming 3 stripes on pronotum. Eyes ovate, convex, projecting laterally a little beyond side margin of head in dorsal aspect, highest at the middle. Rostrum shorter than width. Epistome symmetrical, punctuate, scaled, with obtuse hind angle, with a short bare median carina. Postepistome with metallic green ovate scales.. Antennae with scape reaching the middle of pronotum. Scutellum ovate. Elytral intervals flat, with irregular 3–4 rows of oval to round scales and a row of decumbent seate. The setae as long as 2 to 3 ground scales combined, weakly dilated and rounded at apex. Femora dentate. Tibiae weakly bisinuate internally.

**Specimens examined**: JJ - 2 exs., Aradong, 12–13.v.1983; 2 exs., Jeju Univ. Campus, 4.vi.1983.

**Korean record**: Hong et al., 2000; Yunakov, 2013c.

**Biological notes**: This species is parthenogentic. Adults feed on the young leaves of *Castanea cuspidata*, *Castanopsis siboldii*, *Quercus salicina*, *Quercus myrsinaefolia*, *Quercus serrata*, *Quercus dentata* and *Quercus glauca* from spring to summer, and often injurious to the ornamental trees in the garden (Morimoto et al., 2006).

**Distribution**: Korea (Central and Jejudo Is.), Japan (Honshu, Shikoku, Kyushu, Tsushima).

## 20. *Lepidepistomodes kokurohoshi* Kojima and Morimoto, 2006 (Plate 4-20)
작은상수리주둥이바구미 (신칭)

*Lepidepistomodes kokurohoshi* Kojima and Morimoto, 2006: 196 (TL: Japan, Kagawa pref., Mt. Mineyama).

**Measurements.** Body length 5.3–6.4 mm.

**Diagnosis.** Very closed to *L. nigromaculatus*. Body black, covered with grayish green, grayish brown with light copper color. Elytra with variable black patches between 6$^{th}$ intervals. Eltyral setae on each interval in a row, seta as long as 3 ground scales combined on dorsum, as long as 2 ground scales combined on sides and declivity, truncate at apex. Pronotum with narrow black median stripe, often indefinite. Last ventrite covered with small grayish scales densely on the median third in entire length.

**Specimens examined**: GG - 1 ex., Gangwha, 22.vii.1992.

**Korean record**: First record to Korean Fauna in this work.

**Distribution**: Korea (Central), Japan (Honshu, Shikoku, Kyushu).

## 21. *Lepidepistomodes nigromaculatus* Roelofs, 1873 (Plate 4-21)
상수리주둥이바구미

*Myllocerus nigromaculatus* Roelofs, 1873: 169 (TL: Japan; Nagasaki).
*Myllocerus scitus* Voss, 1942: 104 (TL: China; Fukien: Shaowu).

**Measurements.** Body length 5.3–6.0 mm.

**Diagnosis.** Blackish, antennae dark reddish brown, tibiae often reddish black; scaling predominantly metallic green, ash greehish on the underside, variegated with blackish scales, the latter forming lateral stripes on pronotum and small blackish spots on elytra in variable density and shap (Morimoto et al., 2006)

Prementum with 2setae, covered buccal cavity entirely. Mandibles with only 3 setae, without scales. Epistomal plate rounded pentagonal, with scales, postepistome with scales, postepistomal carina obtused raised, epistomal carina carving angle obtuse, Rostral dorsum flat to slightly tumid, with a medinan carina and side carina. Apex of rostrum as long as width of base. Antennal scrobes dorsal position, curved upward, widened, enclosed, with scales. Antennae long, longer than 1/2 length of body length. Antennal scape as long as the length of funicle, exceed anterior margin of pronotum, antennal scape weakly curved, without scales, with short piliform setae densely. Antennal funicle with piliform setae densely. Antennal funicle length, first segment shorter than 2$^{nd}$ segment, third segment as long as 4$^{th}$ segment, 4$^{th}$–6$^{th}$ segments elongated form. Club spindle-shaped, narrower than 2 times of 6$^{th}$ funicle segment width. Frons narroer than the 2/3 width of rostrum, flat. Eye dorso-lateral position, oblique, convex. Pronotum saddle-like, with a medinan carina weakly, with a pair of side carina at the posterior part, without vibrissae and subocular lobes, anterior margin slightly arcuate and as broad as basal margin, posterior margin weakly bisinuate, Dorsal surface of pronotum tumid, punctured. Femur with a large tooth inside of distal clavate part, Corbels of hind tibia semienclosed. Base of claws free. Scutellum distinct, U-shape. Elytra rectangular, with humeri, longer than 1.5 times of width, behind humeri of elytra straight. Intervals of elytra not costate, elytral basal margin weakly projected, anterior part of elytral intervals 1–4 tumid weakly. Ground scales on elytra blackish and greenish metallic circular or shell-like. Erected setae on each interval of elytra long needle-like, as long as or longer than 2$^{nd}$ interval, order in a regular row. Striae on the elytra distinct.

**Specimens examined**: HN - 1 ex., Shakuoji (= Anbyeon Seokwangsa), 24.vii.1925; GG - 3 exs., Seoul Bulamsan, 19.vii.1970; 1 ex., Deokjeokdo, 5.viii.1970; 1 ex., Chilbosan, 25.vi.1975; 2 exs., Suwon, 13.vi.1976; 2 exs., Suwon, 20.vi.1976; 1 ex., Suwon, 24.v.1984; 1 ex., Gwanggyosan, 28.vi.1991; JN - 1 ex., Jirisan Ssanggyesa, 10.vii.1969; 1 ex., Mudeungsan, 10.ix.1975; 5 exs., Baekunsan, 22–25.?.1991; GN - 1 ex., Sacheon, 25.vii.1983; 2 exs., Sacheon, 5.vi.1993.

**Korean record**: Kim and Kim, 1973; Kwon and Lee, 1986; Kim et al., 1991; ESK/KSAE, 1994; Morimoto, 1994; Kim, 1995; Hong et al., 2000; Yunakov, 2013c.

**Biological notes**: This species is probably parthenogentic and no male had been found. Weevils feed on the young leaves of *Castanea cuspidata*, *Quercus serrata* and *Quercus acutissima* from May to August.

**Distribution**: Korea (North, Central and South), Japan (Honshu, Shikoku, Kyushu, Tsushima), China (Fukien, Shanghai).

## Genus *Lepidepistomus* Kojima and Morimoto, 2006: 165

Type species: *Myllocerus elegantulus* Roelofs, 1873.
**Distribution**: Korea, Japan.

### 22. *Lepidepistomus elegantulus* Roelofs, 1873 (Plate 4-22)
새왕주둥이바구미

*Myllocerus elegantulus* Roelofs, 1873: 170 (TL: Japan).

**Measurements.** Body length 3.6–4.5 mm.
**Diagnosis.** Body reddish brown covered with concolorous ash green, round or oval scales. Eyes ovate, convex. Rostrum 2/3 as long as wide at base. Pterygia well expanded laterally. Epistome with a small triangular bare and punctate area at the, with a median carina between the posterior corners of epistome and postepistome. Antennae with scape almost reaching the middle of pronotum, funicle with 1st segment shorter than 2nd. Pronotum shorter than width, punctuate, anterior margin truncate, posterior margin slightly bisinuate. Scutellum longer than wide. Elytral intervals flat, with 3–5 rows of oval and round scales and a row or 2 rows of piliform setae on intervals, small fine seta on anterior margin of each puncture. Femora dentate. Tibiae weakly bisinuate internally.

**Specimens examined**: JN - 5 exs., Yeocheon Geumodo, 19.vii.1993 ; Holotype (NHM), Japan, G. Lewis 1910-320.
**Korean record**: *Macrocorynus elegantulus*: Kim and Kim, 1974; Kwon and Lee, 1986; ESK/KSAE, 1994; Morimoto, 1994a; Hong et al., 2000; Yunakov, 2013c.
**Biological notes**: Adults feed on the young leaves of *Castanea cuspidata* and *Quercus glauca* from June to August in Japan (Morimoto et al., 2006).
**Distribution**: Korea (Central and South), Japan (Honshu, Shikoku, Kyushu, Tsushima).

## Genus *Myosides* Roelofs, 1873: 164

Type species: *Myosides seriehispidus* Roelofs, 1873.

**Diagnosis.** Body covered with scales densely, concealing integument. Head and rostrum longitudinally multisulcate, forehead between eyes a little narrower than the base of rostrum. Eyes evenly convex, highest at the middle. Rostrum shorter than broad, continuous to forehead in the same plane on dorsum, parallel-sided or expanded laterally at pterygia, then rapidly narrowed anteriorly for a short distance to sides of epistome; epistome bare, sharply delimited posteriorly by a V- or U-shaped carina, postepistomal area with bare space, parepistome with 6–8 pairs of decumbent or curved long setae; pterygia well-marked, evenly arcuate to anterior corners; antennal scrobes dorsal, open posteriorly. Antennae robust, scape reaching anterior margin of pronotum, funicle 7-

segmented, 1st segment robust, about twice as long as broad, 2nd segment a little shorter than 1st, 3rd to 6th segments each about as long as broad, moniliferous, 7th segment transverse, club oval. Mandibles with apical tooth blunt, ventral cutting ridge well marked, with a median tooth, each with 3 long and about 5 short setae, Prementum with 3 or 4 pairs of setae, the most lateral pair often indistinct. Prothorax broader than long, without ocular lobes in usual sense, but anterior margins not exactly straight but very faintly produced toward eyes at sides by close examination; posterior margin of pronotum truncate, almost as broad as or slightly broader than the anterior margin. Sutellum minute or vestigial, concealed by scales if present. Elytra oval, evenly rounded at sides, broadest at or about 1/3 from apex, humeri obsolete, not costate along base, striae narrower than intervals, ultimate stria complete (Morimoto et al., 2006).

**Distribution**: Korea, Japan, South of the Russian Far East, USA (introduced).

**Key to the species of genus *Myosides* from Korea**

1. Suberect scales on elytra slenderer and longer, more than 4 times as long as wide, scarcely widened distally ····· *M. chejuensis*
− Suberect scales on elytra shorter, distinctly dilated distally, 2.5−3.0 times as long as wide ····· *M. seriehispidus*

## 23. *Myosides chejuensis* Morimoto and Lee, 1993 (Plate 4-23)

제주줄주둥이바구미

*Myosides chejuensis* Morimoto and Lee, 1993: 69 (TL: Korea, Jejudo, Oradong).

**Measurements.** . Body length about 2.7 mm.

**Diagnosis.** Body reddish black. Body covered with powder-like incrustation and shell-like scales densely. Prementum with 6 setae, covered buccal cavity entirely. Epistomal plate rounded V-shape. Epistomal plate without scales. Postepistome without scales. Anterior part of epistomal plate with 3 pairs of setae. Post epistomal carina sharply raised up. Rostral dorsum depressed, with a medinan carina, with side-longitudinal carinae. Apex of rostrum as long as width of base. Antennal scrobes dorso-lateral position, curved upward. Posterior part of antennal scrobes widened, enclosed, without scales. Antennal scape shorter than funicle. Antennal scape not exceed anterior margin of pronotum, exceed posterior margin of eye. Basal part of antennal scape thick. Distal part of antennal scape weakly clavate. Antennal scape with scales densely. Antennal funicle without scales, with long and short piliform seate sparsely. First segment of antennal funicle longer than 2nd segment. Third segment of antennal as long as 4th segment. Antennal funicle 4th−6th segments moniliform. Club ovate, 2 times wider than6th funicular segment. Frons wider than the 2/3 width of rostrum. Eye lateral position, oblique, rounded. Pronotum shape rounded truncate, without vibrissae and subocular lobes, posterior margin truncate. Femora dentate. Claws free. Scutellum very small, indistinct. Elytra oval, without humeri. Behind humeri of elytra gently rounded. Erected setae on each interval of elytra narrow spatulate, short to a little long, shorter than width of 2nd interval, longer than 1/2 width of 2nd interval, ordered a regular row. Functures on elytra shallow, elongate spindly. Striae on the elytra distinct.

**Specimens examined**: JJ - 1 ex., Hwabuk, 12.viii.1987; 3 exs., Hwabuk, 20.vi.1988; 1 ex., Samdal, 13.ix.1988.

**Korean record**: Morimoto and Lee, 1993; Hong et al., 2000; Yunakov, 2013c.

**Biological notes**: Specimens were collected from a bush of *Humulus japonicus* by beating on the river bank near the athletic stadium in Jeju city together with *M. seriehispidus*. Their distribution might be disturbed by flood judging from the collecting data of many mountainous beetles at the bank of downstream (Morimoto and Lee, 1993).

**Distribution**: Korea (Jejudo).

### 24. *Myosides seriehispidus* Roelofs, 1873 (Plate 4-24)

줄주둥이바구미

*Myosides seriehispidus* Roelofs, 1873: 164 (TL: Japan; Nagasaki).

**Measurements.** Body length. 3.5 mm.

**Diagnosis.** Rostrum slightly narrowed from the base to the middle, then almost parallel-sided at pterygia, angle of epistome a little less than right angle, with V-shaped bare space behind epistome. Pronotum shorter than width, broadest at the middle. Elytra oval, 3rd interval as broad as neighboring intervals, not raised, erect scales distinctly dilated apically, 2.5–3.0 times as long as broad. Tooth of hind femora often smaller and significantly obtuse than that of anteriors.

**Specimens examined**: GG - 1 ex., Mt. Myongjisan, 21.vi.1992; GB - 1 ex., Ulreungdo, 12.viii.1995.

**Korean record**: Kim et al., 1991; Morimoto and Lee, 1993; ESK/KSAE, 1994; Morimoto, 1994; Hong et al., 2000; Yunakov, 2013c.

**Biological notes**: Specimens were collected from litter or on the surface of the earth (Morimoto, 1994).

**Distribution**: Korea (Central, South, Jejudo Is., and Ulreungdo Is.), Japan (Hokkaido, Honshu, Sado, Izu, Ogasawara, Shikoku, Kyushu), Russia (Primorskii Terr.).

## Genus *Nothomyllocerus* Kojima and Morimoto, 2006: 177

Type species: *Myllocerus griseus* Roelofs, 1873.

**Distribution**: Korea, Japan, China, South of the Russian Far East.

**Key to the species of genus *Nothomyllocerus* from Korea**

1. Epistome obtuse-triangular at median angle, twice as wide as median length; forehead between eyes half as wide as the base of rostrum; antennae with 5th to 7th segments of funicle each longer than wide; elytra with a row of recumbent short scale-like setae on each interval ····· *N. griseus*
– Epistome obtusely rounded at posterior angle, about 4 times as wide as median length; forehead between eyes more than half the width of rostrum at base; antennae with 5th to 7th segments of

funicle submoniliform, 7th a little wider than long; elytra with a row of long and suberect scales on each interval ····· *N. illitus*

## 25. *Nothomyllocerus griseus* (Roelofs, 1873) (Plate 4-25)
섭주둥이바구미

*Myllocerus griseus* Roelofs, 1873: 170 (TL: Japan; Nagasaki).

**Measurements.** Body length 4.3–5.2 mm.

**Diagnosis.** Body Brownish black, antennae and legs usually reddish brown to dark brownish. Covered with ash brown scales predominantly on dorsum, with grayish and brownish irregular patches of scales, with a row of setae on each interval, setae short, not longer than 2 ground scales combined, light brown, slightly dilated apically and rounded or subtruncate at apex, a little longer on declivity. Rostrum shorter than length, apex wider than base. Epistome obtuse-triangular at median angle, twice as wide as median length. Frons slightly wider than the half width of base. Eyes ovate, convex. First segment of antennal funicle shorter than 2nd. Anterior margin of pronotum truncate, distinctly constricted before base and acute at hind angles, posterior margin strongly bisinuate. Elytral intervals flat, with irregular 5–6 rows of round scales, with a row of setae. Femora dentate.

**Specimens examined**: GG - 1 ex., Gwangreung, 29.v.1983; GW - 1 ex., Daegwanryeong, 16.vi.1973; JB - 1 ex., Naejangsan, 10.vi.1975; JN - 1 ex., Jirisan Nogodan, 3.viii.1996; Holotype (NHM), Japan, G. Lewis 1910-320.

**Korean record**: Kôno and Kim, 1937; Cho, 1957; Ko, 1969; KSPP, 1972; Kim et al., 1974; KSPP, 1986; Kwon and Lee, 1986; Kim and Chang, 1987; Yoon et al., 1990; Kim and Oh, 1990; Kim et al., 1991; Kim, 1993; ESK/KSAE, 1994; Morimoto, 1994; Paik et al., 1995; Kim and Kim, 1998; Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013c.

**Biological notes**: This is one of the most common weevils in Japan and abundant on the trees of the genera *Quercus*, *Castanopsis*, *Castanea*, *Alnus* and *Betula* from late April to August, and the adults are obtained by sifting litter in the forests of the above mentioned trees throughout the year (Morimoto et al., 2006).

**Distribution**: Korea (Central, South), Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima), Russia (Kuril Is.).

## 26. *Nothomyllocerus illitus* (Reitter, 1915) (Plate 5-26)
칠주둥이바구미

*Myllocerus illitus* Reitter, 1915: 122 (TL: China; Kiautschou).

**Measurements.** Body length 5.5–6.8 mm.

**Diagnosis.** Body black, antennae and tibiae reddish black, tarsi dark reddish brown. Prementum

with 5–7 setae, often 7 setae visible. Epistomal plate pentagonal, without scales. Apex of rostrum widened. Upper part of Pterygia of rostrum well developed, enlarged. Antennal scrobes curved upward. Posterior part of scrobe widen. Rostral dorsum depessed, with a medinan carina. Antennal scape length exceed middle of eye, not exceeding the anterior margin of prothorax. Antennal funicle, 3–6 segments moniliform to transverse, 1st segment length as long as 2nd, funicle 5–6 segments shorter than 1.5 times of width. Club cone-shape. Eye dorso-lateral position. Anterior margin of pronotum not projected. Posterior margin of pronotum bisinuate. Pronotum punctured and rugged, without subocular lobes and vibrissae, covered with semicircular or subpolygonal scales. Femur with a very small tooth inside. Base of claws separate, free. Scutellum large or distinctly visible. Intervals of elytra with ground scales, scales oval, circular, subpolygonial. Suberect setae on intervals of elytra ordered in regular or irregular row.

**Specimens examined**: GG - 2 exs., Seoul Hwigyeongdong, 19.v.1969; 1 ex., Seoul Bulamdong, 20. v.1971; 1 ex., Suwon, 17.viii.1980; 1 ex., Taehwasan, 23.v.1982; 1 ex., Gwangreung, 29.v.1983; 8 exs., Surisan, 27.v.1984; 2 exs., Gwanggyosan, 1.v.1987; 2 exs., Yongin, 21.v.1989; 16 exs., Ganghwado, 27.v.1997; 2 exs., Ganghwado, 28.v.1997; 2 exs., Ganghwado, 28.v.1997; GW - 1 ex., Chiaksan, 30.v. 1974; 1 ex., Chuncheon, 21.iv.1985; 1 ex., Chuncheon, 6.v.1985; 1 ex., Chuncheon, 11.v.1985; 1 ex., Gangwon Univ. Campus, 28.v.1985; 1 ex., Chuncheon, 15.vi.1985; 1 ex., Chuncheon, 31.v.1987; 1 ex., Chuncheon, 26.v.1988; 1 ex., Wonju, 21.v.1989; 1 ex., Chunseong, 17.vi.1989; 1 ex., Chuncheon Obongsan, 25.v.1993; 1 ex., Hwaseong Bibong, 1.vi.1994; 1 ex., Gangwon Univ. Campus, 26.v.1995; 1 ex., Seongnam Bundang, 12.vi.1996; CB - 1 ex., Jincheon, 23.v.1987; 1 ex., Okcheon, 22.v.1993; 4 exs., Goesan, 23.v.1993; 4 exs., Hoengseong, 24.v.1993; 4 exs., Chuncheon Obongsan, 25.v.1993; 1 ex., Seolaksan Baekdamsa, 25.v.1993; 8 exs., Hwacheon, 25.v.1993; 7 exs., Yanggu, 26.v.1993; 1 ex., Goseong, 26.v.1993; 2 exs., Danyang, 10.v.1997; CN - 1 ex., Gyeryongsan Gabsa, 30.v.1987; 1 ex., Geumsan Buseoksa, 22.v.1993; 1 ex., Geumsan Gaedeoksa, 22.v.1993; 2 exs., Cheongyang Chilgabsan, 15.vi.1993; 3 exs., Gyeryongsan, 28.v.1996; 1 ex., Gyeryongsan, 29.viii.1996; 1 ex., Cheonan Byeongcheon, 18.v.1997; GB - 3 exs., Seongju, 15.v.1975; 1 ex., Juwangsan, 16.viii.1980; 1 ex., Andong, 29.v.1993; 1 ex., Yeongcheon, 29.v.1993; 3 exs., Andong, 10.v.1997; 3 exs., Sobaeksan Huibangsa, 10.v.1997; 1 ex., Gimcheon Chupungryeong, 2.vi.1997; GN - 1 ex., Geojedo, 18.v.1977; 2 exs., Jinju, 23.v.1993; 1 ex., Jinju, 6.vi.1993; 4 exs., Goseong Munsuam, 3.vi.1997.

**Korean record**: Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013c.

**Biological notes**: This species is probably parthenogenetic, and common in Korea on *Quercus* spp. from May to September.

**Distribution**: Korea (Central, South), Japan (Honshu, Shikoku), China (Jiangsu, Anhui, Fujian, Sichuan, Guizhou, Guansi, Guandong), Russia (Primorskii Terr.).

## Genus *Phyllolytus* Fairmaire, 1889: 52

Type species: *Phyllolytus longicornis* Fairmaire, 1889.

**Distribution**: Korea, Japan, China, Taiwan, Russian Far East, Myanmar.

## 27. *Phyllolytus psittacinus* (Redtenbacher, 1869) (Plate 5-27)
검정왕주둥이바구미 (신칭)

*Myllocerus psittacinus* Redtenbacher, 1869: 150 (TL: Hongkong).
*Phyllolytus psittacinus*: Morimoto et al., 2006: 174.

**Measurements.** Body length 6.5–9.5 mm.
**Diagnosis.** Very close to *P. variabilis*. Body entirely black, with greenish scales on whole body. Epistome and apex of rostrum asymmetrical. Epistome without scales, bare, shiny. Prementum with more than 4 setae. Mandibles with 3 setae. Prothorax without vibrissae nor subocular lobes. Pronotum hardly bisinuate at base. Elytra with 1st, 3rd, 5th,and 7th intervals costate.

**Specimens examined**: JJ - 1♀, Seogwipi city, Andeok Valley, 16.vii.1990.
**Korean record**: First record to Korean fauna in this study.
**Biological notes**: Unknwon.
**Distribution**: Korea ( Jeju), Japan, Taiwan, China, Myanmar.

## 28. *Phyllolytus variabilis* (Roelofs, 1873) (Plate 5-28)
왕주둥이바구미

*Myllocerus variabilis* Roelofs, 1873: 168 (TL: Japan; Nagasaki).
*Phyllolytus longicornis* Fairmaire, 1889: 52 (TL: China; Kiangsi).
*Myllocerops fortis* Reitter, 1915: 120 (TL: China; Kiautsou).
*Myllocerus peneckei* Voss, 1936: 37 (TL: Ussuri).
*Phyllolytus variabilis*: Morimoto et al., 2006: 176.

**Measurements.** Body length 6–9 mm.
**Diagnosis.** Body dark reddish brown and reddish black. Prementum with 4 setae, covered buccal cavity entirely. Epistomal plate pentagonal, without scales, postepistome with scales, post epistomal carina weakly raised, epistomal carina carving angle obtuse, Rostral dorsum slightly depressed, with a median sulcus and lateral carina. Apex of rostrum as long as width of base. Antennal scrobes dorso-laterial position, curved upward, widened, enclosed. Pterygia developed, enlarged. Antennae long, longer than 1/2 length of body length. Antennal scape shorter than funicle, exceed anterior margin of pronotum, basal part of antennal scape thick, distal part of antennal scape weakly clavate, antennal scape weakly curved, without scales, with short piliform setae densely. Antennal funicle with piliform setae densely. First segment of antennal funicle shorter than 2nd segment, third segment much longer than 4th segment, 4th–6th segments slander elongated form. Club long spindle-shaped, narrower than than 2 times of 6th funicle segment width. Frons slightly wider than the 2/3 width of rostrum, narrower than 1.5 times of eye width, anterior part of frons depressed transeversely. Eye dorso-lateral position, transverse, convex. Pronotum saddle-like, without a medinan carina, with a pair of side carina at the posterior part, without vibrissae nor subocular lobes, anterior margin not projected anteriorly, posterior margin truncate, with stron depressions. Femur dentate, sparsely covered with short piliform setae. Fore

tibia flat weakly but external margin not carinate, Apex of fore tibia simple, marginate. Internal edge of hind tibia strongly bisinuate forming triangle, without teeth and bristles. Claws free. Scutellum distinct, U-shape. Elytra rectangular, with humeri, longer than 1.5 times of width, intervals between 5$^{th}$ intervals not costate, fifth and seventh intervals behind humeri costate, elytral basal margin weakly projected anteriorly, anterior part of elytral intervals 2−4 tumid. Elytra covered with few greenish round scales, naked partially, with short piliform setae densely. Erected setae on each interval of elytra short lanceolate, shorter than 1/2 width of 2$^{nd}$ interval, ordered in 2 or 3 irregular rows. Punctures on elytra deep, large round rectangular. Striae on the elytra distinct.

**Specimens examined**: GG - 1 ex., Yangji, 20.viii.1955; 1 ex., Suwon, 4.vii.1958; 1 ex., Surisan, 8.ix. 1968; 1 ex., Gwanggyosan, 6.vi.1969; 1 ex., Suwon, 3.vii.1969; 13 exs., Deokjeokdo, 5.viii.1970; 1 ex., Suwon, 25.vi.1973; 1 ex., Suwon, 6.viii.1980; 1 ex., Suwon, 17.viii.1980; 1 ex., Suwon, 16.ix.1980; 1 ex., Suwon, 15.viii.1983; 1 ex., Suwon, 21.vii.1985; 1 ex., Yeoju, 17.viii.1988; 1 ex., Suwon, 2.xi.1989; 1 ex., Anseong Cheongryongsa, 30.ix.1995; 1 ex., Seoul Ujangsan, 23.viii.1996; JN - 1 ex., Jirisan, 5.viii. 1959; 1 ex., Jirisan Piagol, 17.vii.1968; 1 ex., Jirisan Hwaeomsa, 9.vii.1969; 1 ex., Jirisan Ssanggyesa, 10.vii.1969; 1 ex., Jirisan Piagol, 22.vii.1971; 4 exs., Jirisan Piagol, 15−17.vii.1976; 1 ex., Jirisan, 21.vii. 1981; 1 ex., Yeocheon, 20.vii.1993; 2 exs., Yeongam, 1.ix.1994; 1 ex., Gurye Piagol, 11.vii.1996; 1 ex., Jirisan Simwon, 4.viii.1996; GB - 1 ex., Cheongsong, 22.viii.1980; 1 ex., Geumho, 20.ix.1980; 1 ex., Jikjisa, 29.ix.1980; 1 ex., Pohang, 12.viii.1996; 3 exs., Andong Univ. Campus. 30.viii.1996; GN - 2 exs., Haeinsa, 14.viii.1980; 2 exs., Jinju, 14.vii.1993; 5♂5♀ (ZIN) Keasong Mts., Pakyon popo, 27 km NE from Keasong, #252 9.ix.1971 Horvatovich S. and Papp J.; 2♂ 2♀ (ZIN) South Pyongan Prov., Chang-lyong san, 50 km NE of Pyangyan #169 13.viii.1972 Horvatovich S. and Papp J.; 5♀ (ZIN) South Pyongan Prov., Za-mo san, 60 km NE from Pyangyan #232 2.ix.1972 Horvatovich S. and Papp J..

**Korean record**: Kôno, 1930; Kôno and Kim, 1937; Saito, 1941; Cho, 1955; Cho, 1957; ZSK, 1968; Ko, 1969; KSPP, 1972; Park, 1981; KSPP, 1986; Kwon and Lee, 1986; Kim et al., 1991; Bae and Moon, 1993; ESK/KSAE, 1994; Morimoto, 1994; Yoon et al., 1990; Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013c.

**Biological notes**: Adults are common on *Quercus acuta*, *Quercus acutissma*, *Quercus dentate*, *Quercus glauca*, *Quercus serrat*, *Castanea crenata* and *Castanopsis cuspidate* in July and August (Saito, 1941; Morimoto et al., 2006).

**Distribution**: Korea (North, Central, South), Japan (Honshu, Shikoku, Kyushu, Tsushima), NE. China, Russia (Primorskii Terr.).

## Genus *Pseudoedophrys* Kojima and Morimoto, 2006: 153

Type species: *Oedophrys hilleri* (Faust, 1889).

**Diagnosis.** Head with forehead wider than eye; eyes large, ovate, weakly convex, highest at the middle. Rostrum with sides forming a continous line with those of head, transverse, narrowing slightly from the base to the middle and slightly dilated at the apex; epistome bare, asymmetrical, weakly distorted leftwards at caudal margin, short, not expanding behind antennal sockets, marginate posteriorly by a row carina, which is weakly arcuate at sides and narrowly rounded at base,

shortly pointed at anterolateral corners; parepistome with a row of incurved long setae, postepistomal area almost flat and parallel-sided between scrobes, with sparse scales; swinging fossae open posteriorly, without any additional costa, shallowly depressed at apex; mandibles each with 4–6 fine setae and a few seta-like scales; prementum with 6 setae of which median pair short. Antennae with scape moderately stout, slightly curved, almost of the same thickness from base to close apex, with narrow scales and short narrow scales; funicle with 1st segment greatest, longer than 2nd; club regular fusiform. Prothorax transverse, of subequal width at base and apex, truncate at apex on dorsum, almost straight at base, postocular lobes very feeble, without vibrissae. Scutellum evident, scaled. Elytra much wider at rectangularly rounded humeri than prothorax, widest behind the middle in both sexes, longitudinally convex, jointly rounded at apex, with 10 regular striae and flat intervals. Legs slender; femora with small tooth; tibiae slender, weakly dilated internally at apex, mucronate. Procoxae contiguous. Mesosternal process narrow, parallel-sided. Abdominal process between metacoxae narrower than a coxa. Venter with 2nd ventrite as long as 3rd and 4th combined (Morimoto et al., 2006)

**Distribution**: Korea, Japan, USA (introduced).

## 29. *Pseudoedophrys hilleri* (Faust, 1889) (Plate 5-29)

밤나무뭉뚝바구미

*Myllocerus hilleri* Faust, 1889: 222 (TL: Japan).

**Measurements.** Body length 3.7–4.1 mm.

**Diagnosis.** Body black to dark reddish black, antennae and legs brownish; scaling generally gray on the sides of head and pronotum, and underside, brownish to dark brownish on head and rostrum, pronotum, and dorsal area of elytra between 4th striae from base to declivity and apex (Morimoto et al., 2006).

Prementum with 6 setae. Mandibles with 3 long and many short hair like setae. Epistomal carina pentagonal with obtuse rounded hind angle, sharply carinate. Epistomal plate without scales. Postepistome without scales. Pterygia of rostrum developed enlarged. Antennal scrobes dorsal position, curved upward, posterior part of scrobe widened, enclosed, without scales. Antennal length longer than half of body length. Antennal scape as long as funicle, exceed anterior margin of pronotum. Antennal funicle 4–6 segments elongated form. Antennal funicle with long setae and short lanceolate or piliform setae densely. First segment length of antennal funicle longer than 2nd segment, but much shorter than 2nd+3rd segments. Third segment as long as 4th segment. Club spindle-shaped and short, narrower than 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width. Eye dorso-lateral position, oblique, slightly convex. Pronotoum posterior margin weakly bisinuate, punctured. Anterior margin of pronotum not projected. Posterior margin of pronotum strongly bisinuate. Subocular lobes distinct. Vibrissae present. Femur with circular polygonal scales, with tooth inside of clavate part. Scutellum distinct, U-shape. Elytra rectangular, with humeri, behind of humeri part slightly constrict. Basal margin of elytra not costate and weakly projected anteriorly. Elytra covered with circular or shell-like scales and with yellowish dust-like incrustation. Intevals of elytra not costate, anterior part of interval 1–4 tumid. Erected setae on each interval narrow spatulate or stick-like, marginate, shorter than width of 2nd interval but longer than half of width of 2nd interval, arranged many rows alter-

natively. Striae on the elytra distinct. Punctures shallow.

**Specimens examined**: GB - 1 ex., Ulreungdo, 26.v.1995; 9 exs., Ulreungdo, 11–12.viii.1995; Holotype, ♀ (MTD) "Japonia / Hiller, Helleri / Faust".
**Korean record**: Cho, 1934; Kôno and Kim, 1937; Kim, 1963; Ko, 1969; KSPP, 1972; KSPP, 1986; Kwon and Lee, 1986; ESK/KSAE, 1994; Morimoto, 1994: 275; Hong et al., 2000; Yunakov, 2013c.
**Biological notes**: Adults appear from May to August and October,and feed on the young leaves of *Pyrus pyrifolia*, *Prunus mume*, *Prunus persica*, *Prunus jamasakura*, *Quercus acutissima*, and often injurious to these fruit trees (Morimoto et al., 2006).
**Distribution**: Korea (South, Is. Ulreungdo), Japan (Honshu, Shikoku, Kyushu), USA (introduced).

## Tribe Dermatodini Emden, 1936

## Genus *Dermatoxenus* Marshall, 1916: 50

Type species: *Lagostomus vermiculatus* Gyllenhal, 1833
**Distribution**: Korea, Japan, China, Taiwan, Burma, Cambodia, Sulawesi, India, Java, Malacca, Sumatra, Thailand.

### 30. *Dermatoxenus caesicollis* (Gyllenhal, 1833) (Plate 5-30)
애둥근혹바구미

*Lagostomus caesicollis* Gyllenhal, 1833, Gén. Spec. Curc. 1(2): 619 (TL: China).
*Cneorhinus nodosus* Motschulsky, 1860, Étud. Ent. 9: 21 (TL: Japan).
*Dermatoxenus caesicollis*: Kim, 1984, 18: 207 (Korea; JJ Sujangwon).

**Measurements.** Body length 9.0–11.0 mm.
**Diagnosis.** Body black, covered with light whitish and grey scales. Antennal scrobes lateral position, long, curved downwards before eye or direct to eye, posterior margin open. Pterygia developed. Anterior part of rostrum wider than base. Eyes lateral position convex. Prothorax without vibrissae. Pronotum with a median longitudinal sulcus,anterior margin truncate, posterior margin slightly bisinuate. Corbel enclosed. Claws connate at base. Humeri developed. Second ventrite much longer than the 3$^{rd}$, separated from the 1$^{st}$ at most by a weak suture. The 3$^{rd}$ and 5$^{th}$ intervals of elytra convex strongly. Just behind of humeri with convex, froming tubercles on 7$^{th}$ interval. Distal part of 3$^{rd}$ and 5$^{th}$ intervals with declivital tubercles. Corbel of hind tibia enclosed.

**Specimens examined**: JB - 1 ex., Naejangsan, 10.vi.1975; GB - 1 ex., Sobaeksan Jukryeong, 31.viii. 1991; GN - 1 ex., Tongdosa, 2.x.1979.
**Korean record**: Kim, 1984; Lee et al., 1985; Kwon and Lee, 1986; Kim, 1993; ESK/KSAE, 1994; Morimoto, 1994a; Paik et al., 1995; Hong et al., 2000; Yunakov, 2013d.

**Distribution**: Korea (South, Jejudo), Japan (Honshu, Shikoku, Kyushu, Ryukyu), China (Kuatun, Jiangsu, Anhui, Zhejiang, Jiangxi, Sichuan, Fujian, Guansi, Yunnan), Taiwan, India.
**Biological notes**: Adults were collected on *Aralia* spp. in Japan (Morimoto, 1994).

## Tribe Episomini Lacordaire, 1863

## Genus *Episomus* Schoenherr, 1823: 1143

Type species: *Curculio lacerta* Fabricius, 1781.
**Distribution**: Korea, Japan, China, Taiwan, Tibet, Andaman, Bangla Desh, Borneo, Burma, Cambodia, Sulawesi, India, Java, Malacca, Philippines, Sri Lanka, Sumatra, Thailand.

### 31. *Episomus turritus* (Gyllenhal, 1833) (Plate 5-31)
혹바구미

*Lagostomus turritus* Gyllenhal, 1833: 613 (TL: Japan).
*Episomus turritus* var. *declivis* Faust, 1897: 102, 124 (TL: N. China; Tschifu).
*Dermatodes tuberculatus* Matsumura (nec Gyllenhal): 2 (TL: Japan; Honshu).
*Episomus turritus*: Kolbe, 1886, 52(1): 218 (Korea).
*Dermatodes tuberculatus*: Okamoto, 1924, 1(2): 186 (Korea; Jejudo).
*Epizomus* [sic] *turritus yamamurai* Kôno, 1928: 166 (TL: Korea; Keijo (= Seoul), Fuzan (= Busan)).
*Episomus turritus* subsp. *jamamurai* [sic]: Lona, 1937, 160: 372 (Korea).
*Episomus declivis*: Chao and Chen, 1980, 20: 25 (Korea).

**Measurements.** Body length 12–16 mm.
**Diagnosis.** Body black, covered with dense pearl-gray andwhite scales. Scales on the dorsal surface a little brown, mixing with sparse dark scale hairs. Rostrum oblong, having triangular fissure at the upper end along which Y-shaped black marking lies and at the both sides of which brown long hairs grow. Elytra covered with gray white scale hairs and testaceous ones to make patterns. Pronotum cylindrical with wrinkles.

**Specimens examined**: GG - 2 exs., Koryo (= Gwangreung), 6.ix.1924; 1 ex., Gwanaksan, 18.vi.1969; 1 ex., Maseok, 4.vi.1985; 1 ex., Gwanggyosan, 30.v.1987; 1 ex., Songdo, 25.vi.1991; 1 ex., Ganghwado, 28.v.1997; 1 ex., Hwaseong, 2.vii.?; 1 ex., Surisan, 25.vi.?; GW - 3 exs., Chunseong, 28.v.1985; 1 ex., Chuncheon, 28.vi.1989; 1 ex., Chuncheon, 25.v.1996; 2 exs., Hongcheon, 8.vii.1996; CN - 1 ex., Gyeryongsan, 11.vii.1995; JN - 1 ex., Jirisan, 17.vii.1968; GN - 1 ex., Daigenji (= Jirisan Daeweonsa), 1.viii.1924; 2 exs., Geojedo Nojasan, 4–5.vi.1997; JJ - 1 ex., Eorimok, 3.vi.1984; 1 ex., Eorimok, 10.vi. 1984; 1 ex., Seogwang, 10.ix.1989; 1 ex., Aewol, 25.v.1992; 1 ex., Eorimok, 10.viii.1985.
**Korean record**: Kolbe, 1886; Faust, 1887; Matsumura, 1931; Haku, 1936; Lona, 1937; Mochizuki and Tsunekawa, 1937; Narita, 1939; Mochizuki and Masui, 1939; Ishii, 1940; Kim, 1961; Cho, 1963;

Cho et al., 1968; Cho, 1969; Ko, 1969; Hyun and Woo, 1969; KSPP, 1972; Kim and Kim, 1973a; Kim et al., 1974; Kim, 1978; Yoon and Nam, 1979; Kim, 1980; Nam and Kim, 1982; Lee et al., 1985; KSPP, 1986; Kwon and Lee, 1986; Kim, 1989; Kim et al., 1991; Morimoto and Lee, 1992; Park et al., 1993; Kim, 1993; ESK/KSAE, 1994; Morimoto, 1994a; Paik et al., 1995; Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013e.

**Biological notes**: The imago of this species is a pest of buds of cultivated grapes (Chûjo, 1960). Adults feed on leaves of *Morus* spp. *Robinia pseudoacacia*, *Wistaria floribunda*, *Albizzia julibrissin* (Morimoto, 1994a) and *Lespedeza bicolor* (Morimoto and Lee, 1992).

**Distribution**: Korea (North, Central, South, Jejudo), Japan (Honshu, Shikoku, Kyushu, Tsushima), China (Heilongjiang, Jiangsu).

## Tribe Omiini Shuckard, 1840

## Genus *Asphalmus* Sharp, 1896: 94

Type species: *Asphalmus japonicus* Sharp, 1896.

**Distribution**: Korea, Japan, South of the Russian Far East.

### 32. *Asphalmus japonicus* Sharp, 1896 (Plate 6-32)

윤줄바구미

*Asphalmus japonicus* Sharp, 1896: 95 (TL: Japan; Tokyo).

**Measurements.** Body length 3.5 mm.

**Diagnosis.** Body reddish black, antenae and legs dark brown. Prementum with 2 setae. Mandibles with 3 long setae only. Epistomal plate distinct, obtuse angle, V-shape. Posterior part of epistome naked. Rostral dorsum slightly tumid, with a median sulcus. Pterygia developed. Antennal scrobes dorso-lateral position, curved upward shortly, posterior margin widened, enclosed, without scales. Antennae robust, shorter than 1/2 body length. Antennal scape shorter than funicle, exceed anterior margin of pronotum, strongly curved, without scales and with piliform setae sparsely, basal part thick, distal part robust, clavate. First segment of funicle longer than 2$^{nd}$, 3$^{rd}$ segment as long as 4$^{th}$ segment, 4–6 segments moniliform. Club ovate, 2 times wider than 6$^{th}$ funiclar segment. Frons wider than 2/3 width of rostrum base, wider than 1.5 times width of eye. Anterior part of frons weakly tumid. Eye lateral position, small, transverse circular, convex. Pronotum oval rounded, without a medinan carina, surface punctate, anterior margin weakly projected anteriorly and posterior margin rounded, dorsal surface slightly tumid, without subocular lobes and vibrissae. Femur without a tooth inside of distal part, with short piliform setae. Tibia thick, external margin not carinate. Internal edge of fore tibia slightly sinuate, without teeth and bristles. Base of claws simple fused together. Metepisternum covered with elytra broadly, with distinct suture with metasternum. Scutellum small, indistinct, triangular. Elytra elongated oval, without humeri, just behind

of humeri gently rounded, basal margin not projected anteriorly and not raised upward, intervals not costate, covered with suberected piliform setae densely, with a row of long light brown piliform erected setae, its length longer than 1/2 width of 2nd interval and shorter than 2nd interval width. Striae indistinct. Punctures shallow, circular. Posterior margin of 2nd sternite strongly bisinuate.

**Specimens examined**: GG - 1 ex., Seoul Dobongsan, 3.vi.1990; JB - 1 ex., Mt. Naebyeonsan, 1–6.vi. 2001; CB - 5 exs., Mt. Sokrisan, 23–24.vi.1989; GB - 1 ex., Mt. Palgongsan, 16.v.1976.
**Korean record**: Kim et al., 1991; ESK/KSAE, 1994; Hong et al., 2000; Borovec, 2013a.
**Biological note**: In Japan, adults were collected by shifting litter (Morimoto, 1994a).
**Distribution**: Korea (Central), Japan (Honshu, Shikoku, Kyushu).

## Tribe Phyllobiini Schoenherr, 1826

## Genus *Phyllobius* Germar, 1824

Type species: *Curculio pyri* Linnaeus, 1758.
**Distribution**: Palaearctic, USA (introduced), Canada (introduced), Guinea, Zaire.

**Key to the subgenera and the species of genus *Phyllobius* from Korea**

1. Femur without tooth inside [subgenus *Diallobius*] ····· *P.* (*D.*) *incomptus*
– Femur with tooth inside at least on middle and hinf legs ····· 2
2. Fore tibia with triangulary expanded part in male; head hardly convex behind eyes [subgenus *Odontophyllobius*] ····· *P.* (*O.*) *armatus*
– Fore tibia bisinuate internally in both sex ····· 3
3. Head distinctly convex behind eyes; antennae slander; femora with large triangular tooth [subgenus *Otophyllobius*] ····· 4
– Head scarsely convex behind eyes; antennae robust Tibiae flattened, carinate at both margins [subgenus *Phyllobius*] ····· 5
4. Fringed setae along hind margin of middle and hind femora decumbent, short, about one third as long as the width of femoral base, eepecially in male ····· *P.* (*O.*) *prolongatus*
– Fringed setae along hind margin of middle and hind femora conspicuous, longer than half the basal width of femora at least in male ····· *P.* (*O.*) *rotundicollis*
5. Rostrum shorter than width ····· *P.* (*P.*) *intrusus*
– Rostrum longer than width ····· *P.* (*P.*) *subnudus*

## Subgenus *Diallobius* Sharp, 1896

*Diallobius* Sharp, 1896: 104 (Type species: *Phyllobius mundus* Sharp, 1896).
*Ceratophyllobius* Pesarini, 1969, Boll. Soc. Entomol. Italiana 99–101(3–4): 58 (Type species: *Phyllobius mundus* Sharp, 1896).

### 33. *Phyllobius* (*Diallobius*) *incomptus* Sharp, 1896 (Plate 6-33)
갈녹색가루바구미

*Phyllobius incomptus* Sharp, 1896, Trans. Ent. Soc. Lond.: 103 (TL: Japan).
*Diallobius inornatus* Sharp, 1896, Trans. Ent. Soc. Lond.: 104 (TL: Japan).
*Phyllobius leechi* Sharp, 1896,
*Phyllobius* (*Diallobius*) *incomptus*: Kwon and Lee, 1986, 6: 68 (Korea; North, Central, South).
*Diallobius mundus* Sharp, 1896, Trans. Ent. Soc. Lond.: 104 (TL: Japan; Nikko, Kashwagi).

**Measurements.** Body length 4.4–6.9 mm.
**Diagnosis.** Pronotum somewhat long, broadened anteriorly. Pronotum with the widest on before middle part. Femora in male with strong tooth.

**Specimens examined**: Japan - Kanagawa, Mikasa Park, Yokosuka-city, 2♂3♀, 7.v.1988, K. Morimoto (det. by Morimoto, 1999); Senjogahara, Nikko Tolligi pref., 1♂1♀, 30.vi.1963, K. Morimoto (det. by Morimoto, 1999).
**Korean record**: Haku, 1936; Kôno and Kim, 1937; Doi, 1938; Kim et al., 1974; Kwon and Lee, 1986; Kim and Chang, 1987; ESK/KSAE, 1994; Hong et al., 2000; Alonso-Zarazaga, 2013b.
**Distribution**: Korea, Japan.

## Subgenus *Odontophyllobius* Pesarini, 1968

*Odontophyllobius* Pesarini, 1968: 38 (Type species: *Phyllobius armatus* Roelofs, 1875).

### 34. *Phyllobius* (*Odontophyllobius*) *armatus* Roelofs, 1875 (Plate 6-34)
청녹색가루바구미

*Phyllobius armatus* Roelofs, 1875, Ann. Soc. Ent. Belg. 17 compt. rend.: 128 (TL: Japan).
*Phyllobius annectens* Sharp, 1896, Trans. Ent. Soc. Lond.: 99 (TL: Japan).
*Phyllobius doii* Kôno, 1927, Ins. Mats. 2: 59 (TL: Kuril Is.).
*Phyllobius daisetsuzanus* Kôno, 1928, Ins. Mats. 2: 164 (TL: Japan; Daisetsu).
*Phyllobius* (*Odontophyllobius*) *annectens*: Kwon and Lee, 1986, 6: 68 (Korea; South).

**Measurements.** Body length 8.0–8.9 mm (in Japan).
**Diagnosis.** Internal edge of fore tibiae in male with more or less developed triangular process. Head not expanded behind eyes in both sexes.

**Specimens examined**: Japan - Toll gate Mt. Zao Miyagi Pref., 1♂1♀, 25.vi.1983, K. Morimoto (det. by K. Morimoto, 1999).
**Korean record**: Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Alonso-Zarazaga, 2013b.

**Distribution**: Korea (South), Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Kuril Is.).
**Remarks**: The first record from Korea was done by Kwon and Lee (1986) with Phyllobius annectens Sharp, but authors could not find their voucher specimen.

## Subgenus *Otophyllobius* Pesarini, 1968

*Otophyllobius* Pesarini, 1968: 38 (Type species: *Phyllobius rotundicollis* Roelofs, 1873).

### 35. *Phyllobius* (*Otophyllobius*) *prolongatus* Roelofs, 1873 (Plate 6-35)
능금녹색가루바구미

*Phyllobius prolongatus* Motschulsky, 1866: 180 (TL: Japon).
*Phyllobius* (*Otophyllobius*) *prolongatus*: Pesarini, 1980: 221.
*Phyllobius longicornis* Roelofs, 1873: 166 (TL: Japan; Hakodadi; Aomori).

**Measurements.** Body length 7.5–9.8 mm.
**Diagnosis.** Body yellowish brown to black, antennae orange to reddish brown, legs yellowish brown to dark reddish brown, covered with metallic green fusiform scales densely, and with very short appressed pubscence. Elytra with appressed and very short pubescence. Eyes well convex, highest at one-third from base, not produced barckwords. Coxal tubercles only present on hind legs, obtuse conical in male. Fringed setae along hind margin of middle and hind femora decumbent, short, about one-third as long as the width of femora at base, especially in male.Longitudinal sulcus on male venter deep on 5$^{th}$ ventrite and continued to 3$^{rd}$ ventrite through the 4$^{th}$, lateral ridges of the sulcus distinct on 5$^{th}$ and at least on caudal half of 4$^{th}$ ventrite (Morimoto et al., 2006).

**Specimens examined**: Japan - Kitami-Aioi, Hokkaido., 1 ex, 24.vi.1986, K. Morimoto (det. by K. Morimoto, 1999).
**Korean record**: Kamijo, 1933, 15: 55 (Korea; Daegu, Palgongsan); Kôno and Kim, 1937, 22: 28 (Korea); Mochizuki and Tsunekawa, 1937, 22: 89 (Korea; Soyosan); Mochizuki and Masui, 1939, 4: 72 (Korea; Soyosan); Kim and Kim, 1972, 4: 159 (Korea; Sogeumgang); Kim et al., 1974, 7: 227 (Korea; Gamaksan); Kwon and Lee, 1986, 6: 68 (Korea; Central, South); ESK/KSAE, 1994, p. 202 (Korea); Kim and Kim, 1998, 38: 176 (Korea; Odaesan).
**Biological notes**: This species is very common in Japan from May to July on various plants such as trees of *Prunus*, *Betula*, *Salix*, *Acer*, *Quercus*, *Castanea*, *Ulmus*, and grasses of *Polygomum*, *Bohemeria* etc, and is often injurious to apple in northern Japan (Morimoto et al., 2006).
**Distribution**: Korea? (central, south), China (Henan), Japan (Hokkaido, Honshu), Kuril Is..
**Remarks**: Korean specimen not examined.

### 36. *Phyllobius* (*Otophyllobius*) *rotundicollis* Roelofs, 1873 (Plate 6-36)
큰녹색가루바구미

*Phyllobius rotundicollis* Roelofs, 1873: 167 (TL: Japan, Nagasaki).
*Phyllobius nigritus* Sharp, 1896: 100.
*Phyllobius* (*Metaphyllobius*) *rotundicollis*: Kwon and Lee, 1986, 6: 68 (Korea; Central).

**Measurements.** Body length 10.0 mm.
**Diagnosis.** Elytra long, covered with densely grayish brown hairs and yellowish green piliform scales.

**Specimens examined**: GW - 1 ex., Seolaksan, 29.vii.1982.
**Korean record**: Kim et al., 1974; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Alonso-Zarazaga, 2013b.
**Distribution**: Korea (Central), Japan (Honshu, Shikoku, Kyushu, Tsushima).
**Biological notes**: Adults were collected on fruit trees and broad-leaved trees in Japan (Morimoto, 1994a).
**Remarks**: The first record from Korea was done by Kim et al. (1974).

## Subgenus *Phyllobius* s. str.

*Phyllobius* Germer, 1824: 447 (Type species: *Curculio pyri* Linnaeus, 1758).

### 37. *Phyllobius* (*Phyllobius*) *intrusus* Kôno, 1948 (Plate 6-37)
삼나무녹색가루바구미

*Phyllobius intrusus* Kono, 1948: 169 (TL: Japan; Tokyo).

**Measurements.** Body length 5.0–6.0 mm.
**Diagnosis.** Rostrum parallel-sides, as long as wide. Tooth of femora triangular. Rostrum as long as width, side parallel, without horn-like projection at the apex of each side in male. Temples flat, not tumid. Pronotum tumid and rounded truncate, widest at middle. External edge of tibia flattened, carinate. Internal edge of fore tibia slightly sinuate, in male not strongly bisinuate.

**Specimens examined**: JN - 10 exs., Suncheon Songgwangsa, 11–12.iv.1998.
**Korean record**: Hong et al., 2000; Alonso-Zarazaga, 2013b.
**Biological notes**: Feed on the sprout of *Cryptomeria japonica* and *Chamaecyparis obtusa* on April to May in Japan (Morimoto, 1994a). Adults attracted to light trap.
**Distribution**: Korea (South), Japan (Honshu, Shikoku, Kyushu), America (introduced).

### 38. *Phyllobius* (*Phyllobius*) *subnudus* Kôno, 1928 (Plate 7-38)
녹색가루바구미

*Phyllobius subnudus* Kôno: 165 (TL: Japan; Chiba, Kagoshima).

**Measurements.** Body length 5.5–6.0 mm (in Japan).
**Diagnosis.** Body covered with greenish scales. Rostrum somewhat oblong, widened anteriorly. Hind head flat. Pronotum globose, widest before middle. Femora in male strongly dentate.

**Specimens examined**: Japan - Kuroisawa Nakatsugawa Gifu Pref., 1♂1♀, 13.vi.1987, K. Morimoto (det. by K. Morimoto, 1999).
**Korean record**: Mochizuki and Tsunekawa, 1937; Alonso - Zarazaga, 2013b.
**Distribution**: Korea (Central), Japan (Honshu, Shikoku, Kyushu).
**Remarks**: Authors could not find any Korean specimen of this species in this work.

## Tribe Polydrusini Schoenherr, 1823

## Genus *Polydrusus* Germar, 1817

*Polydrusus* Germar, 1817: 341 (Type species: *Curculio undatus* Fabricius, 1781. No designated in original description).

**Distribution**: Argentina, Chile; Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama; Guadeloupe; E. Canada, NC, NE, NW, SE, SW. USA; Palaearctic.

## Subgenus *Caenotylodrosus* Kôno and Morimoto, 1960

*Caenotylodrosus* Kôno and Morimoto, 1960: 76 (Type species: *Polydrosus chinensis* Kôno and Morimoto, 1960).

### 39. *Polydrusus* (*Caenotylodrosus*) *obesulus* Faust, 1882 (Plate 7-39)
노고단바구미

*Polydrusus obesulus* Faust, 1882, Deutsche Ent. Zeitschr. 26: 261 (TL: Amur).
*Polydrusus* (*Caenotylodrosus*) *obesulus*; Korotyaev and Meleshko, 1997: 276, 279.

**Measurements.** Body length 4.7 mm.

**Diagnosis.** Prementum with 2 setae. Mandibles with broad lanceolate scales sparsely, with 5 long setae and few short piliform setae. Apex of rostrum slightly narrower than base. Pterygia of rostrum poorly developed, not enlarged. Antennal scrobes lateral position, curved downward under the eye. Posterior part of scrobe widened, open, with scales. Rostral dorsum slightly depressed, with a medinan carina. Antenna as long as half of body length, shorter than funicle. Antennal scape not exceed posterior margin of eye, not exceeding the anterior margin of prothorax. Antennal scape with piliform setae sparsely. Antennal scape from base to middle part slander, distal part strongly clavate. Antennal funicle elongate, without scales, with few long setae and few short setae. First segment of funicle as long as 2nd segment. 3rd segment as long as 4th segment. Club short spindle-shaped, narrower than 2 times width of 6th segment of funicle. Frons wider than 2/3 times of rostrum width, anterior parts strongly depressed. Dorso-lateral parts of head strongly tumid, Eye lateral position, circular, convex. Pronotum truncate saddle form, with a weak medinan carina, punctured and rugged. Subocular lobes absent. Vibrissae absent. Femur with a tooth inside of distal clavate part, without scales, with greenish piliform setae densely. Internal edge of fore tibia without teeth, straight to rounded. Fore tibia flattened partly, external margin weakly carinate. Apex of fore tibia marginate. Internal edge of hind tibia without teeth. Corbels of hind tibia open. Base of claws fused together. Metepisterna covered with elytra narrowly. Suture between metepisternum and metasternum distinct. Scutellum large U-shape. Elytra rectangular, with humeri, just behind part of shoulder straight to slightly rounded. Intervals of elytra not costate. Anterior parts of 1st–4th intervals tumid. Elytra covered with semicircular or broad leaf-like greenish scales. Erected setae on each interval piliform, shorter than 1/2 width of 2nd interval, ordered in row. Apex of elytra obtuse. Anterior margin of 2nd sternite weakly bisinuate. Posterior margins of 2nd–4th sternites slightly rounded. Middle width of 2nd sternite narrower than 3rd+4th.

**Specimens examined**: GW - 1 ex., Mt. Daeam, 30.v.1992; JN - 1 ex., Jirisan Nogodan, 20.vii.1968.
**Korean record**: Hong et al., 2000; Yunakov, 2013f.
**Distribution**: Korea (South), Russia (Amur Prov.).

## Subgenus *Eustolus* Thompson, 1859

*Eustolus Thompson*, 1859: 131 (Type species: *Curculio flavipes* DeGeer, 1775).

### 40. *Polydrusus* (*Eustolus*) *japonicus* (Hustache, 1920)
노랑다리바구미

*Scythropus japonicus* Hustache, 1920: 116 (TL: Japan; Tokyo).
*Scythrops* [*sic*] *japonicus*: Haku, 1936, 21: 122 (Korea; Daegu); Kôno and Kim, 1937, 22: 27 (Korea); Kwon and Lee, 1986, 6: 72 (Korea; South); ESK/KSAE, 1994, p. 204 (Korea); Morimoto, 1994a, 4: 280 (Korea).
*Polydrusus* (*Eustolus*) *japonicas*: Morimoto et al., 2006: 134.

**Measurements.** 4.3–5.1 mm (in Japan).

**Diagnosis.** Body black, mouth parts, antennae and tarsi yellowish brown, tibia and basal and apical parts of femora often brownish to yellow brown, body covered with greenish oval to round scales densely. Head distinctly gibbous laterally behind eyes (Morimoto et al., 2006).

**Korean record**: Haku, 1936; Kôno and Kim, 1937; Kwon and Lee, 1986; Morimoto, 1994a; ESK/KSAE, 1994; Hong et al., 2000; Yunakov, 2013f.

**Distribution**: Korea (South), Japan (Hokkaido, Honshu).

**Remarks**: The first record from Korea was done by Haku (1936). Authors could not find any Korean specimen of this species in this work.

## Subgenus *Polydrusus* s. str.

### 41. *Polydrusus* (*Polydrusus*) *fulvicornis fulvicornis* (Fabricius, 1792)
산노랑다리바구미

*Curculio fulvicornis* Fabricius, 1792 :468.
*Curculio ruficornis* Bonsdorff, 1785: 27 (TL: Sweden).
*Polydrusus ornatus* Matsumura, 1911: 132 (non Gyllenhal, 1834) (TL: Sakhalin).
*Sythropus ornatus*: Krivolutskaja et al., 1978: 90 (Korea).

**Measurements.** Body length 5.0 mm (in Russian specimen).

**Diagnosis.** Derm reddish brown, covered with grayish green round scales.

**Korean record**: Krivolutskaja et al., 1978; Kim, 1984; Lee et al., 1985; Kim, 1993; Morimoto, 1994a; Paik et al., 1995; Hong et al., 2000; Hong and Korotyaev, 2002; Yunakov, 2013f.

**Biological note**: In Japan, adults were collected on *Betula* spp. (Morimoto, 1994a).

**Distribution**: Korea, Japan (Hokkaido, Honshu), Russia (Commander Is., Sakhalin, Khabarovsk and Primorskii Terr., C. Siberia, European part), N. and C. Europe.

**Remarks**: The first record from Korea was done by Krivolutskaja et al. (1978). Authors could not find any Korean specimen of this species in this work.

## Tribe Sitonini Gistel, 1856

**Key to the genera of the tribe Sitonini from Korea**

1. Labial palp with one segment; mandible bigger than the diameter of eye ····· *Eugnathus*
– Labial palp with three segments; mandible smaller than the diameter of eye ····· *Sitona*

# Genus *Eugnathus* Schoenherr, 1834: 132

Type species: *Eugnathus viridanus* Gyllenhal, 1834.
**Distribution**: Korea, Japan, China, Taiwan, Borneo, Burma, Sulawesi, India, Java, Malacca, Philippines, Sumatra, Thailand, Vietnam.

## 42. *Eugnathus distinctus* Roelofs, 1873 (Plate 7-42)

쌍무늬바구미

*Eugnathus distinctus* Roelofs, 1873, Ann. Soc. Ent. Belg. 16: 179 (TL: Japan).
*Catachaenus chloroticus* Pascoe, 1874, Journ. Linn. Soc. Lond. 12: 23 (TL: Japan).
*Catachaenus bracteatus* Pascoe, 1874, *Ibid*.: 23 (TL: Japan; Tsushima).
*Eugnathus heydeni* Schilsky, 1911, in Küster, Käfer Eur. 47: 87 (TL: Japan).
*Eugnathus granulatus*: Kim et al., 1985, 23: 106 (Korea; Juwangsan) [*granulatus* is typing error for *distinctus*].

**Measurements.** Body length 3.6–7.5 mm.
**Diagnosis.** Mandibles with greenish scales and grayish hairs. Derm covered with light greenish and greenish orange scales. Undersides covered with white and light grayish yellow scales. Elytra with transverse band in front of middle part.

**Specimens examined**: GW - 2 exs., Chiaksan, 23.vi.1977; 35 exs., Goseong, 25–26.v.1993; CB - 11 exs., Goesan, 23.v.1993; JB - 12 exs., Naejangsan, 10–11.vi.1975; JN - 2 exs., Yeocheon, 20–21.vii.1993; GB - 1 ex., Bonghwa, 28.v.1993; 1 ex., Gimcheon Chupungryeong, 6.vi.1997; GN - 10 exs., Geojedo Nojasan, 4.vi.1997; JJ - 8 exs., Jeju, 12.ix.1967; 1 ex., Eorimok, 4.ix.1980; 1 ex., Gwaneumsa, 19.vi.1982; 1 ex., Yeongsil, 5.vi.1983; 1 ex., Gwaneumsa, 11.vi.1983; 40 exs., Jeju, 4–5.viii.1988; 2 exs., Seogwipo, 30.vii.1993; 2 exs., Yeocheon, 4.viii.1993; 3 exs., Samyangdong, 4.ix.1995.
**Korean record**: Kolbe, 1886; Kôno, 1930a; Matsumura, 1931; Masaki, 1936; Kôno and Kim, 1937; Cho, 1957; ZSK, 1968; Sin and Noh, 1970; Lee and Kwon, 1974; Yoon and Nam, 1978; Chao and Chen, 1980; Lee et al., 1985; Kim et al., 1985; Kwon and Lee, 1986; Morimoto and Lee, 1992; Park et al., 1993; Kim, 1993; Morimoto, 1994a; Lee et al., 1994; Kim, 1994; Kim, 1995b; Paik et al., 1995; Hong et al., 2000; Velazquez de Castro, 2013.
**Biological note**: Adults were captured on the leaves of *Lespedeza* spp. and *Pueraria thunbergiana*. (Morimoto and Lee, 1992).
**Distribution**: Korea (Central, South, Jejudo), Japan (Honshu, Shikoku, Kyushu, Tsushima, Ryukyu), China (Shaowu, Jiangsu, Anhui, Zhejiang, Fujian), Taiwan.

# Genus *Sitona* Germar, 1817

Type species: *Curculio lineatus* Linnaeus, 1758.

## 43. *Sitona aberrans* Faust, 1887 (Plate 7-43)
알락들바구미

*Sitona aberrans* Faust, 1887: 168 (TL: Vladivostock).
*Parasitones gravidus* Sharp, 1896: 113 (TL: Japan; Hakone).

**Measurements.** Body length 6.0–7.0 mm.
**Diagnosis.** Rostrum slightly transverse, widened toward apex; back shallow depression, forehead flat. Punctures on head elongate, moderately large. Eyes large, slightly convex. Punctures of pronotum double. Dark-brown. Pubescence not dense, scales on elytra small, drop-shaped; odd intervals with spots of brighter scales and 1 row of shortly raised scales. Widened part of femora with spatulate scales, wider than on the other parts of legs. Underside of body with sparse small narrow scales, lateral side of mesosternum and metasternum with not dense shining spatulate scales.

**Specimens examined**: JN - 1 ex., Jirisan, 23.vii.1970.
**Korean record**: Egorov, 1976a; Morimoto and Lee, 1992; ESK/KSAE, 1994; Morimoto, 1994a; Paik et al., 1995; Hong et al., 2000; Hong and Korotyaev, 2002; Velazquez de Castro, 2013.
**Biological note**: Specimens were captured by sweeping grasses including *Humulus japonicus* (Morimoto and Lee, 1992).
**Distribution**: Korea (South, Jejudo), Japan (Honshu), Russia (Primorskii Terr.).

## 44. *Sitona amurensis* Faust, 1882 (Plate 7-44)
아무르들바구미

*Sitona amurensis* Faust, 1882: 263 (TL: Amur).

**Measurements.** Body length 3.8–4.2 mm.
**Diagnosis.** Body black and blackish brown. Femora with middle part black or dark-brown, darker than tibiae. Large punctures on pronotum deep, several times larger than small finely distinct punctures on narrow shining interval between them. Punctures on frons not smaller than punctures on pronotum, deep. Base of pronotum wider than apex. Disk of pronotum with clear bright stripes on margin. Elytra brighter, with bright stripes on 3$^{rd}$–5$^{th}$ intervals; intervals with raised narrow scales.

**Specimens examined**: HN - 2 exs., Hyeoisanjin, 16.viii.1950; HH - 2 exs., Bakyeonsan Gaeseong, 7.vi.1970 (HMNH); China - 2 exs., Changbaishan, 11.vi.2013.
**Korean record**: Hong and Korotyaev, 2002; Velazquez de Castro, 2013.
**Distribution**: Korea (north), NE. China, Russia (Khabarovsk, Amur, Primorskii Terr.).

## 45. *Sitona hispidulus* (Fabricius, 1776) (Plate 7-45)
들바구미

*Curculio hispidulus* Fabricius, 1776: 226 (TL: Europe).
*Sitona foedus* Gyllenhal, 1834, in Schoenherr: 120 (TL: Crimea).
*Sitona* (*Sitona*) *hispidulus*: Kwon and Lee, 1986, 6: 73 (Korea; South).
*Sitona hispidulus*: Morimoto, 1994a, 4: 281 (Korea).

**Measurements.** Body length 3.5–4.5 mm.
**Diagnosis.** Interval between anterior margin of prosternum to transverse sulcus as long as interval between transvers sulcus to fore coxae. Eye protrude weakly. Elytra with a row of suberected long hairs on each interval.

**Specimens examined**: GG - 1 ex., Yeogisan, 21.v.1997; 3 exs., Suwon, 4.vii.1997.
**Korean record**: Kwon and Lee, 1986; Morimoto, 1994a; ESK/KSAE, 1994; Hong et al., 2000; Velazquez de Castro, 2013.
**Distribution**: Korea (Central, South - introduced), Japan (Hokkaido, Honshu, Kyushu - introduced), China (Beijing, Hebei, Shansi, Neimenggu, Gansu, Qinghai), Mongolia, European part of Russia, Caucasus, Europe, N. America (introduced).

## 46. *Sitona japonicus* Roelofs, 1873 (Plate 8-46)
일본바구미

*Sitones japonicus* Roelofs, 1873: 160 (TL: Japan; Nagasaki).
*Sitona japonica*: Lee and Kwon, 1974, 4: 47 (Korea; JJ Hagwi).
*Sitona* (*Sitona*) *japonicus*: Kwon and Lee, 1986, 6: 73 (Korea; Jejudo).

**Measurements.** Body length 4.0–4.5 mm.
**Diagnosis.** Eye protrude, semi-globose. Width of head including eyes as broad as or broader than width of anterior margin of pronotum. 1$^{st}$ interval of elytra some convex. Suberected piliform scales of elytra distinct on posterior part, and more on odd intervals.

**Specimens examined**: JB - 15 exs., Naejangsan, 110.vi.1975; GN - 1 ex., Milyang Pochungsa, 16.v.1993; 6 exs., Geojedo, 4.vi.1997; JJ - 1 ex., Jeju, 3.viii.1985; 1 ex., Daejeong, 24.v.2000.
**Korean record**: Lee and Kwon, 1974; Kwon and Lee, 1986; Morimoto and Lee, 1992; Morimoto, 1994a; ESK/KSAE, 1994; Paik et al., 1995; Hong et al., 2000; Velazquez de Castro, 2013.
**Distribution**: Korea (South, Jejudo), Japan (Honshu, Shikoku, Kyushu, Tsushima).
**Biological notes**: Specimens were captured from *Trifolium repens* by sweeping (Morimoto and Lee, 1992).

## 47. *Sitona lineatus* (Linnaeus, 1758) (Plate 8-47)
토끼풀들바구미

*Curculio lineatus* Linnaeus, 1758, Syst. Nat. ed. 10(1): 385 (TL: Palaearctic region).
*Curculio intersectus* Fourcroy, 1785, Ent. Paris 1: 120.
*Sitona* (*Sitona*) *lineatus*: Kwon and Lee, 1986, 6: 73 (Korea; South).
*Sitona lineatus*: Morimoto, 1994a, 4: 281 (Korea).

**Measurements.** Body length 4.0–5.0 mm.
**Diagnosis.** Transverse sulcus behind anterior margin of prosternum contacted with fore coxae. Elytra covered with only scales.

**Specimens examined**: GW - 3 exs., Hwacheon, 25.v.1993; 1 ex., Seolaksan Baekdamsa, 26.v.1993; 2 exs., Goseong, 26.v.1993; 4 exs., Inje. 27.v.1993; CB - 10 exs., Goesan, 23.v.1993.
**Korean record**: Kwon and Lee, 1986; Morimoto, 1994a; ESK/KSAE, 1994; Hong et al., 2000; Velazquez de Castro, 2013.
**Distribution**: Korea (Central, South - introduced), Japan (Hokkaido - introduced), Russia (Irkutsk Prov., W. Siberia, European part, Caucasus), Europe, N. America (introduced).

## 48. *Sitona lineellus* (Bonsdorff, 1785) (Plate 8-48)
목초들바구미

*Curculio lineellus* Bonsdorff, 1785: 30 (TL: N. Europe).

**Measurements.** Body length 3.0–4.5 mm.
**Diagnosis.** First interval of elytra not convex. Piliform scales very short, and appeared on apex of elytra. Femora dark-brown or black, distinctly darker than tibiae. Elytra usually with distinct longitudinal pale stripes on 3$^{rd}$–5$^{th}$ intervals and distinct erected narrow setae, length of the setae somewhat not longer than twice width of a interval, smaller than twice length of ground scales. Large punctures on frons rounded or hardly elongate well separated from median sulcus. Fore tibiae in male slightly curved, aedeagus on apex strongly narrowed.

**Specimens examined**: GN - 5 exs., Habcheon Daeyang, 2.vi.1997; 1 ex., Geoje, 4.vi.1997; JJ - 1 ex., Jeju, 8.iv.1997.
**Korean record**: Hong et al., 2000; Hong and Korotyaev, 2002; Velazquez de Castro, 2013.
**Distribution**: Korea (South, Jejudo), Japan (Hokkaido), China (Heilongjiang, Beijing, Hebei, Shansi, Neimenggu, Gansu, Qinghai, Zinjiang), Mongolia, Russia (Siberia, European part), Kazakhstan, Caucasus, Europe, N. America (introduced).

## 49. *Sitona obsoletus obsoletus* Gmelin, 1790 (Plate 8-49)
대륙들바구미

*Curculio obsoletus* Gmelin, 1790: 1807.
*Sitona flavescens* var. *lepidus* Gyllenhal, 1834, in Schoenherr Gén. Spec. Curc. 2(1): 104 (TL: N. America).
*Curculio flavescens* Marsham, 1802, Col. Brit.: 311 (nec Fabricius, 1787) (TL: Europe).
*Sitona flavescens*: Egorov, 1976a, 55(4): 828 (Korea).
*Sitona lepidus*: Egorov et al., 1996d, 3(3): 501 (Korea).

**Measurements.** Body length 4.3–6.0 mm (in Russia).
**Diagnosis.** Eyes strongly convex, subglobose. Head including eyes as wide as or wider than pronotum at anterior margin. Median sulcus thin, shallow. Frons and basal half of dorsum of rostrum flat. Head with small narrow lanceolate and piliform scales, frons without lanceolate or oval metallic scales. Pronotum with strongly angularly convex at the middle of lateral sides, matted, with dense hardly larger than punctures on head. Elytra covered with slender and oblong scales. Punctures of frons and dorsum of rostrum smaller, not rugose, punctures rounded, not formed row or striae; interval between puntures matted. Elytra 1.7 times as long as wide, on base deep emarginate, disk from middle smoothly sloped toward apex, lateral sides from middle abruptly go down toward apex. Striae of elytra thin, shallow, of small punctures. Intervals flat, 9$^{th}$ on apex wider than neighboring. Dorsum with dull reddish-brown or grayish small elongate scales, without distinctly pattern, odd intervals of elytra with obsolete dark and bright spots (Egorov et al., 1996d).

**Specimens examined**: Germany - 1 ex, St. Augustin, 26.ix.2000.
**Korean record**: Egorov, 1976a; Egorov et al., 1996d; Hong et al., 2000; Velazquez de Castro, 2013.
**Distribution**: Korea (North), Japan (Hokkaido), NE. China, Mongolia, Russia (Amur Prov., Khabarovsk and Primorskii Terr., Sakhalin, Kuril Is., Siberia, European part, Caucasus), Kazakhstan, M. Asia, Afghanistan, Europe, N. America.

## 50. *Sitona ovipennis* Hochhuth, 1851 (Plate 8-50)
극동들바구미

*Sitona ovipennis* Hochhuth, 1851, Bull. Soc. Imp. Nat. Moscou 24: 23 (TL: Irkutsk).

**Measurements.** Body length 5.2–7.9 mm (in Russia).
**Diagnosis.** Body black, covered with reddish brown scales. Integument not concealed by pubescence; underside of body not brighter than dorsum. Antennae, tibiae and tarsi usually brown. Elytra usually dark brown with small spots of bright scales and with more or less numerous naked parts. Large punctures on pronotum deeper and dense, not concealed with scales, distance between punctures less than 2–3 times diameter of puncture. From third to 5$^{th}$ segments of antennal funicle not shorter than its width (Egorov et al., 1996d).

**Specimens examined**: 1 ex., G.C. Chanpion coll., B.M. 1927-409 (NHM)
**Korean record**: Egorov et al., 1996d; Hong et al., 2000; Velazquez de Castro, 2013.
**Distribution**: Korea (North), N. China (Shansi, Gansu), Mongolia, Russia (Altai, Tuva, Irkutsk Prov., Transbaikalia, , Yakutia, Khabarovsk and Primorskii Terr.).
**Remarks**: The first record from Korea was done by Egorov et al. (1996d). Authors could not find any Korean specimen of this species in this work.

## 51. *Sitona simillimus* Korotyaev, 1979
백두산들바구미

*Sitona simillimus* Korotyaev, 1979: 145 (TL: Russia; Primorskii Terr.; NE. China).

**Measurements.** Body length 6.1 mm.
**Diagnosis.** Body large, black. Derm covered with grayish brown scales. pical construction of prosternum almost closed toward anterior margin of coxal cavity. Carving of epistome shallow, at the middle with small prominent. Epistome with median carina. Rostrum almost parallel-sided, as same as length and width. Back of rostrum edged carina, slightly not reached to anterior margin of eyes. Antennal scape with angular projection on apex. Lateral sides of pronotum stronger rounded; the widest part at the middle or at basal half. Mucro on fore and hind tibiae distinctly separated from apex of tibiae.

**Specimens examined**: HN - 1 ex., Baekdusan, 1988 (ZIN).
**Korean record**: Egorov et al., 1996; Hong et al., 2000; Hong and Korotyaev, 2002; Velazquez de Castro, 2013.
**Distribution**: Korea (North), NE. China, Russia (Khabarovsk and Primorskii Terr.).

## 52. *Sitona tessellatus* Korotyaev, 1979
북방들바구미

*Sitona tessellatus* Korotyaev, 1979: 149 (TL: Russia; Primorsky, Khabarovsk, Amur; Mongolia, China).

**Measurements.** Body length 3.0–4.1 mm.
**Diagnosis.** Femora not dark or hardly darker than tibiae, reddish-brown. Large punctures on pronotum shallow, no more than 2–3 times as same as smaller finely punctures; interval between punctures with reticulate microsculpture. Punctures on frons and rostrum shallow, smaller than large punctures on pronotum. Base of pronotum narrower than apex. Bright stripes on dorsal margin of pronotum indistinct. Elytra with dark on basic background and distinct finely spots "chess-board" pattern, intervals without erected scales.

**Specimens examined**: YG - 1 ex., Samjiyeon (1000m), 4.vi.1985 (HMNH).
**Korean record**: Hong and Korotyaev, 2002; Velazquez de Castro, 2013.

**Distribution**: Korea (North), Japan, NE. China, Russia (S. Khabarovsk, Amur, Primorskii), Mongolia.

## Tribe Tanymecini Lacordaire, 1863

Tanymecides Lacordaire, 1863: 82 (Type genus: *Tanymecus Germar*).

**Key to the subtribes of tribe Tanymecini from Korea**

1. Claws connate ····· Subtribe Piaomiina
– Claws free ····· 2
2. Rostrum sepatated from frons by transverse sulcus ····· Subtribe Tainophthalmina
– Without trasverse sulcus between rostrum and frons ····· Subtribe Tanymecina

## Subtribe Piazomiina Reitter, 1913

Piazomiini Reitter, 1913: 28 (Type genus: *Piazomias* Schoenherr).

**Key to the genera of subtribe Piazomiina from Korea**

1. Rostral dorsum with a deep median sulcus and, adjoining one or two parallel callous side-longitudinal ribs (callosities); with a well marked lateral edge between dorsal surface and lateral surface; with one or two shallower, slightly curved side-longitudinal furrow between the callosity and lateral edge; humeri distinct; fore coxae contiguous; inner edge of fore tibia not distinctly denticulate. Corbels enclosed; prosternal process produced behind coxae into a two-pointed tubercle ····· *Hypomeces*
– Rostral dorsum with a shallow median sulcus and, never bordered by the callosity; without a well marked lateral edge between dorsal surface and lateral surface; side-longitudinal furrow between callosity and lateral edge indistinct, but callosity slightly raised; humeri abscent; fore coxae separated; inner edge of fore tibia distinctly denticulate ····· 2
2. Metepisterna fused with metasternum entirely or partly ····· *Piazomias*
– Metepisterna completely separated with metasternum ····· 3
3. Base of elytron not raised, but sloping gradually to the junction with the mesonotum. Corbel of hind tibia broadly enclosed. Rostrum without a groove anteriorly of the eye ····· *Meteutinopus*
– Base of elytra abruptly raised and declivent ····· 4
4. Rostrum without side-longitudinal grooves and side-carinae on the dorsal surface ····· *Leptomias*
– Rostrum with side-longitudinal grooves and side- carinae on the dorsal surface ··· *Sympiezomias*

## Genus *Hypomeces* Schoenherr, 1823: 1141

Type species: *Curculio squamosus* Fabricius, 1792.
**Distribution**: Korea, China, Burma, Java, Malacca, Philippines, Sumatra, Thailand, New Guinea.

### 53. *Hypomeces squamosus* (Fabricius, 1792) (Plate 8-53)
초록빛바구미

*Curculio squamosus* Fabricius, 1792, Isis von Oken 1823(10): c.1141.
*Curculio squamosus* Herbst, 1795 : 92 (TL: Vorder- und Hinterindien).

**Measurements.** Body length 13.0–13.5 mm.
**Diagnosis.** Body black, densely covered with green scales and short hairs. Corbels enclosed. Rostral dorsum with a deep central groove and with 2 more grooves at each both side of the central groove; Prosternal process with 2 projections. Pronotum with a deep and broad central longitudinal groove and with a side groove at each both side of the central groove. Innner side of fore tibia without teeth.

**Specimens examined**: GG - 2 exs., Yangju, 21.v.1996.
**Korean record**: Hong et al., 2000; Ren et al., 2013.
**Distribution**: Korea (Central), NE. China (Jilin, Henan, Jiangsu, Anhui, Zhejiang, Jiangxi, Hunan, Fujian, Guandong, Guansi, Sichuan, Yunnan), Taiwan, Vietnam, Cambodia, Thailand, Malaysia, Indonesia, Philippines, Miyanma, India.

## Genus *Leptomias* Faust, 1886: 132

Type species: *Pachynotus angustatus* Redtenbacher, 1844.
**Distribution**: Korea, China, South of the Russian Far East, Tibet, Afghanistan, Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan, India, Nepal, Yemen.

## Subgenus *Leptomias* s. str.

### 54. *Leptomias* (*Leptomias*) *humilis* (Faust, 1882) (Plate 9-54)
애뚱보가슴바구미

*Piazomias humilis* 1882: 264 (TL: Amur).

*Leptomias korbi* Pic, 1905 98 (TL: Amur); Egorov, 1976a: 828 (Korea).

**Measurements.** Body length 4.5–5.5 mm.

**Diagnosis.** Body black to reddish black, covered with grayish brown and metallic scales, and with short light brown piliform setae sparsely. Rostral sides parallel, rostral dorsum flat and with median sulcus. Posterior part of scrobe widened and with scales. Eyes lateral, globose. Prothorax globose, pronotum with granules. Suture between metepimeron and metepistermeron distinct. Apex of fore tibia not enlarged. Basal margin of elytra raised. Elytral striae wide and deep, intervals convex.

**Specimens examined**: GG - 2 exs., Gapyeong Yumyeongsan, 14.vi.1977; GW - 2 exs., Chiaksan, 23–24.vi.1977; 1 ex., Chuncheon, 15.v.1985; 1 ex., Chuncheon Jiamri, 28.vi.1989; CN - 1 ex., Cheongyang, 12.v.1987; 1♂ (ZIN) Pyongyang City, Daesong-san, #1317, 16.vi.1988, Merkl O. and Szel Gy.; 1 ♂ (ZIN) Korea South Phenan Prov., Bong-ha Riv., on the river Te-dong, 45 km E from Pyongyang #19, 2.ix.1972, Mahunka S. and Steinmann H.; 1♀ (ZIN) North Korea, bass. Yalu, 25–27.vi.1897, Komarov; 1♀ (ZIN) North Korea, Puktshkhen, Prov. Hamgen Namdo, 2.viii.1950, Borchsenius; 3m 2♀ (ZIN) Korea Tumen'-ula River, Russian-Korean frontier, 11–23.vi.1913, Tshersky.

**Korean record**: Egorov, 1976a; Hong et al., 2000; Hong and Korotyaev, 2002; Ren et al., 2013.

**Distribution**: Korea (North, Central), Russia (Amur Prov., Khabarovsk and Primorskii Terr.).

## 55. *Leptomias schoenherri* Faust, 1882 (Plate 9-55)

뚱보가슴바구미

*Leptomias schoenherri* Faust, 1882, Horae Soc. Ent. Ross. 16: 296 (TL: Amur); Egorov, 1976a, 55(4): 828 (Korea).

**Measurements.** Body length 6.15–6.92 mm.

**Diagnosis.** Body reddish black, covered with circular scales and small piliform setae, pronotum with more fine setae than that of elytra. Prementum with 2 setae. Mandibles with 6 or more long setae and many short piliform setae, with few lanceolate scales. Basal part of mandibular scar column-like and projected strongly. Epistomal carina V-shape, acute angle, not raised. Epistomal plate without scales. Postepistome with light greenish or copper metallic small circular scales. Anterior margin of epistomal plate with 2–4 pairs of setae. Pterygia of rostrum poorly developed. Antennal scrobes lateral position, curved downward under the eye, posterior part of scrobe widen, open, without scales. Rostral dorsum strongly depressed, with a median sulcus, without side-longitudinal carinae and sulcus. Apex of rostrum as wide as width of base. Antennal length shorter than half of body length. Antennal scape length shorter than funicle, exceed anterior margin of eye and not exceed posterior margin of eye. Antennal scape from base to middle part very slander, distal part strongly clavate. Antennal scape without scales, with piliform setae sparsely. Antennal funicle $3^{rd}$–$6^{th}$ segments moniliform. Antennal funicle without scales, with few long setae and short piliform setae sparsely. First segment length of antennal funicle longer than $2^{nd}$, $3^{rd}$ segment longer than $4^{th}$ segment. Club ovate, as wide as 2 times of width of $6^{th}$ funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, without transverse sulcus in front of eye, anterior part weakly depressed. Eye lateral position, transverse, convex. Pronotum globose, with a weak shal-

low narrow median sulcus, posterior margin truncate, with 4 pairs small to medium size depressed side-pits, pronotum disc integuments granulate. Subocular lobes indistinct. Vibrissae present, developed. Femur with circular metallic scales sparsely, without tooth inside of clavate part. Tibia with circular metallic scales sparsely. Fore tibia thick, external margin not carinate. Internal edge of fore tibia with teeth and light brownish long bristles. Internal edge of fore tibia sinuate to strongly curved inward through distal part. Apex of fore tibia simple, marginate. Corbels of hind tibia enclosed. Hind tarsus short, robust, 3rd segment narrower than 1.5 times of length. Base of claws fused together. Suture between metepisternum and metasternum distinct. Metepisternum not slightly covered with elytra. Scutellum distinct, long narrow rounded V-shape. Elytra elongated oval, without humeri, behind of shoulder part straight, densely covered with many dark brown or light brown polygonal scales. Basal margin of elytra raised and not projected anteriorly. Intervals of elytra not costate. Erected setae (= scales) on each interval short slander needle-like, as long as 1/2 width of 2nd interval, ordered in row or alternative form of a row. Striae on the elytra distinct.

**Specimens examined**: GW - Chuncheon, 1♀, 6.v.1988 (NIAST); Changcheonri, 1♀, 17.v.1992 (NIAST); Bongmyeong-ri, 1♀, 22.v.1992 (NIAST); Kangchon, 1♂, 19.v.?, (NIAST); JN - Yecheon-gun, 1♀, 13.vii.1983; Russia - Primoriye Terey-city Medow, 1♂, 5.vi.1957, L. A. Ivliev (NIAST); Vladivostok-city Okeanskay-station, 1♀, 27.vi.1976, N. Atarova (NIAST).

**Korean record**: Egorov, 1976a; Hong et al., 2000; Ren et al., 2013.

**Biological notes**: This species is the pest on seedling of broad bean in China (Morimoto, 1994a).

**Distribution**: Korea (Central), Japan (Hokkaido), China (Heilongjiang, Jilin, Liaoning, Shansi, Shensi, Gansu), Russia (Amur Prov., Khabarovsk and Primorskii Terr.).

## Genus *Meteutinopus* Zumpt, 1931: 125

Type species: *Xylinophorus mongolicus* Faust, 1881.

**Distribution**: Korea, China, Mongolia, E. Siberia, Afghanistan.

### 56. *Meteutinopus mongolicus* (Faust, 1881) (Plate 9-56)

몽고바구미

*Thylacites mongolicus* Faust, 1881: 290 (TL: Baical, Dauria, Amur).
*Eutinops* (*Tylacites*) *mongolicus* Faust, 1887: 27.
*Xylinophorus mongolicus*: Faust, 1885: 177.

**Measurements.** Body length 4.85–5.0 mm.

**Diagnosis.** Prementum with 4 setae. Mandibles with 6 long setae and many short piliform setae, without scales. Basal part of mandibular scar column-like and projected. Epistomal carina narrow V-shape, acute angle, not raised. Epistomal plate without scales. Postepistome with grayish white circular scales. Anterior margin of epistomal plate with 3 pairs of setae. Pterygia of rostrum poorly developed. Antennal scrobes lateral position, curved downward under the eye, posterior part of

scrobe widen, open, with scales. Rostral dorsum slightly depressed, with a median sulcus, without a medinan carina, without side-longitudinal carinae and sulcus in each side. Apex of rostrum slightly narrower than base. Antennal length much shorter than half of body length. Antennal scape length shorter than funicle, exceed anterior margin of eye and not exceed middle of eye. Antennal scape from base to middle part very slander, distal part strongly clavate. Antennal scape with few lanceolate scales, with piliform setae densely. Antennal funicle 3rd–6th segments moniliform. Antennal funicle without scales, with long setae and short piliform setae sparsely. First segment of antennal funicle longer than 2nd, 3rd segment as long as 4th segment. Club ovate, as wide as 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, without transverse sulcus in front of eye, anterior part flat. Eye lateral position, oblique, slightly convex. Pronotum truncate oval, with a weak shallow narrow median sulcus, posterior margin truncate, depressed side-pit absent, pronotum disc integuments granulate. Subocular lobes indistinct. Vibrissae present, developed. Femur with circular shell-like scales densely, without tooth inside of clavate part. Tibia with circular shell-like scales densely. Fore tibia thick, external margin not carinate. Internal edge of fore tibia with teeth and light brownish long bristles. Internal edge of fore tibia slightly sinuate to strongly curved inward through distal part. Apex of fore tibia slightly enlarged. Internal edge of hind tibia with few (2–4) tiny teeth, with bristles. Corbels of hind tibia open. Hind tarsus short, robust, 3rd segment wider than 1.5 times of length. Base of claws fused together. Suture between metepisternum and metasternum distinct. Metepisternum not covered or slightly covered with elytra. Scutellum so much small, indistinct, V-shape. elytra elongated oval, without humeri, behind of humeri part gently rounded. Basal margin of elytra not raised and not projected anteriorly. Elytra covered with many dark brown and few grayish white circular or polygonal shell-like scales densely, Intervals of elytra not costate, anterior part of interval 2–4 not tumid. Erected setae on each interval very short narrow lancet-like, as long as diameter of a scale, shorter than 1/2 width of 2nd interval, ordered in a row or alternative form of a row. Striae on the elytra distinct. Puctures small spot-like, shallow.

**Specimens examined**: GG - Seoul Seosamneung, 1♂2♀, 24.vi.1973, D. J. Sim; Mt. Cheonggyesan, 1♂, 24.v.1987; 1♂, 2.v.1989; Seongnam, 1♀, 2.v.1984; Cheongpyeong, 1♀, 6.v.1971; Gyomun-ri, 1♂ 1♀, 29.v.1986; Suwon, 1♂, 29.iv.1985 (NIAST); Goyang, 1♂, 2.v.1971; Mt. Cheonma, 1♀, 11.vi.1982; 1♀, 26.vi.1984; 2♂, 23.iv.1961; 1♂, 26.vi.1984; 3♂, 16–17.iv.1977; 1♀, 16.vi.1974; 1♀, 20.v.1984; Mt. Youngmunsan, 1♀, 28.v.1982; Mt. Soyosan, 1♂1♀, 13.v.1909; 1♀, 10.vi.1909; 2♀, 16.v.1911; GW - Gangcheon, 1♂, 5.v.1977; CB - Jecheon, 2♂1♀, 6.v.1974; GN - Hamyang Backwunsa, 1♂, 25–26.v. 1990; China - Beijing, 2♂, 20.iv.1958 (KU-J); 2♀ (ZIN) South Phenan Prov., Pyongyang, Nung-ra do, island in the river Te-dong, 27.v.1970, Mahunka S. and Steinmann H.; 1♀ (ZIN) Kengi Prov.: Begyon nan, Bagyon san, near San-chon ri, at San-chon tong, 27 km SE from Keasong, 7.vi.1970, Mahunka S. and Steinmann H.; 1♀ (ZIN) North Korea, Sinandzyu, Prov. Pkhenian Pugdo, 9.vii.1950, Borchsenius; 1♀ (ZIN) North Korea, Tshemulpo, 1891, Bunge.

**Korean record**: Faust, 1887; Kôno, 1930a; Kôno and Kim, 1937; Nagayama and Okamoto, 1940; Cho, 1957; ZSK, 1968; Chao and Chen, 1980; KSPP, 1986; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Hong and Korotyaev, 2002; Ren et al., 2013.

**Biological notes**: Feed on young leaves of *Populus euranercana*, *Castanea bungeana*, *Morus alba*, *Robinia pseudo-acacia*, *Amorpha fruticosa*, apple, pear, soybean, cotton and peanut (Nagayama and Okamoto, 1940).

**Distribution**: Korea (North, Central, South), China (Heilongjiang, Jilin, Liaoning, Neimenggu, Beijing, Hebei, Shansi), Mongolia, Russia (Baikal, Dauria, Amur).

**Remarks**: This species was placed in *Xylinophorus* by Faust (1885: 177) in the description of the genus *Xylinophorus* (in a footnote to the description of the Middle Asian species *X. prodromus* Faust). The first record from Korea was done by Faust (1887) with *Eutinops* (*Thylacites*) *mongolicus* Faust.

## Genus *Piazomias* Schoenherr, 1840: 936

Type species: *Piazomias virescens* Boheman, 1840.
**Distribution**: Korea, China, E. Siberia, Uzbekistan, Turkmenistan, Kyrgyzstan, Kazakhstan.

### 57. *Piazomias griseistrius* Kolbe, 1886
회색줄바구미

*Piazomias griseistrius* Kolbe, 1886: 217 (TL: Korea; Seoul).

**Korean record**: Kolbe, 1886; Kôno, 1930a; Günther and Zumpt, 1933; Kôno and Kim, 1937; Cho, 1957; ZSK, 1968; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Ren et al., 2013.
**Distribution**: Korea (Seoul).
**Remarks**: The first record from Korea was done by Kolbe (1886), but his collecting record was the only record until now. Authors could not examine this specimen in this work.

## Genus *Sympiezomias* Faust, 1887: 29

Type species: *Brachyaspistes velatus* Chevrolet, 1845.
**Distribution**: Korea, Japan, East Siberia, China, Myanmar.

**Key to the species of genus *Sympiezomias* from Korea**

1. Pronotum with a thin median furrow and frequently hidden by scales, the lateral areas without dark stripes ····· *S. cribricollis*
− Pronotum with a borad median furrow and rarely hidden by scales, the lateral areas with each a faint and rather dark stripes ····· 2
2. Clavate distal part of antennal scape with semicircular scales, setae and piliform setae of antennal funicle long, ground scales on elytra light grey color and semicircular-shape ····· *S. herzi*
− Clavate distal part of antennal scape without semicircular scales, setae and piliform setae of antennal funicle short, ground scales on elytra metallic brown color and subpolygonal-shape ··· ····· *S. lewisi*

## 58. *Sympiezomias cribricollis* Kôno, 1930 (Plate 9-58)
가는밀감바구미

*Sympiezomias cribricollis* Kôno, 1930: 189 (TL: Taiwan (= Formosa)).

**Measurements.** Body length 8.0–10.0 mm.
**Diagnosis.** Elytra with a very distinct transverse whitish band; pronotum moderately granulate, the granules conspicuously pierced each with a hole. The median stripe of pronotum brown with coppery reflexions.

**Specimens examined**: JJ - 2 exs., Seogwipo, 15.vi.1975; 5 exs., Seogwipo, 20.vi.1975; 5 exs., Seogwipo, 9.vii.1975; 6 exs., Seogwipo, 15.viii.1975; 1 ex., Donneko, 18.vi.1983; 3 exs., Jeju, 24.iv.1989; 1 ex., Jeju, 6.v.1989; 7 exs., Gujwa, 27–28.vi.1990.
**Korean record**: Hong et al., 2000; Ren et al., 2013.
**Distribution**: Korea (Jejudo), Japan (Ryukyu), Taiwan.

## 59. *Sympiezomias herzi* Faust, 1887 (Plate 9-59)
어리밀감바구미

*Sympiezomias herzi* Faust, 1887: 30 (TL: China; Beijing).

**Measurements.** Body length 9.5–11.0 mm.
**Diagnosis.** Body grayish brown. Epistomal plate with white scales. Clavate distal part of antennal scape with semicircular scales, setae and piliform setae of antennal funicle long. Pronotum with a borad median furrow and rarely hidden by scales, median band of pronotum with light grayish scales, lateral areas with each a faint and rather dark stripes. Ground scales on elytra light grey, round.

**Specimens examined**: 1♂1♀ (ZIN), Peiking (= Beijing) , Herz
**Korean record**: Günther and Zumpt, 1933; Kôno and Kim, 1937; Chao and Chen, 1980; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Ren et al., 2013.
**Distribution**: Korea (Jejudo), Japan (Okinawa), China (Heilongjiang, Jilin, Beijing, Hebei, Henan, Shandong, Shansi, Shensi).
**Remarks**: Two materials collected from Beijing (one of them was Herz's collection (No. 13) were examined and compared with *S. lewisi* collected from Jeju-do. *Sympiezomias herzi* was not found in but *S. lewisi* was found in Jejudo. Günther and Zumpt (1933) reported the species from Korean fauna firstly, but their report was only a list.

## 60. *Sympiezomias lewisii* (Roelofs, 1879) (Plate 9-60)
밀감바구미

*Piazomias lewisi* Roelofs, 1879a: 52 (TL: Japan).

**Measurements.** Body length 9.1–9.3 mm.

**Diagnosis.** Prementum with 6 setae. Buccal cavity covered by mentum entirely. Mandibles without scales, with numerous setae (over 8, with long setae and short piliform setae). Rostrum slightly wider than base. Pterygia of rostrum poorly developed. Antennal scrobes lateral position, curved downward under the eye. Posterior part of scrobe widen, open with scales. Rostrum slightly widened apically. Pterygia poorly developed. Antennal scrobes lateral, curved downward under the eye. Posterior part of scrobe widened, open, covered with scales. Antennae shorter than half of body length. Antennal scape length shorter than funicle, exceeds anterior margin of eye but not exceeds posterior margin of eye. Antennal scape from base to middle part very slander, distal part strongly clavate. Antennal scape without scales, with setae densely. Antennal funicle 3rd–6th segments moniliform. Antennal funicle without scales, with long setae and piliform setae sparsely. First segment of antennal funicle as long as 2nd, 3rd segment as long as 4th segment. Club ovate, wider than 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, without transverse sulcus in front of eye, anterior part flat. Eye lateral position, transverse, convex. Pronotum truncate oval, with a median sulcus, posterior margin truncate, depressed side-pit absent, pronotum disc integuments granulate. Subocular lobes indistinct. Vibrissae present, developed. Femur with circular and polygonal scales densely, without tooth inside of clavate part. Fore tibia thick, external margin not carinate. Internal edge of fore tibia with teeth and long bristles. Internal edge of fore tibia slightly sinuate to strongly curved inward through distal part. Apex of fore tibia simple, slightly curved inward. Internal edge of hind tibia with many teeth, with bristles. Corbels of hind tibia enclosed. Hind tarsus short, robust, 3rd segment wider than 1.5 times of length. Base of claws fused together. Suture between metepisternum and metasternum distinct. Metepisternum slightly covered with elytra. Scutellum so much small, indistinct, V-shape. elytra elongated oval, without humeri, behind of humeri part straight to gently rounded. Basal margin of elytra raised and not projected anteriorly. Elytra covered with many dark brown and grayish white circular sparsely, and polygonal scales densely. Intervals of elytra not costate, anterior part of interval 2–4 not tumid. Erected setae on each interval very short narrow stick-like, shorter than 1/2 width of 2nd interval, ordered in a row or alternative form of a row. Striae on the elytra distinct. Puctures deep, rounded. End of elytra narrow obtuse angle. Anterior margin of 2nd sternite strongly bisinuate. 2–4 sternites stairs-shape, slightly rounded or flat. Posterior margin of 2–4 sternites slightly rounded. Middle width of 2nd sternite wider than 3rd+4th sternite. Middle width of 2nd sternite wider than 3rd+4th sternite.

**Specimens examined**: JJ - Kannoji (600 m), 12.vii.1968, Y. Nishida and T. Shirozu (KU-J, det. by K. Morimoto, 1969); Kwaneumsa, 1♂, 2.viii.1995; Anduk-valley, 1♀, 7.v.1989; 2♂1♀, ?.v.1989; 1♂2♀, 5.v.1990; Seoguipo, 2♀, 16–20.vi.1975; 1♂, 15.viii.1975; Sungpanak, 1♀, 4.v.1990; Japan - Kyushu AkaMura Buzen Prov., 1♂, 2.vi.1955, Y. Takakura (KU-J, det. by K. Morimoto, 1982).

**Korean record**: Kim and Kim, 1972; Lee et al., 1985; Kwon and Lee, 1986; Morimoto and Lee, 1992; Kim, 1993; Morimoto, 1994a; ESK/KSAE, 1994; Paik et al., 1995; Kim and Kim, 1998; Hong et al., 2000; Ren et al., 2013.

**Biological notes**: This species feed on mulberry and citrus trees in Japan (Morimoto, 1994a) and Korea.
**Distribution**: Korea (Jejudo), Japan (Honshu, Shikoku, Kyushu), China (Beijing).

## Subtribe Tainophthalmina Desbrochers, 1873

Tainophthalmidae Desbrochers, 1873: 426 (Type genus: *Tainophthalmus* Desbrochers).

## Genus *Enaptorhinus* Waterhouse, 1853: 179

Type species: *Enaptorhinus sinensis* Waterhouse, 1853.
**Distribution**: Korea, Japan?, China.

**Key to the species of Korean *Enaptorhinus* (males)**

1. Dorsal surface of elytra slightly convex or flat, 5th interval not formed a carina ····· 2
− Dorsal surface of elytra flat and depressed, 5th interval costate, formed a sharp carina ····· 3
2. Elytra with longitudinal stripes formed by scales on each 3rd interval, and with transverse stripes on the anterior parts of elytral declivity; 5th and 6th intervals as convex as the other intervals; dorsal parts of elytra slightly rounded upward, same level from base to declivity ····· ····· *E. granulatus* Pascoe
− Elytra without stripes formed by scales, 5th and 6th intervals a little more convex than the others, with only a weak longitudinal ridge formed by granules; anterior parts before middle of elytra slightly flat not depressed, hind parts after middle of elytra rounded upward ····· ····· *E. convexiusculus* Heller
3. Elytra distinctly shorter than 2 times width; 5th interval strongly costate, formed a strong carnia by peaked granules; setae on the anterior margin of elytral punctures fine, piliform; scales on intervals oval; granules on intervals pointed out sharply; Rostral dorsum slightly tumid to flat ··· ····· *E. pseudocrocodylus*
− Elytra longer than 2 times width; 5th interval slightly costate, not granulate; setae on anterior margin of elytral punctures broad, leaf-like; scales on intervals round to polygonal; granules on intervals not pointed out sharply; Rostral dorsum strongly tumid ····· *E. sinensis* [in China]

### 61. *Enaptorhinus granulatus* Pascoe, 1881 (Plate 10-61)
털보바구미

*Enaptorhinus granulatus* Pascoe, 1881: 588 (TL: North China); Faust, 1887: 27 (Korea).
*Euaptorrhinus granulatus*: Cho, 1957: 276.

**Measurements.** Body length 8.0–12.5 mm.

**Diagnosis.** Body black or dark brown, covered with light whitish brown or metallic scales, whitish scales dispersed densely to make longitudinal stripe makings on the pronotum and elytra. Head, terminal abdominal segment, apex of elytra and tibia clothed with testaceous long hairs densely. Prementum with 6–8 setae. Mandibles with long setae (over 5) and many short piliform scales. Rostral dorsum slightly tumid. Posterior part of antennal scrobes not widen. Antennal scape from base to middle part very slander. Anterior part of frons slightly depressed. Internal edge of hind tibia without small teeth. Elytra covered with light brown semicircular scales (1,3,5,7,8,9,10 intervals with densely; 2,4,6 intervals sparsely). Intervals of elytra with pointed granules, slightly costate.

**Specimens examined**: GG - Mt. Suraksan, 1♂, 21.v.1987; 1♀, 21.v.1987; 1♀, 10.vi.1986; Gwangmyeong-si, 1♂, 7.vi.1986; Mt. Yunmunsan, 1♂, 13.v.1973; 1♂1♀, 29.v.1982; 1♀, 28.v.1982; 9♀, 30.iv.1989; Mt. Pyeongnaesan, 1♂, 1.vi.1984; Mt. Gwangdeok, 1♂, 8.viii.1984; Mt. Cheonggyesan, 1♂, 24.v.1984; 1♂1♀, 26.vi.1984; 1♂, 4.v.1984; 1♂, 4.v.1984; 1♂, 5.vi.1986; 1♂, 24.v.1990; Namhansanseong, 1♂, 13.vi.1975, 1♂, 13.vi.1975; Eumhyun-ri, 2♂1♀, 6.vi.1991; Gwangneung, 1♂, 10.vi.1989; Aengmubong, 2♂1♀, 6.vi.1973; Mt. Cheonmasan, 1♂, 6.vi.1991; Mt. Daemosan, 1♂, 8.vi.1986; Paldang, 1♂, 14.v.1961; Gwanggyo, 1♂, 30.vi.1990; Mt. Myeongjisan, 2♀, 4.vi.1991; Mt. Goryeongsan, 1♀, 21.vi.1997; Gwangmyeong-si, 1♀, 7.vi.1986; Mt. Gwanaksan, 1♀, 20.v.1989; Mt. Baekwunsan, 1♀, 7.viii.1984; Cheongpyeong, 1♀, 11.v.1984; Namhasanseong, 2♀, 13.vi.1975; Pyeongane, 2♀, 1.vi.1984; Gangchon, 1♀, 5.vii.1975; Mt. Wangbangsan, 1♂ 2♀, 29.v.1985; Seoul, Wui-dong, 1♂1♀, 27.v.1986; Seoul. Mt. Dobongsan, 1♂, 9.vi.1986; GW - Gachilbong, 2♀, 21–23.vi.1984; Mt. Jeombongsan, 3♂3♀, 23.vi.1984; CB - Mt. Wolaksan, 3♂2♀, 30.v.1987; CN - Gongju-si, 1♀, 5–7.vi.1997; GB - Mt. Juwangsan, 2♂1♀, 5.vi.1989; Bulyeonggyegok, 1♂3♀, 25.vi.1990; GN - Mt. Jirisan, 1♀, 25.vi.1986; 1♀, 26.vi.1986; North Korea - Pyeongyang Mt. Daeseongsan, 2♂1♀, 16.vi.1988, O. Merkl and Gy. Szel (ZIN); 1♂1♀, 15.v.1985, A. Vosjnits and L. Zombori (ZIN); Mt. Geumgang Onjeong-ri 400m, 1♂1♀, 20.vi.1988, O. Merkl and Gy. Szel (ZIN).

**Korean record**: Faust, 1887; Kôno, 1930a; Kamijo, 1933; Cho, 1934; Kôno and Kim, 1937; Mochizuki and Tsunekawa, 1937; Mochizuki and Masui, 1939; Ishii, 1940; Cho, 1957; ZSK, 1968; Kim et al., 1974; Kim et al., 1976; Kim and Nam, 1977; Kim, 1978; Yoon and Nam, 1979; Kim, 1980; Chao and Chen, 1980; Chang and Choe, 1982; Kim et al., 1985; Kwon and Lee, 1986; Kim and Chang, 1987; Yoon et al., 1989; Kim et al., 1991; Park and Han, 1992; ESK/KSAE, 1994; Kim, 1995a; Kim and Kim, 1996; Kim and Kim, 1998; Hong et al., 2000; Han, 2002; Hong and Korotyaev, 2002; Ren et al., 2013.

**Distribution**: Korea (North, Central, South), N. China (Liaoning, Shandong).

## 62. *Enaptorhinus pseudocrocodylus* Han and Zhang, 2013 (Plate 10-62)

*Enaptorhinus pseudocrocodylus* Han and Zhang, 2013: 125 (TL: Korea; CN, Mt. Gyeryongsan; China; Shandong, Mt. Laoshan).
*Enaptorhinus sinensis*: Han, 2002; Han et al., 2007.

**Measurements.** Body length 7–8 mm.

**Diagnosis.** Body black, covered with pearlescent round scales. Rostral dorsum slightly tumid to flat. Hind tibia with many long, soft hairs. Elytra distinctly shorter than 2 times width, dorsal

surface flat, slightly depressed, with 5th interval strongly costate forming a sharp carina by peaked granules, with a fine long seta on each granule, scales on the elytra oval, setae on the anterior margin of elytral punctures fine. Elytral declivity with long hairs.

**Specimens examined**: Holotype. ♂, CN - Mt. Gyeryongsan, 12.vi.2012.
Paratypes. CN - Mt. Gyeryongsan , 4♂5♀, 12.vi.2012; China-Laoshan, 1♂1♀, 30.vi.2013.
**Korean record**: Han, 2002; Han et al., 2007; Han and Zhang, 2013.
**Distribution**: Korea (Central), China (Shandong).

### 63. *Enaptorhinus convexiusculus* Heller (Plate 10-63)
볼록엉덩이털보바구미

*Enaptorrhinus convexiusculus* Heller, 1930: 108.

**Measurements.** Body length 7–8 mm.
**Diagnosis.** Body black. Rostral dorsum - from base to middle - as tumid as frons; elytra without any stripes formed by scales, 5th and 6th interval a little higher than the others, like as a weak longitudinal carina formed with granules; anterior part of elytra slightly flat, posterior part of elytra convex; hind tibia with many long soft hairs.

**Specimens examined**: Holotype. ♂, China - Peiking, 1925-15; GW - Wonju city, Mt. Chiaksan, 1♂1♀, 21.vii.1979; 5♂4♀, 5.vi.1992; 2♂, Wonju city, Mt. Chiaksan, 19.vi.2001.
**Korean record**: Han and Zhang, 2013.
**Distribution**: Korea (Central), China (North East).

## Subtribe Tanymecina Lacordaire, 1863

Tanymecides Lacordaire, 1863: 82 (Type genus: *Tanymecus* Germar).

**Key to the genera of subtribe Tanymecina from Korea**

1. Elytra with humei ····· *Chlorophanus*
– Elytra without humeri ····· 2
2. Outer surface of mandibles strongly compressed and blade-like towards the apex, mandibular scar indistinct ····· *Meotiorhynchus*
– Mandible not strongly compressed, mandibular scar distinct ····· *Scepticus*

# Genus *Chlorophanus* Sahlberg, 1823: 24

Type species: *Curculio fallax* Sahlberg, 1823 = *Curculio excisus* Fabricius, 1801.
**Distribution**: Palaearctic.

**Key to the species of genus *Chlorophanus* from Korea**

1. Yellow scales absent on the sides of prothorax and 8th interval of elytra. Side of pronotum narrowed from base to middle part to front part more and more. First segment of funicle shorter than 2nd segment, 3rd segment longer than 4th segment ····· *C. auripes*
– Yellow scales present on the sides of prothorax and 8th interval of elytra covered with yellow scales ····· 2
2. Antennal segments long, slender. First segment of funicle shorter than 2nd segment, 3rd segment longer than 4th segment ····· *C. grandis*
– Antennal segments short, stubby. First segment of funicle as long as 2nd segment, 3rd segment as long as 4th segment ····· [*C. sibiricus*]

## 64. *Chlorophanus auripes* Faust, 1897 (Plate 10-64)
홍다리청바구미

*Chlorophanus auripes* Faust, 1897: 94 (TL: Chanka-See, China).

**Measurements.** Body length 11.0–12.0 mm.
**Diagnosis.** Premetum with 6 setae. Postepistome with greenish metallic circular scales densely. Apex of rostrum as wide as base. Antennal length shorter than half of body length. Antennal scape length shorter than funicle, exceed anterior margin of eye and not exceed posterior margin of eye. Antennal scape from base to middle part thick, distal part weakly clavate. Antennal scape without scales, with lanceolate or short piliform setae densely. Antennal funicle 3rd–6th segments slander elongate form. Antennal funicle without scales, with few long setae and with short piliform setae densely. First segment of antennal funicle shorter than 2nd, 3rd segment longer than 4th segment. Club spindle-shaped, narrower than 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, anterior part flat. Eye lateral position, oblique, convex. Pronotum trapezoid, falt, with a broad shallow median sulcus, posterior margin strongly bisinuate, pronotum disc integuments strongly sculptured and wrinkled. Vibrissae present. Femur with circular greenish or reddish copper metallic scales densely. Tibia with circular greenish or reddish copper metallic scales densely. Internal edge of fore tibia sinuate to strongly curved inward through distal part, apex of fore tibia rounded inward. Elytra covered with greenish circular scales densely and with yellowish dust-like incrustation. Elytra without yellow stripe on 8th interval.

**Specimens examined**: GG - 1 ex., Gwangreung, 15.viii.1920; 1 ex., Yeoju, 24.vi.1997; 4 exs., Paju, 22.vi.2013; 1♀, Seoul, 30.vii.1938 (ZIN).
**Korean record**: Kôno, 1928; Kôno, 1930a; Haku, 1936; Kôno and Kim, 1937; Mochizuki and Tsunekawa, 1937; Mochizuki and Masui, 1939; Ishii, 1940; Cho, 1957; ZSK, 1968; Kim et al., 1974;

Chao and Chen, 1980; KSPP, 1986; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Ren et al., 2013.

**Distribution**: Korea (Central), Japan (Honshu), China (Beijing, Hebei, Shansi, Neimenggu, Gansu).

## 65. *Chlorophanus grandis* Roelofs, 1873 (Plate 10-65)

황초록바구미

*Chlorophanus grandis* Roelofs, 1873: 162 (TL: Yokohama, Japan).
*Chlorophanus grandis* var. *metallescens* Sharp, 1896: 111 (TL: Japan; Oyama).
*Chlorophanus grandis* f. *konumensis* Kôno, 1930: 182 (TL: Sakhalin).

**Measurements.** Body length 12.0–14.0 mm.

**Diagnosis.** Premetum with 8 setae. Postepistome with greenish metallic circular and lanceolate scales densely. Antennal scape without scales, with narrow lanceolate or short piliform setae densely. Antennal funicle 3rd–6th segments slander elongate form. Antennal funicle without scales, with few long setae and with short piliform setae densely. First segment of antennal funicle shorter than 2nd, 3rd segment longer than 4th segment. Club spindle-shaped, narrower than 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, anterior part flat to weekly depressed. Eye lateral position, oblique, convex. Pronotum trapezoid, with a weak medinan carina around which slightly depressed, posterior margin strongly bisinuate, pronotum disc integuments sculptured and strongly wrinkled. Vibrissae present. Femur with circular greenish or reddish copper metallic scales densely. Tibia with circular greenish or reddish copper metallic scales densely. Internal edge of fore tibia sinuate to strongly curved inward through distal part. Apex of fore tibia rounded inward. Internal edge of hind tibia with long light brown bristles. Elytra with yellow stripe on 8th interval and side of prothorax. Elytra covered with greenish circular scales densely and with yellowish dust-like incrustation.

**Specimens examined**: GG - Cheongpyeong yuwonji, 1♂, 29.v.1984; 1♂, 27.v.1984; Gangseo-ri, 1♂, 21.vii.1967; Mt. Cheonmasan, 1♂, 27.v.1984; Mt. Cheonggyesan, 1♂, 24.vi.1984; 1♀, 23.v.1984; Aengmubong Bokwangsa, 1♀, 15.vi.1984; Seoul Cheongryangri, 1♀, 23.v.1909; GW - Mt. Odesan, 1♂, 24.vi.1998; 1♀, 17.vii.1962; Pyeongchang Doam-myun Yongsan-ri, 1♂, 29.vi.1985; Yanggu Haean-myeon, 2♂, 13.vi.1990; Hongcheon Gachilbong, 1♀, 21–23.vi.1984; Gachilbong, 1♀, 21–23.vi.1984; Hwacheon Damok-ri, 1♂, 28.v.1976; Susang-ri, 1♀, 12.vi.1990. CB - Cheongwon, 1♀, 24.v.1992. JN - Mt. Jirisan Baekmudong, 1♀, 28.vii.1992; [North Korea] HN - Keizanchin Kannanc, 1♀, 9.vii.1938 (S. Eguchi).

**Korean record**: Faust, 1887b; Okamoto, 1924; Anonymous, 1932; Kôno and Kim, 1937; Mochizuki and Tsunekawa, 1937; Nagayama and Okamoto, 1940; Ishii, 1940; Cho, 1947; Cho, 1963; Cho et al., 1968; Ko, 1969; KSPP, 1972; Kim et al., 1974; Lee et al., 1985; KSPP, 1986; Kwon and Lee, 1986; Bae and Moon, 1993; Kim, 1993; ESK/KSAE, 1994; Paik et al., 1995; Kim and Kim, 1996; Hong et al., 2000; Hong and Korotyaev, 2002; Ren et al., 2013.

**Distribution**: Korea (Central, South, Jejudo), Japan (Hokkaido, Honshu, Kyushu), Russia (Sakhalin).

**Biological notes**: Adults feed on leaves of *Salix* spp., *Malus pumila*, *Rosa* spp., *Lespedeza bicolor*

(Nagayama and Okamoto, 1940).

**Remarks**: *Chlorophanus grandis* is similar to *C. sibiricus*, with yellow stripe on 8th interval of elytra and side of prothorax. There was no compared data between *C. grandis* and *C sibiricus* in Roelof's description (1873). Chracters described by Faust (1897) were ambiguous to separate *C. grandis* and *C. sibiricus*. Kôno (1928, 1930) and many Korean taxonomists identified *C. grandis* Roelofs and *C. sibiricus* Gyllenhal base on the character state of posterior joint part of the elytral interval 2nd and 10th. However, the character state is unstable.

## 66. *Chlorophanus sibiricus* Gyllenhal, 1834 (Plate 10-66)

청바구미

*Chlorophanus sibricus* Gyllenhal, 1834: 65 (TL: Dauria).
*Chlorophanus circumcinctus* Gyllenhal, 1834, in Schoenherr : 64 (TL: Siberia).
*Chlorophanus bidens* Motschulsky, 1859: 496 (TL: Amur).
*Chlorophanus brachythorax* Motschulsky, 1859: 496 (TL: Amur).
*Chlorophanus foveolatus* Motschulsky, 1859: 496 (TL: Amur).
*Chlorophanus parallelocollis* Motschulsky, 1859: 496 (TL: Amur).
*Chlorophanus scabricollis* Motschulsky, 1860: 166 (TL: Amur).
*Chlorophanus circumcinctus* ab. *aurifemoratus* Reitter, 1915: 175 (TL: Mongolia).
*Chlorophanus peregrinus* Reitter, 1915: 176 (TL: Transbaikalia).
*Chlorophanus circumcinctus* var. *plicatirostis* Reitter, 1915: 175 (TL: Transbaikalia).
*Chlorophanus sibiricus* var. *parallelocollis*: Faust, 1887: 27 (Korea).
*Chlirophanus* [sic] *sibiricus*: Kôno and Kim, 1937: 18 (Korea; Gangreung).
*Chlrophanus* [sic] *sibiricus*: ZSK, 1968: 129 (Korea).

**Measurements.** Body length 10.3 mm.

**Diagnosis.** Premetum with 6 setae. Postepistome with greenish metallic circular and lanceolate scales densely. Apex of rostrum as wide as base. Antennal length shorter than half of body length. Antennal scape length shorter than funicle, exceed anterior margin of eye and not exceed posterior margin of eye. Antennal scape from base to middle part thick, distal part weakly clavate. Antennal scape without scales, with narrow lanceolate setae densely. Antennal funicle without scales, with few long setae and with short lanceolate setae densely. First segment of antennal funicle as long as 2nd, 3rd segment as long as 4th segment. Club short spindle-shaped, narrower than 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, without transverse sulcus in front of eye, anterior part flat. Eye lateral position, oblique, round to convex. Pronotum trapezoid, medinan carina indistinct slightly depressed like as median sulcus, posterior margin strongly bisinuate, pronotum disc integuments strongly wrinkled. Vibrissae present. Femur with circular greenish metallic scales densely. Tibia with circular greenish metallic scales densely. Fore tibia thick. Internal edge of fore tibia sinuate to strongly curved inward through distal part. Apex of fore tibia rounded inward. Internal edge of hind tibia with long light brown bristles. Elytra with yellow stripe on 8th interval and side of prothorax. Elytra covered with greenish circular scales densely and with yellowish dust-like incrustation. Intevals of elytra not costate, anterior part of interval 2–4 tumid. Erected setae on each interval short piliform, shorter than 1/2 width of 2nd interval, arranged many rows (3–5) alternatively. Striae on the elytra indistinct. Puctures deep or

shallow, circular sharpened posteriorly. End of elytra narrow and pointed, acute angle. Anterior margin of 2nd sternite strongly bisinuate. 2–4 sternites stairs-shape, flat to slightly rounded. Posterior margin of 2–4 sternites straight. Middle width of 2nd sternite as wide as 3rd+4th sternite. Middle width of 5th sternite as wide as 3rd+4th sternite.

**Specimens examined**: Russia - Tuva Rep.. Erzin Step Art. frigied naufe riv. Tegkhen, 1♂1♀, 27.vii.1980, B. Korotyaev.

**Korean record**: Faust, 1887b; Kôno, 1930a; Günther and Zumpt, 1933; Kôno and Kim, 1937; Cho, 1957; Kôno and Morimoto, 1960; ZSK, 1968; Egorov, 1976a; Chao and Chen, 1980; Kwon and Lee, 1986; ESK/KSAE, 1994; Hong et al., 2000; Hong and Korotyaev, 2002; Ren et al., 2013.

**Distribution**: Korea?, China (Beijing, Hebei, Shansi, Shensi, Neimenggu, Ningsia, Gansu, Qinghai, Sichuan), Mongolia, Russia (Russian Far East, Siberia).

**Remarks**: The first record from Korea was done by Faust (1887b) with *Chlorophanus sibiricus* Gyllenhal and *Ch. sibiricus* var. *parallelocollis* Motschulsky. This species is similar to *C. grandis*, but differs by the antennal segments: *Chlorophanus grandis* have short stubby antennal segments; First segment of funicle as long as 2nd segment; 3rd segment as long as 4th segment. It is reconfirmed that specimens reported as *C. sibiricus* from South Korea belong to *C. grandis*.

## Genus *Meotiorhynchus* Sharp, 1896: 85

Type species: *Meotiorhynchus querendus* Sharp.

**Distribution**: Korea, Japan, Coastal area of South of the Russian Far East.

### 67. *Meotiorhynchus querendus* Sharp, 1896 (Plate 11-67)

왕표주박바구미

*Meotiorhynchus querendus* Sharp, 1896: 86 (TL: Hakodate, Yezo, Japan).
*Scepticus lateralis* Matsumura, 1911: 130 (TL: Sakhalin).

**Measurements.** Body length 6–9.0 mm.

**Diagnosis.** "Rostrum short and broad. rugose in front, with a deep channel on the middle; eyes moderately prominent; antennae short and stout. Thorax rather long, curvate at the sides, obsoletely sculptured, covered with very small sordid scales, with and obscure channel on the middle. Elytra elongate, quite narrow at the base, where, however, they just exceed the width of the base of the thorax, thence becoming broader for about one-fourth or one-fifth of the length; acuminate at the apex, finely striate, covered with minute scales, which are of an almost uniform dark colour, except at the sides where they become more or less pallid, though in a very variable manner. Legs stout; apex of hind tibiae very large" (Sharp, 1896).

**Specimens examined**: GW - Kosung Whajinpo, 1♂1♀, 1.v.1999, S.Y. Kim; North Korea - Lanam-city, 1♂, ?.vi.1920, Yamamoto; Russia - Sakhalin Is., Kholmsk-city, shand shore near sea, ♀, 3.viii.

1978, A.B. Egorov (NIAST, det. by Egorov); Primorie South 15 km Bnevske, 1♂1♀, 19.vii.1973, A. S. Ryabukin.

**Korean record**: Egorov, 1976a; Hong et al., 2000; Ren et al., 2013.

**Biological note**: Distributed in sand soil area of seashore (Morimoto, 1994a).

**Distribution**: Korea (North, Central, South), Japan (Hokkaido, Honshu), Russia (Kuril Is., Sakhalin, Primorskii Terr.).

## Genus *Scepticus* Roelofs, 1873: 158

Type species: *Scepticus insularis* Roelofs.

**Distribution**: Korea, Japan, East Siberia, Tajikistan, Afghanistan.

**Key to the species of genus *Scepticus* from Korea**

1. Anterior part of frons a little depressed; rostrum with impression between lateral edge of rostrum and upper edge of eye, upper edge of eye disconnected with lateral edge of rostrum; venture clothed with sub-erected hair-shape or recumbent setae with blunt and dilated apex ····· 2
– Anterior part of frons not depressed, flat; with or without impression between lateral edge of rostrum and upper edge of eye; venture clothed with recumbent setae, gradually dilated to apex, apex blunt ····· 3
2. Odd intervals of elytra costate; venture clothed with recumbent setae, gradually dilated to apex, apex blunt ····· *S. insularis*
– Odd intervals of elytra not costate, flat; venture clothed with sub-erected hair-shape, apex of setae fine and sharp ····· *S. sungbogi* Han, sp. nov.
3. Elytra slightly constricted behind humeri; both sides of prothorax ovate; head strongly convex above eyes; between lateral edge of rostrum and upper edge of eye impressed, upper edge of eye disconnected with lateral edge of rostrum ····· *S. griseus*
– Elytra gently rounded; both sides of prothorax weekly rounded; head slightly convex above eyes; between lateral edge of rostrum and upper edge of eye not impressed, upper edge of eye connected with lateral edge of rostrum ····· *S. unifromis*

### 68. *Scepticus griseus* (Roelofs, 1873) (Plate 11-68)
천궁표주박바구미

*Piazomias griseus* Roelofs, 1873: 162 (TL: Japan).
*Scepticus hachijoensis* Kôno, 1930a: 187 (TL: Japan; Is. Hachijo).

**Measurements.** Body length 6.5–8.2 mm.

**Diagnosis.** Prementum with 2 setae. Mandibles without scales, with 5 long setae and very short small setae sparsely. Epistomal carina V-shape. Epistomal plate without scales. Postepistome with small circular scales. Anterior margin of epistomal plate with 3 pairs setae. Pterygia of rostrum poorly developed, not enlarged. Antennal scrobes lateral position, curved downward under the

eye. Posterior part of scrobe widen, open, without scales. Rostral dorsum flat, with a median sulcus, without side-longitudinal carinae and side sulcus on each side. Apex of rostrum as wide as base. Antenna shorter than half of body length. Antennal scape shorter than funicle, exceed anterior margin of eye and not exceed posterior margin of eye. Antennal scape from base to middle part thick, distal part strongly clavate. Antennal scape with scales, with greenish piliform setae sparsely. Antennal funicle 3rd–6th segments moniliform. Antennal funicle with greenish piliform setae sparsely and with few long setae. First segment of antennal funicle a little longer than 2nd, 3rd segment as long as 4th segment. Club ovate, wider than 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, without transverse sulcus in front of eye, anterior part flat. Eye lateral position, oblique, convex. Pronotum oval rounded, with a median sulcus, posterior margin rounded, pronotum disc integuments smooth and punctured. Subocular lobes indistinct. Vibrissae present. Femur with circular scales densely, without tooth inside of clavate part. Fore tibia thick, external margin not carinate. Internal edge of fore tibia without teeth. Internal edge of fore tibia slightly sinuate. Apex of fore tibia enlarged. Internal edge of hind tibia without teeth, with long slander light brown bristles. Corbels of hind tibia enclosed. Base of claws free, separate together. Suture between metepisternum and metasternum distinct. Metepisternum covered broadly with elytra. Scutellum distinct, small, V-shape. Elytra oval, without humeri, behind of humeri part slightly constrict and rounded. Basal margin of elytra raised weakly and not projected anteriorly. Basal parts of 1st and 3rd intervals weakly costate. Anterior part of interval 2–4 not tumid. Erected setae on each interval short piliform or stick-like, shorter than 1/2 width of 2nd interval, ordered in a row alternatively. Striae on the elytra distinct. Puctures shallow and small. End of elytra obtuse angle. Anterior margin of 2nd sternite strongly bisinuate. 2–4 sternites stairs-shape, flat to slightly rounded. Posterior margin of 2–4 sternites straight. Middle width of 2nd sternite wider than 3rd+4th sternite. Middle width of 5th sternite wider than 3rd+4th sternite.

**Specimens examined**: GG - Gangwha Dongmak-ri, 1♀, 27.v.1997 (NIAST, det. By Egorov); CN - Taean, 2♂, 12.x.1996 (NIAST, det. By Egorov)

**Korean record**: Kim, 1979; Kwon and Lee, 1986; Morimoto, 1994a; ESK/KSAE, 1994; Lee et al., 1994; Hong et al., 2000; Ren et al., 2013.

**Biological note**: Distributed in some dried inland fields in Japan (Morimoto, 1994a) and damaged on *Cnidium officinale* in Korea (Lee et al., 1994).

**Distribution**: Korea (Central), Japan (Honshu, Shikoku, Kyushu, Tsushima, Ryukyu).

## 69. *Scepticus insularis* Roelofs, 1873 (Plate 11-679)

뽕나무표주박바구미 (개칭)

*Scepticus insularis* Roelofs, 1873: 158 (TL: Japan; Nagasaki, Hiago).

**Measurements.** Body length 5.5–7.5 mm.

**Diagnosis.** Anterior part of frons a little depressed; rostrum with impression between lateral edge of rostrum and upper edge of eye, upper edge of eye disconnected with lateral edge of rostrum; venture clothed with recumbent setae with blunt and dilated apex. Elytra with intervals costate alternately and the basal margin costate.

**Specimens examined**: Holotype. Japan, G. Lewis, 1910-320 (NHM); 1 ex., Hokkaido Japan, 23.vii. 2013.

**Korean record**: Masaki, 1936; Nagayama and Okamoto, 1940; Cho, 1955; Ko, 1969; KSPP, 1972; KSPP, 1986; Kwon and Lee, 1986; Morimoto, 1994a; ESK/KSAE, 1994; Hong et al., 2000; Ren et al., 2013.

**Biological note**: This species is the pest of cotton, tobacco and mulberry tree (Cho, 1955). Adults feed on buds and young leaves of various plants and larva feed on their roots (Nagayama and Okamoto, 1940). Distributed in the field of inland high mountain. Population of Japan (Aomori and Hokkaido) have parthenogeny (Morimoto, 1994a).

**Distribution**: Korea?, Japan (Hokkaido, Honshu, Shikoku, Kyushu), Russia (Sakhalin).

**Remarks**: The first record from Korea was done by Masaki (1936). Here, we could not find Korean specimen of this species.

## 70. *Scepticus sungbogi* Han, sp. nov. (Plate 11-70)

성복표주박바구미 (신칭)

**Holotype.** ♂ (KU-K), Korea, GB, Ulreungdo, 4 .VIII.1988, collected by Sung-Bok An.

**Paratypes.** 1♂2♀ (KU-K), Korea. GB-Ulreungdo, 4.viii.1988, collected by Sung-Bok An; 1♀ (KU-K), GB-Ulreungdo, 8.vi.1963.

**Diagnosis.** Anterior part of frons a little depressed; rostrum with impression between lateral edge of rostrum and upper edge of eye, upper edge of eye disconnected with lateral edge of rostrum; venture clothed with sub-erected fine hair-shape setae; odd intervals of elytra not costate, flat.

**Description.** Male. Body length 6.5 mm; body width 3.5 mm. Body reddish-dark-brown, oval. Rostral dorsum, pronotum and elytra densely covered with membranous whitish grey scales; ventral surface of head with plume-shaped pale-brown scales, ventral surface of rostrum with round, membranous whitish grey scales; ventral side densely covered with suberected piliform setae. Head: prementum with 2 setae, covered entire part of buccal cavity; mandible with numerous setae (more than 8 setae), without scales; mandibular scar slightly prominent; epistomal carina V-shape; epistomal plate small, without scales; postepistome sparsely clothed with small circular scales; pterygia poorly developed; rostral dorsum flat or slightly depressed, with a median sulcus, with weak side-longitudinal carinae and side sulcus on each side of the median sulcus; dorso-lateral edge of rostrum not carinaed; apex of rostrum slightly wider than base; rostrum slightly shorter than the width of the base; upper edge and lower edge of antennal scrobes distinct, curved downward under the eye, upper edge touching anterior margin of eye, lower edge remote from anterior margin of eye, scrobe slightly widening posteriorly; posterior part of antennal scrobes without scales; antennal scape clavate, basal part slander, apex dilated; antennal scape shorter than the whole length of funicle; antennal scape reaching middle of eye; middle part of antennal scape straight, not curved; antennal scape clothed with sub-erected or erected hair-shape scales, with appressed oval scales at the distal parts sparsely; antennal funicles clothed with sub-erected or erected fine hair-shape setae; 1$^{st}$ funicular segment as long as 2$^{nd}$; 3$^{rd}$ funicular segment slightly shorter than 4$^{th}$; 4$^{th}$–6$^{th}$ funicular segments short trapezoid, distal part slightly dilate; 7$^{th}$ funicular segment trapezoid, strongly dilated at distal part, distinctly separate with club; club conical ovate, shorter than 2 timesof width; eye lateral position, oblique, convex. Thorax: pronotum with median

sulcus, weakly developed, with vibrissae, without subocular lobes, slightly wider than length, widest at anterior 1/3; anterior and basal margins of pronotum truncate; dorsal surface of pronotum with fine punctures;; scutellum small, distinct; humeri rounded, without a callosity; apex of elytra simple, obtuse angle; all intervals of elytra same level; basal margin of elytra emarginate, not carinate, not protruded anteriorly; scales of elytral dense, imbricate; erected setae of elytral fine, short, suberected piliform, arranged with 2 or 3 rows zigzag, erected setae on the declivity part of the elytra same as that of the other elytral parts; antero-lateral margin of elytra without or with very minute excision for reception of the anterior knob of the metepisterna; lateral margin of elytra with fringe of scales; femora clothed with short appressed and long recumbent scales, without a tooth on its inside of the clavate part; tibia clothed with short broad appressed scales and narrow long recumbent scales; internal edge of fore tibia dentate; apical part of fore tibia simple, not curved inward, not dilated; internal edge of hind tibia dentate; corbels of hind tibia very narrowly enclosed; fringed setae of corbel long needle-shaped; ; tarsal grooves glabrous; 3rd segment of hind tarsus evidently broader than 2nd; claws free; front coxae much closer to anterior than to posterior margin of prosternum, contiguous together; metepisternum distinctly separate from metasternum; most part of metepistrnum covered by elytron, with broad naked area; metepimeron covered by elytron entirely, invisible. Abdomen: suture between ventrite 1 and 2 distinct, weakly bisinuate; 2nd ventrite as long as 3rd+4th at the middle longitudinal line, its posterior margin straight.

**Etymology.** Named after the late Dr. Sung Bok Ahn, who collected this species.

**Remarks**: This species similar to *S. insularis*, but differs in following characters: elytral intervals (excepting for the basal part of 1st and 3rd intervals) not costate; median sulcus of pronotum distinct; 3rd tarsomere 1.5 times as wide as long; erected setae on elytral intervals ordered 2–3 irregular rows. In *S. insularis* odd intervals costate; median sulcus of pronotum indistinct; 3rd tarsomere 1.5 times as narrow as length; erected setae on elytral intervals flatt, gradually widened to apex, ordered in 1 regular or irregular row.

## 71. *Scepticus uniformis* Kôno, 1930 (Plate 11-71)

표주박바구미

*Scepticus uniformis* Kôno, 1930: 186–187 (TL: Japan; Okinawa).

**Measurements.** Body length 6.0–9.0 mm.

**Diagnosis.** Prementum with 2 setae. Mandibles without scales, with 5 long setae and very short small setae sparsely. Epistomal carina V-shape. Epistomal plate without scales. Postepistome with small circular scales. Anterior margin of epistomal plate with 3 pairs setae. Pterygia of rostrum poorly developed, not enlarged. Antennal scrobes lateral position, curved downward under the eye. Posterior part of scrobe widen, open, without scales. Rostral dorsum flat, with a median sulcus, with weak side-longitudinal carinae and side sulcus on each side. Apex of rostrum as wide as base. Antenna shorter than half of body length. Antennal scape shorter than funicle, exceed anterior margin of eye and not exceed posterior margin of eye. Antennal scape from base to middle part thick, distal part strongly clavate. Antennal scape with scales densely. Antennal funicle 3rd–6th segments moniliform. Antennal funicle with piliform setae sparsely and with few long setae.

First segment of antennal funicle a little longer than 2nd, 3rd segment as long as 4th segment. Club ovate, wider than 2 times of width of 6th funicle. Frons wider than 2/3 width of rostrum, wider than 1.5 times of eye width, without transverse sulcus in front of eye, anterior part flat. Eye lateral position, oblique, convex. Pronotum oval rounded, with a median sulcus, punctured, posterior margin rounded. Subocular lobes indistinct. Vibrissae present, weakly developed. Femora with circular scales densely, without tooth inside of clavate part. Fore tibia thick, external margin not carinate. Internal edge of fore tibia without teeth. Internal edge of fore tibia slightly sinuate. Apex of fore tibia emarginate. Internal edge of hind tibia without teeth, with long slander light brown bristles. Corbels of hind tibia enclosed. Claws free. Suture between metepisternum and metasternum distinct. Metepisternum covered broadly with elytra. Scutellum distinct, small, V-shape. Elytra oval, without humeri, behind of humeral part gently rounded. Basal margin of elytra raised weakly and not projected anteriorly. Intervals not costate. Anterior part of interval 2–4 not tumid. Erected setae on each interval short piliform or stick-like, shorter than 1/2 width of 2nd interval, ordered in a row alternatively. Striae on the elytra distinct. Puctures shallow and small. End of elytra obtuse angle. Anterior margin of 2nd sternite strongly bisinuate. 2–4 sternites stairs-shape, flat to slightly rounded. Posterior margin of 2–4 sternites straight. Middle width of 2nd sternite wider than 3rd+4th sternite. Middle width of 5th sternite wider than 3rd+4th sternite.

**Specimens examined**: CN - Boryung Wonsando, 5♂6♀, 19.viii.1999; JN - Sinan, 15♂15♀, 24.v.1982 (NIAST); JJ - Yongmeo-ri, 4♂7♀, 22.viii.1984 (NIAST); Sinyang, 1♀, 21.v.1994 (NIAST); Japan - Naon Yamato-son, 14.x.1988, K. Morimoto (KU-J).

**Korean record**: Kim, 1979; Kwon and Lee, 1986; Morimoto and Lee, 1992; Morimoto, 1994a; ESK/KSAE, 1994; Paik et al., 1995; Kim, 1995b; Hong et al., 2000; Ren et al., 2013.

**Biological note**: Distribution of this species is restricted to sandy coast (Morimoto and Lee, 1992).

**Distribution**: Korea (Central, South, Jejudo), Japan (Honshu, Shikoku, Kyushu, Ryukyu).

## Tribe Trachyphloeini Lacordaire, 1863

Trachyphloeides Lacordaire, 1863: 191 (Type genus: *Trachyphlous* Germar)

## Subtribe Trachyphloeina Lacordaire, 1863

**Key to the genera of tribe Trachyphloeina from Korea**

1. Prothorax with subocular lobes, antennal scrobes direct to eye ····· *Pseudocneorhinus*
– Prothorax without subocular lobes, antennal scrobes curved downwards before eye ····· *Trachyphloeosoma*

# Genus *Pseudocneorhinus* Roelofs, 1873: 177

Type species: *Pseudocneorhinus obesus* Roelofs, 1873.
**Distribution**: Korea, Japan, China, South of the Russian Far East, USA (introduced).

**Key to the species of genus *Pseudocneorhinus* from Korea**

1. Internal edge of hind tibia with 7–9 teeth, 4–5 big and 2–4 small ····· 2
– Internal edge of hind tibia without or with 2–4 teeth only, 2 small and 1–2 tiny ····· 3
2. Postepistome with circular metallic scales. Widest at anterior part of elytra ····· *P. bifasciatus*
– Postepistome without circular metallic scales. Widest at middle of elytra ····· *P. soheuksandoensis*
3. 3rd and 4th segments of funicle slightly longer than width. 1st segment of funicle as long as or slightly longer than 2nd segment of funicle, much shorter than 2nd and 3rd segments (1st << 2nd+3rd) ····· *P. obesus*
– 3rd and 4th segments of funicle as long as or slightly broader than length. 1st segment of funicle very longer than 2nd, as long as 2nd and 3rd segments (1st = 2nd+3rd nearly) ····· 4
4. Piliform scales on intervals of elytra broad and leaf-shaped. 2nd, 4th and 6th intervals without or with the scales fewer than 1st, 3rd and 5th intervals ····· *P. setosus*
– Piliform scales on intervals of elytra slender, needle-shape or stick-shape, scarcely dilated distal in natural ····· 5
5. Dorsal carina of epistome not elevated sharply, obtuse V-shaped, with broad and bare space behind epistome. 2nd segment of funicle 1.8–2 times as long as width. Hind tibia with 2–4 small and tiny teeth inside ····· *P. adamsi*
– Dorsal carina of epistome elevated sharply, obtuse U-shaped, with furrow-like bare space behind epistome. 2nd segment of funicle 1.5 times as long as width. Hind tibia without teeth inside. Body is very small ····· *P. minimus*

## 72. *Pseudocneorhinus adamsi* Roelofs, 1879 (Plate 11-72)
얼룩무늬가시털바구미

*Pseudocneorhinus adamsi* Roelofs, 1879: 53 (TL: Mantchuria).

**Measurements.** Body length 5.0–6.2 mm.
**Diagnosis.** Epistoma V-shape, epistomal carina not raised, with broad naked area behind epistomal carina. Rostrum sides parallel. Antennae robust, with dense scales and setae. 3rd and 4th segments of funicle as long as width or slightly broader than length. 1st segment of funicle longer than 2nd, as long as 2nd and 3rd segments (1st = 2nd+3rd nearly). Elytra oval, with dense gold metallic and dark brown ground scales that arranged radially around the large and circular punctures, piliform scales on intervals of elytra needle-shape or stick-shape, long (as long as width of 2nd interval), slender, erected, their number same in each interval. Striae rough, longitudinal linear furrow between punctures invisible, widest position behind the middle. Internal edge of hind tibia with 2–4 tiny teeth.

**Specimens examined**: GG - Cheongpyeong, 1♀, 31.v.1986; Singal, 1♀, 24.vi.1992; Ansan, Is. Okgu-do, 1♀, 25.viii.1989; Mt. Cheonmasan, 2♀, 26.vi.1972; 3♀, 6–7.vi.1986; 2♀, 7.vi.1986; Suweon, 1♀, 14.vi.1990; 1♀, 3.vi.1990; GW - Mt. Bangtaesan, 2♀, 5.vi.1999; Koseong Keunbongsa, 1♀, 22.v.1992; Mt. Chiaksan, 1♀, 7.vi.1974; Yanggu Dutayeon, 1♀, 30.v.1990; CB - Okcheon, 2♀, 29.v.1991; JB - Muju Gucheondong, 1♀, 9.vi.1972; Mt. Naejangsan, 1♀, 5.vii.1985; JN - Mt. Jirisan, 1♀, 3.vi.1998; 1♀, 5.vi.1998; Mt. Duryunsan, 21♀, 22–23.vi.1993; GB - Bulyeonggyegok, 4♀, 24–26.vi.1990.; GN - Mt. Gayasan, 2♀, 5.viii.1960.

**Korean record**: Morimoto, 1984; Kwon and Lee, 1986; Yoon et al., 1990; Kim et al., 1991; Morimoto, 1994a; ESK/KSAE, 1994; Kim, 1995a; Han et al., 2000; Hong et al., 2000; Borovec, 2013b.

**Biological notes**: Adults were collected on from *Chamaecyparis* spp. in Japan (Morimoto, 1994a).

**Distribution**: Korea (Central, South), Japan (Honshu), China (Manchuria, Shansi, Heilongjiang, Jilin, Liaoning).

## 73. *Pseudocneorhinus bifasciatus* Roelofs, 1880 (Plate 12-73)

땅딸보가시털바구미

*Pseudocneorhinus bifasciatus* Roelofs, 1880: 122 (TL: Hakodate Japan).
*Callirhopalus bifasciatus*: Sin and Noh, 1970, 1: 37 (Korea; Soheuksando).

**Measurements.** Body length 5.0–6.0 mm.

**Diagnosis.** Epistoma narrow V- or U-shape, epistomal carina elongated posteriorly and sharply elevated, with narrow naked area behind epistomal carina and on which metallic circular ground scales. Rostrum sides not parallel, rounded and widest at the 1/3 position from the apex. Antennae robust, with dense scales and setae. 3$^{rd}$ and 4$^{th}$ segments of funicle as long as width. 1$^{st}$ segment of funicle longer and thicker than 2$^{nd}$, as long as 2$^{nd}$ and 3$^{rd}$ segments (1$^{st}$ = 2$^{nd}$+3$^{rd}$ nearly). Elytra global and the first part of third from the base widest, shell-shaped ground scales covered and overlapped posteriorly like scales of the silver carp, piliform scales on intervals of elytra needle-shaped suberected, very short (half length of the width 2$^{nd}$ interval), their number same in each interval. Striae distinct, longitudinal linear furrow between punctures visible. Puncture very small size. Join-part of interval 2$^{nd}$ and 10th merged and formed a hump at the end of the elytra. Internal edge of hind tibia with 5–7 big teeth.

**Specimens examined**: GG - Mt. Cheonggyesan, 1♀, 10.v.1987; 2♀, 6.vi.1991; 1♀, 11.v.1992; Mt. Suraksan, 1♀, 2.vi.1974; Kwangreung, 1♀, 16.v.1964; 1♀, 8.vii.1975; Mt. Cheonmasan, 1♀, 30.v.1984; Mt. Wangbangsan, 1♀, 23.v.1990; GW - Mt. Odaesan, 2♀, 24.vi.1984; CB - Mt. Wolaksan, 1♀, 29–31.v.1987; Cheongwon, 1♀, 28.v.1991; CN - Mt. Gyeryongsan, 1♀, 10.vii.1987; JB - Mt. Naejangsan, 1♀, 4.vii.1985; Muju Gucheondong, 4♀, 20–22.v.1983.; JN - Mt. Duryunsan, 1♀, 23.vi.1993; Mt. Jirisan, 8♀, 23–26.vi.1986; 1♀, 4.vi.1977; 1♀, 5.vi.1998; GB - Cheongdo, 1♀, 23.v.1987; 1♀, 23.v.1987; Daegu, Dongwhasa, 2♀, 24.v.1986; JJ - Kwaneumsa, 1♀, 5.v.1990.

**Korean record**: Haku, 1936; Masaki, 1936; Kôno and Kim, 1937; Mochizuki and Tsunekawa, 1937; Sin and Noh, 1970; Yoon and Nam, 1978; Kwon and Lee, 1986; Park et al., 1993; Morimoto, 1994a; ESK/KSAE, 1994; Han et al., 2000; Hong et al., 2000; Borovec, 2013b.

**Distribution**: Korea (Central, South, Jejudo), Japan (Hokkaido, Honshu, Shikoku, Kyushu), China (Zhejiang), North America (introduced).

**Biological notes**: Damaged to citrus plants. Parthenogenesis in Japan, but male population exist in China and southern islands of Japan (Morimoto, 1994a).

## 74. *Pseudocneorhinus minimus* Roelofs, 1879 (Plate 12-74)
꼬마가시털바구미

*Pseudocneorhinus minimus* Roelofs, 1879, p. 53 (TL: Japan).
*Callirhopalus minimus*: Morimoto, 1962: 213.

**Measurements.** Body length 3.5–4.0 mm.
**Diagnosis.** Body covered with a dirty incrustation. Hind angle of epistome U-shape, elevated sharply, hind angle position lying prior to the part between anterior margins of pterygia, bare space behind epistome narrow. Sides of rostrum parallel. 1st segment of funicle as twice as the length of 2nd segment, 2nd segment of funicle robust and length as 1.5 times as width, 3rd and 4th segments of funicle as long as or slightly broader than length. Without teeth inside of the hind tibia. Elytra oval, broadest at the middle, with dense irregular shape gold metallic and dark brown ground scales. Few piliform scales on intervals of elytra needle-shaped, erected, the scales as long as the width of 2nd interval. Striae indistinct, longitudinal linear furrow between functures invisible. Punctures small size. Internal edge of hind tibia not dentate.

**Specimens examined**: GG - Pyeongtaek, 1♀, 27.vi.1995; Gangwhado, 2♀, 12.viii.1999; JN - Mt. Jirisan, 1♀, 26.vi.1986; Far East Russia - Primorie, near st. Khasan Golubiny ut., 1♀, 30.v.1974, A. B. Egorov.
**Korean record**: Han et al., 2000; Hong et al., 2000; Borovec, 2013b.
**Distribution**: Korea (Central, South), Japan (Hokkaido, Honshu, Kyushu), China (Jilin, Beijing, Hebei, Shensi, Jiangsu, Anhui, Jiangxi, Sichuan), Far East Russia.

## 75. *Pseudocneorhinus obesus* Roelofs, 1873 (Plate 12-75)
두줄무늬가시털바구미

*Pseudocneorhinus obesus* Roelofs, 1873: 177 (TL: Japan; Nagasaki).
*Callirhopalus obesus*: Kim and Kim, 1973a, 5: 83 (Korea; Mujugucheondong).

**Measurements.** Body length 4.3–6.0 mm.
**Diagnosis.** Internal edge of hind tibia without small tooth. First segment of funicle as long as or slightly longer than 2nd, 3rd and 4th segments of funicle slightly longer than width. Seate on intervals of elytra stick-shaped, shorter than the width of 2nd interval, suberected, their number same in each interval.

**Specimens examined**: GG - 1 ex., Suwon, 4.iv.1983; 1 ex., Gwangreung, 20.vi.1983; GW - 1 ex., Odaesan, 17.vii.1962; 1 ex., Goseong, 25.v.1993; 1 ex., Yanggu, 26.v.1993; 1 ex., Unduryeong, 27.v.

1993; 1 ex., Myeongju Odaesan, 27.v.1993; 1 ex., Pyeongchang Jinbu, 27.v.1993; 2 exs., Taebaek, 28. v.1993; CB - 1 ex., Goesan, 23.v.1993; JB - 2 exs., Naejangsan, 10.vi.1975; GB - 2 exs., Andong, 10.v. 1988; 3 exs., Bonghwa, 28.v.1993; 1 ex., Pohang, 12.viii.1996.

**Korean record**: Kim and Kim, 1973a; Egorov, 1976a; Lee et al., 1985; Kwon and Lee, 1986; Morimoto and Lee, 1992; Kim, 1993; ESK/KSAE, 1994,; Morimoto, 1994a; Paik et al., 1995; Han et al., 2000; Hong et al., 2000; Borovec, 2013b.

**Biological note**: This species is parthenogenetic in Japan, and the male has been recorded from Jeju Is. and China (Fukien) (Morimoto and Lee, 1992).

**Distribution**: Korea (Central, South, Jejudo), Japan (Honshu, Kyushu), N. China (Kwangtseh, Kuatun, Jiangsu, Anhui, Hubei, Zhejiang, Fujian), Russia (Khabarovsk and Primorskii Terr., Kuril Is.).

**Remarks**: The first record from Korea was done by Kim and Kim (1973a) with *Callirhopalus obesus* Roelofs. The record by Sin and Noh (1970) was misidentification (Han et al., 2000), these specimens recorded as a new species, *P. soheuksandoensis* Han and Yoon, 2000.

## 76. *Pseudocneorhinus setosus* Roelofs, 1879 (Plate 12-76)

가시털바구미

*Pseudocneorhinus setosus* Roelofs, 1879: 53 (TL: Japan); Kwon and Lee, 1986: 73; Han et al., 2000: 35.
*Callirhopalus setosus*: Kim and Kim, 1972: 83.

**Measurements.** Body length 4.4–6.6 mm.

**Diagnosis.** Epistoma V-shape, carina slightly elevated, without broad naked area behind epistomal carina. Rostrum sides parallel. Antennae robust, 3$^{rd}$ and 4$^{th}$ segments of funicle as long as width, 1$^{st}$ segment of funicle longer than 2$^{nd}$, as long as 2$^{nd}$ and 3$^{rd}$ segments (1$^{st}$ = 2$^{nd}$+3$^{rd}$ nearly). Elytra oval, with dense irregular shape metallic and dark brown ground scales that arranged radially around the large and semicircular punctures, piliform scales on intervals of elytra broad leaf-shaped scales on each intervals, 2$^{nd}$, 4$^{th}$ and 6$^{th}$ intervals fewer than 1$^{st}$, 3$^{rd}$ and 5$^{th}$ intervals, widest position behind the middle. Striae indistinct, longitudinal linear furrow between punctures invisible. Puncture large size. Internal edge of hind tibia without small teeth.

**Specimens examined**: GW - 1 ex., Pyeongchang Odaesan, 27.v.1993; 1 ex., Unduryeong, 27.v.1993; 1 ex., Donghae, 28.v.1993; 1 ex., Unduryeong, 25.vii.1997; JB - 8 exs., Naejangsan, 10.vi.1975; JN - 1 ex., Jirisan Simwon, 4.viii.1996; GB - 1 ex., Bonghwa, 28.v.1993; GN - 1 ex., Jinju, 14.vii.1993.

**Korean record**: Kim and Kim, 1973a; Kim and Kim, 1974; Kim et al., 1974; Kim et al., 1976; Kim and Nam, 1977; Kim and Nam, 1981; Lee et al., 1985; Kwon and Lee, 1986; Park et al., 1993; Kim, 1993; ESK/KSAE, 1994; Morimoto, 1994a; Paik et al., 1995; Kim 7 Kim, 1996; Han et al., 2000; Hong et al., 2000; Borovec, 2013b.

**Biological note**: Parthenogenesis in Japan, but male exist in China (Morimoto, 1994a).

**Distribution**: Korea (Central, South), Japan (Honshu, Kyushu), N. China (Shaowu, Kwangtseh, Kuatun, Heilongjiang, Fujian), Russia (Primorskii Terr.).

### 77. *Pseudocneorhinus soheuksandoensis* Han and Yoon, 2000 (Plate 12-77)
소흑산도가시털바구미

*Pseudocneorhinus soheuksandoensis* Han and Yoon, 2000: 257 (TL: Soheuksando Is., Korea).
*Callirhopalus obesus*: Sin and Noh, 1970: 37.

**Measurements.** Body length 3.5–4.5 mm.
**Daignosis**. This species is very similar to *Pseucneorhinus bifasciatus*. Body blackish and reddish black, covered with suberected shell-like grey scales densely. Postepistome without circular metallic scales. Elytra more oval than *P. bifasciatus*, with slightly rounded humeri, behind of humeri gently rounded; widest part of elytra just middle.

**Specimens examined**: Holotype: ♂, Jeolanam-do, Is. Soheuksando, 8.viii.1970, Y. T. Noh. Paratypes: 2♂4♀, same data as holotype.
**Korean record**: Han and Yoon, 2000; Borovec, 2013b.
**Distribution**: Korea (Soheuksando).

## Genus *Trachyphloeosoma* Wollaston, 1869: 414

Type species: *Trachyphloesoma setosum* Wollaston, 1869.
**Distribution**: Korea, Japan, Vietnam, India, S. Africa, SE. USA, Hawaii, St. Helena.

### 78. *Trachyphloeosoma advena* Zimmerman, 1956 (Plate 12-78)
땅바구미

*Trachyphloesoma advena* Zimmerman, 1956: 28 (TL: Hawaiian Islands, Mt. Tantalus, Oahu).

**Measurements.** Body length 2–2.2 mm.
**Diagnosis.** Body reddish light brown. Prementum with 4 setae, covered buccal cavity entirely. Base of the mandibular scar not projected. Mandibles with 3 setae only. Epistomal plate broad U-shape, very small. Epistomal plate without scales. Postepistome without scales. Anterior part of epistomal plate with 1 pair of setae. Post epistomal carina sharply raised up. Epistomal carina carving angle obtuse. Rostral dorsum slightly depressed, with a median sulcus, with side-longitudinal carinae. Apex of rostrum narrower than base. Antennal scrobes dorso-lateral position, curved downward under eye. Posterior parts widened to narrowed, enclosed, without scales. Pterygia not developed. Antennae short, shorter than 1/2 length of body length. Antennal scape longer than funicle, exceed anterior margin of pronotum, strongly curved, with scales densely. Basal part of antennal scape thick. Distal part of antennal scape weakly clavate. Antennal funicle without scales, with piliform setae sparsely. First segment of antennal funicle longer than $2^{nd}$, as long as $2^{nd}$+$3^{rd}$ segment, $3^{rd}$ segment as long as $4^{th}$, $4^{th}$–$6^{th}$ segments moniliform. Club ovate, wider

than 2 times of 6th funicular segment. Frons wider than the 2/3 width of rostrum., wider than 1.5 times of eye width, without transverse sulcus in front of eyes. Anterior part of frons flat. Eye lateral position, circular, round. Pronotum oval, anterior margin slightly projected, basal margins truncate, with a median sulcus, without vibrissae, without subocular lobes. Dorsal surface of pronotum tumid, punctuate, granulate. Femora without a tooth inside of distal clavate part, covered with yellow powder-like incrustation densely. Fore tibia thick, external margin not carinate. Internal edge of fore tibia without teeth, without bristles, slightly sinuate and curved. Apex of fore tibia simple, marginate. Internal edge of hind tibia without teeth. Corbels of hind tibia open. Claws free. Metepisternum covered broadly by elytra, over 2/3 or entirely, sub elytral part broad. Suture between meterpisternum and metasternum distinct. Scutellum very small, indistinct, V-shape. Elytra oval, shorter than 1.5 times of width, without humeri, behind humeral parts of elytra straight to gently rounded. Odd intervals of elytra not costate. Elytra covered with powder-like incrustation densely. Erected setae on each interval of elytra long, narrow spatulate, as long as width of 2nd interval, order in a straight row. Punctures on elytra large, deep, circular. Striae on the elytra indistinct. Apex of elytra tumid obtuse angle. Anterior margin of 2nd sternite strongly bisinuate. Sternites 2–4 convex, sutures between sternites deep. Middle width of 2nd sternite wider than 3rd+4th. 5th sternite wider than 3rd+4th. Posterior margin of 2nd–4th sternites straight.

**Specimens examined**: JJ - 1 ex., Seongpanak, 28.ix.1990 (det. by K. Morimoto and C. E. Lee, 1992); 3 exs., Dongsuak, 12.vi.2005.

**Korean record**: Morimoto and Lee, 1992; Morimoto, 1994a; ESK/KSAE, 1994; Paik et al., 1995; Hong et al., 2000; Borovec, 2013b.

**Biological notes**: Adults were captured by shifting litter in the forest (Morimoto and Lee, 1992).

**Distribution**: Korea (Jejudo), Japan (Honshu, Shikoku, Kyushu), Hawaii, USA (Alabama, Florida-introduced).

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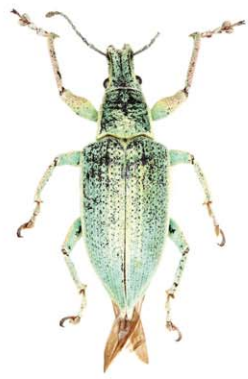

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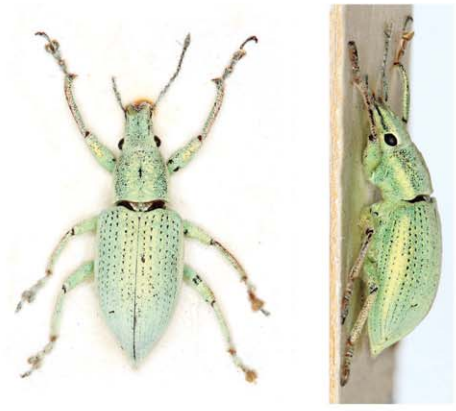

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