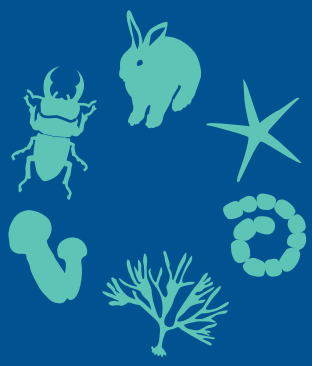
Insect Fauna of Korea

Volume 12, Number 27

Tenebrionoidea

Arthropoda: Insecta: Coleoptera: Tenebrionoidea:
Melandryidae & Tetratomidae



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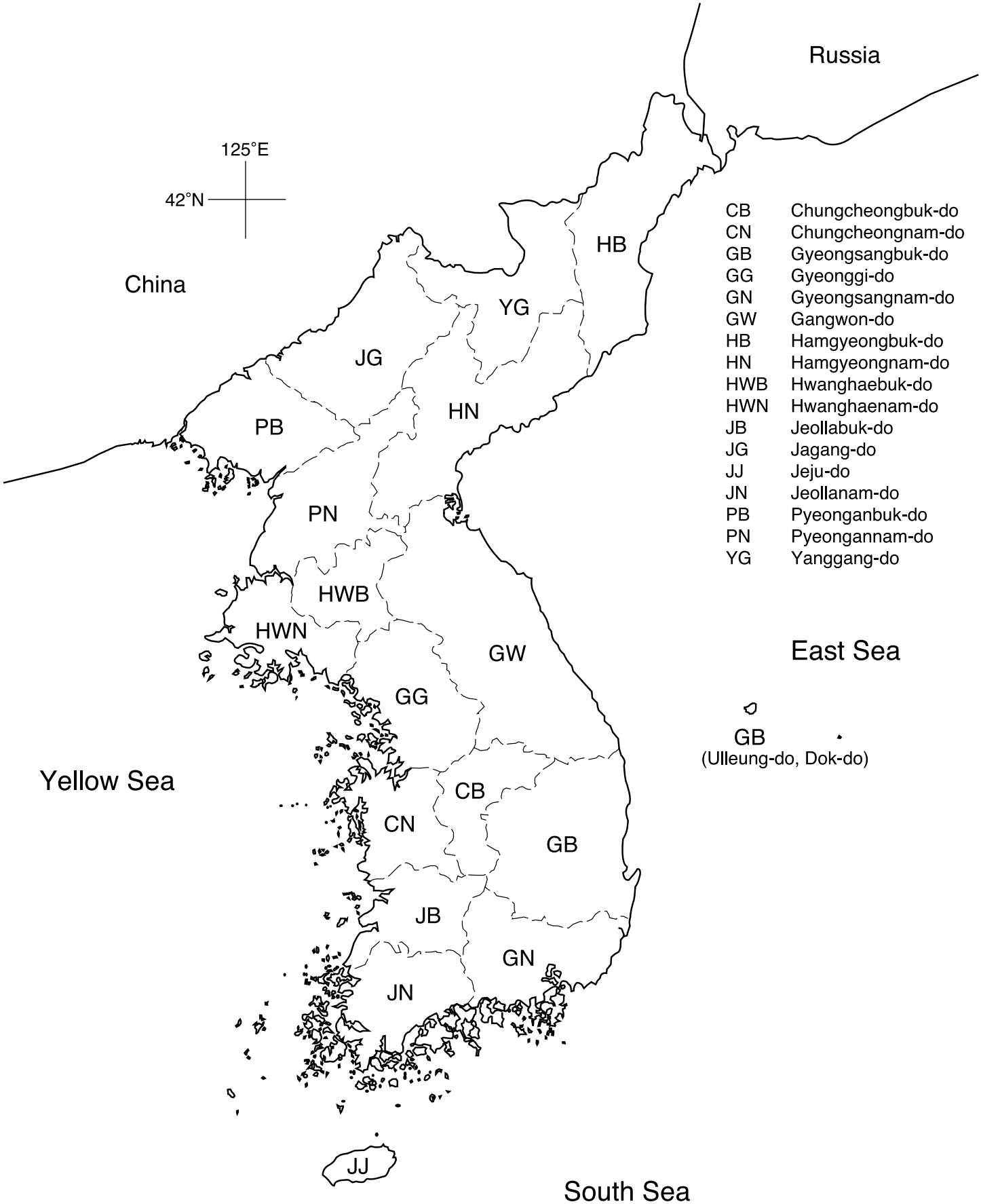
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HWB Hwanghaebuk-do
HWN Hwanghaenam-do
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JG Jagang-do
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PB Pyeonganbuk-do
PN Pyeongannam-do
YG Yanggang-do
East Sea
GB
(Ulleung-do, Dok-do)
Yellow Sea
South Sea

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Arthropoda: Insecta: Coleoptera: Tenebrionoidea:
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2019

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Tenebrionoidea

Arthropoda: Insecta: Coleoptera: Tenebrionoidea:
Melandryidae & Tetratomidae

Boo-Hee Jung

Korea University

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.

PREFACE

Biological resources include all organisms and their genetic characteristics. Conservation and utilization of these resources have the capacity to improve human life and to enhance the world. Therefore it is required that the practical and potential values of these organisms are conserved and used wisely. The first step towards this goal is to document our biological diversity and to investigate them in detail. Biological resources increase the competitiveness of a nation through their use as fundamental resources for making highly valued products, such as new lines of cultivar, materials, and drugs.

Many countries in the world are responsible for preserving their biodiversity and using the sustainable ways. The Ministry of Environment (MOE) of Korea has established "CBD-CHM Korea" to share of information of biodiversity.

Each nation in the world is investigating and clearing information of native species within its territory. The National Institute of Biological Resources (NIBR) of MOE has published the 'Flora and Fauna of Korea' since 2009 to manage biological resources in comprehensive ways and to enhance national competitiveness by building up the foundation for the sovereignty rights over biological resources. Professional research groups, consisting of professors and other taxonomic experts, have systematically examined 15,545 species of vascular plants, animals and other organisms over the past 10 years and have published their findings in 191 volumes in Korean and 196 volumes in English, and two volumes of monographs covering 216 species of invertebrates. This year, 21 volumes of the Flora and Fauna of Korea in both Korean and English versions including 704 species of vascular plants, invertebrates and insects are additionally published.

The NIBR will continue to publish and research of flora and fauna of Korea that contribute conservation and sustainable use of biological resources. Finally, I would like to express my sincere appreciation to authors who made efforts in writing the manuscripts of *the Flora and Fauna of Korea*.

Prof. Dr. Yeon Jae Bae
President
National Institute of Biological Resources

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INTRODUCTION

(1) Melandryidae

The family Melandryidae Leach, 1815 is one of the small groups of the superfamily Tenebrionoidea. Melandryidae (false darkling beetles) currently comprises about 420 extant described species (60 genera) worldwide (Ślipiński et al., 2011), and 28 species (12 genera) in Korea (Ju, 1969; Kim et al., 1994; Kwon et al., 1996; Nikitsky and Pollock, 2008; Hong and Lee, 2014; Jung, 2018a, b). Although the classification of Melandryidae was different by various authors (Table 1), at the moment the family is divided into two subfamilies (Bouchard et al., 2011): Melandryinae Leach, 1815 and Osphyinae Mulsant, 1856 (1839).

Members of the family Melandryidae are elongate, slender beetles, with parallel-sided or posteriorly tapering body. Body color is mostly uniform brown to black, but some species have with contrasting color pattern (yellow-reddish or scarlet markings). Head is hypognathous and short. The antennae are 11-segmented (rarely 10), variable in size and form (filiform, moniliform, serrate), and with or without distinct club of apical 3−5 antennomeres. The maxillary palpi are well-developed and apical maxillary palpomere is very large, triangular, securiform or cultriform. Tarsal formula is 5-5-4, rarely 4-4-3 in both sexes and tibial spurs are distinct (Pollock, 2002).

The members of the family can be grouped according to their dominant feeding habits. The two main categories are fungivory and xylophagy. However, it is likely that fungi comprise a significant portion of the diet of the otherwise xylophagous group. Adults and larvae are found in rotten wood and fungi or under bark. Adults are primarily nocturnal, and can often be seen crawling about on fungi or dead logs at night, but some are flower-visitors (Pollock, 2002; Lawrence and Ślipiński, 2013).

Gaku and Kazuro (1937) first reported one species of Melandryinae, *Dircaea dentatomaculata* Lewis from

Table 1. Classification of Melandryidae

Arnett (1963)	Crowson (1966)	Sasaji (1974)	Nikitsky (1989)	Nikitsky (1992)	Bouchard et al. (2011)
Melandryidae	Melandryidae	Melandryidae	Melandryidae	Melandryidae	Melandryinae
	Eustrophinae	Orchesiinae	Orchesiinae	Orchesiinae	
Melandryinae	Melandryinae	Melandryinae	Serropalpinae	Melandryinae	
			Melandryinae		
Osphyinae	Osphyinae	Osphyinae	Osphyinae	Osphyinae	Osphyinae
Scraptinae	Scraptiidae	Scraptiidae	Scraptiidae	Scraptiidae	
Anaspinae					
Tetratominae	Tetratomidae	Tetratomidae	Tetratomidae	Tetratomidae	

Korea, which was collected in Mt. Soyo. Akio and Saburo (1937) also reported *Phloiotrya bellicosa* Lewis from Mt. Odae. Two species, *Serropalpus barbatus* Schaller and *Melandrya karafutona* Kôno were reported by Cho (1968). Between 1994 and 2014, checklists of Korean Melandryidae were published; Kim et al. (1994, 6 species), Kwon et al. (1996, 6 species) and Hong and Lee (2014, 21 species). In addition, the Korean Melandryids were taxonomically reviewed by Eom and Park (2001) and Eom (2000, master's thesis). In 2018, Jung carried out a taxonomic review of Korean *Dircaea* (Jung, 2018a), and later reported six further species from Korea (Jung, 2018b).

(2) Tetratomidae

The Tetratomidae Billberg is a relatively small family, which comprises 13 genera and about 155 species arranged into five subfamilies. It is distributed mainly in the Holarctic region, and absent in the Australian region (Leschen, 1990; Nikitsky, 1998b; Young and Pollock, 2002).

Various elements of this family have historically been associated with several lineages of Melandryidae (Crowson, 1955; Miyatake, 1960; Nikitsky, 1992; Lawrence and Newton, 1995). The family may well be paraphyletic (Lawrence and Newton, 1995). Tetratomidae was first recognized as an independent family by Crowson (1955). Tetratomids were previously treated as several tribes of the families Melandryidae and Mycetophagidae (Crowson, 1955; Miyatake, 1960; Nikitsky, 1992, 1998; Lawrence and Newton, 1995; Young and Pollock, 2002). Recently several lineages of melandryids and mycetophagids were placed in the tetratomid group, based upon character sets of both larvae and adults (Miyatake, 1960; Hayashi, 1975; Nikitsky, 1989, 1998b).

The family can be separated from melandyids and mycetophagids by the front coxal cavities being open behind externally and internally, with small lateral extension partially exposing trochantin (Crowson, 1955; Miyatake, 1960; Nikitsky, 1998b; Young and Pollock, 2002).

Members of the family Tetratomidae are oblong to elongate, strongly convex to slightly flattened. Body color is mostly brownish black to black, some species are with contrasting color pattern (yellow-reddish or scarlet markings). The body usually is covered with sparse to dense decumbent setae. The eyes are relatively large and emarginated. Tarsal formula is 5-5-4, with lobed tarsomeres. Procoxae are separated by the prosternal process (Lawrence, 1982; Young and Pollock, 2002).

The tetratomids, the polypore fungus beetles, are commonly fungivorous. They mainly inhabit fruiting bodies of higher fungi (Crowson, 1964; Lawrence, 1982), hymenomycete fungi, especially Polyporaceae and Tricholomataceae (Young and Pollock, 2002). Both larvae and adults typically feed and breed in the fruiting bodies of polypores and other lignicolous basidiomycete fungi (Park et al., 1931; Minch, 1952, Graves, 1960; Miyatake, 1960; Lawrence, 1982; Leschen, 1990; Jung, 2011).

Kim and Kim (1996) first reported one species of Tetratomidae, *Pisenus chujoi* Miyatake from Korea, and Nikitsky (1998a) additionaly reported *Holostrophus* (*Paraholostrophus*) *orientalis* Lewis from Korea without any distributional information. In 2010, Jung carried out a taxonomic review of Korean Tetratomidae and later reported four further species from Korea (Jung, 2011, 2017).

MATERIALS AND METHODS

The melandyid and tetratomid materials examined in this study are deposited in the Jung's Insect Collection (majority of the specimens) and in the National Institute of Biological Resources in Incheon, Korea. Materials for this study were collected from March to November of 2007−2018 from rotten wood, under the bark of dead logs, in flight intercept traps installed in forests or in light traps, and often from macrofungi including Basidiomycetes, which are used as food source of fungivorous melandryids and tetratomids. And also materials collected from host fungi growing on dead or decaying trees were reared in the laboratory. The host fungi were identified based on Breitenbach and Kränzlin (1986) and Lee (1988).

The morphological terminology follows Nikitsky (1989, 1992, 1998b) and other major monographs. References regarding higher taxa (subfamilies) consulted Nikitsky and Pollock (2008), Nikitsky (2008) and Bouchard et al. (2011). The genera and species are arranged alphabetically adopted from Nikitsky and Pollock (2008) and Nikitsky (2008).

Descriptions of higher taxa and species, taxonomic keys, synonyms, type and bibliographic information, materials examined, distribution (Palaearctic region), host fungi and taxonomic remarks are provided. The world distribution was arranged by countries or zoogeographical regions, i.e. Korea, China, Asia, Oriental Region, Palaearctic Region, Afrotropical Region etc. The following abbreviations were used to indicate the provinces in which specimens were collected: GW (Gangwon-do), SL (Seoul), GG (Gyeonggi-do), CB (Chungcheongbuk-do), CN (Chungcheongnam-do), GB (Gyeongsangbuk-do), GN (Gyeongsangnam-do), JB (Jeollabuk-do), JN (Jeollanam-do), JJ (Jeju-do); Mt. (Mountain).

Acknowledgements

This study is primarily based on the melandryid work by Eom and Park (2001). Thanks are gratefully due to my son, J.B. Seung (Seoul National University, Insect Biosystematics Lab.), who collected many specimens for this study.

TAXONOMIC NOTES

Class Insecta

Order Coleoptera

Superfamily Tenebrionoidea

Family Melandryidae Leach, 1815

Melyandrida Leach, 1815: 104.

Genera over 60 (12 in Korea), species over 420 (28 in Korea).

Diagnosis: **Body** length 2.0−20.0 mm; body variously shaped: elongate, slender, parallel-sided or tapering posteriorly to broad, ovate to subcylindrical; color mostly uniform, brown to black, some with contrasting color pattern (yellow-reddish or scarlet markings); dorsal vestiture present, often combination of depressed and erect setae. **Head** very short (especially in Orchesiini) to short, slightly to moderately hypognathous, parallel-sided, eyes narrowly (especially in Orchsiini) to widely separated on vertex; eyes coarsely to finely faceted, with or without intrafacetal setae; antennae 11-segmented, rarely 10, moniliform to filiform and serrated, with or without indistinct to distinct club of apical 3−5 antennomeres; antennal insertions completely visible; maxillary palpi well-developed, palpomeres variously shaped, moderately serrated; apical palpomere triangular, securiform or cultriform, often very large; labial palpi short, apical palpomere fusiform, pyriform to flattened and expanded. **Pronotum** subquadrate to slightly elongate, widest at base in most taxa; surface smooth, punctate or rugose; evenly convex dorsally; with various grooves and depressions; lateral margins explanate in some genera; lateral margins without or with partial to complete carina; pronotal base tightly or loosely connected to elytral base; prosternal process short and indistinct. **Legs** moderately to distinctly elongate; front legs generally smaller than middle, and especially hind legs; femora subcylindrical to distinctly flattened, parallel-sided to slightly clavate; tibiae narrow to moderately wide, parallel-sided to slightly widening apically; tibial spurs distinct (especially Serropalpini and Orchesiini), relatively straight, either subequal or distinctly unequal in length; tarsal formula 5-5-4, rarely 4-4-3 in both sexes; tarsomeres narrow, simple (Orchesiini) or widening, with penultimate tarsomere expanded ventrally; first tarsomere

usually elongate, especially in middle and hind legs; tarsal claws narrow, simple with distinct basal tooth. Scutellum relatively small or completely hidden (*Lederia*), posteriorly rounded to triangular. **Elytra** flattened to convex dorsally; with distinct striae or confused punctuation.

Habits and habitats: The members of this family can be divided into two general categories according to their dominant feeding habits - fungivory and xylophagy. Within Melandryinae, a combination of fungivory (e.s. most Orchesiini) and xylophagy (Serropalpini and Melandryini) exists. However, it is likely that fungi comprise a significant portion of the diet of the otherwise xylophagous group. Adult Melandryidae are primarily nocturnal, and can often be seen crawling about on fungi or dead logs at night (Pollock, 2002; Lawrence and Šlipiński, 2013).

Remarks: The family Melandryidae differs from the Tetratomidae by the non-clubbed antenna, from Mordellidae by not pointed apical segment of abdomen, and from Tenebrionidae by elongated first tarsomeres of mid and hind legs.

Distribution: Worldwide.

Subfamily Melandryinae Leach, 1815

Melyandrida Leach, 1815: 104.
Type genus: *Melandrya* Fabricius, 1801.

Key to the Korean tribes of Melandryinae

1. Body elongate, more or less broad; eyes clearly visible from above; pronotum loosely connected with elytral base ····· 2
− Body elongate or spindle-shaped; eyes invisible or scarcely visible from above; pronotum tightly connected with elytral base ····· 3
2. Body elongate-broad and flat; medio-lateral portions of pronotum more or less broadly depressed; tibial spurs moderate ····· Melandryini
− Body mostly elongate-cylindrical; medio-lateral portions of pronotum not depressed; tibial spurs large ... ····· Serropalpini
3. Body elongate-cylindrical; antennae filiform or gradually widening apically; procoxae contiguous or very narrowly separated; metatibial spurs less than 1/3 length of metatibia ····· Dircaeini
− Body elongate-spindle-shaped; antennae elongate, gradually widening apically, or with distinct club; procoxae separated by narrow prosternal process; metatibial spurs at least 1/3 length of metatibia ····· ····· Orchesiini

Tribe Dircaeini Kirby, 1837

Dircaeidae Kirby, 1837: 240.
Type genus: *Dircaea* Fabricius, 1798.

Diagnosis: Body larger, mostly ＞5 mm, rarely ＜5 mm. Head weakly hypognathous, inflexed, invisible dorsally. Antennae filiform to weakly serrate, antennomeres 3−10 longer than wide. Maxillary palpomere large, apical maxillary palpomere securiform to cultriform, nearly equal to, or wider than third. Lateral margins of pronotum carinate, gradually diminished anteriorly from apical 1/3. Elytra unicolored (brown to blackish brown) or with yellow-reddish markings. Meso- and metatibiae obliquely truncated at apices. Hind coxae contiguous or very narrowly separated (Sasaji, 1985; Pollock, 2002).

Genera 8 (4 in Korea), over 30 species (8 in Korea).
Distribution: Palaearctic Region.

Key to the Korean genera of Dircaeini

1 Antennae gradually widening toward apex ····· *Dircaeomorpha*
− Antennae filiform to almost moniliform ····· 2
2. Apical maxillary palpomere nearly as wide as third; hind coxae very narrowly separated ····· *Ploiotrya*
− Apical maxillary palpomere wider than third; hind coxae contiguous ····· 3
3. Pronotal disc scabrous and somewhat rugose; lateral sides of pronotum widely explanate and upturned, completely carinate from base to apex; elytra with weakly visible striae ····· *Paradircaea*
− Pronotal disc not scabrous; lateral sides of pronotum not explanate and partially carinate, gradually diminished from basal 2/3 to apex; elytra with nearly invisible striae ····· *Dircaea*

Genus *Dircaea* Fabricius, 1798

Dircaea Fabricius, 1798: 6.
Type species: *Dircaea quadriguttata* Fabricius, 1798.

Diagnosis: Antennae filiform, antennomeres 3−10 elongate-triangular, widest at apex; apical antennomere fusiform. Apical maxillary palpomere large, wider than third. Pronotal disc not coarsely scabrous. Lateral sides of pronotum not explanate and partially carinate, gradually diminished from basal 2/3 to apex. Meso- and metatibiae obliquely truncated at apex. Hind coxae contiguous.

Species: over 5 (3 in Korea).

Distribution: Korea, Japan, China (Fujian), Europe.

Key to the Korean species of *Dircaea*

1. Pronotum with minute, regular, dense punctures; apical maxillary palpomere elongate-triangular, obliquely truncate at apex; length of pronotum about 3.0 mm ····· 2
− Pronotum with large, coarse, dense punctures; apical maxillary palpomere semicircularly triangular, roundly truncate at apex; length of pronotum about 2.2 mm ····· *D. quadriguttata*
2. Elytra with four reddish yellow markings, each markings large and widely transverse, almost reaching suture; elytra weakly and indistinctly striate-punctate ····· *D. erotyloides*
− Elytra with four reddish yellow markings, each markings small and narrowly transverse, widely separated from suture; elytra not striate-punctate ····· *D. ussuriensis*

1. *Dircaea erotyloides* Lewis, 1895 (Pls. A1, K1, O1, Q1)

Dircaea erotyloides Lewis, 1895: 267; Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224; Jung, 2018a: 50.

Ploeotrya erotyloides: Nakane, 1963a: 242.

Description: **Body** length 10−12 mm. Body elongate-cylindrical, parallel-sided and narrowing anteriorly and posteriorly; strongly convex dorsally and ventrally; almost glabrous, with very short yellowish brown pubescence; minutely, densely, regularly punctate; body color largely black dorsally and weakly shiny; antennae, mouthparts, anterior margin of pronotum and legs reddish brown; four elytral markings reddish yellow. **Head** short, moderately hypognathous and inflexed; eyes relatively small, ocular distance almost equal to eye diameter; antenna nearly filiform, relatively long, reaching over pronotal base; antennal insertions completely visible; antennomeres 3−10 nearly elongate-triangular, widest at apex, each antennomeres longer than wide; third antennomere about 1.4 times longer than second; apical antennomere nearly fusiform, gradually tapering apically; maxillary palpi large, 4-segmented; apical maxillary palpomere large and elongate triangular, obliquely truncate at apex. **Pronotum** slightly longer than wide, widest at basal 1/3 and gradually narrowing anteriorly; pronotal base as wide as elytral base, tightly connected with elytral base; about 3.0 mm long; with shallow mid-longitudinal sulcus; subbasal part with two shallow grooves; posterior corners not produced and rounded. Scutellum semicircular. **Elytra** elongate and cylindrical, parallel-sided, narrowing from apical 1/5 to apices; with four reddish yellow markings; two sharply dentate reddish yellow markings at basal 1/5 part, approaching lateral sides and suture; two band-like, strongly dentate reddish yel-

low markings at basal 4/5 part, almost extending to lateral margins and sutural line; weakly and indistinctly striate-punctate. **Legs** long; front legs shorter than middle, and especially hind legs; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with short, equal spurs; tarsal formula 5-5-4; tarsomeres cylindrical and simple, but penultimate tarsomeres bilobed ventrally; first hind tarsomere slightly longer than three preceding combined. **Procoxae** large, not separated; prosternal proccess tiny, short and indistinct; mesocoxae separated by narrow, apically tapering mesoventral process; hind coxae contiguous, metaventrite strongly and longitudinally concave in apical half.

Specimens examined: **[JN]** 1♂, Han-jai, Baikun-san (Mt.), Donggok-ri, Oklyong-myeon, Gwangyang-si, 3.viii−16.viii.2016, J.B. Seung (F.I.T.); **[JJ]** 3♀, Gyorae Natural Recreation Forest, Gyorae-ri, Jocheon-eup, Jeju-si, 11.vi−21.vii.2016, J.B. Seung and B.H. Jung (F.I.T.); 1♂, Gyorae Natural Recreation Forest, Gyorae-ri, Jocheon-eup, Jeju-si, 22.vii−11.viii.2017, J.B. Seung (F.I.T.); 1♀, Seongpanak, Halla-san (Mt.), Jeju-si, 22.vii−11.viii.2017, J.B. Seung (F.I.T.).

Distribution: South Korea, Japan.

2. *Dircaea quadriguttata* (Paykull, 1798) (Pls. A2, K2)

Hypulus quadriguttata Paykull, 1798: 251.
Dircaea guttata Stierlin, 1898: 166.
Dircaea quadriguttata Fabricius, 1798: 122; Jung, 2018a: 50.
Dircaea shibatai Hayashi, 1960: 42.

Description: **Body** length about 7.5 mm. Body elongate-cylindrical, narrowing anteriorly and posteriorly; strongly convex dorsally; almost glabrous, with very short yellowish brown pubescence; very coarsely and densely punctate; body color largely black dorsally and weakly shiny; mouthparts, antennomeres 1−3 and legs (except for yellowish brown tarsi) brown; four elytral markings reddish yellow. **Head** short, moderately hypognathous and inflexed, antennae nearly filiform, relatively short, reaching only pronotal base; antennal insertions completely visible; antennomeres 3−10 enlarged, nearly triangular, widest at apex, each antennomeres longer than wide; third antennomere about 1.4 times longer than second; apical antennomere nearly fusiform, gradually tapering apically; maxillary palpi large, apical maxillary palpomere large, semicircularly triangular, roundly truncate apically. **Pronotum** slightly elongate, a little longer than wide; about 2.2 mm long; widest at basal 1/3 and gradually narrowing anteriorly; pronotal base as wide as elytral base, tightly connected to it; with shallow midlongitudinal sulcus; very coarsely, largely, regularly, densely punctate; basal margin sinuous, distinctly carinate; subbasal part with two shallow grooves. Scutellum semicircular. **Ely-**

tra elongate and cylindrical, narrowing from apical 1/5 to apices; very coarsely, minutely, regularly, densely punctate and weakly rugose; elytra with four reddish yellow markings; two bluntly and broadly dentate markings at basal 1/5, protruding anteriorly and posteriorly, not extending to lateral sides and suture; two band-like, broadly and bluntly dentate markings at basal 4/5, not extending to lateral margins and suture; somewhat weakly and indistinctly striate-punctate. **Legs** long; front legs shorter than middle, and especially hind legs; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with short, equal spurs; tarsomeres cylindrical and simple, but penultimate tarsomeres bilobed ventrally; hind first tarsomere longer than three preceding combined. **Procoxae** large, not separated; prosternal proccess tiny, short and indistinct; mesocoxae separated by narrow, apically tapering mesoventral process; hind coxae contiguous; metaventrite strongly and longitudinally concave at apical half.

Specimens examined: **[GG]** 1♀, Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 13.vii.2016, J.B. Seung and B.H. Jung (F.I.T.).

Distribution: Korea, Russia (East Siberia, Far East), Japan, Mongolia, China (Northeast Territory, Northwest Territory), Kazakhstan, Europe.

Remarks: This species is closely related with *Dircaea erotyloides* Lewis, 1895, but distinguished from the latter by the following characters: antennae relatively short, reaching only pronotal base, each antennomeres relatively broad; length of pronotum about 2.2 mm; elytral markings bluntly and broadly dentate.

3. *Dircaea ussuriensis* Nikitsky, 1985 (Pls. B3, K3, O3, Q3)

Dircaea ussuriensis Nikitsky, 1985b: 57; Jung, 2018a: 50.

Description: **Body** length 9.5−11.0 mm. Body elongate-cylindrical, parallel-sided and narrowing anteriorly and posteriorly; strongly convex dorsally; almost glabrous, with very short yellowish brown pubescence; minutely, densely, regularly punctate; body color largely black dorsally and weakly shiny; antennae, mouthparts and legs reddish brown; four elytral markings reddish yellow. **Head** short, moderately hypognathous and inflexed; eyes relatively small, ocular distance almost equal to eye diameter; antennae nearly filiform, relatively short, reaching only pronotal base; antennal insertions completely visible; antennomeres 3−10 nearly elongate-triangular, widest at apex, each antennomeres longer than wide; third antennomere about 1.4 times longer than second; apical antennomere nearly fusiform, gradually tapering apically; maxillary palpi large, apical maxillary palpomere large, elongate triangular, obliquely truncate at apex. **Pronotum** slightly longer than wide; widest at basal 1/3 and gradually narrowing anteriorly; pronotal base as wide as elytral base, tightly connected to it; with shallow midlongitudinal sulcus; basal margin sinuous, carinate; subbasal part with two shallow grooves. Scutellum semicircular. **Elytra** elongate and cylindrical, parallel-sided, nar-

rowing from apical 1/5 to apices; elytra with four reddish yellow markings; two narrowly dentate markings at basal 1/5, far from suture; two band-like, strongly and narrowly dentate markings at basal 4/5, not extending to suturee; not striate-punctate. **Legs** long; front legs shorter than middle, and especially hind legs; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with short, equal spurs; tarsomeres cylindrical and simple, but penultimate tarsomeres bilobed ventrally; first hind tarsomere slightly longer than three preceding combined. **Procoxae** large, not separated; prosternal proccess tiny, short and indistinct; mesocoxae separated by narrow, apically tapering mesoventral process; hind coxae contiguous, metaventrite strongly and longitudinally concave at apical half.

Specimens examined: **[GW]** 1♂1♀, Yongdae National Natural Recreation Forest Yongdae-ri, Inje-gun, 25.ix.2017, J.B. Seung (light); **[GG]** 1♀, Hwigyeong-woen, Gwangneung, Jinjeop-eup, Namyangju-si, 20.vii.2016, C.S. Han and Y.L. Seo (light).

Distribution: Korea, Russia (Far East).

Remarks: Nikitsky and Pollock (2008) elevated *Dircaea ussuriensis* Nikitsky, 1985 to species level, from subspecies (*Dircaea erotyloides ussuriensis* Nikitsky, 1985) in the Catalogue of Palaearctic Coleoptera. This species is closely related with *Dircaea erotyloides* Lewis, 1895 but can be distinguished from the latter by the following characters: antennae relatively short, reaching only pronotal base, each antennomeres relatively broad; elytral markings relatively narrowly dentate; elytra not striate-punctate.

Genus *Dircaeomorpha* Fairmaire, 1896

Dircaeomorpha Fairmaire, 1896: 122.
Type species: *Dircaeomorpha clavicornis* Fairmaire, 1896.

Diagnosis: Body elongate, more or less cylindrical. Antennae gradually widening toward apices, antennomeres 3−10 distinctly enlarged, strongly flattened apically, each antennomere wider than long.

Species: over 2 (1 in Korea).

Distribution: Korea, Japan.

4. *Dircaeomorpha elegans* Sasaji, 1974

Dircaeomorpha elegans Sasaji, 1974: 4; Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Diagnosis: Body length 11 mm. Body black, moderately shiny; antennae gradually widening toward apex; pronotum with a median longitudinal sulcus from anterior to posterior base; sternopleural suture invisible; elytra with two pairs of dentate orange markings: anterior markings on humeri reserving black spot (Eom and Park, 2001).

Specimens examined: None.

Distribution: South Korea, Japan.

Remarks: This species is very similar to *Dircaea eroyloides* in the elytral pattern and the body shape, but it differs from *D. erotyloides* by the oval black spots on humeral corners of elytra and clavate antenna (Eom and Park, 2001). Korean specimens of this species were not examined in this study. Further collections are needed.

Genus *Paradircaea* Nikitsky, 1998

Paradircaea Nikitsky, 1998a: 44.
Type species: *Dircaea dentatomaculata* Lewis, 1895.

Diagnosis: Body elongate-oblong. Antennae filiform, gradually enlarged apically. Third maxillary palpomere narrower than apical (fourth). Pronotal disc scabrose and somewhat rugose; lateral margins strongly explanate and weakly raised up from base to basal 2/3, weakly explanated at anterior 1/3 and strongly carinate anteriorly.

Species: 1 (1 in Korea).

Distribution: Korea, Japan, Russia (Far East).

5. *Paradircaea dentatomaculata* (Lewis, 1895) (Pl. B4)

Dircaea dentatomaculata Lewis, 1895: 267; Gaku and Karuro, 1937: 75; Cho, 1963: 159; Ju, 1969: 123 (*Phloiotrya dentatomaculata*).
Paradircaea dentatomaculata: Nikitsky, 1998a; 44; Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Description: **Body** length 10.0 mm. Body color largely black; palpi, antennomeres 1−3 and abdominal

ventrites 1−4 yellow; antennomeres 4−5 and tarsi brown; four elytral markings reddish yellow; scabrose and somewhat rugose dorsally. **Head** short, weakly hypognathous and inflexed; finely and densely granulate; frons with deep, wide, large groove; eyes relatively small, ocular distance about 1.5 times than eye diameter; antennae relatively short, reaching only pronotal base; antennal insertions completely visible; antennomeres 3−10 enlarged and thickened, each antennomere longer than wide; third antennomere about 1.8 times longer than second; apical antennomere nearly fusiform, tapering from apical 1/3 to apex; maxillary palpi large and thick, apical palpomere nearly thick semicircular. **Pronotum** slightly wider than long, almost quadrangular, widest at middle, gradually narrowing anteriorly and posteriorly; coarsely, densely and irregularly granulate; pronotal base weakly narrower than elytral base, tightly connected to it; with narrow, midlongitudinal sulcus from anterior to base; baso-lateral part with deep, wide longitudinal grooves from subbasal margin to basal half; lateral margins strongly flattened and raised from base to basal 2/3; weakly flattened and raised at anterior 1/3; lateral sides strongly carinate; basal margin sinuous, flattened and weakly raised, carinate, with large and deep depressions near middle. Scutellum semicircular. **Elytra** elongate oblong, parallel-sided, weakly narrowing from apical 1/10 to apices; minutely, very densely and regularly granulate; humeri well developed, with deep and wide grooves near humeri; elytra with four reddish yellow markings not extending lateral margins and suture: two sharply dentate reddish yellow bands at basal 2/5 part; two strongly sinuous, bluntly dentate, reddish yellow bands obliquely placed at basal 4/5 part; each elytron with four indistinct striae. **Legs** long; legs almost equal in length; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with short, equal spurs at apex; tarsomeres cylindrical and simple, but penultimate tarsomeres expanded, bilobed ventrally; hind first tarsomere almost equal to three following combined; tarsal claws narrow and simple, with distinct basal tooth. Prosternal proccess tiny, short and indistinct; procoxae strongly large, not separated.

Specimens examined: **[GW]** 1♀, Near Beupheung-sa, Suju-myeon, Yeongweol-gun, 21.v−5.vi.2015, J.B. Seung and B.H. Jung (F.I. T.).

Distribution: South Korea, Japan, Russia (Far East).

Remarks: This species is distinguished from *Dircaea erotyloides* by the distinctive striae of elytra and thickened antennomeres 3−10.

Genus *Phloiotrya* Stephens, 1832

Phloiotrya Stephens, 1832: 35.

Type species: *Phloiotrya rufipes* Stephens, 1832.

Diagnosis: Antennae filiform, each antennomere mostly parallel-sided and truncated at apex. Third maxillary palpomere nearly as wide as apical (4th). Pronotum strongly rugose at middle. Sternopleural suture complete or incomplete. Elytra usually with weakly visible striae. Male front tarsomeres 1−3 enlarged (female tarsomeres 1−3 narrowing) and truncate, with dense setae ventrally; penultimate tarsomeres bilobed ventrally. Hind coxae very narrowly separated.

Species: over 14 (3 in Korea).

Distribution: Korea, Japan, Russia (Far East), Mongolia, Europe, North Africa.

Key to the Korean species of *Phloiotrya*

1. Pronotum regularly, densely and minutely granulate at middle; each elytron with weakly visible seven striae····· *P. obscura* (Lewis)
− Pronotum irregularly, transversely and coarsely granulate at middle; each elytron with weakly visible three or four striae·····2
2. Lateral side of pronotum carinate from base almost to anterior corner; central part of pronotum peeled off····· *P. rugicollis* Marseul
− Lateral side of pronotum carinate from base to basal 1/2 and diminished apically; central part of pronotum not peeled off·····*P. bellicosa* Lewis

Subgenus *Phloiotrya* Stephens, 1832

Phloiotrya Stephens, 1832: 35.

Type species: *Phloiotrya rufipes* Stephens, 1832.

6. *Phloiotrya* (*Phloiotrya*) *bellicosa* Lewis, 1895

Phloiotrya bellicosa Lewis, 1895: 266; Akio and Saburo, 1937: 75; Cho, 1957: 57; ZSK, 1968: 114; Kim et al., 1994: 173; Kwon 1986: 161; Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Specimens examined: None.

Distribution: Korea, Japan, Russia (Far East), Mongolia.

Remarks: This species is similar to *Phloiotrya rugicollis* Marseul, 1876, but can be distinguished from

that in having the lateral margins of pronotum incomplete; central part of pronotum not peeled off; male abdominal ventrites 1−4 without dense hair tufts.

Korean specimens of this species were not examined. I have seen more than 50 Korean *Phloiotrya* specimens including those preserved in the National Institute of Biological Resources in Incheon (identified as *Phloiotrya bellicosa*). None of them are *Phloiotrya bellicosa* Lewis, 1895; all are *Phloiotrya rugicollis* Marseul, 1876. Therefore, since it was first reported from Mt. Odae by Akio and Saburo (1937), perhaps another *Phloiotrya* species (*P. rugicollis*) was misidentified or miscited as *P. bellicosa* in the Korean insect list. Further studies and collections are needed.

7. *Phloiotrya* (*Phloiotrya*) *obscura* (Lewis, 1895) (Pls. C5, K5, Q5)

Dircaea obscura Lewis, 1895: 268.

Phloiotrya subcostulata Pic, 1953: 335.

Phloiotrya rufomarginella Hayashi, 1960: 43.

Phloiotrya (*Phloiotrya*) *obscura*: Sasaji, 1985: 367; Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Description: **Body** length 7.0−9.5 mm. Body elongate-oblong, parallel-sided and weakly narrowing anteriorly and posteriorly; strongly convex dorsally and weakly shiny; body color largely brownish black; mouthparts, antennomeres 1−3 and legs yellowish brown; covered with decumbent, short, dense brownish yellow hairs on dorsum. **Head** short, strongly hypognathous; minutely, densely punctate and granulate; eyes relatively small, ocular distance about 1.5 wider than eye diameter; antennae nearly filiform, third antennomere about 1.2 times longer than second; antennomeres 3−11 slightly thickened to apex, apical antennomere almost oval, strongly tapering apically, longer than wide; frontoclypeal area with distinctly deep groove; maxillary palpi large and serrate; apical maxillary palpomere cultriform, transversely oblong, weakly narrowing to apex. **Pronotum** longer than wide; subparallel-sided, gradually and weakly narrowing anteriorly; pronotal base as wide as elytral base and tightly connected to it; densely granulate and very weakly rugose at central part; with median sulcus from base to basal half; latero-basal part with indistinct and shallow depression. Scutellum clearly visible, tongue-shaped. **Elytra** elongate-oblong, weakly narrowing from apical 1/5 to apices; densely granulate and weakly rugose; elytral base with two shallow and weak grooves; each elytron with weakly visible seven striae on disc. **Legs** distinctly long; front legs shorter than middle and hind legs; femora flattened and wide-cylindrical; tibiae gradually widening apically; tibiae with two short spurs; front tibial spurs unequal, two mid and hind tibial spurs equal; mid tarsomeres 1−4 and hind tarsomeres 1−3 simple, relatively slender. **Procoxae** very large, circular, not separated; prosternal process tiny

and indistinct; metacoxae very narrowly separated.

Secondary sexual characteristics: Male: apical maxillary palpomere strongly transverse cultriform, about twice longer than third; antennae relatively long, reaching basal 1/20 of elytra; front tarsomeres 1−4 widening, about 1.2 times longer than wide and lobed with dense setae ventrally. Female: apical maxillary palpomere moderately transverse cultriform, about 1.5 times longer than third; antennae relatively short, reaching elytral base; front tarsomeres 1−4 narrowing and simple, with weakly dense setae ventrally.

Specimens examined: **[GW]** 1♂, Bangha-ri, Namsan-myeon, Chuncheon-si, 19.vi.2011, S.I. Kim; 1♂2♀, Near Beupheung-sa, Suju-myeon, Yeongweol-gun, 21.v−5.vi.2015, J.B. Seung (F.I.T.); **[GB]** 3♀, Chisan-ri, Sinnyeong-myeon, Yeongcheon-si, 15.v−1.vi.2014, J.W. Lee; **[GN]** 1♀, Samgak-san (Mt.), Gijang-gun, Busan-si, 18.v.2008, H.S. Song; 1♀, Ganwoelje, Wulju-gun, Wulsan-si, 18.vi.2009, H.C. Park.

Distribution: Korea, Japan, Russia (Far East, East Siberia).

8. *Phloiotrya* (*Phloiotrya*) *rugicollis* Marseul, 1876 (Pls. C6, K6, O6, Q6)

Phloiotrya rugicollis Marseul, 1876: 334; Eom and Park, 2001: 351; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Dircaea rugicollis: Nikitsky, 1985b: 59.

Description: **Body** length 7.0−14 mm. Body elongate-oblong, parallel-sided and weakly narrowing anteriorly and posteriorly; strongly convex dorsally and weakly shiny; body color largely brownish black; mouthparts, antennae and legs yellowish brown; covered with decumbent, short, dense brownish yellow hairs on dorsum. **Head** short, strongly hypognathous; densely, coarsely punctate and granulate; frons with sulcus medially; eyes relatively large, ocular distance almost equal to eye diameter; antennae relatively short, reaching pronotal base; antennal insertions completely visible; antennae nearly filiform, antennomeres 3−11 cylindrical, enlarged apically and squarely truncate at apex, each antennomere longer than wide; third antennomere about twice longer than second; apical antennomere narrow and long fusiform; maxillary palpi large and serrate; third palpomere shorter than fourth. **Pronotum** wider than long, widest at middle; pronotal base narrower than elytral base, tightly connected to it; convex, especially at middle; densely granulate, especially very coarsely and transversely so around middle, peeled off at central part; lateral margins entirely carinate from base to anterior corner; subbasal part with indistinct and shallow depressions. **Elytra** strongly elongate, weakly narrowing from apical 1/5 to apices; with dense and regular punctures and weakly rugose; with very weakly visible three or four striae on disc. **Legs** distinctly long; front legs shorter than middle and hind legs; femora flattened and wide-cylindrical; tibiae gradually widening apically; tibiae with short, equal

spurs; mid tarsomeres 1−4 and hind tarsomeres 1−3 simple and relatively slender, cylindrical; penultimate tarsomeres bilobed ventrally; hind first tarsomere almost equal to three following combined. Procoxae very large, circular, not separated; prosternal process tiny, short and indistinct; mesocoxae separated by narrow and apically tapering mesoventral process; metacoxae very narrowly separated; metaventrite strongly concave and wide at apical half.

Secondary sexual characteristics: Male: Apical maxillary palpomere strongly elongate cultriform, gradually tapering at apex, about three times longer than wide; front tarsomeres 1−4 widened, lobed, with dense setae ventrally; abdominal ventrites 1−4 with dense, golden hair tufts. Female: Apical maxillary palpomere moderately long cultriform, gradually tapering at apex, about twice longer than wide; front tarsomeres 1−4 narrowing and simple, with less dense setae ventrally; abdominal ventrites 1−4 without dense hair tufts.

Specimens examined: **[GW]** 1♂, Beopheung-ri, Suju-myeon, Yeongweol-gun, 30.vii−31.viii.2015, J.B. Seung and S.H. Lee (F.I.T.); 3♂6♀, Neunggyeong-bong, Daegwallnyeong-myeon, Pyeongchang-gun, 5−29.vi.2016, J.B. Seung and B.H. Jung (F.I.T.); 2♀, Neunggyeong-bong, Daegwallnyeong-myeon, Pyeongchang-gun, 29.vi−14.viii.2016, J.B. Seung and B.H. Jung (F.I.T.); **[GG]** 1♀, Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 30.vii.2015, J.B. Seung and B.H. Jung (F.I.T.); 2♀6♂, Mado-myeon, Hwaseong-gun, 6−29.vi.2016, J.B. Seung; 1♂, Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 6−27.vi.2016, J.B. Seung and B.H. Jung (F.I.T.); **[JB]** 1♀1♂, Naejang-san (Mt.), near Guam-sa, Bonkheung-myeon, Sunchang-gun, 27.v−14.vi.2016, B.H. Jung (F.I.T.); 1♂, Naejang-san (Mt.), near Guam-sa, Bonkheung-myeon, Sunchang-gun, 14−26.vi.2016, B.H. Jung (F.I.T.); **[JN]** 1♀, Han-jai, Baikun-san (Mt.), Donggok-ri, Oklyeong-myeon, Gwangyang-si, 14.vii−11.viii.2016, J.B. Seung (F.I.T.); 2♀, Han-jai, Baikun-san (Mt.), Donggok-ri, Oklyeong-myeon, Gwangyang-si, 14.vii−11.viii.2016, J.B. Seung (F.I.T.).

Distribution: Korea, Japan, Russia (Far East).

Tribe Melandryini Leach, 1815

Melyandrida Leach, 1815: 104. Type genus: *Melandrya* Fabricius, 1801.
Phryganophilies Motschulsky, 1849: 58. Type genus: *Phryganophilus* Sahlberg, 1833.
Hylepnigalionidae Gistel, 1856. Type genus: *Hylepnigalio* Gistel, 1856.

Diagnosis: Body relatively broad and weakly flattened. Head well visible dorsally. Eyes slightly protruded. Antennae filiform or moniliform. Pronotum laterally explanate and flattened on disc. Pronotal base usually not carinate, weakly raised up, loosely attached to elytral base. Prosternum well developed.

Remarks: The generic classification within Melandryini is unsettled (Pollock, 2002).

Genera 5 (2 in Korea), over 33 species (7 in Korea).

Distribution: Asia, Europe and Africa.

Key to the Korean genera of Melandryini

1. Pronotum parallel-sided, gradually narrowing anteriorly and posteriorly, widest at middle, posterior corners rounded; elytral interstriae without longitudinal and raised carinae ····· *Phryganophilus*
− Pronotum subparallel-sided, strongly narrowing anteriorly, widest at basal part; posterior corners sharply acute; elytral interstriae with longitudinal and raised carinae ····· *Melandrya*

Genus *Melandrya* Fabricius, 1801

Melandrya Fabricius, 1801: 163.
Type species: *Helops serratus* Fabricius, 1775.

Diagnosis: Body broad-oblong and weakly flattened. Antennae filiform or moniliform. Pronotum strongly narrowing anteriorly, widest at base, posterior corners produced and acute. Pronotal base loosely connected with elytral base, or sometimes concealed; latero-basal part more or less broadly depressed. Elytra mostly with seven longitudinal carinae.

Species: 24 (5 in Korea).

Distribution: Korea, Japan, Russia (Far East, West Siberia), China, Mongolia, Europe, Africa.

Key to the Korean species of *Melandrya*

1. Elytra with yellow markings at basal 1/3 and fascia bands at apices ····· *M. flavonotata*
− Elytra unicolored, without markings and fascia bands ····· 2
2. Elytra not punctate-striate ····· *M. karafutona*
− Elytra punctate-striate ····· 3
3. Elytral interstriae with longitudinal carinae, each carina equally raised ····· 4
− Elytral interstriae with high and low longitudinal carinae, carinae alternately raised ····· *M. dubia*
4. Body color brownish black, weakly shiny; elytral interstriae with five longitudinal carinae ···· *M. modesta*
− Body color bluish black, strongly shiny; elytral interstriae with 8−10 longitudinal carinae ··· *M. mongolica*

Subgenus *Emmesa* Newman, 1838

Emmesa Newman, 1838: 376.
Type species: *Emmesa connectens* Newman, 1838.

9. *Melandrya* (*Emmesa*) *karafutona* Kôno, 1930 (Pls. C7, K7, Q7)

Melandrya karafutona Kôno, 1930: 50; Cho, 1957: 57; ZSK, 1968: 114; Cho, 1969: 334; Kim et al., 1994: 173; Kwon et al., 1996: 161; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Description: **Body** length about 7.5 mm. Body elongate and weakly convex. Body color largely black; antennomeres 1−2, mouthpart, legs yellowish brown; weakly shiny; covered with moderately long, semi-decumbent, yellowish brown hairs. **Head** well visible dorsally; largely, coarsely punctate; frons with distinct midlongitudinal sulcus and shallowly concave at middle; eyes relatively small, ocular distance about 1.8 times wider than eye diameter; antennae filiform, relatively short, reaching pronotal base; antennal insertions completely visible; antennomeres 3−10 cylindrical, each antennomere longer than wide, obliquely truncate at apex; third antennomere about 1.8 times longer than second; apical antennomere fusiform, longer than wide, tapering from apical 1/2 to apex; maxillary palpi large, apical maxillary palpomere transverse securiform, longer than wide. **Pronotum** almost trapezoidal, widest at basal 1/3; largely and coarsely punctate on disc; pronotal base slightly narrower than elytral base, loosely connected to it; with distinct midlongitudinal sulcus and widely concave near sulcus; basal margin sinuous, strongly beaded; midlateral part of pronotal base (between medial area and lateral sides) strongly depressed, weakly flattened and raised. Scutellum semicircular. **Elytra** elongate, weakly angulate at apical 1/10; elytral base wider than pronotal base; moderately, coarsely punctate and weakly rugose on disc; humeri well developed, depressed near humeri; not striate-punctate. **Legs** long; front legs longer than mid and hind legs; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with short, equal spurs at apex; tarsomeres cylindrical; penultimate tarsomeres narrowly bilobed ventrally. Procoxae not separated; prosternal process very short and indistinct; mesocoxae narrowly separated; mesoventral proccess very short, gradually tapering to apex, reaching coxal margin 1/5; metacoxae separated; metaventrite with midlongitudinal sulcus.

Secondary sexual characteristics: Male: Apical maxillary palpomere strongly transverse securiform, about 2.2 times longer than wide. Female: Apical maxillary palpomere moderately transverse securiform, about twice longer than wide.

Specimens examined: **[GW]** 1♀, Odae-san (Mt.), Jinbu-myeon, Pyeongchang-gun, 12.v.2012, B.H. Jung; 3♂1♀, Neunggyeong-bong, Daegwallnyeong-myeon, Pyeongchang-gun, 15.v−2.vi.2016, J.B. Seung and

B.H. Jung (F.I.T.); 4♂, Neunggyeong-bong, Daegwallnyeong-myeon, Pyeongchang-gun, 16.v.2017, J.B. Seung; 2♂1♀, Haesanryeong, Hwacheon-gun, 6.vi.2017, J.B. Seung.

Distribution: Korea, Japan, Russia (Far East).

Subgenus *Melandrya* Fabricius, 1801

Melandrya Fabricius, 1801: 163.
Type species: *Helops serratus* Fabricius, 1775.

10. *Melandrya* (*Melandrya*) *modesta* Lewis, 1895 (Pls. D8, L8, O8, Q8)

Melandrya modesta Lewis, 1895: 273; Jung, 2018b: 85.
Melandrya quadricostata Hayashi, 1960: 46.

Description: **Body** length 8−14 mm. Body broadly elongate and slightly flat; body color largely blackish brown; antennae, mouthparts, legs yellowish brown; weakly shiny; almost glabrous, with very short, minute, decumbent pubescence. **Head** well visible dorsally; moderately, regularly punctate; eyes reniform, lateral, weakly protruded; frons with distinct, longitudinal sulcus and shallowly concave at middle; eyes relatively small, ocular distance about twice wider than eye diameter; antennae filiform, relatively short, reaching pronotal base; antennomeres 3−10 elongate-triangular, each antennomere longer than wide; third antennomere about twice longer than second; apical antennomere fusiform; maxillary palpi large and serrate; apical maxillary palpomere transverse cultriform, about 2.5 times longer than wide. **Pronotum** almost quadrate, widest at basal part, strongly narrowing anteriorly; with moderate and sparse punctures on disc; pronotal base weakly narrower than elytral base, loosely connected to it; with medial, distinct, longitudinal sulcus and widely, longitudinally depressed near medial sulcus; sublateral part strongly, longitudinally depressed from base to basal 4/5; sublateral part (between medial area and lateral margins) with pair of strong, wide depressions; basal margin weakly multi (5)-sinuous. Scutellum semicircular. **Elytra** elongate-oval, widest at middle, weakly and roundly narrowing from basal half to apex; elytral base wider than pronotal base; finely, densely punctate; elytral base strongly grooved; humeri well developed, strongly concave; elytron with 5 striae; interstriae with raised longitudinal carinae. **Legs** distinctly long; front legs longer than mid and hind legs; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with short, equal spurs at apex; fore tarsomeres 1−4 wide-cylindrical, with dense setae ventrally; mid tarsomeres 1−4 and hind tarsomeres 1−3 relatively narrow-cylindrical, but penultimate tarsomeres narrowly bilobed ventrally. Procoxae almost not separated; prosternal process short, not narrow, gradually tapering to apex, reaching

coxal margin 1/5; mesocoxae narrowly separated by cylindrical and narrow mesoventral process; metacoxae separated; metaventrite not concave, with longitudinal sulcus medially.

Secondary sexual characteristics: Male: Apical maxillary palpomere transverse securiform, about 2.5 times longer than wide. Female: maxillary palpomere moderate cultriform, about twice longer than wide.

Specimens examined: **[GW]** 1♂, Neunggyeong-bong, Daegwallnyeong-myeon, Pyeongchang-gun, 15.v–2.vi.2016, J.B. Seung and B.H. Jung (F.I.T.); 1♀, Haesanryeong, Hwacheon-gun, 6.vi.2017, J.B. Seung.

Distribution: Korea, Japan, Russia (Far East).

11. *Melandrya* (*Melandrya*) *mongolica* Solsky, 1871 (Pls. D9, L9, O9, R9)

Melandrya mongolica Solsky, 1871: 378; Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Description: **Body** length 9–16 mm. Body elongate-oblong and weakly flattened; body color largely black; elytra bluish black; antennae, mouthpart and legs brown; strongly shiny; minutely short, decumbent pubescence and glabrous. **Head** well visible dorsally; finely and regularly punctate; frons with shallow, longitudinal sulcus and broadly concave at middle; eyes relatively small, ocular distance about 1.5 times wider than eye diameter; antennae filiform, relatively short, reaching pronotal base; antennomeres 3–10 elongate and narrow triangular, each antennomeres longer than wide; third antennomere about 1.2 times longer than second; apical antennomere fusiform; maxillary palpi large and serrate, apical maxillary palpomere transverse cultriform, longer than wide. **Pronotum** almost trapezoidal, widest at basal 1/3 part; a little flattened dorsally; finely and irregularly punctate but sparsely at middle; medially, indistinctly, longitudinally grooved from basal 1/3 to anterior margin; pronotal base slightly narrower than elytral base, loosely connected to it; basal margin very weakly multi-sinuate, latero-mid-basal part strongly concave. Scutellum semicircular. **Elytra** elongate-oval, widest at basal 4/5, narrowing from basal 4/5 to apex; finely, regularly punctate; humeri well developed, strongly concave near humeri; elytron with 8–10 striae; interstriae with equally raised, longitudinal carinae. **Legs** conspicuously long; front legs longer than mid and especially hind legs; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with two short spurs; mid tarsomeres 1–4 and hind tarsomeres 1–3 relatively narrow cylindrical and not lobed ventrally, but penultimate tarsomeres narrowly bilobed ventrally.

Secondary sexual characteristics: Male: Apical maxillary palpomere transverse, cultriform, about 2.5 times longer than wide; front tarsomeres 1–4 wide-cylindrical and lobed ventrally, with dense setae ventrally; hind tarsomeres 1–4 longer than female's. Female: Apical maxillary palpomere a little transverse, cul-

triform, about twice longer than wide; front tarsomeres 1−4 a little narrow-cylindrical and lobed ventrally, with moderate setae ventrally than male.

Specimens examined: **[GW]** 1♂, Sapdangryeong, Seokbyeong-san (Mt.), Wangsan-myeon, Gangreung-si, 21.v.2002, J.D. Yeo; 1♀, Daegwallnyeong-myeon, Pyeongchang-gun, 15.v−20.v.2011, B.H. Jung; 1♀, Hankye-ri, Inje-gun, 22.vi.2015, J.B. Seung; **[GG]** 2♀, Okyeon-ri, Jije-myeon, Yanpyeong-gun, 20.v.2006, B.H. Jung; **[SL]** 1♀, Gildong Ecological Park, Gangdong-gu, 16.v.2015, B.H. Jung; **[JJ]** 1♀, Seongpanak, Jocheon-eup Jeju-si, 28.v.2015, B.H. Jung; 3♂ 3♀, Gyorae Natural Recreation Forest, Gyorae-ri, Jocheon-eup, Jeju-si, 13.v−10.vi.2016, J.B. Seung and B.H. Jung (F.I.T); 1♂ 1♀, Seongpanak, Jocheon-eup, Jeju-si, 13.v.2016, J.B. Seung.

Distribution: Korea, China, Japan, Russia (East Siberia, Far East, West siberia), Mongolia.

Subgenus *Paramelandrya* Nikitsky, 2002

Paramelandrya Nikitsky, 2002: 24.
Type species: *Tenebrio dubius* Schaller, 1783.

12. *Melandrya* (*Paramelandrya*) *dubia* (Schaller, 1783) (Pls. D10, L10)

Tenebrio dubia Schaller, 1783: 326.
Helops canaliculata Fabricius, 1787: 213.
Melandrya caraboides Latreille, 1818: 42.
Melandrya rufipes Chevrolat, 1833: pl. 33.
Melandrya goryi Laporte, 1840: 249.
Melandrya alternans Motschulsky, 1872: 42.
Melandrya niponica Lewis, 1895: 273; Kim and Kim, 1972; Kim et al., 1994: 173; Kwon et al., 1996: 161.
Melandrya dubia: Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Description: **Body** length 9−19 mm. Body broadly elongate and weakly flattened; body color largely blackish brown; antennae, mouthparts, legs brownish black; weakly shiny, with very short, minute, decumbent pubescence. **Head** well visible dorsally; frons with distinct, deep, longitudinal sulcus, shallowly concave at middle; antennae filiform, reaching pronotal base; antennomeres 3−10 elongate-triangular, each antennomeres longer than wide; third antennomere about twice longer than second; apical antennomere

fusiform; maxillary palpi large and serrate, apical maxillary palpomere transverse cultriform, longer than wide. **Pronotum** almost quadrate, widest at basal part, strongly narrowing anteriorly; pronotal base slightly narrower than elytral base, loosely connected to it; with distinct, midlongitudinal sulcus from base to anterior margin; sublateral part strongly, longitudinally depressed from base to basal 4/5; subbasal part with triangular depression; anterior margin straight; lateral sides flattened, carinate from base to basal half; basal margin weakly multisinuate (5 sinuses); posterior corners sharply acute. Scutellum semicircular. **Elytra** elongate-oval, widest at middle; elytral base wider than pronotal base; elytron with 8 striae; interstriae with alternately raised longitudinal carinae. **Legs** long; front legs longer than mid and hind legs; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with short, equal spurs; fore tarsomeres 1−4 wide-cylindrical, with dense setae ventrally; mid 1−4 and hind 1−3 tarsomeres relatively narrow-cylindrical, but penultimate tarsomeres narrowly bilobed ventrally. **Procoxae** narrowly separate, prosternal process short, oblong, truncated at apex; mesocoxae separated by elongate and oblong mesoventral process; metacoxae separated.

Secondary sexual characteristics: Male: Apical maxillary palpomere transverse securiform, about 2.5 times longer than wide. Female: maxillary palpomere moderate cultriform, about twice longer than wide.

Specimens examined: **[GW]** 1♀, Hankye-ri, Inji-gun, 29.v.2017, J.B. Seung; 1♂1♀, Daegwallnyeong, Daegwallnyeong-myeon, Pyeongchang-gun, 12.vi.2017, J.B. Seung.

Distribution: Korea, Japan, Russia (Far East, West Siberia), Mongolia, Europe.

Subgenus *Pseudomelandrya* Nikitsky, 2002

Pseudomelandrya Nikitsky, 2002: 24.
Type species: *Melandrya flavonotata* Pic, 1938.

13. *Melandrya* (*Pseudomelandrya*) *flavonotata* Pic, 1938

Melandrya flavonotata Pic, 1938: 11; Kim et al., 1994: 173; Kwon et al., 1996: 161; Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.
Melandrya quadrisignata Nakane & Hayashi, 1955: 81.

Diagnosis: Body length 10−12 mm. Body dark brown, dully shining; pronotum with well developed longitudinal depression reaching almost to anterior and posterior margins; elytra with a yellow spot before mid-

dle and yellow band at apical part (Eom and Park, 2001).

Specimens examined: None.

Distribution: Korea, Japan, Russia (Far East).

Genus *Phryganophilus* C. R. Sahlberg, 1833

Phryganophilus C. R. Sahlberg, 1833: 454.
Type species: *Dircaea ruficollis* Fabricius, 1798.

Diagnosis: Pronotum wider than long, almost parallel-sided, barely narrowing anteriorly, widest at middle; posterior corner rounded. Elytral interstriae without longitudinal, raised intervals (Hayashi, 1985; Pollock, 2002).

Species: 5 (2 in Korea).

Distribution: Korea, Japan, Russia (Far East, East and West Sibria), Mongolia, Europe.

Subgenus *Phryganophilus* C. R. Sahlberg, 1833

Phryganophilus C. R. Sahlberg, 1833: 454. Type species: *Dircaea ruficollis* Fabricius, 1798.
Longemelandrya Pic, 1953: 335. Type species: *Melandrya angustata* Pic, 1953.
Phryganophiloides Morishima, 1988: 41. Type species: *Phryganophiloides elegans* Morishima, 1988.

14. *Phryganophilus* (*Phryganophilus*) *ruficollis* (Fabricius, 1798) (Pl. E11)

Dircaea ruficollis Fabricius, 1798: 122.
Lymexylon paradoxus Paykull, 1799: 162.
Melandrya ruficollis Lewis, 1895: 274.
Phryganophilus rosti Hubenthal, 1905: 57.
Phryganophilus ruficollis: Hong and Lee, 2014: 224.

Description: **Body** length 13 mm. Body color largely black; pronotum and visible 4−5 ventrites yellowish orange; covered with very short, decumbent pubescence. **Head** short , hypognathous and inflexed; fine-

ly, densely punctate; frons with deep, large, longitudinal depression; eyes relatively small, ocular distance about twice wider than eye diameter; antennae nearly moniliform, relatively short, not reaching pronotal base; antennomeres 3−10 gradually enlarged and thickening to apex; third antennomere about 1.2 times longer than second; apical antennomere nearly fusiform; maxillary palpi large and thick; apical maxillary palpomere large, transverse securiform, about 2.5 times longer than third. **Pronotum** transversely rectangular, wider than long, widest at middle, narrowing strongly anteriorly and gradually posteriorly; with shallow, weak midlongitudinal sulcus; latero-basal part with large grooves from basal margin to basal half; finely, densely, regularly punctate; basal margin strongly sinuous. Scutellum inverted triangular, rounded at apex. **Elytra** elongate-oblong, slightly narrowing from apical 2/3 to apices; humeri well developed, raised; with strong groove near scutellum; finely, densely, regularly punctate and weakly rugose; not striate-punctate. **Legs** long; front legs longer than mid and hind legs; femora subcylindrical, flat and wide; tibiae cylindrical, gradually widening apically; tibiae with short, equal spurs; fore tarsomeres 1−4 wide-cylindrical, with dense setae ventrally; penultimate tarsomeres bilobed ventrally. Procoxae separated; prosternal process very short and oblong; mesocoxae strongly and narrowly separated; mesoventral proccess very narrow, gradually tapering to apex; metacoxae separated; metaventrite with midlongitudinal sulcus.

Specimens examined: **[JB]**: 1♂, Deokyu-san (Mt.), Muju-gun, 25.v.1993, J.S. Heo.

Distribution: Korea, Japan, Mongolia, Russia (Far East, West Siberia), Europe.

Remarks: This species is recorded for the first time from Korea in this study. It was mistakenly cited in the "National List of Species of Korea <Insect> (Coleoptera II)" (Hong and Lee, 2014), based on an unpublished paper (Eom 2001, master's thesis).

Subgenus *Pseudophryganophilus* Nikitsky, 2002

Pseudophryganophilus Nikitsky, 2002: 27.
Type species: *Melandrya affinis* Nikitsky, 1985.

15. *Phryganophilus* (*Pseudophryganophilus*) *affinis* (Nikitsky, 1985)

Melandrya affinis Nikitsky, 1985c: 757.
Phryganophilus (*Pseudophryganophilus*) *affinis*: Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Specimens examined: None.

Distribution: Korea (South, North), Russia (Far East).

Remarks: Korean specimens of this species were not collected and examined. Nikitsky and Pollock (2008) firstly reported this species from Korea without exact locality data in the Catalogue of Palaearctic Coleoptera. I have not collected and examined this speciemens. Further studies are needed.

Tribe Orchesiini Mulsant, 1856

Orchésiens Mulsant, 1856a: 27.
Type genus: *Orchesia* Latreille, 1807.

Diagnosis: Head very short, strongly hypognathous. Eyes narrowly separated on vertex. Antennae with variously widening or clubbed apical antennomeres. Metatibiae shorter than either femora or first tarsomeres. Metatibial spurs very long, at least 1/3 longer than or equal to metatibiae and having pronounced jumping ability (Sasaji, 1985; Pollock, 2002). Tarsomeres narrow, simple. Front coxae separated by narrow prosternal process (Eom and Park, 2001).

Remarks: The Orchesiini is a well-defined group of Melandryinae (Pollock, 2002).

Genera 7 (1 in Korea), over 45 species (5 in Korea).

Distribution: Palaearctic region (Asia, Europe, North Africa, Afrotropical Region).

Genus *Orchesia* Latreille, 1807

Orchesia Latreille, 1807: 194.
Type species: *Hallomenus micans* Panzer, 1793.

Diagnosis: Body oblong-oval, spindle-shaped; antennae with three- or four-segmented broadened apical club, second antennomere always less than twice narrower and shorter than third. Elytra usually with confused punctuation. Legs with two well-developed tibial spurs. Metatibial spurs very long, serrate. First metatarsomere longer than metatibia. Penultimate front and mid tarsomeres bilobed ventrally.

Remarks: This genus is somewhat reminiscent of the family Mordellidae, bearing well developed spur on tibia, and long first metatarsomere. However, the genus can be separated from Mordellidae by the not caudate tip of abdomen. The larvae develop in tree fungi and rotten wood of usually deciduous trees.

Species over 20 (5 in Korea).

Distribution: Asia and Europe.

Key to the Korean species of *Orchesia*

1. Elytra with reddish-brown pattern ····· 2
− Elytra unicolor, without reddish-brown pattern ····· 4
2. Posterior subapical transverse reddish spot on elytra deeply emarginate ····· 3
− Posterior subapical transverse reddish spot on elytra weakly emarginate ····· *O. elegantula* Lewis
3. Body shorter and rounder, 2.52−2.64 times longer than maximum width (Nikitsky, 1985a) ····· *O. duplicata* Nikitsky
− Body more elongate and parallel-sided, 2.7−2.87 times longer than maximum width (Nikitsky, 1985a) ····· *O. imitans* Lewis
4. Body oblong-oval, shorter and wider, 2.77−2.9 times longer than maximum wide; aedeagus relatively large ····· *O. fusiformis* Solsky
− Body oblong-oval, longer and somewhat narrower, 2.81−3.2 times longer than maximum wide; aediagus relatively small ····· *O. ocularis* Lewis

Subgenus *Clinocara* C. G. Thomson, 1859

Clinocara C. G. Thomson, 1859: 120.
Type species: *Serropalpus fasciatus* Illiger, 1798.

16. *Orchesia* (*Clinocara*) *duplicata* Nikitsky, 1985

Orchesia duplicata Nikitsky, 1985a: 269; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Description: Body length 3.0−3.9 mm. Body oblong-oval (somewhat shorter and rounder than that of *O. imitans* Lewis), 2.52−2.64 times longer than maximum width; body color mostly blackish brown or black; head, pronotal anterior margin, antennomeres 5−7 and apex of apical antennomere, maxillary palpomeres and legs reddish brown. Scutellum black. **Elytra** reddish brown or reddish with black spots and bands; moderately shiny on disc; very densely raspy punctured, clothed with dense, shorter decumbent pubescence (Nikitsky, 1985a).

Specimens examined: None.

Distribution: Korea, Japan, Russia (Far East, West Siberia), China.

Remarks: Korean specimens of this species were not examined. This species is closely related to *Orches-*

ia imitans Lewis 1895, but distinguishable by the shorter and rounder body which is 2.52−2.64 times longer than maximum width (Nikitsky, 1985a).

17. *Orchesia* (*Clinocara*) *elegantula* Lewis, 1895 (Pls. E12, R12)

Orchesia elegantula Lewis, 1895: 260; Jung, 2018b: 85.

Description: **Body** length 4.0−5.5 mm. Body elongate-oblong, spindle-shaped, strongly convex dorsally, weakly shiny; finely and densely punctate; covered with short, dense, recumbent, yellowish brown hairs dorsally and ventrally; body color mostly blackish brown to brown; base of antennae, mouthparts, anterior part of pronotum (sometimes), and legs (partly) reddish brown; elytral markings and bands reddish brown. **Head** strongly hypognathous and inflexed; eyes relatively small, ocular distance almost equal to eye diameter; antennae clavate, relatively short, almost reaching basal margin of pronotum; antennomeres 7−11 enlarged, antennomeres 9−11 strongly enlarged, forming relatively compact club; apical antennomere nearly fusiform, gradually tapering apically; maxillary palpi large, apical maxillary palpomere very large, cultriform. **Pronotum** transverse, wider than long, widest at base; pronotal base as wide as elytral base, tightly connected to it; basal margin strongly sinuous, with two shallow impressions midlaterally. Scutellum clearly visible, transverse and rectangular. **Elytra** elongate-oblong, gradually narrowing from basal half toward apex; without striae on disc, but visible complete sutural striae reaching apex; with various reddish brown markings as follows; basal band sometimes almost subdivided into two spots, somewhat extending backward along suture and connected with trasverse middle band; transverse subapical spot not reaching presutural line. **Legs** long; front legs shorter than middle and especially hind legs; femora subcylindrical, flat and wide; front femora narrower than middle and especially hind femora; metatibial spurs very long, about 0.6 times longer than first tarsomere; outside of metatibial spurs serrate; fore and middle tarsi simply cylindrical. Prosternal proccess distinct, reaching procoxae.

Specimens examined: **[GW]** 1♀, Suha-ri, Daegwallnyeong-myeon, Pyeongchang-gun, 15.vi.2016, B.H. Jung; **[GG]** 1♀, Gwansan-dong, Deokyang-gu, 29.iv.2004, B.H. Jung; **[GB]** 1♂1♀, Sinmu-dong, Dong-gu, Daegu-si, 11.vi−14.vii.2014, J.W. Lee; **[JN]** 1♀, Han-jai, Baikun-san (Mt.), Donggok-ri, Oklyeong-myeon, Gwangyang-si, 16−30.viii.2016, J.B. Seung (F.I.T.); **[JJ]** 1♀, Hwasun Gotzawal, Seogwipo-si, 11.vi.2016, J.B. Seung and B.H. Jung; 1♀, Gyorae Natural Recreation Forest, Gyorae-ri, Jocheon-eup, Jeju-si, 11.vi.2016, J.B. Seung and B.H. Jung.

Distribution: Korea, Japan, Russia (Far East), Mongolia.

18. *Orchesia* (*Clinocara*) *imitans* Lewis, 1895 (Pl. E13)

Orchesia imitans Lewis, 1895: 261; Eom and Park, 2001: 345; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Description: **Body** length 3.5−4.5 mm. Body elongate-oblong, spindle-shaped, 2.7−2.87 times longer than maximum width; strongly convex dorsally, weakly shiny; finely and densely punctate; covered with short, dense, recumbent, yellowish brown hairs dorsally and ventrally; body color mostly brownish black or reddish brown; base of antennae, partly mouthpart, anterior part of pronotum (sometimes), and legs reddish brown; elytral markings and bands reddish brown. **Head** strongly hypognathous and inflexed; eyes relatively small, ocular distance almost equal to eye diameter; antennae clavate, relatively short, almost reaching basal margin of pronotum; antennomeres 7−11 enlarged, antennomeres 8−11 strongly enlarged, forming relatively compact club; antnennomeres 9−10 wider than long; apical antennomere nearly fusiform, gradually tapering apically; maxillary palpi large, apical maxillary palpomere very large, cultriform, not less than 1.5 times longer than maximum width. **Pronotum** transverse, approximately 1.9 times wider than long, widest at base; pronotal base as wide as elytral base, tightly connected to it; basal margin strongly sinuous, with two shallow midlateral impressions; posterior corners acute. Scutellum clearly visible, transverse and rectangular. **Elytra** elongate-oblong, gradually narrowing from basal half toward apex; without striae on disc, but visible complete sutural striae reaching apex; with various reddish brown markings as follows; rather broad, longitudinal, lateral bands extending from base to basal 2/3; small and oval spots at middle; transverse, curved bands at apical 1/3, reaching both sutural line and lateral margins; epipleura of elytra wide in anterior part and gradually narrowing posteriorly but reaching apex of elytra. **Legs** long; front legs shorter than middle, and especially hind legs; femora subcylindrical, flat and wide; front femora relatively narrower than middle, and especially hind femora; front and middle tibiae cylindrical; hind tibiae not cylindrical, strongly widening apically; each tibia with two spurs; front and middle tibial spurs very short; metatibial spurs very long, about 0.7 times longer than first tarsomere; outside of metatibial spurs serrate; fore and middle tarsi simply cylindrical, fourth tarsomere bilobed ventrally. Prosternal proccess distinct, reaching procoxae.

Specimens examined: **[CN]** 1♀, Oseo-san (Mt.), Boyeong-si, 29.vi−19.ix.1999, D.S. Goo; **[GB]** 1♀, Chisan-ri, Sinnyeong-myeon, Yeongcheon-si, 11.vi.2014, J.W. Lee; 2♀, Sinmu-dong, Dong-gu, Daegu-si, 12.v−11.vi.2014, J.W. Lee.

Distribution: Korea, Japan, Russia (Far East), China (Northeast Territory).

Subgenus *Orchesia* Latreille, 1807

Orchesia Latreille, 1807: 194.
Type species: *Hallomenus micans* Panzer, 1793.

19. *Orchesia* (*Orchesia*) *fusiformis* Solsky, 1871

Orchesia fusiformis Solsky, 1871: 377; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.
Orchesia acicularis Reitter, 1886: 349.
Orchesia nadeshdae Semenov, 1898: 289.
Orchesia obscuricolor Pic, 1954: 53.

Description: **Body** length 4.0−5.7 mm. Body oblong-oval, 2.77−2.9 times longer than maximum width; body color mostly reddish brown to blackish brown; maxillary palpomeres, legs, often base of antennae and apical club's apex paler; weakly shiny on dorsum, clothed with dense, decumbent, greyish-yellowish pubescence; apical antennomeres 1.4−1.6 times longer than wide; apical maxillary palpomere cultrifrom, 1.66−2.1 times longer than wide. Pronontum 1.43−1.64 times broader than long. Aedeagus usually slightly shorter than metatibiae, 0.55−0.75 mm long (Nikitsky, 1985a).

Specimens examined: **[GG]** 2♂2♀, Dongguneung, Guri-si, 8.iv.2006, B.H. Jung, from *Trametes* sp. (larva); 1♀, Chuknyeong-san (Mt.), Namyangju-si, 8.iv.2006, B.H. Jung, from *Lenzites beulina* (larva); 1♂, Cheonma-san (Mt.), Namyangju-si, 27.iii.2007, B.H. Jung, from *Trametes hirsuta* (larva).

Distribution: Korea, Russia (Far East, West Siberia), Mongolia, China, Kazakhstan, Europe.

Host fungi: *Trametes hirsuta* (Wulfen) Pilat, *Lenzites beulina* (L.: Fr.) Fr., mycelia.

Remarks: The larvae develop in tree fungi. Widespread throughout the forest zone of East and partly Central Europe, as well as in Siberia, the Russian Far East and Korea (Nikitsky, 1985a).

20. *Orchesia* (*Orchesia*) *ocularis* Lewis, 1895 (Pls. E14, L14, O14, R14)

Orchesia ocularis Lewis, 1895: 261; Ju, 1969: 123; Kim et al., 1994: 173; Kwon et al., 1996: 161; Nikitsky and Pollock, 2008: 64; Hong and Lee, 2014: 224.

Description: **Body** length 5.0−6.0 mm. Body oblong-oval, spindle-shaped, narrowing anteriorly and posteriorly, 2.81−3.2 times longer than maximum width, convex dorsally and weakly shiny; covered with short,

dense, recumbent, brownish yellow hairs on dorsum; body color mostly brown; mouthparts, antennae and legs reddish brown; with fine, dense, relatively homogenous punctuation. **Head** strongly hypognathous and inflexed; eyes relatively large, ocular distance much narrower than eye diameter; antennae clavate, antennae relatively short, almost reaching pronotal base; antennomeres 9−11 enlarged, forming relatively compact club, 1.4−1.8 times longer than wide; apical antennomeres nearly fusiform; apical maxillary palpomeres very large, widely securiform, 1.77−2.2 times longer than wide. **Pronotum** transverse, 1.4−1.56 times wider than long, widest at base; pronotal base as wide as elytral base, tightly connected to it; basal margin strongly sinuous, with two shallow midlateral impressions. Scutellum clearly visible, transverse and rectangular. **Elytra** without striae on disc, but visible complete sutural striae reaching apex. **Legs** long; front legs shorter than middle and especially hind legs; femora subcylindrical, flat and wide; front femora relatively narrower than middle and especially hind femora; front and middle tibiae cylindrical; hind tibiae not cylindrical, strongly widening apically; each tibia with two spurs; front and middle tibial spurs very short; mid-tibial spurs inequal in length (proportions 2:3); metatibial spurs very long, about 0.7 times longer than first tarsomere; outside of metatibial spurs serrate; penultimate tarsomeres bilobed ventally. **Procoxae** separate; prosternal process long, gradually tapering toward apex; mesocoxae separate; mesoventral process long, gradually tapering toward apex; metacoxae separated. Aedeagus usually slightly or not shorter than metatibiae, 0.81−0.87 mm long.

Secondary sexual characteristics: Male: front tarsomeres 1−4 widening, lobed with dense setae ventrally. Female: front tarsomeres 1−4 narrowing and simply cylindrical, with weakly dense setae ventrally.

Specimens examined: **[GW]** 1♂1♀, Neunggyeong-bong, Daegwallnyeong, Daegwallnyeong-myeon, Pyeongchang-gun, 29.vi−14.viii.2016, J.B. Seung and B.H. Jung; 1♀, Suha-ri, Daegwallnyeong-myeon, Yongpyeong-gun, Pyeongchang-gun, 29.vi−14.viii.2016, J.B. Seung and B.H. Jung; **[JN]** 1♂, Han-jai, Baikun-san (Mt.), Donggok-ri, Oklyeong-myeon, Gwangyang-si, 20.vi−14.vii.2016, J.B. Seung (F.I.T.); 1♂1♀, Han-jai, Baikun-san (Mt.), Donggok-ri, Oklyeong-myeon, Gwangyang-si, 16.viii−30.viii.2016, J.B. Seung (F.I.T.).

Distribution: Korea, Japan, Russia (Far East: Southern Kuril Islands, Sakhalin), Mongolia.

Remarks: By coloration and sculpture, this species is similar to *O. fusiformis*, but readily distinguishable by the relatively larger aedeagus and a little longer and narrower body shape.

Tribe Serropalpini Latreille, 1829

Serropalpides Latreille, 1829: 43. Type genus: *Serropalpus* Hellenius, 1786.

Diagnosis: Body mostly elongate-oblong. Head visible from above. Maxillary palpi variable. Male mentum with setose pit. Pronotal base as wide as elytral base; basal margin beaded. Elytra mostly narrow, cylindrical. Tibiae with transverse combs or longitudinal carinae on dorsum; tibial spurs distinct, mostly large. Each abdominal ventrite gradually shorter toward apex (Pollock, 2002).

Genera over 8 (4 in Korea), over 17 species (7 in Korea).

Distribution: Korea, Japan, Russia (Far East, East Siberia, Kunashir), Thailand, Europe.

Key to the Korean genera of Serropalpini

1. Elytra not or weakly punctate-striate ····· 2
− Elytra distinctly punctate-striate ····· 3
2. Pronotum elongate-trapezoidal, longer than wide; mesoventral proccess short, narrow and pointed, reaching 4/5 of coxal margin ····· *Mikadonius*
− Pronotum a little wider than long, widest at basal 1/3−1/2; mesoventral process long, but not reaching metaventrite ····· *Phloeotrinus*
3. Elytra with weak striae; maxillary palpi simply elongate or subcylindrical and not serrate, third maxillary palpomere elongate, apical maxillary palpomere narrow ····· *Encodes*
− Elytra with distinct striae; maxillary palpi strongly serrate, third palpomere transversely wide triangular; apical palpomere cultriform, not wider than third ····· *Serropalpus*

Genus *Enchodes* LeConte, 1866

Enchodes LeConte, 1866: 148. Type species: *Dircaea sericea* Haldeman, 1848.
Paramikadonius Nomura, 1959: 44. Type species: *Synchroa crepuscula* Lewis, 1895.

Diagnosis: Eyes well visible from above. Antennae filiform, elongate, mostly parallel-sided, indistinctly widening apically, antennomeres 3−10 distinctly longer than wide. Maxillary palpi simply elongate and subcylindrical, not serrate, third maxillary palpomere elongate, apical maxillary palpomere narrow. Posterior corners of pronotum distinct and subacute. Elytra without impressed striae. Front coxae separated by narrow and pointed prosternal process. Metacoxae separated, mesoventral process concave at apex.

Species: 2 (2 in Korea).

Distribution: Korea, Japan, Russia (Far East).

Key to the Korean species of *Enchodes*

1. Pronotum with two pores at central part····· *E. orientalis* Nikitsky
− Pronotum without two pores at central part····· *E. crepusculus* (Lewis)

Subgenus *Paramikadonius* Nomura, 1959

Paramikadonius Nomura, 1959: 44.
Type species: *Synchroa crepuscula* Lewis, 1895.

21. *Enchodes crepusculus* (Lewis, 1895) (Pls. F15, L15, O15, R15)

Synchroa crepusculus Lewis, 1895: 263.
Mikadonius costulatus Pic, 1932: 3.
Paramikadonius crepusculus: Nomura, 1959: 44.
Paramikadonius crepusculus: Nakane, 1963a: 243.
Enchodes crepuscula: Nikitsky, 1989: 51.
Enchodes crepusculus: Sasaji, 1989: 401; Hong and Lee, 2014: 224.

Description: **Body** length 15.5−18 mm. Body elongate-cylindrical, parallel-sided, narrowing anteriorly and posteriorly; weakly convex dorsally and shiny; body color mostly blackish brown; antennae, mouthparts and legs reddish brown; covered with relatively short, dense, decumbent hairs on dorsum. **Head** visible from above, finely and densely punctate; frons shallowly and longitudinally depressed; ocular distance almost equal to eye diameter; antennae filiform and long, reaching elytral base; third antennomere about twice longer than second; apical antennomere cylindrical, narrowing from apical half to apex; maxillary palpi slender and not serrate; apical maxillary palpomere narrow securiform, roundly and obliquely truncate at apex. **Pronotum** almost trapezoidal, longer than wide, widest at basal half, weakly narrowing anteriorly; pronotal base almost equal to elytral base, loosely connected to it; with fine and regular punctures; basal margin sinuous and distinctly beaded; baso-lateral part with two deep grooves. Scutellum somewhat pentagonal. **Elytra** elongate, parallel-sided, weakly narrowing from apical 1/10 to apex; finely and regularly punctate; weakly but distinctly punctate-striate; interstriae convex, with fine punctures. **Legs** long; front legs shorter than middle and hind legs; femora flattened and wide-cylindrical; tibiae narrow and gradually enlarged apically; tibial spurs equal and short; male front tarsomeres 2−4 cylindrical and lobed ventrally, with dense setae ventrally; mid and hind tarsomeres simple, cylindrical, penultimate tarsomere not bilobed

ventrally. Procoxae a little separated; prosternal process short and apically tapering; mesocoxae relatively, widely separated; mesoventral process long, tapering apically; metacoxae widely separated.

Specimens examined: **[GW]** 1♂2♀, Suha-ri, Daegwallnyeong-myeon, Pyeongchang-gun, 5−29.vi.2016, J.B. Seung and B.H. Jung (F.I.T.); 1♀, Haisanryeong, Hwacheon-gun, 30.vi.2017, J.B. Seung (F.I.T.).

Distribution: Korea, Russia (Far East, Kunashir). Japan.

Remarks: This species is recorded for the first time from Korea in this study. It was mistakenly cited in the "National List of Species of Korea <Insect> (Coleoptera II)" (Hong and Lee, 2014), based on an unpublished paper (Eom, 2001, master's thesis).

22. *Enchodes orientalis* Nikitsky, 1973

Enchodes orientalis Nikitsky, 1973: 1729; Eom and Park, 2001: 350; Nikitsky and Pollock, 2008: 70; Hong and Lee, 2014: 224.

Diagnosis: Body length about 16 mm. Body reddish brown to blackish brown and shining; maxillary palpi slender; penultimate palpomere narrower than apical one. Pronotum usually with a pair of small and round pores at middle in addition to basal deep foveae; sternopleural suture not flanged; mesoventral process emarginate apically; hind coxae separated from each other (Eom and Park, 2001).

Specimens recored: 1♂, Baemsagol, Sannae-myeon, Namweon, 24.vi.1986 (Eom, 2001; preserved in Kyeongsang University).

Distribution: Korea, Russia (Far East).

Remarks: I have not collected and examined this speciemens. The diagnosis is cited from Eom and Park (2001).

Genus *Mikadonius* Lewis, 1895

Mikadonius Lewis, 1895: 264.

Type species: *Mikadonius gracilis* Lewis, 1895.

Diagnosis: Head and eyes well visible from above. Maxillary palpi large and strongly serrate, apical maxillary palpomere transverse triangular, about twice longer than wide. Lateral sides of pronotum without carinae. Elytra not punctate-striate. Penultimate tarsomeres bilobed ventrally.

Remarks: Only two species of the genus *Mikadonius* are known throughout the world.

Species: 2 (2 in Korea).

Distribution: Korea, Japan.

Key to the Korean species of *Mikadonius*

1. Elytra mostly yellowish brown; lateral sides, sutural lines and apices black····· *M. gracilis* Lewis
− Elytra entirely black·····*M. japonicus* Hayashi

23. *Mikadonius gracilis* Lewis, 1895 (Pls. F16, L16, O16, R16)

Mikadonius gracilis Lewis, 1895: 264; Park, 1996: 176; Eom and Park, 2001: 349; Nikitsky and Pollock, 2008: 70; Hong and Lee, 2014: 224.

Description: **Body** length 10−16 mm. Body elongate-cylindrical, parallel-sided, narrowing anteriorly and posteriorly; convex dorsally and shiny; body color mostly black or rarely entirely black; mouthparts yellow; 1−3, antennomeres 8−11, basal margin of pronotum (sometimes entirely black), elytra (except for black lateral sides, sutural lines and apex) and legs brownish yellow; almost glabrous, covered with very short, dense, decumbent pubescence on dorsum. **Head** visible from above; finely, densely, regularly punctate; with shallow midlongitudinal sulcus from frons to clypeal base; ocular distance about 2.2 times wider than eye diameter; antennae filiform and long, reaching elytral base; third antennomere about twice longer than second; each antennomere nearly parallel-sided, narrowly cylindrical, longer than wide; apical antennomere cylindrical, narrowing from apical half to apex; clypeus without longitudinal sulcus; maxillary palpi large and strongly serrate; apical maxillary palpomere transveres triangular, about twice longer than wide. **Pronotum** elongate trapezoidal, longer than wide, widest at base and strongly narrowing anteriorly; pronotal base narrower than elytral base, loosely connected to it; with shallow midlongitudinal sulcus; with fine, dense, regular punctures; basal margin sinuous and distinctly carinate; subbasal part with two deep grooves. Scutellum somewhat semi-circular. **Elytra** elongate and very long, parallel-sided, weakly narrowing apically; minutely, densely, coarsely punctate and weakly rugose; apex of elytra angulate; not punctate-striate, but with visible complete sutural striae reaching apex; humeri weakly developed, weakly concave near humeri. **Legs** long; front legs shorter than middle and especially hind legs; femora flattened and wide-cylindrical; tibiae narrow, gradually enlarged apically; tibial spurs short and unequal, inner spur a little longer than outer; front 2−4 tarsomeres broad cylindrical, lobed ventrally; middle and hind tarsomeres 2−4 a little narrowly cylindrical, penultimate tarsomeres bilobed ventrally. Procoxae narrowly separated; prosternal process short and

narrow, truncate at apex, reaching coxal margin 1/5; mesocoxae narrowly separated; mesoventral proccess elongate triangular, gradually tapering to apex, reaching coxal margin 4/5; metacoxae separated.

Specimens examined: **[JB]** 1♂, Muju-gun, 15.v.2005, B.H. Jung; **[GB]** 1♂, Unmun-san (Mt.), Sinweon-ri, Cheongdo-gun, 15.vi.2011, T.H. Kang.

Distribution: Korea (South), Japan.

24. *Mikadonius japonicus* Hayashi, 1960 (Pls. F17, M17, P17, R17)

Mikadonius japonicus Hayashi, 1960: 43; Jung, 2018b: 85.

Description: **Body** length about 13 mm. Body elongate, parallel-sided, narrowing anteriorly and posteriorly; convex dorsally and shiny; body color mostly black; mouthparts, antennae (sometimes) and legs brown; almost glabrous, covered with very short, dense, decumbent pubescence on dorsum. **Head** visible from above; finely, densely, regularly punctate; frons with shallow midlongitudinal sulcus, a little peeled off at middle; ocular distance about 2.2 times wider than eye diameter; antennae filiform and relatively long, reaching basal 1/5 of pronotum; antennal insertions completely visible; third antennomere about 1.8 times longer than second; each antennomere narrowly cylindrical, longer than wide; apical antennomere cylindrical, narrowing from apical half to apex; clypeus with longitudinal sulcus; maxillary palpi large and strongly serrate; apical maxillary palpomere transverse triangular, about twice longer than wide. **Pronotum** elongate trapezoidal, longer than wide, widest at base and strongly narrowing anteriorly; pronotal base narrow than elytral base, loosely connected to it; with shallow midlongitudinal sulcus; convex dorsally; with fine, dense, regular punctures; basal margin sinuous and distinctly carinate; subbasal part with two deep grooves. **Elytra** elongate, very long, parallel-sided, weakly narrowing apically; minutely, densely, coarsely punctate and weakly rugose; apex of elytron round; not punctate-striate, but with visible complete sutural striae reaching apex; humeri weakly developed, weakly concave near humeri. **Legs** long; front legs shorter than middle and especially hind legs; femora flattened and wide-cylindrical; tibiae narrow, gradually enlarged apically; tibial spurs short; front tarsomeres 2−4 broad-cylindrical, lobed ventrally; middle and hind tarsomeres 2−4 a little narrow-cylindrical; penultimate tarsomeres bilobed ventrally. **Procoxae** narrowly separated; prosternal process short and narrow, truncate at apex, reaching coxal margin 1/5; mesocoxae narrowly separated; mesoventral proccess short, narrow, gradually tapering to apex, reaching coxal margin 4/5; metacoxae separated.

Specimens examined: **[GB]** 1♂1♀, Unmun-san (Mt.), Sinweon-ri, Cheongdo-gun, 15.vi.2011, T.H. Kang; 1♂1♀, Sinmu-dong, Dong-gu, Daegu-si, 11.vi−14.vii.2014, J.W. Lee.

Distribution: Korea, Japan.

Genus *Phloeotrinus* Nikitsky, 1989

Phloeotrinus Nikitsky, 1989: 45.
Type species: *Serropalpus filiformis* Marseul, 1876.

Diagnosis: Pronotum a little wider than long, widest at basal 1/3 or near middle. Mesoventral process long, but not reaching metaventrite.

Species: 3 (2 in Korea).
Distribution: Korea, Japan, Tailand.

Subgenus *Phloeotrinops* Nikitsky, 1989: 46

Type species *Dircaea femoralis* Lewis, 1895.

25. *Phloeotrinus* (*Phloeotrinops*) *femoralis* (Lewis, 1895) (Pls. G18, M18, P18, S18)

Dircaea femoralis Lewis, 1895: 268.
Phloeotrinus femoralis: Nikitsky and Pollock, 2008: 71 (*Phloeotrinus jemoralis*; miss spelling); Jung, 2018b: 85.

Description: **Body** length 5.0−10 mm. Body elongate-oblong, parallel-sided, weakly narrowing anteriorly and posteriorly; strongly convex dorsally and weakly shiny; body color mostly brown; mouthparts, antennomeres 1−2 and legs yellowish brown; dorsum densely granulate; covered with decumbent, dense yellowish brown hairs. **Head** strongly hypognathous; with relatively long, decumbent, yellowish brown hairs; frons with entire medial sulcus to clypeal base; ocular distance almost equal to eye diameter; antennae relatively long, reaching basal 1/10 of pronotum; antennae filiform, antennomeres 3−11 cylindrical, each antennomere paralell-sided, longer than wide; third antennomere about 1.5 times longer than second; apical antennomere fusiform, gradually tapering apically; maxillary palpi long and serrate; apical maxillary palpomere securiform, about 1.4 times longer than third, about twice longer than wide. **Pronotum** widest at middle, gradually and roundly narrowing anteriorly and posteriorly; with midlongitudinal sulcus from base to an-

terior margin; pronotal base a little wider than elytral base; densely granulate; basal margin almost straight and carinate; with wide, shallow depression near posterior corners. Scutellum somewhat rectangular. **Elytra** strongly elongate and oblong, parallel-sided, weakly narrowing from apical 1/5 to apices; elytral base with grooves; with very weakly visible three or four striae on disc. **Legs** long; front legs shorter than middle and hind legs; femora flattened and wide-cylindrical; tibiae gradually widening apically; tibiae flattened, with short spurs at apex and serrate at outer margin; front tibiae with inequal spurs, inner spur longer than outer, mid and hind tibiae with equal spurs; mid tarsomeres 1−2 wide and flattened, third tarsomeres cylindrical; hind tarsomeres 1−3 simple and relatively slender, narrow-cylindrical; penultimate tarsomeres bilobed ventrally. **Procoxae** narrowly separated; prosternal process short and triangular, reaching coxal margin 1/5; mesocoxae narrowly separated; mesoventral proccess cylindrical, gradually and roundly tapering to apex, reaching coxal margin 1/5; metacoxae separated; metaventrite with midlongitudinal sulcus.

Secondary sexual characteristics: Male: front 2−4 tarsomeres wide-cylindrical, lobed, with dense setae ventrally. Femlae: front 2−4 tarsomeres narrow-cylindrical, not lobed, with moderate setae ventrally.

Specimens examined: **[JN]** 1♂, Han-jai, Mt. Baikun, Donggok-ri, Oklyeong-myeon, Gwangyang-si, 4−11.vii.2016, J.B. Seung (F.I.T.); 4♂5♀, Han-jai, Mt. Baikun, Donggok-ri, Oklyeong-myeon, Gwangyang-si, 12.vii−3.viii.2016, J.B. Seung (F.I.T.); 1♂1♀, Han-jai, Mt. Baikun, Donggok-ri, Oklyeong-myeon, Gwangyang-si, 3−16.viii.2016, J.B. Seung (F.I.T.).

Distribution: Korea, Japan.

Subgenus *Phloeotrinus* Nikitsky, 1989: 45

Type species *Serropalpus filiformis* Marseul, 1876.

26. *Phloeotrinus filiformis* (Marseul, 1876) (Pls. H19, M19, P19)

Serropalpus filiformis Marseul, 1876: 333.
Phloeotrinus filiformis: Hong and Lee, 2014: 224.

Description: **Body** length 12−15 mm. Body elongate-oblong, parallel-sided, narrowing anteriorly and posteriorly; strongly convex dorsally and weakly shiny; body mostly brownish black; antennae and legs reddish brown; dorsum covered with decumbent, short, dense and yellow hairs; coarsely, densely punctate and granulate. **Head** strongly hypognathous; ocular distance almost equal to eye diameter; antenna filiform, third antennomere about twice longer than second; antennomeres 3−11 cylindrical, longer than wide; api-

cal antennomere elongate-oval, tapering apically; frontoclypeal area with distinctly deep groove; maxillary palpi large and serrate; apical maxillary palpomere cultriform, transversely wide, roundly and weakly narrowing to apex. **Pronotum** longer than wide, widest at middle; pronotal base as wide as elytral base, tightly connected to it; with indistinct midlongitidunal sulcus from base to anterior margin; lateral side carinate from base to near anterior corner; basal margin almost straight and distinctly carinate; latero-basal part with distinct and wide depression. Scutellum clearly visible, somewhat tongue-shaped. **Elytra** elongate-oblong, parallel-sided, strongly narrowing from apical 1/5 to apices; distinctly striate-punctate; interstriae strongly convex, with dense punctures. **Legs** long; front legs shorter than middle and hind legs; femora flattened and wide-cylindrical; tibiae gradually widening apically; tibiae with two short spurs; tarsomeres squarely truncate at apex, with dense setae ventrally; mid tarsomeres 1−4 and hind tarsomeres 1−3 simple, relatively slender, narrowly cylindrical; front and mid penultimate tarsomeres bilobed ventrally. Procoxae very large, circular, not separated; prosternal process tiny and indistinct; mesocoxae narrowly separated; mesoventral process long, tapering apically; metacoxae widely separated; metaventrite with longitudinal sulcus.

Secondary sexual characteristics: Male: apical maxillary palpomere cultriform, strongly transverse; front tarsomeres 1−4 (especially tarsomeres 2−4) strongly widening and lobed, with dense setae ventrally. Female: apical maxillary palpomere cultriform, moderately transverse; front tarsomeres 1−4 narrowing and simple, with less dense setae ventrally.

Specimens examined: **[GW]** 1♀, Eulsu-valley, Seo-myeon, Yangyang-gun, 6.vi.2018, J.B. Seung (F.I.T.); **[GG]** 1♂, Yujeong-ri, Docheog-myeon, Gwangju-si, 22.vi.2018, J.B. Seung.

Distribution: Korea, Japan.

Remarks: This species is recorded for the first time from Korea in this study. It was mistakenly cited in the "National List of Species of Korea <Insect> (Coleoptera II)" (Hong and Lee, 2014), based on an unpublished paper (Eom, 2001, master's thesis). It is similar to *Serropalpus barbartus* (Schaller, 1783), but differs from that species in having depression in central base of pronotum and sharp apical elytra.

Genus *Serropalpus* Hellenius, 1786

Serropalpus Hellenius, 1786: 310.

Type species: *Serropalpus striatus* Hellenius, 1786 (= *Mordella barbata* Schaller, 1783).

Diagnosis: Eyes well visible from above. Antennae filiform. Maxillary palpi serrate, third palpomere transversely wide triangular, apical palpomere cultriform, not wider than third. Hind corners of pronotum indistinct, rounded to nearly square; lateral prontotal carina present; elytra strongly striate-punctae. Third metatarsomere slightly shorter than fourth, cylindrical. Mid coxae are divided by mesoventral process.

Metacoxae contiguous.

Species: over 2 (1 in Korea).

Distribution: Korea, Japan, Russia (Far East, East Siberia), Europe.

27. *Serropalpus barbatus* (Schaller, 1783) (Pls. H20, M20, P20)

Mordella barbatus Schaller, 1783: 322.

Serropalpus striatus Mellenius, 1786: 318.

Lymexylon biguttatus Schellenberg, 1802: 10.

Serropalpus niponicus Lewis, 1895: 263.

Serropalpus barbatus: Konô, 1930: 49; Cho, 1957: 57; Cho, 1968; ZSK, 1968: 114; Kim et al., 1994: 173; Kwon et al., 1996: 161; Eom and Park, 2001: 351; Nikitsky and Pollock, 2008: 71; Hong and Lee, 2014: 224.

Description: **Body** length 13−19 mm. Body elongate-oblong, parallel-sided and weakly narrowing anteriorly and posteriorly; strongly convex dorsally and weakly shiny; body color mostly brownish black; antennae brown, mouthparts and legs reddish black; dorsum covered with short, dense, decumbent, brownish yellow hairs. **Head** visible from above, with tiny and dense punctures; ocular distance almost equal to eye diameter; antennae filiform, long, reaching beyond basal margin of pronotum; antennomeres cylindrical, each antennomere longer than wide; third antennomere twice longer than second; apical antennomere narrow and long fusiform, gradually tapering apically; maxillary palpi large and serrate; apical maxillary palpomere cultriform, roundly and weakly tapering at apex, about 3.5 times longer than wide. **Pronotum** longer than wide, gradually and weakly narrowing from basal half to anterior corner; pronotal base as wide as elytral base, tightly connected to it; minutely and densely punctate; basal margin almost straight and distinctly beaded; subbasal part with distinct depressions. Scutellum somewhat semi-circular. **Elytra** strongly elongate, parallel-sided, weakly narrowing from apical 1/5 to apices; covering whole abdomen; distinctly striate-punctate; interstriae strongly convex, with dense punctures. **Legs** long; front legs shorter than middle and hind legs; femora flattened and wide-cylindrical; tibiae gradually widening apically; tibiae with short spurs; male front tarsomeres 1−4 wide-cylindrical (female tarsomeres 1−4 a little narrowing) and truncate squarely, with dense setae ventrally; mid tarsomeres 1−4 and hind tarsomeres 1−3 simple and relatively slender, narrow-cylindrical; front and mid penultimate tarsomeres bilobed.

Specimens examined: **[GW]** 1♂, Bangadari-yaksu, Jeogchen-ri, Jinbu-myeon, Pyeongchang-gun,

20.vi.2018, J.B. Seung.

Distribution: Korea, Japan, Russia (West Siberia, Far East), Asia, Nearctic Region, Europe.

Subfamily Melandryinae, incertae sedis

Remarks: The generic classification within Melandryinae is unsettled. A detailed phylogenetic analysis of the entire family is needed to clarify the relationships among the tribes and subfamilies (Pollock, 2002).

Genus *Hira* Hayashi, 1960

Hira Hayashi, 1960: 45.
Type species: *Hira humerosignata* Hayashi, 1960.

Diagnosis: Pronotal base is narrower than elytral base. Sternopleural suture is visible. Lateral margins of pronotum narrowing anteriorly and carinate posteriorly.

Species: 2 (1 in Korea).
Distribution: Korea, Japan.

28. *Hira suturalis* Nomura, 1962 (Pls. I21, M21, S21)

Hira suturalis Nomura, 1962: 42; Jung, 2018b: 85.

Description: **Body** length about 5.7 mm. Body elongate-oblong, parallel-sided; convex dorsally and shiny; body color mostly brown; antennomeres 1−3, maxillary pali, elytra (except for sutural line) yellowish brown; pronotum, lateral side and sutural line of elytra dark brown; dorsum covered with short, dense, decumbent yellowish white hairs. **Head** nearly invisible from above; ocular distance a little narrower than eye diameter; antennae relatively long, reaching to elytral base; filiform, each antennomere longer than wide; third antennomere about twice longer than second; apical antennomere oval, gradually narrowing apically; apical maxillary palpomere longer than third, securiform. **Pronotum** nearly trapezoidal, wider than long, widest at basal 1/4, gradually and weakly narrowing anteriorly; coarsely and densely punctate; basal margin weakly sinuous and strongly beaded; subbasal part with two very short, longitudinal, distinct depressions.

Elytra strongly elongate-oblong, parallel-sided, weakly narrowing from apical 1/5 to apices; with dense punctures and rugose; not striate-punctate. **Legs** long; front legs shorter than middle and especially hind legs; femora flattened and wide-cylindrical; tibiae gradually widening apically; tibiae with short and equal spurs. Procoxae very large, cylindrical, not separated; midcoxae separated by narrow, cylindrical, apically tapering mesoventral process; metacoxae narrowly separated.

Specimens examined: **[GW]** 1♂, Near Beupheung-sa, Suju-myeon, Yeongweol-gun, 21.v−5.vi.2015, J.B. Seung (F.I.T.); 1♀, Near Beupheung-sa, Suju-myeon, Yeongweol-gun, 3.viii.2015, J.B. Seung (F.I.T.); **[JN]** 1♀, Han-jai, Mt. Baikun, Donggok-ri, Oklyeong-myeon, Gwangyang-si, 20.vi−4.vii.2016, J.B. Seung (F.I.T.).

Distribution: Korea, Japan.

Family Tetratomidae Billberg, 1820

Tetratomaedes Billberg, 1820: 34.
Type genus: *Tetratoma* Fabricius, 1790.

Body length 2.0−17 mm. Body oblong to elongate, strongly convex to slightly flattened; body color brownish black to black, sometimes with orange or reddish markings; almost glabrous, with sparse to dense ducumbent setae. **Head** short, triangular, slightly deflexled; antennae with 11 antennomeres. clavate, or with apical 3−4 antennomeres forming a loose club; antennal insertions exposed or slightly concealed; eyes lateral, large, obovate, slightly to conspicuously emarginate near antennal insertions, narrowly (especially some Eustrophinae) to widely separated dorsally. **Pronotum** wider than head, subequal to basal witdth of elytra, subquadrate or narrowing anteriorly; anterior margins rounded; posterior margin straight or sinuate, laterally narrowing toward anteriorly; sides smoothy or crenulate. **Elytra** usually with confused punctuation. **Legs** with front trochantins usually visible; trochanters small, triangular, tibiae slender with distinct apical spurs; tarsal formula 5-5-4; tarsomeres slender, first tarsomere elongate; claws simple. **Abdomen** with five ventrites, sutures entire or inverted, with first two segment connate; procoxae transverse or oval, procoxal cavities open behind externally and open or closed internally; mesocoxae narrowly separated, mesoventrite short; metacoxae transverse and contiguous, metaventrite broad (Crowson, 1955, 1964; Lawrence, 1982; Young and Pollock, 2002).

Remarks: Tetratomids are most commonly found under fungus-grown bark and in softer shelf fungi, where adults tend to browse primarily on the surface while larvae bore into the tissues. Adults are commonly encounterd on fungi (Nikitsky and Lawrence, 1992; Young and Pollock, 2002).

Distribution: Worldwide (except the Australian Region).

Key to the Korean subfamilies of Tetratomidae

1. Antennae serrate or more or less moniliform, without distinct apical club ····· Hallomeninae
− Antennae clavate, with distinct apical club ····· 2
2. Apical 3−7 antennomeres enlarged ····· Eustrophinae
− Apical 3−4 antennomeres enlarged ····· 3
3. Apical 3 antennomeres enlarged, forming club ····· Piseninae
− Apical 4 antennomeres enlarged, forming a club, although seventh antennomere fairly broadened ····· Tetratominae

Subfamily Eustrophinae Gistel, 1856

Eustrophidae Gistel, 1848: [10].
Type genus: *Eustrophus* Illiger, 1802.

Body relatively narrow or oblong-oval, usually much less than 9 mm long, Third antennomeres usually much shorter, apical antennomeres (9−11) distinctly wider than antennomeres 3−4. Each elytron with fewer than 11 rows of punctures.

Tribe Holostrophini Nikitsky, 1998

Holostrophini Nikitsky, 1998: 39.
Type genus: *Holostrophus* G. H. Horn, 1888.

Diagnosis: Body shape elliptical. Prosternal process widening apically, separating procoxae; elytral punctation fine, not forming striae.

Genera 2 (1 in Korea), 8 species (2 in Korea).
Distribution: Asia, Oriental region.

Genus *Holostrophus* Horn, 1888

Holostrophus Horn, 1888: 36.
Type species: *Eustrophus bifasciatus* Say, 1824.

Diagnosis: Eyes distinctly emarginate, ocular distance slightly narrower than transverse ocular diameter; prosternal process longer, protruding behind posterior edge of procoxa.

Species: 7 (2 in Korea).
Distribution: Asia, Oriental region.

Key to the Korean species of *Holostrophus*

1. Elytron with two bands at basal and apical parts····· *H. diversefasciatus* Pic
− Elytron with four bands at basal, middle, subapical and apical parts····· *H. orientalis* Lewis

29. *Holostrophus diversefasciatus* Pic, 1921 (Pls. I22, M22)

Holostrophus diversefasciatus Pic, 1921: 1; Jung, 2011: 125; Hong and Lee, 2014: 223.
Holostrophus katoi Nomura, 1959: 42.

Description: **Body** length 4.5−5.0 mm. Body elliptical, elongate-oval, convex, weakly glossy; with dense punctures, with decumbent and yellowish brown pubescence; body color mostly black, antennae, antero-lateral margins of pronotum, bands of elytra, ventral side of body and legs yellowish brown. **Head** hypognathous, barely visible dorsally; eyes emarginate, reaching antennal fossae; antennae relatively short, not reaching basal margin of pronotum, widening from antennomere 7 to apex; apical antennomere elongate triangular, tapering to apex; fourth maxillary palpomere subsecuriform. **Pronotum** triangular; with distinct lateral carinae; lateral sides abruptly narrowing anteriad; basal margin sinuous, with short longitudinal sulcus on subbasal part. **Elytra** convex, distinctly tapering apically; not striate-punctate; with two yellowish brown bands; anterior band near humerus; posterior band at subapical part. **Legs** slender; tibiae with two spurs; tarsomere 1 longer than 2−3 tarsomeres combined.

Specimens examined: **[GW]** 1ex., Beopheung-ri, Suju-myeon, Yeongweol-gun, 21.v−5.vi.2015, J.B. Seung (F.I.T.); 1ex., Jangneung, Yeongweol-gun, 21.v−5.vi.2015, J.B. Seung (F.I.T.); 1ex., Beopheung-ri, Suju-myeon, Yeongweol-gun, 2.vii.2015, J.B. Seung (F.I.T.); **[GG]** 1ex., Okhyeon-ri, Jije-myeon, Yangpyeo-

ng-gun, 14.v.2007, B.H. Jung *ex Coriolus versicolor*; 2exs., Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 21.v−5.vii.2015, J.B. Seung and B.H. Jung (F.I.T.); 1ex., Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 20.vii.2015, J.B. Seung and B.H. Jung (F.I.T.).

Distribution: Korea, Russia (Far East), Japan, China (Northeast Territory).

30. *Holostrophus orientalis* Lewis, 1895 (Pls. I23, N23, S23)

Holostrophus orientalis Lewis, 1895: 259; Nikitsky, 2008: 63; Jung, 2011: 125; Hong and Lee, 2014: 223.

Description: **Body** length 4.5−6.8 mm. Body elliptical, elongate-oval, convex, weakly glossy; with short, decumbent and golden hairs; body color mostly black; head reddish brown; antennomeres 1−4, apical part of head, mouthparts and bands of elytra yellowish brown. **Head** hypognathous; eyes emarginate; antennae widening from antennomere 7 to apex; apical antennomere elongate triangular; apical (4^{th}) maxillary palpomere triangular. **Pronotum** triangular, with fine, dense punctures; with distinct lateral carinae; lateral margins slightly beaded, not visible dorsally; basal margin sinuous, with short longitudinal sulcus on subbasal part. **Elytra** not punctate-striate; with reddish brown band at basal part, divided into two round dusky spots on basal edge; one spot placed near humeral angle, other band bidentate, placed near lateral sides; irregular reddish spot at middle; simple band extended at subapical and apical parts. **Legs** slender; tibiae with two spurs at apex.

Specimens examined: **[GW]** 1ex., Odae-san (Mt.), near Weoljeong-sa, Jinbu-myeon, Pyeongchang-gun, 30.viii.2014, J.B. Seung; 1ex., Beopheung-ri, Suju-myeon, Yeongweol-gun, 21.v−5.vi.2015, J.B. Seung (F.I.T.); 1ex., Jangneung, Yeongweol-gun, 21.v−5.vi.2015, J.B. Seung (F.I.T.); 1ex., Deukgu-ri, Sangdong-myeon, Yeongweol-gun, 21.v−5.vi.2015, J.B. Seung (F.I.T.); **[GG]**: 1ex., Saneum Hyuyangrim, Yanpyeong-gun, 13.x.2006, B.H. Jung *ex Oligophorous* sp.; 1ex., Mt. Jungmi-san, Yanpyeong-gun, 3.x. 2006, B.H. Jung *ex Oligophours* sp.; 2ex., Wongok-dong, Ansan-si, 12.v.2006, B.H. Jung *ex Coriolus versicolor*; 1ex., Mt. Mugap-san, Toechon-ri, Gwangju-gun, 27.v.2006, B.H. Jung *ex Bjerkandera adusta*; 1ex., Iseongsanseong, Hanam-si, 1.vii.2006, B.H. Jung *ex mycelia*; 1ex., Mt. Mani-san, Hwado-myeon, Gangwha-gun, 8.viii.2009, B.H. Jung *ex Laetiporus sulphureus*; 1ex., Bijo-bong, Deokjeok-myeon, Deokjeok island, Ongjin-gun, Incheon-si, 24.x.2009, B.H. Jung and A.Y. Kim ex rotten wood; 1ex., Namhansanseong, Eunhaeng-dong, Seongnam-si, 27.vi.2013, Y.B. Lee; 1ex., Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 20.vii.2015, J.B. Seung and B.H. Jung (F.I.T.); **[GB]** 1ex., Chisan-ri, Sinnyeong-myeon, Yeongcheon-si, 12.vi−14.vii.2014, J.W. Lee; **[JJ]** 1ex., Mt. Halla, Seongpanak, Jeju-si, 24.vi.2012, J.B. Seung; 1ex., Hwasun Gotzawal, Seogwipo-si, 11.vi.2016, J.B. Seung and B.H. Jung; 1ex., Gyorae Natural Recreation Forest, Gyorae-ri, Jocheon-eup, Jeju-si, 23.vii.2016, J.B. Seung and B.H. Jung.

Distribution: Korea, Japan, China, Taiwan.

Host fungi: *Oligophours* sp., *Coriolus versicolor* (L.: Fr.) Quél., *Bjerkandera adusta* (Fr.) Karst., *Laetiporus sulphureus* (Fr.) Murr., and Mycelia.

Remarks: *Holostrophus* (*Paraholostrophus*) *orientalis* is obligatory fungal inhabitant (mycetobiont). Thus, it selects the host fungi according to biological characteristics of the fungus, such as longevity of the fruiting body and rot type. This species inhabits the fruiting bodies of Polyporaceae (e.g. *Bjerkandera*, *Coriolus*, *Laetiporus*), which are lignicolous and long-lived (Jung, 2011).

Subfamily Hallomeninae Gistel, 1848

Hallomenidae Gistel, 1848: [11]. Type genus: *Hallomenus* Panzer, 1793.
Dryalates Mulsant, 1856b: 44. Type genus: *Dryala* Mulsant, 1856.
Mycétomiens Mulsant, 1856b: 103. Type genus: *Mycetoma* Dejean, 1834.

Genus *Hallomenus* Panzer, 1793

Hallomenus Panzer, 1793: 17.
Type species: *Hallomenus humeralis* Panzer, 1793 (= *Chrysomela binotata* Quensel, 1790).

Diagnosis: Eyes deeply emarginate, but margins not close to antennal fossae; antennomeres 3−10 moniliform or serrate, without distinct club; apical maxillary palpomere elongate, fusiform or very slightly expanded; prosternal process elongate, separating coxae, curved dorsally at apex; tibial spurs very short.

Species: 8 (1 in Korea).

Distribution: Asia, Europe.

Subgenus *Xeuxes* Champion, 1889

Xeuxes Champion, 1889: 85. Type species *Xeuxes brevicollis* Champion, 1889.
Parahallomenus Nomura & Katô, 1958: 1. Type species *Hallomenus tokejii* Nomura & Katô, 1958.

31. *Hallomenus* (*Xeuxes*) *tokejii* Nomura & Katô, 1958 (Pls. I24, N24)

Hallomenus (*Xeuxes*) *tokejii* Nomura & Katô, 1958: 1; Jung, 2017: 58.

Description: **Body** length about 5.8 mm. Body elongate and oblong-oval, subparallel-sided and narrowing anteriorly and posteriorly; weakly convex dorsally and shiny; body color mostly black; antenna, mouthpart, legs, prosternum, middle of meso- and metaventrite, ventrites yellowish brown; dorsum covered with long, recumbent, yellowish brown hairs. **Head** visible from above; finely, moderately and rather sparsely punctate; eyes large, slightly protruding laterally, coarsely faceted; ocular distance narrower than eye diameter; antennae strongly and broadly serrate and relatively short, almost reaching pronotal base; antennal insertions completely visible; third antennomere about three times longer than second; antennomeres 4−10 strongly serrate, each antennomere triangular, sharply protruded inward, nearly as long as wide, obliquely truncate at apex; apical antennomere fusiform, narrowing apically, about 1.8 times longer than wide; maxillary palpi small, apical maxillary palpomere cylindrical, parallel-sided, about twice longer than wide, obliquely truncate at apex. **Pronotum** almost trapezoidal, wider than long, subparallel-sided, widest at basal 1/3, weakly and roundly narrowing anteriorly; pronotal base a little narrower than elytral base; weakly convex dorsally; with large, regular punctures and weakly rugose; basal margin weakly bisinuate and carinate; baso-lateral part with two deep, triangular grooves; with midlongitudinal shallow groove from base to near anterior margin; posterior corners not sharply produced and round at apex. Scutellum somewhat pentagonal. **Elytra** oblong, parallel-sided, very weakly widening at middle, weakly and roundly narrowing from apical 1/10 to apex; weakly convex; finely, sparsely and regularly punctate; with 7−8 conspicuous striate on each elytron, costae diminished near base and apex; interstriae weakly convex. **Legs** slender and long; front legs shorter than middle and especially hind legs; femora flattened and wide-cylindrical; tibiae cylindrical and gradually enlarged apically; tibial spurs short; middle and hind tarsomeres simple, cylindrical and not lobed ventrally; first tarsomeres longer than second; penultimate tarsomeres simple, not bilobed ventrally; hind first tarsomere much shorter than three preceding combined; tarsal claws narrow and simple, with distinct basal tooth.

Specimens examined: **[JN]**: 1♀, Jeongnyeongchi, Jucheon-myeon, Namweon-si, Jeonllabuk-do, 13.vii.2016, B.H. Jung, under the bark with mycelina.

Distribution: Korea, Japan, Russia (Far East).

Remarks: This species differs from the other *Hallomenus* species in the large eyes and the serrated antennae.

Subfamily Piseninae Miyatake, 1960

Pisenini Miyatake, 1960: 124.
Type genus: *Pisenus* Casey, 1900.

Genus *Pisenus* Casey, 1900

Pisenus Casey, 1900: 167.
Type species: *Cryptophagus humeralis* Kirby, 1837.

Diagnosis: Eyes emarginate anteriorly, usually strongly transverse; apical three (8−11) antennomeres abruptly and strongly dilated, forming a loose club, covered with unevenly long hairs; hind wings with closed anal cell (Miyatake, 1960).

Species: 4 (2 in Korea).
Distribution: Korea, Japan, Russia (Far East), Taiwan.

Key to the species of Korean *Pisenus*

1. Body elongate-oval and moderately convex; antennae submoniliform, widening from 6th to 8th antennomeres (Miyatake, 1960) ····· *P. chujoi* Miyatake
− Body cylindrical, strongly convex; antennae submoniliform, widening from 4th to 8th antennomeres····· ····· *P. insignis* (Reitter)

32. *Pisenus chujoi* Miyatake, 1960

Pisenus chujoi Miyatake, 1960: 129; Kim and Kim, 1996: 121; Nikitsky, 1998: 28; Kim, 2002: 230; Jung, 2011: 125; Hong and Lee, 2014: 223.

Specimens examined: None.
Distribution: Korea (?), Japan, Russia (Far East).
Remarks: *Pisenus chujoi* Miyatake was reported from the Korean fauna for the first time by Kim and Kim (1996), and also was cited in the list of Korean Coleoptera by Kim (2002). This species is not examined because no specimens have been deposited in the collection referred in the literature. No exact evidence and

information about specimens have been presented in Kim and Kim (1996). Thus this species has never been checked and collected in the field. Accordingly, it was not reported from Korea by Jung (2011).

33. *Pisenus insignis* (Reitter, 1889) (Pls. J25, S25)

Pseudotryphyllus insignis Reitter, 1889: 245.
Pisenus insignis: Miyatake, 1960: 121; Jung, 2011: 125; Hong and Lee, 2014: 223.

Description: **Body** length 2.5−3.5 mm, width 2.5−1.9 mm. Body elongate-oval, strongly convex, glossy; with short, fine and subdecumbent yellowish hairs; body color mostly black; antennae, mouth-parts, elytra (except bands) and legs reddish brown. **Head** with coarse, large and dense punctures; antennae clavate, widening from antennomere 8 to apex; apical maxillary palpomere cylindrical. **Pronotum** convex; with sparse, strong and large punctures; pronotal base slightly narrower than basal elytra; almost parallel-sided, lateral sides roundly narrowing anteriad and posteriad; basal margin slightly sinuous. **Elytra** not striate-punctate; convex, with sparse and strong punctures; elytra variable in color; typical form unicolored reddish brown; varieties usually with triangular patch on and around scutellum, and black transverse band at middle and apex; or sometimes scutellar patch extended posteriad and connected with median band.

Specimens examined: **[GW]**: 10♂10♀, Near Weoljeong-sa (Temple), Mt. Odae, Jinbu-myeon, Pyeongchang-gun, 2.vi.2007, B.H. Jung *ex Heterobasidion*; **[GS]**: 2♂3♀, Mt. Yumyeong, Gail-ri, Seolak-myeon, Gapyeong-gun, 22.iv.2007, B.H. Jung *ex Heterobasidion insularis*; 2♀, Mt. Yumyeong, Gail-ri, Seolak-myeon, Gapyeong-gun, 22.iv.2007, B.H. Jung *ex Coriolus versicolor*; 2♀, Mt. Yumyeong, Gail-ri, Seolak-myeon, Gapyeong-gun, 22.iv.2009, B.H. Jung *ex Heterobasidion insularis*.

Distribution: Korea, Japan, Russia (Far East).

Host fungi: *Heterobasidion insularis* (Murr.) Ryv., *Coriolus versicolor* (L.: Fr.) Quél., *Daedaleopsis tricolor* (Bull.: Fr.) Bond. et Sing.

Remarks: *Pisenus insignis* (Reitter) is obligatory fungal inhabitant (mycetobiont). It inhabits the fruiting bodies of Polyporaceae (e. g. *Heterobasidion*, *Coriolus*, *Daedaleopsis*), which are lignicolous and long-lived. The host fungi of this species are also thick enough to feed and breed in the fruiting body, with thickness ranging from 1.0 to 8.0 mm. This species is polyphagous, and quite common in the most decayed fruiting bodies.

Subfamily Tetratominae Billberg, 1820

Tetratomaedes Billberg, 1820: 34.
Type genus: *Tetratoma* Fabricius, 1790.

Genus *Tetratoma* Fabricius, 1790

Tetratoma Fabricius, 1790: 217.
Type species: *Tetratoma fungorum* Fabricius, 1790.

Diagnosis: Apical 4 antennomeres strongly widening, forming loose or compact club, though seventh antennomere can be fairly strongly widening; elytra with confused punctuation; spurs of metatibiae short (Miyatake, 1960; Nikitsky, 1998).

Species: 18 (1 in Korea).
Distribution: Asia, Europe.

Subgenus *Abstrulia* Casey, 1900

Abstrulia Casey, 1900: 167.
Type species: *Tetratoma tessellata* Melsheimer, 1844.

34. *Tetratoma* (*Abstrulia*) *ainu* (Nakane, 1963) (Pls. J26, N26, S26)

Abstrulia ainu Nakane, 1963b: 30; Jung, 2017: 58.

Description: **Body** length 3.0−3.5 mm. Body elongate-oval, strongly convex, strongly metallically shining and glabrous; with distinct, decumbent, short pubescence; body mostly black; antennomeres 1−5, pronotal margins, mouthparts, elytral markings, legs reddish brown; antennomeres 6−11 brown. **Head** weakly flattened; with dense, fine punctures; ocular distance about twice wider than eye diameter; clypeus shallowly depressed; antennae rather short, reaching pronotal base; antenna submoniliform, antennomeres 8−11 shorter than or nearly equal to all preceding ones combined; antennomeres 8−11 strongly enlarged, forming

loose club, though seventh antennomere moderately broadened; third antennomere almost equal to second and about 1.3 times longer than fourth; apical antennomere nearly fusiform, gradually narrowing to apex, about 1.4 times longer than wide. **Pronotum** convex, transverse rectangular, about 1.3 times wider than long, subparallel-sided, widest at middle and weakly narrow anteriorly and posteriorly; with strong and large punctures; pronotal base slightly narrower than elytral base; lateral side serrate, explanate, flattened, weakly reflexed and slightly raised up, strongly beaded; basal margin slightly sinuous in front of scutellum, slightly produced medially, strongly beaded; strongly depressed prebasally in middle; with two deep, well-developed midlateral basal fovea. **Elytra** oblong-oval; parallel-sided, gradually and roundly narrowing from apical 1/5 to apices; not striate-punctate; convex, with large, coarse and strong punctures; elytral markings variable; broad longitudinal markings behind scutellum and along basal 3/5 of sutural line; transverse and dentate markings at basal 2/5; L-shaped markings near apices. **Legs** slender and simple; femora swollen; tibiae slender, enlarged apically; tarsal formula 5-5-4; front and middle tarsomeres 2−4 and hind tarsomeres 2−3 lobed ventrally; first hind tarsomere about 1.2 times shorter than proceeding tarsomeres combined.

Specimens examined: **[GW]** 2♂3♀, Near Beopheung-sa, Suju-myeon, Mureung-ri, 3.viii.2015, J.B. Seung; 1♂3♀, Near Beopheung-sa, Suju-myeon, Mureung-ri, 15−30.viii.2015, J.B. Seung (F.I.T.); **[GG]**: 1♂, Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 25.v−10.vi.2015, B.H. Jung and J.B. Seung (F.I.T.); **[JN]** 1♀, Hanjae, Baegun-san, Ongnyong-myeon, Donggok-ri, Gwangyang-gun, 31.v.2015, S.S. Kim.

Distribution: Korea, Japan, Russia (Far East; S. Sakhalin, S. Kuril Is.).

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PLATES

PLATES

A−J: Adults of Korean Melandryidae, Tetratomidae (**a: dorsal, b: ventral; c: female**)
K−N: Antennae of Korean Melandryidae, Tetratomidae
O−P: Maxillary palpi of Korean Melandryidae
Q−S: Aedeagus of Korean Melandryidae, Tetratomidae (Each scale bar=0.1 mm; Male genitalia)

Family Melandryidae Leach, 1815

1. *Dircaea erotyloides* Lewis, 1895
2. *Dircaea quadriguttata* (Paykull, 1798)
3. *Dircaea ussuriensis* Nikitsky, 1985
4. *Paradircaea dentatomaculata* (Lewis, 1895)
5. *Phloiotrya* (*Phloiotrya*) *obscura* (Lewis, 1895)
6. *Phloiotrya* (*Phloiotrya*) *rugicollis* Marseul, 1876
7. *Melandrya* (*Emmesa*) *karafutona* Kôno, 1930
8. *Melandrya* (*Melandrya*) *modesta* Lewis, 1895
9. *Melandrya* (*Melandrya*) *mongolica* Solsky, 1871
10. *Melandrya* (*Paramelandrya*) *dubia* (Schaller, 1783)
11. *Phryganophilus* (*Phryganophilus*) *ruficollis* (Fabricius, 1798)
12. *Orchesia* (*Clinocara*) *elegantula* Lewis, 1895
13. *Orchesia* (*Clinocara*) *imitans* Lewis, 1895
14. *Orchesia* (*Orchesia*) *ocularis* Lewis, 1895
15. *Enchodes crepusculus* (Lewis, 1895)
16. *Mikadonius gracilis* Lewis, 1895
17. *Mikadonius japonicus* Hayashi, 1960
18. *Phloeotrinus* (*Phloeotrinops*) *femoralis* (Lewis, 1895)
19. *Phloeotrinus filiformis* (Marseul, 1876)
20. *Serropalpus barbatus* (Schaller, 1783)
21. *Hira suturalis* Nomura, 1962

Family Tetratomidae Billberg, 1820

22. *Holostrophus diversefasciatus* Pic, 1921
23. *Holostrophus orientalis* Lewis, 1895
24. *Hallomenus* (*Xeuxes*) *tokejii* Nomura & Katô, 1958
25. *Pisenus insignis* (Reitter, 1889)
26. *Tetratoma* (*Abstrulia*) *ainu* (Nakane, 1963)

PLATE A

1a

1b

2a

2b

PLATE B

3a

3b

4a

4b

PLATE C

6a

6b

5

7

PLATE D

8

10

9a

9b

PLATE E

11

12

13

14

PLATE F

15a

15b

16

17a

PLATE G

17b

18a

18b

18c

PLATE H

19a

19b

20a

20b

PLATE I

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22

23

24

PLATE J

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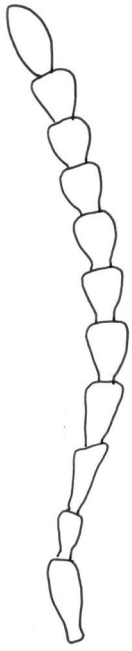
26

PLATE K

1



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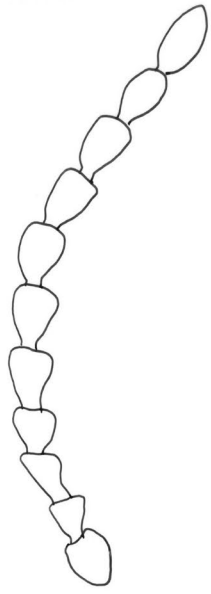

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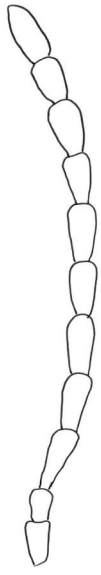

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PLATE L

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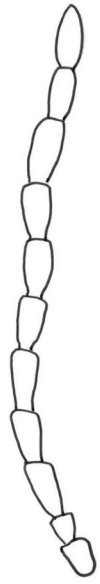

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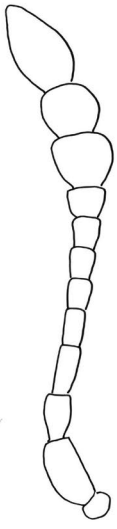

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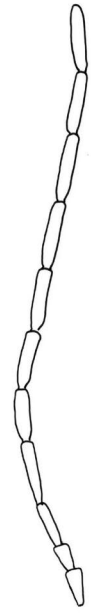

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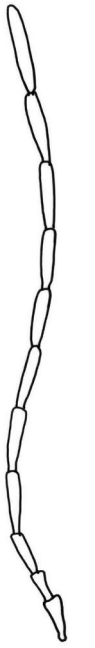

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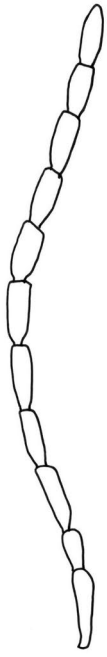

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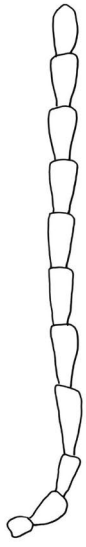

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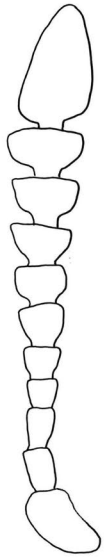
PLATE N



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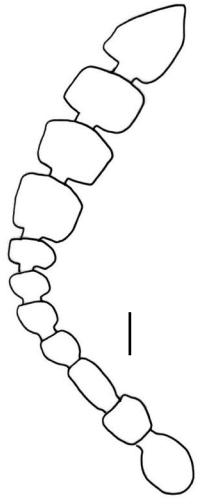

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PLATE O

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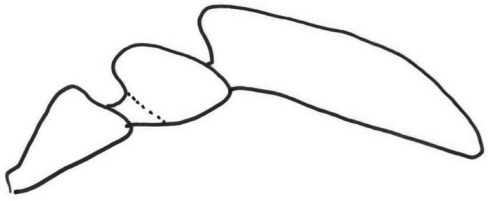

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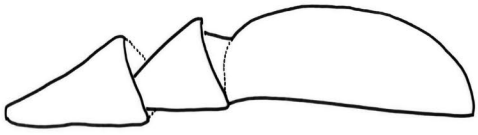

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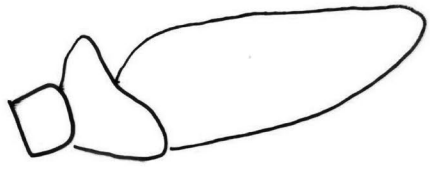

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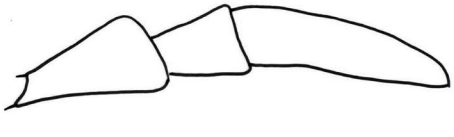

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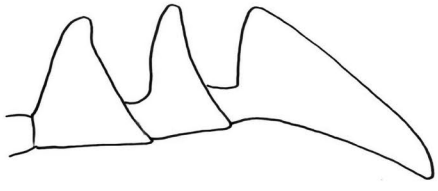

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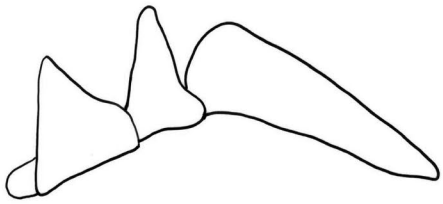

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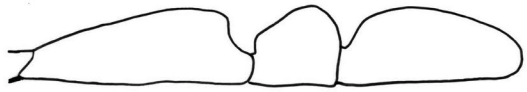

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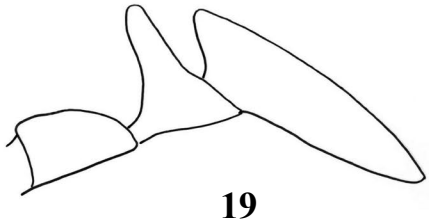

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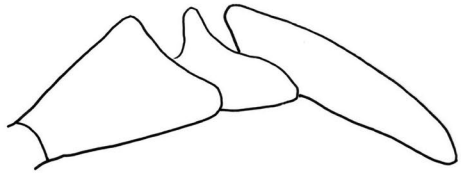

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PLATE Q

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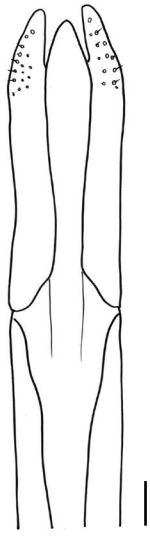

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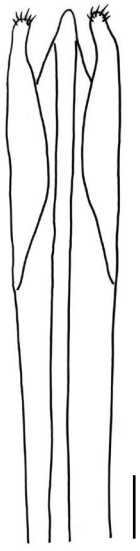

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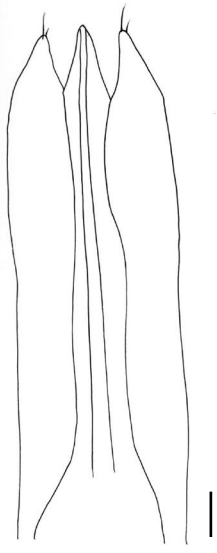

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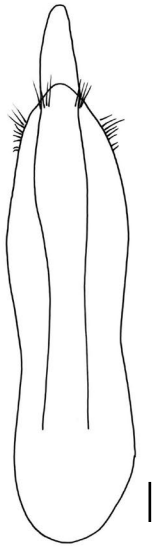

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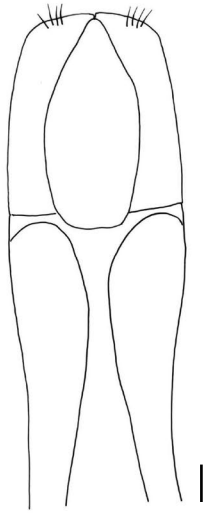

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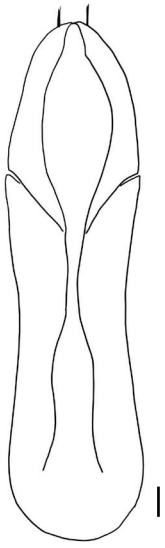

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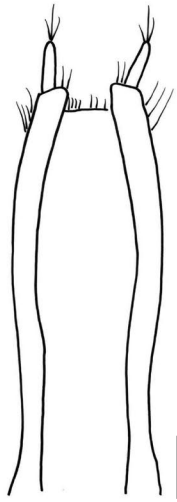

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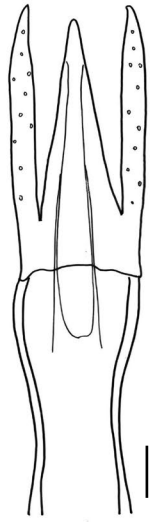

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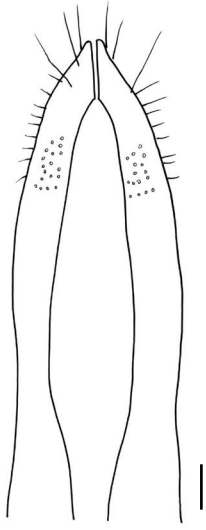

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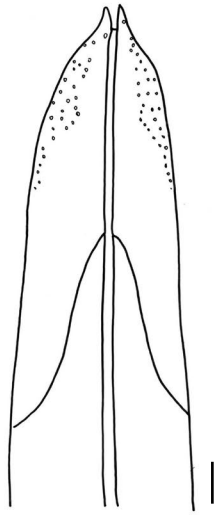

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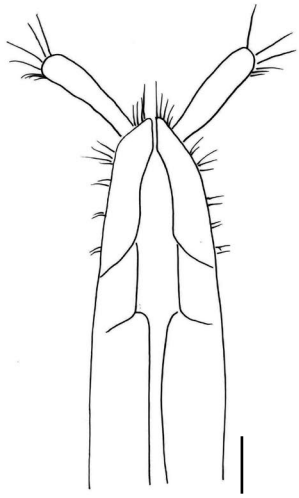

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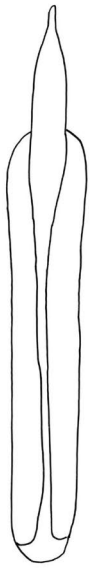

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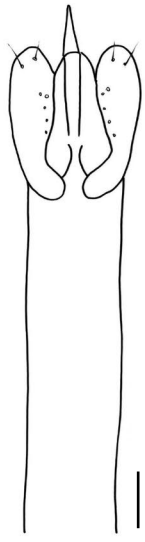

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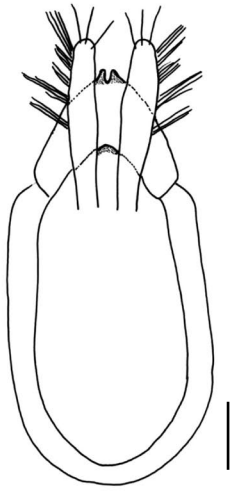

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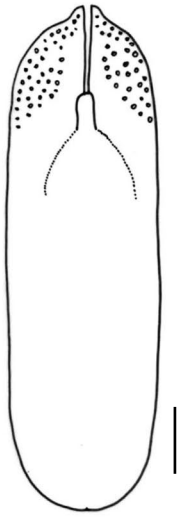

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