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Erotylidae

Arthropoda: Insecta: Coleoptera: Cucujoidea: Erotylidae

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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

The biological resources include all the composition of organisms and genetic resources which possess the practical and potential values essential to human live. Biological resources will be firmed competition of the nation because they will be used as fundamental sources to make highly valued products such as new lines or varieties of biological organisms, new material, and drugs. As the Nagoya Protocol was adopted in 2010 and entered into force in the 12th Conference of Parties of the Convention on Biological Diversity (CBD) in 2014, it is expected that the competition to get biological resources will be much intensive under the rapidly changed circumstance on the access and benefic sharing of the genetic resources (ABS). To cope with a new international paradigm on all kinds of issues related to biological resources, the Ministry of Environment of Korea enforced a new law called 'An act on access and benefit sharing of genetic resources' on August 17th, 2017.

Each nation in the world is investigating and clearing information of native species within its territory in order to secure its sovereignty rights over biological resources. The National Institute of Biological Resources (NIBR) of the Ministry of Environment has published the 'Flora and Fauna of Korea' since 2006 to manage biological resources in comprehensive ways and to enhance national competitiveness by building up the foundation for the sovereignty over biological resources. Professional research groups consisting of professors and related experts of taxonomy examined systematically a total of 14,336 species for the past eight years to publish 173 volumes in both Korean and English versions, and two volumes of World Monograph covering 216 species of invertebrates. This year, 13 volumes of the Flora and Fauna of Korea in both Korean and English versions including 1,407 species of invertebrates, insects and vascular plants are additionally published. Flora and Fauna of Korea are the first professional records to describe all the species of the nation in a comprehensive way, and they would contribute to level up the taxonomic capacity.

The NIBR will continue to publish flora and fauna of Korea that will contribute conservation and application of biological resources for successful implementation of the ABS protocol. Finally, I would like to express my sincere appreciation to authors who spared no effort to publish *the Flora and Fauna of Korea*.

President
of the National Institute of Biological Resources

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INTRODUCTION

The cosmopolitan family Erotylidae (pleasing fungus beetles) is assigned to the superfamily Cucujoidea (Clavicornia) of the Coleoptera-Cucujiformia. The family Erotylidae (combined with Languriidae and partly Cryptophagidae) comprises about 3,500 described species in approximately 258 genera worldwide (Leschen, 2003). Most species occur in tropical and subtropical regions (Drilling *et al*., 2010).

The family Erotylidae, which originally included the large-bodied, colourful, and plant-feeding members of Languriidae (Crotch 1876; Gorham 1887; Fowler 1908), was considered separate from languriids by Crotch (1873a) and this classification was followed by others (Arrow 1925; Crowson 1952; Schenkling 1923, 1928; Sen Gupta & Crowson 1971; Lawrence & Newton 1982, 1995; Pakaluk *et al*., 1995). These two families were separated largely on the basis of different biologies (Lewis, 1884), with Erotylidae being mycophagous and Languriidae being phytophagous (Leschen, 2003).

Leschen (2003) proposed a new classification of the family Erotylidae, based on current morphological and molecular studies on the phylogeny. In his study, Erotylinae (= Erotylidae in the old, limited sense) stands beside five other subfamilies (together with the former Languriidae); subfamilies of the former Erotylidae are now ranked as tribes of Erotylinae.

There are currently recognized six subfamilies (Table 1): Xenoscelinae (7 genera), Pharaxonothinae (5 genera), Loberinae (6 genera), Languriinae (72 genera), Cryptophilinae (13 genera), and Erotylinae (5 tribes) (Leschen, 2003).

Table 1 Classification of Languriidae and Erotylidae

Sen Gupta & Crowson (1971)	**Leschen (2003)**
Languriidae	Erotylidae
Cryptophilinae	Cryptophilinae
Cryptophilini	Cryptophilini
Xenoscelinini	Empocryptini
Languriinae	Toramini
Cladoxenini	Languriinae
Languriini	Thallisellini
Thallisellini	Languriini
Setariolinae	Hapalipini
Toraminae	Xenoscelinae
Xenoscelinae	Pharaxonothinae
Loberonothini	Loberinae
Pharaxonothini	Erotylinae
Loberini	
Xenoscelini	
Erotylidae	

Most species are striking in appearance, exhibiting bright colours including red, yellow, orange, pink and purple, frequently in combination with contrasting black to form conspicuous patterns of stripes, zigzags, bands, speckles, spots or rings (Robertson *et al*., 2004). Body oval to elongate-elliptical, often glabrous, 2–25 mm long. Apical maxillary palpomere is very wide and apical 3–4 antennomeres are forming a club. Tarsal formula is 5–5–5 and the procoxal cavity is closed behind (Chûjô, 1969; Skelley, 1988).

Members of the subfamily Languriinae are phytophagous. Larvae and adults of the subfamily Erotylinae are mycophagous, associated with various macrofungi (e.g. Polyporales) including Basidiomycetes and related higher fungi and (Leschen, 2003; Robertson *et al*., 2004). Most species exhibit specific preference for special fungi (Chûjô, 1969; Skelley, 1988).

Heyden (1887) first reported one species of Erotylinae, *Megalodacne morawitzi* (Solsky) [currently *Episcapha morawitzi morawitzi* (Solsky)] from Korea. Schönfeldt (1887) also recorded *Episcapha morawitzi morawitzi* under the name *Episcapha taishoensis*. Two species, *Aulacochilus japonicus* Crotch and *Aulacochilus decoratus* Reitter, were reported by Miwa (1929). Later, Japanese researchers (1933–1949) added five species. Korean erotylids were frequently recorded from 1950 to 1980, several researchers (Cho, Delkeskamp, Nakane, Chûjô, Lee *et al*., Woo and Cho) reported seven species.

During the 1990s, taxonomic studies with faunistic data to Korean Erotylidae were conducted: Chûjô and Lee (1992, 1994), Chûjô *et al*. (1993), from Mt Jiri and Mt. Halla etc.; Kim *et al*. (1994, checklist of Korean insects), Kwon *et al*. (1996). In addition, the Korean Erotylidae was taxonomically reviewed by Choi (1992) in the master's course. In 2015, Jung carried out taxonomic review of Korean *Tritoma* and *Triplax* with host fungi.

MATERIAL AND METHODS

The erotylid materials examined in this study are deposited in the Jung's Insect Collection (majority of the specimens), Sungshin Women's University Insect Collection and National Academy of Agricultural Science, Jeonju. Other specimens collected through national surveys or projects by the Ministry of Environment of Korea are mainly deposited in the National Institute of Biological Resources in Incheon, Korea.

Materials for this study were collected from March to November of 2005–2016 from rotten wood and on macrofungi including Basidiomycetes, which are the most commonly used food source of fungivorous erotylids. The host fungi were identified based on Breitenbach and Kränzlin (1986) and Lee (1988).

The morphological terminology follows Chûjô (1969), Choi's (1992) master's thesis and other major monographs. References regarding higher taxa (subfamilies) consulted Wegrzynowicz (2007) and Bouchard *et al*. (2011), and genera and species are arranged alphabetically adopted from Wegrzynowicz (2007).

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. Some taxa known only from North Korea are not included in the identification keys. The world distribution (Palaearctic region) was arranged by countries or zoogeographical regions, i.e. Korea, China, Asia, Oriental Region, Palaearctic Region, Afrotropical Region etc.

The abbreviations used in this study are as follows: GW (Gangweon-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 previous erotylid works (Choi, 1992; Jung, 2015a, b). Thanks are gratefully due to my son, J.B. Seung (Seoul National University, Insect Biosystematics Lab.), who collected many specimens and photographed habituses for this study.

TAXONOMIC NOTES

Phylum Arthropoda von Siebold, 1848

Class Insecta Linnaeus, 1758

Order Coleoptera Linnaeus, 1758

Superfamily Cucujoidea Latreille, 1802

Family Erotylidae Latreille, 1802

Erotylinae Latreille, 1802: 233.

Genera: over 258 (17 in Korea), species over 3,500 (41 in Korea).

Subfamily Languriinae Hope, 1840

Languriidae Hope, 1840: 190.

Type genus: *Languria* Latreille, 1802.

DIAGNOSIS: Body strongly elongated, parallel-sided, moderately flattened or relatively convex; usually glabrous or often pubescent; colour various, bright metallic, black to yellow, often with contrasting markings. Head with mainly glandular ducts; usually with stridulatory file; transverse line absent on vertex; antennal grooves absent; antenna clavate, last antennomeres forming a loose club, antennomeres symmetrical or not; subapical serrations of mandible absent; apical labial palpomere not securiform, greatly wider than or equal to long. Elytra is completely covering abdomen; elytral punctation striate (confused in some *Penolanguria*) with scutellary striole present or absent; epipleuron distinct to apex. Tarsomere 1 usually equal to, or sometimes longer than, tarsomere 2 (longer than tarsomeres 2 and 3 in *Languria*); tarsomere 4 reduced and hidden in ventral view; tarsal formula 5–5–5 in both sexes; procoxal cavities externally open or closed; internally open or closed; abdominal ventrite 1 equal to length of remaining ventrites (Leschen and Skelley, 2002; Wegrzynowicz, 2002, Leschen, 2003).

Genera: 16 (2 in Korea), species over 131 (9 in Korea).

Distribution: Many languriid species are represented in hot and humid regions, but most are concentrated in South-East Asia and Africa, less numerous in America and Australia, absent in Europe and Northern Asia (Leschen and Wegrzynowicz 1998; Wegrzynowicz 2002).

Tribe Languriini Hope, 1840

Languiridae Hope, 1840: 190. Type genus: *Languria* Latreille, 1802.

Cladoxeninae Arrow, 1925: 166. Type genus: *Cladoxena* Motschulsky, 1866.

Key to the Korean genera of Languriini

1. Body moderately elongate; strial punctures of elytra deep ····· *Anadastus*
– Body strongly elongate; strial punctures of elytra shallow ····· *Tetraphala*

Genus *Anadastus* Gorham, 1887

Anadastus Gorham, 1887: 362. Type species: *Languria cambodiae* Crotch, 1876.

Neolanguria Gorham, 1887: 361. Type species: *Trogosita filiformis* Fabricius, 1801.

Perilanguria Fowler, 1908: 19. Type species: *Languria monticola* Fowler, 1885.

Stenodastus Gorham, 1887: 362. Type species: *Languria melanosterna* Harold, 1879.

Species: over 55 (6 in Korea).

Distribution: Asia, North Africa, Oriental region.

Key to the Korean species of *Anadastus*

1. Body color mostly brownish red dorsally ····· 5
– Body color mixed with bluish black and red ····· 2
2. Head color red ····· 3
– Head color black ····· 4
3. Head and pronotum with tiny and sparse punctures; postnotum and ventrites black ventrally ·· *A. ruficeps*
– Head and pronotum with dense and coarse punctures; postnotum and ventrites brownish yellow ventrally ····· *A. praetermissus*

4. Leg mostly bluish black, base of femur and tibiae partly red ····· *A. atriceps*
– Leg mostly brownish red, apex of femur and base of tibiae black ····· *A. menetriesii*
5. Elytra bicoloured, mostly brownish red, apical 1/5 black ····· *A. praeustus*
– Elytra unicoloured; entirely brownish red ····· *A. filiformis*

1. *Anadastus atriceps* (Crotch, 1873) [Pls. A1, I1, M1]

Languria atriceps Crotch, 1873a: 185.
Anadastus atriceps: Kim and Chang, 1984: 161; Kim and Park, 1991b: 145; Kim *et al*., 1994: 168; Kwon *et al*., 1996: 158; Jung and Park, 2014: 441; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 3.0–5.5 mm; body elongate, parallel-sided, weakly convex, glabrous; head and elytra black, pronotum red; leg mostly bluish black, base of femora and tibiae partly red, tarsi brownish black; meso- and metathorax and abdominal ventrites black. **Head** with large and rough punctures; ocular distance about twice wider than eye diameter; antennomeres 7–11 widened inward, forming loose and flattened club; apical maxillary palpomere cylindrical, narrowing apically; apical labial palpomere almost narrow triangular. **Pronotum**, strongly convex; with large and regular punctures; all margins distinctly rimmed; anterior margin almost straight; anterior angles weakly produced anteriad and distinctly rounded; lateral margins almost weakly Ω-shaped, widest at middle; basal margin blackish red, weakly sinuous with distinct transverse basal sulcus at near basal margin; subbasal part with short, longitudinal and deep sulci; posterior angles sharply produced. Scutellum pentagonal. Prosternal process is elongate and wide, distinctly separating front coxae. **Elytra** elongate, weakly convex, parallel-sided, narrowing from apical 1/5 to apex; striate-punctate, strial punctures large, deep and regular; interstriae smooth, much narrower than striae. **A**ll femora of **legs** swollen all tibiae widened apically; tarsomeres 1–4 lobed ventrally, with dense setae; tarsomere 1 longer than 2 and 3; tarsomere 4 reduced and hidden in ventral view.

Specimens examined: [GW] 1ex. Gapcheon riverside, Gapcheon-myeon, Hoengseon-gun, 12.vi.2002, H.C. Park; 2exs. Mt. Eungbok, Seo-myeon, Yangyang-gun, 5.x.2013, K.D. Han; **[GG]** 1ex. Mt. Acha-san, Guri-si, 25.vi.1997, H.C. Park; 1ex. Botonggol, Namhansanseong, Seongnam-si, 26.ix.2003, Y.B. Lee; 5exs. Anteo Ecological park, Haan-dong Gwangmyeong-si, 8.ix.2009, Y.B. Lee; **[JB]** 3exs. Mt. Naejang-san, Jeongeup-si, 10.vi.1975, K.R. Choe; **[JN]** 1ex. Mt. Baeyang-san, Jangseong-eup, 11.vi.1975, J.Y. Shim.

Distribution: Korea, Japan.

Korea: GW, GG, JB, JN.

2. *Anadastus filiformis* (Fabricius, 1801) [Pl. A2]

Trogosita filiformis Fabricius, 1801: 152.
Languria nigripes Crotch, 1873a: 184.
Languria rufotestaceus Motschulsky, 1860: 242.
Languria testaceus MacLeay, 1825: 45.
Anadastus filiformis: Kim *et al*., 1994: 168; Kwon *et al*., 1996: 158; Jung and Park, 2014: 441; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 5.0–5.7 mm; body elongate, parallel-sided, weakly convex, glabrous; body mostly yellowish brown; antennae and legs blackish brown. **Head** with large, regular and relatively sparse punctures; ocular distance about 2.5 times wider than eye diameter; antennal grooves absent; antennomeres 7–11 widened inward, forming loose and flattened club; apical antennomere almost circular; apical maxillary palpomere cylindrical, narrowing to apex. **Pronotum** strongly convex; large, regular and relatively sparse punctures; all margins distinctly rimmed; anterior margin almost straight; anterior angles weakly produced anteriad and distinctly rounded; lateral margins almost parallel-sided, weakly arched at basal 1/4; basal margin sinuous, with distinct transverse basal sulcus near basal margin, subbasal part with short, longitudinal and deep sulci; posterior angles sharply produced. Prosternal process is elongate and broad, distinctly separates front coxae. Scutellum is pentagonal. **Elytra** elongate, weakly convex, glabrous; parallel-sided, narrowing from apical 1/5 to apex; striate-punctate; strial punctures clear, shallow, fine, sparse, and regular; interstriae flat, smooth and wider than striae. All femora of **legs** swollen all tibiae widened apically; tarsomeres 1–4 lobed ventrally, with dense setae; tarsomere 1 longer than 2 and 3; tarsomere 4 reduced and hidden in ventral view.

Specimens examined: [JB] 1ex. Mt. Naejang-san, Jeongeup-si, 10.vi.1975, K.R. Choe.

Distribution: Korea, Japan, China (south: Fujian, Hainan, Hongkong, Sichuan, Taiwan, Yunnan), India (Sikkim, Darjeeling District, Arunachal Pradesh), Oriental region.

Korea: JB.

3. *Anadastus menetriesii* (Motschulsky, 1860) [Pls. A3, I3, M3, R3]

Languria menetriesii Motschulsky, 1860: 240.
Languria fucosa Lewis, 1884: 358; Nakayama and Tabashi, 1933: 21; Cho, 1957: 207; ZSK, 1969: 107.
Anadastus menetriesii; Kim and Park, 1991a: 215; Kim *et al*., 1992: 129; Kim *et al*., 1994: 168; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 533; Jung and Park, 2014: 441; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 5.0–6.0 mm; body elongate, parallel-sided, convex, glabrous, glossy; with fine and regular punctures; head, antennomeres 6–11, elytra black; antennomeres 1–5, pronotum and leg (mostly) brownish red; apex of femora, base and apex of tibiae, tarsi brownish black; meso- and metathorax and abdominal ventrites black. **Head** narrower than pronotum, with fine, distinct and regular punctures; ocular distance about twice wider than eye diameter; antennomeres 1–5 almost moniliform; antennomeres 7–11 widened inward, forming loose and flattened club; apical antennomere oval; apical maxillary palpomere cylindrical, narrowing to apex; apical labial palpomere narrow triangular. **Pronotum** strongly convex, longer than wide; with small and regular punctures; all margins distinctly rimmed; anterior margin almost straight; anterior angles weakly produced anteriad and distinctly rounded; lateral margins almost weakly Ω-shaped, widest at middle, narrowest at basal 1/10; basal margin weakly sinuous, with distinct transverse basal sulcus near basal margin; subbasal part with short, longitudinal and deep sulci; posterior angles sharply produced. Prosternal process elongate and broad, distinctly separating front coxae. Scutellum is pentagonal and black. **Elytra** elongate, weakly convex; parallel-sided, narrowing from apical 1/5 to apex; striate-punctate; strial punctures large, deep and regular; interstriae very narrow and smooth. All femora of **legs** swollen all tibiae widened apically; tarsomeres 1–4 lobed ventrally, with dense setae; tarsomere 1 longer than 2 and 3; tarsomere 4 reduced and hidden in ventral view.

Specimens examined: [CN] 1ex. Mt. Weolmyeong, Naesan-ri, Buyeo-gun, 4.vii.2000, H.C. Park **[JB]** 3exs. Is. Eocheongdo, Eocheongdo-ri, Okdo-myeon, Gunsan-si, 13.vi.2009, T.H. Kang; 3exs. Is. Eocheongdo, Eocheongdo-ri, Okdo-myeon, Gunsan-si, 27.vi.2009, T.H. Kang; **[JJ]** 1ex. Andeok valley, Seogwipo-si, 2.ix.2006, M.A. Kim.

Distribution: Korea, Japan, China (Fujian, Jilin), Russia (Far East).

Korea: CN, JB, JJ.

4. *Anadastus praetermissus* (Janson, 1873) [Pls. B4, I4, M4, R4]

Languria praetermissus Janson, 1873: 186; Jung and Park, 2014: 441.

DESCRIPTION: Body length 4.2–5.0 mm; body elongate, parallel-sided, weakly convex, glabrous; head, pronotum, scutellum and legs brownish yellow; antennomeres 8–11 yellowish brown; elytra bluish black; meso- and metathorax and abdominal ventrites black. **Head** with dense, coarse, and relatively large punctures; ocular distance about 2.5 times wider than eye diameter; antennal grooves absent; antennomeres 8–11 widened, especially antennomeres 9–11 strongly widened inward, forming loose and flattened club; apical antennomere almost circular; apical maxillary palpomere cylindrical, tapered apically. **Pronotum** weakly parallel-sided; strongly convex; longer than wide, widest at anterior 1/3; anterior part wider than basal

part; with dense, coarse, and relatively large punctures; all margins distinctly rimmed; anterior margin almost straight; anterior angles weakly produced anteriad; lateral margins almost parallel-sided, widest at anterior 1/3; basal margin weakly sinuous, with distinct transverse basal sulcus at near basal margin; subbasal part with short, deep and longitudinal sulci; posterior angles weakly produced. Prosternal process is moderately broad, distinctly separating front coxae. **Elytra** strongly elongate, about 3 times longer than length of pronotum; weakly flat; parallel-sided, narrowing from apical 1/7 to apex; striate-punctate, strial punctures regular, dense and large; interstriae flat and weakly rugose. All femora of **legs** swollen all tibiae widened apically; tarsomeres 1–4 lobed ventrally, with dense setae; tarsomere 1 longer than 2 and 3; tarsomere 4 reduced and hidden in ventral view.

Specimens examined: [JB] 15exs., Is. Eocheongdo, Eocheongdo-ri, Okdo-myeon, Gunsan-si, 27.vi.2009, T.H. Kang.

Distribution: Korea, Japan.

Korea: JB.

5. *Anadastus praeustus* (Crotch, 1873) [Pls. A5, I5, M5, R5]

Languria praeustus Crotch, 1873a: 185.

Anadastus praeustus: Kim *et al*., 1994: 168; Kwon *et al*., 1996: 158; Jung and Park, 2014: 441; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 6.5–8.5 mm; body elongate, parallel-sided, weakly convex, glabrous; body mostly brownish red; antennomeres 6–11, apical 1/5 of elytra, apex of femora, base of tibiae and tarsi brownish black. **Head** weakly convex, with relatively tiny punctures; ocular distance about 2.2 times wider than eye diameter; antennal grooves absent; antennomeres 1–5 brownish red, almost moniliform; antennomeres 7–11 widened, forming loose and flattened club; antennomeres 8–10 strongly widened inward; antennomere 9 about twice wider than long; apical antennomere almost oval; apical maxillary palpomere cylindrical, narrowing to apex. **Pronotum** almost Ω-shaped; strongly convex; with relatively tiny and regular punctures; all margins distinctly rimmed; anterior margin straight; anterior angles weakly produced anteriad; lateral margins rounded, weakly Ω-shaped, widest at middle, narrowest at basal 1/5; basal margin weakly sinuous, with distinct transverse basal sulcus near basal margin; subbasal part with short, deep and longitudinal sulci; posterior angles sharply produced. Prosternal process is moderately broad, distinctly separating front coxae. **Elytra** strongly elongate parallel-sided, convex, striate-punctate; strial punctures deep, dense, regular and distinct; interstriae weakly flat and smooth. All femora of **legs** swollen all tibiae widened apically; tarsomeres 1–4 lobed ventrally, with dense setae; tarsomere 1 longer than 2 and 3; tarsomere 4

reduced and hidden in ventral view.

Specimens examined: [CN] 1ex. Is. Hwajang-do, Anheung-myeon, Taean-gun, 1.ix.2005, T.H. Kang; **[GB]** 2exs. Is. Juk-do, Dodong-ri, Wulleungdo, 27.vii.2001, S.L. Ahn; **[JN]** 1ex. Sangjeong-ri, Gogeum-myeon, Wando-gun, 3.ix.2003, H.C. Park.

Distribution: Korea, Japan, Russia (Kuril Islands), China (south and central; Fujian, Hainan, Hongkong, Sichuan, Taiwan, Yunnan, Guandong, Guizhou, Jiangxi, Zhejiang), Oriental region.

Korea: CN, GB, JN.

6. *Anadastus ruficeps* (Crotch, 1873) [Pls. B6, I6, M6, R6]

Languria ruficeps Crotch, 1873a: 185; Jung and Park, 2014: 441.

DESCRIPTION: Body length 4.0–5.0 mm; body elongate, parallel-sided, convex, glabrous; head, antennomeres 1–6, pronotum, scutellum and legs brownish red; antennomeres 7–11 reddish black, elytra bluish black; meso- and metathorax and abdominal ventrites black. **Head** with tiny and sparse punctures; ocular distance about 2.5 times wider than eye diameter; antennal grooves absent; antennomeres 8–10 widened inward; 9–11 strongly enlarged, forming loose and flattened club; apical antennomere almost oval; apical maxillary palpomere cylindrical, tapered apically. **Pronotum** strongly convex; weakly Ω-shaped, wider than long, widest at middle, narrowest at basal 1/5; with tiny and regular punctures; all margins distinctly rimmed; anterior margin almost straight; anterior angles weakly produced anteriad and distinctly rounded; basal margin sinuous, with distinct transversely depressed sulcus near basal margin, subbasal part with longitudinal, short and deep sulci; posterior angles moderately produced. Prosternal process is moderately broad, distinctly separating front coxae. **Elytra** weakly convex, strongly elongate and parallel-sided; narrowing from apical 1/5 to apex; striate-punctate, strial punctures regular, dense and moderate; interstriae flat and smooth. All femora of **legs** swollen all tibiae widened apically; tarsomeres 1–4 lobed ventrally, with dense setae; tarsomere 1 longer than 2 and 3; tarsomere 4 reduced and hidden in ventral view.

Specimens examined: [JB] 4exs. Mt. Naejang-san, Jeongeup-si, 10.vi.1975, K.R. Choe; 1ex. Mt. Naejang-san, Jeongeup-si, 10.vi.1975, J.Y. Shim.

Distribution: Korea, Japan. China (southeast; Fujian, Hainan, Guandong, Sichuan, Jiangxi, Zhejiang).

Korea: JB.

Genus *Tetraphala* Sturm, 1843

Tetraphala Sturm, 1843: 306. Type species: *Languria splendens* Wiedemann, 1823.
Metabelus Gorham, 1887: 361. Type species: *Pachylanguria borrei* Fowler, 1886.
Tetralanguria Crotch, 1876: 378. Type species: *Languria splendens* Wiedemann, 1823.
Tetralanguroides Fowler, 1886: 318. Type species: *Tetralanguroides fiyi* Fowler, 1886.

Species: 16 (2 in Korea).

Distribution: Asia (central, south), and Oriental Regions.

Key to the Korean species of *Tetraphala*

1. Antennomeres 8–11 strongly widened, forming a club; anterior angles of pronotum moderately produced anteriad ····· *T. collaris*
– Antennomeres 7–11 strongly widened, forming a club; anterior angles pronotum strongly produced anteriad ····· *T. fryi*

7. *Tetraphala collaris* (Crotch, 1876) [Pls. C7, I7, M7, R7]

Pachylanguria collaris Crotch, 1876: 377.
Languria punctata Harold, 1879: 58.
Pachylanguria tripunctata Kraatz, 1900: 347.
Languria yunnana Fairmaire, 1887: 136.
Tetralanguria collaris: Cho, 1957: 36; ZSK, 1969: 108; Kim *et al*., 1994: 168; Chûjô and Lee, 1994: 188; Kim, 1995: 129; Kim *et al*., 1999: 125; Kwon *et al*., 1996: 158.
Tetraphala collaris: Wegrzynowicz, 2007: 535; Jung and Park, 2014: 441; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 9.5–16.0 mm, body elongate, parallel-sided, convex, glabrous; body (except pronotum) bluish black, pronotum red with three large black spots and bluish black basal margin. **Head** with fine and moderate punctures; ocular distance about twice wider than eye diameter; antennal grooves absent; antennomeres 8–11 strongly widened, forming a loose club; apical antennomere almost circular; apical maxillary palpomere and apical labial palpomere cylindrical, narrowing to apex. **Pronotum** almost quadrate, wider than long; strongly convex; with very small punctures; all margins distinctly rimmed; anterior margin almost straight; anterior angles moderately produced; lateral margins rounded, weakly narrowing anteriad and posteriad, widest at middle; basal margin sinuous, with distinct and black transverse basal sulcus near mid-basal margin; with short, deep and longitudinal sulci at subbasal parts; posterior angles sharply produced.

Elytra elongate parallel-sided, convex; indistinctly striate-punctate; strial punctures irregular, sparse, shallow and coarse; interstriae with irregular punctures and rugulose. All femora of **legs** swollen; all tibiae widened apically; tarsomeres 1–4 lobed and strongly widened ventrally, with dense setae; tarsomere 1 longer than 2 and 3; tarsomere 4 reduced and hidden in ventral view.

Specimens examined: [**GW]** 1ex. near Mt. Seokbyeong-san, Imkye-ri, Imkye-myeon, Jeongseon-gun, 22.v.2002, J.D. Yeo; 6exs. Mt. Odae-san, Seonjai-gil, Jinbu-myeon, 20.v.2015, B.H. Jung; 3exs. Neunggyeong-bong, Daegwallnyeong, Daegwallnyeong-myeon, Pyeongchang-gun, 15.vi.2016, B.H. Jung.

Distribution: Korea, Japan. China (south, central, Mandchuria; Fujian, Hainan, Sichuan, Taiwan, Yunnan, Guizhou, Jiangxi, Zhejiang), India (Himachal Pradesh, Sikkim, Darjeeling District), Oriental region.

Korea: GW.

8. *Tetraphala fryi* (Fowler, 1886) [Pls. C8, J8, N8, R8]

Tetralanguroides fiyi Fowler, 1886: 319.

Tetralanguria fryi: Kim and Kim, 1974; Kim *et al*., 1991: 163; Kim *et al*., 1994: 168; Kim, 1995: 129; Kwon *et al*., 1996: 158.

Tetraphala fryi: Wegrzynowicz, 2007: 536; Jung and Park, 2014: 441; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 10.5–13.0 mm; body elongate, parallel-sided, convex, glabrous; body (except pronotum) bluish black, pronotum red with three large black spots and bluish black basal margin. **Head** with fine and moderate punctures; ocular distance about twice wider than eye diameter; antennal grooves absent; antennomeres 7–11 strongly widened, forming a loose club; apical antennomere almost circular; apical maxillary palpomere and apical labial palpomere cylindrical, narrowing to apex. **Pronotum** almost quadrate, width almost equal to length; strongly convex; with very small punctures; all margins distinctly rimmed; anterior margin almost straight; anterior angles strongly produced; lateral margins rounded, weakly narrowing anteriad and posteriad, widest at middle; basal margin sinuous, with distinct and black transverse basal sulcus near basal margin; with short, deep and longitudinal sulci at subbasal part; posterior angles sharply produced. **Elytra** elongate parallel-sided and convex; indistinctly striate-punctate, strial punctures irregular, sparse, shallow and coarse; interstriae flat, with irregular punctures and rugulose. All femora of **legs** swollen; all tibiae widened apically; tarsomeres 1–4 lobed and strongly widened ventrally, with dense setae; tarsomere 1 longer than 2 and 3; tarsomere 4 reduced and hidden in ventral view.

Specimens examined: [SL] 1ex. Bukhansanseong, Seoul-si, 2.x.1971, K.H. Park; **[CB]** 1ex. Mt. Gyemyeong-san, Jongmin-dong, Chungju-si, 17.vi.2003, J.K. Kim and J.D. Yeo; **[JN]** 1ex. Mt. Weolchul-

san, Yeongam-gun, 14.v.2000, S.J. Chang.

Distribution: Korea, Japan (Tsushima), China (Fujian, Zhejiang).

Korea: SL, CB, JN.

9. *Tetraphala miles* (Fowler, 1913)

Tetralanguria miles Fowler, 1913: 134; ZSK, 1969: 108; Kim *et al*., 1994: 168; Kwon *et al*., 1996: 158; Jung and Park, 2014: 441; Hong and Lee, 2014: 178.

Remarks: No Korean specimens of this species were available. It has been cited in the Korean literature sources, since ZSK (1969) reported it from Korea. However, according to Wegrzynowicz (2007) the species is known only from Taiwan, so misidentification cannot be ruled out. Further investigations are necessary.

Subfamily Cryptophilinae Casey, 1900

Cryptophilini Casey, 1900: 77.

Type genus: *Cryptophilus* Reitter, 1874.

Genera: 4 (1 in Korea), species about 19 (1 in Korea).

Distribution: Asia, Europe.

Remarks: The genera *Cryptophilus* Reitter, 1874, *Leucohimatium* Rosenhauer, 1856 and *Macrophagus* Motschulsky, 1845 were described in the family Cryptophagidae. Sen Gupta and Crowson (1971) transferred a number of small, cryptophagid-looking genera (including those mentioned above) to the family Languriidae. History of the classification of *Cryptophilus* was summarized by Leschen and Wegrzynowicz (1998) and Wegrzynowicz (2002). At present, *Cryptophilus* is placed in the the subfamily Cryptophilinae, while *Leucohimatium* and *Macrophagus* (not occurring in Korea) are in the subfamily Xenoscelinae of the broadly defined family Erotylidae which includes all taxa of the former Languriidae (Leschen, 2003).

Tribe Cryptophilini Casey, 1900

Cryptophilini Casey, 1900: 77.

Type genus: *Cryptophilus* Reitter, 1874.

Genus *Cryptophilus* Reitter, 1874

Cryptophilus Reitter, 1874: 381. Type species: *Cryptophagus integer* Heer, 1841.
Tomarops Grouvelle, 1903: 343. Type species: *Tomarops punctatus* Grouvelle, 1903.

Species: over 9 (1 in Korea).

Distribution: Asia, Europe.

Remarks: Members of *Cryptophilus* are sapro-mycetophagous (Leschen and Buckley, 2007), inhabiting decaying plant material, and stored grain. Some species of related genera either live on cycad pollen, being sometimes pollinators of cycads (Leschen and Ashe, 1999) and endoparasitoids of Lepidoptera pupae (Leschen and Buckley, 1997). Adults are usally found among fallen leaves and hay (Ljubarsky, 2010).

10. *Cryptophilus integer* (Heer, 1841)

Cryptophagus integer Heer, 1841: 426; Ljubarsky, 1991: 111; Ljubarsky, 1997: 49; Wegrzynowicz, 2007: 531; Hong and Lee, 2014: 178.
Paramecosoma simplex Wollaston, 1857: 50.
Cryptophagus muticus Brisout de Barneville, 1863: 67.
Cryptophagus ceylonicus Motschulsky, 1866: 396.
Paramecosoma balearicus Schaufuss, 1869: 14.
Cryptophagus barnevillei Tournier, 1872: 445.
Cryptophilus debilis Sharp, 1885: 145.
Cryptophilus frater Grouvelle, 1898: 43.

Specimens examined: None.

Distribution: Cosmopolitan.

Korea: North Korea.

Remarks: No Korean specimens of this species were available. This species was reported from North Korea by Ljubarsky (1991) based on only one specimens which was collected in Pyongyang City (Pyongyang, Hotel Pyongyang, 6. August 1971). This is a cosmopolitan species, therefore it most probably occurs in South Korea as well. Further collectings and examinations are necessary.

Subfamily Xenoscelinae Ganglbauer, 1899

Xenoscelini Ganglbauer, 1899: 649. Type genus: *Xenoscelis* Wollaston, 1864.

Eicolyctini Vogt, 1967: 103. Type genus: *Eicolyctus* J. R. Sahlberg, 1919 [syn. of *Zavaljus* Reitter, 1880].

Loberonothini Sen Gupta and Crowson, 1969: 127. Type genus: *Loberonotha* Sen Gupta and Crowson, 1969.

Genera: 8 (2 in Korea), species over 17 (2 in Korea).

Distribution: Asia, Europe, North Africa (Canary Islands).

Genus *Henoticonus* Reitter, 1878

Henoticonus Reitter, 1878: 127.

Type species: *Henoticus triphylloides* Reitter, 1878.

Species: 1 (1 in Korea).

Distribution: Korea, Japan.

11. *Henoticonus triphylloides* Reitter, 1878 [Pl. C9]

Henoticus triphylloides Reitter, 1878: 127.

Henoticonus triphylloides: Schenkling, 1923: 15; Song and Ahn, 2010: 195; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 3.3 mm; body oblong-oval, convex dorsally and almost glabrous; head and pronotum black, elytra blackish brown or reddish brown, antennae and legs dark reddish brown, ventral side blackish brown. **Head** with rough punctures; vertex with line; supraocular line present, extending posteriorly beyond eyes; eyes projected laterally; ocular distance about three times wider than eye diameter; antennal insertions not exposed dorsally; antennae mostly moniliform, 3 apical antennomeres enlarged, forming a loose club; third antennomere about 1.6 times longer than wide, fourth antennomere shorter than third; apical antennomere almost globular, about 1.2 times longer than wide; apical maxillary palpomere elongate cylindrical; apical labial palpomere slightly widely cylindrical. **Pronotum** transverse, about 1.4 times wider than long, widest at base; weakly convex; with rough, large and dense punctures; anterior magin weakly rounded; lateral area narrowly depressed along margin; basal margin weakly bisinuate; basal corner angulate interiorly. **Elytra** elongate oval, about 1.5 times longer than wide, widest near middle; striate-punctate; strial

punctures shallow and regular; interstriae almost smooth and flat. All femora of **legs** thick; tarsomeres 1–4 short fifth tarsomere elongate. Procoxal cavity; narrowly open behind; prosternum short and broad; prosternal process narrow, apically broad with rounded tip; mesoventrite with V-shaped ridge; metaventrite with median suture.

Specimens examined: [SL] 1ex. Mt. Choan, Banghak-dong, Gangbuk-gu, 31.v.2007, B.H. Jung; [Record]: Pyeongchang-gun, Jinbu-myeon, Mt Odaesan, Sangwonsa (preserved in Chungnam University Insect Collection).

Distribution: Korea, Japan.

Korea: SL, GW.

Genus *Leucohimatium* Rosenhauer, 1856

Leucohimatium Rosenhauer, 1856:179.

Type species: *Leucohimatium angustum* Rosenhauer, 1856 (= *Tenebrio arundinaceus* Forskål, 1775).

Species: 5 (1 in Korea).

Distribution: Asia, Europe, Afrotropical Region, Australian Region.

12. *Leucohimatium langii* (Solsky, 1866)

Paramecosoma langii Solsky, 1866: 90.

Leucohimatium brevicolle Reitter, 1878: 93.

Leucohimatium langii: Lyubarsky, 1991; Wegrzynowicz, 2007: 536; ; Hong and Lee, 2014: 178.

Specimens examined: None.

Distribution: Central, Southern and Eastern Europe, Caucasus, Kazakhstan, Middle Asia, Mongolia, North Korea.

Remarks: *Leucohimatium langii* Solsky inhabitants the Palearctic steppe zone, and the westernmost and northermost limits of its distribution are in the Carpathian Basin.

No Korean specimens of this species were available. This species was reported from North Korea by Ljubarsky (1991) based on two specimens which were collected in Pyonganam-do (Sa Gam, 45 km N Pyongyang, 12 August 1971, netting on shrubs, weeds and grass of riverside) and Pyongyang City (Pyongyang, city park between river Dae-dong and Hotel Pyongyang, 1 September 1971, netting on grass and bushes of the park).

Subfamily Erotylinae Latreille, 1802

Erotylinae Latreille, 1802: 233.
Type genus: *Erotylus* Fabricius, 1775.

DIAGNOSIS: Body length 2.0–25.0 mm. Body hemispherical to elongate-elliptical; slightly to strongly convex; usually glabrous, sometimes covered with decumbent hairs; color mostly black with yellow-reddish markings. **Head** prognathous, deeply inserted into transverse prothorax; surface smooth or punctate; with a pair of stridulatory files at each side (*Amblyopus*, *Cyrtotriplax*, *Rhodotritoma*, *Scelidopetalon*, *Triplax*, *Dacne*, *Phonodacne* etc.) or before occipital excision (*Phonodacne* etc.); antennae 11-segmented, moniliform, short, half or less than half of body in length; usually apical three, sometimes apical four or five antennomeres forming club; apical maxillary palpomere and apical labial palpomere fusiform to securiform. **Pronotum** broader than head; subquadrate; surface smooth or punctate; lateral sides subparallel or converging anteriad, often with produced anterior angles. **Elytra** entire, apically rounded; surface striate-punctate or smooth. Prosternum moderately to very long in front of coxa and bearing broad, apically expanded intercoxal process; fore coxal cavity widely separated and broadly closed posteriad. Femora weakly swollen; tibiae carinate flattened, apically enlarged and with short, small apical spurs; tarsal formula 5–5–5; sometimes fourth tarsomere reduced and pubescent beneath (Ross, 1963; Chûjô, 1969).

Distribution: Worldwide.

Key to the Korean tribes of Erotylinae

1. Apical maxillary palpomere not transverse; four basal tarsomeres nearly equal in size, all tarsomeres visible dorsally ····· Dacnini
– Apical maxillary palpomere transverse; 1–3 tarsomeres dilated; fourth tarsomere minute, hidden at base of third tarsomere, invisible dorsally ····· 2
2. Body very large and strongly elongate; head without pair of stridulatory files on occipital region; maxilla with two teeth ····· Encaustini
– Body small to medium-sized and mostly oval or oblong; head mostly with pair of stridulatory files on occipital region; maxilla with or without teeth ····· Tritomini

Tribe Dacnini Gistel, 1848

Engidites Latreille, 1829: 506. Type genus: *Engis* Paykull, 1800 (syn. of *Dacne* Latreille, 1797).
Dacneidae Gistel, 1848: 3. Type genus: *Dacne* Latreille, 1797.
Cryptodacnini Sen Gupta, 1969: 101. Type genus: *Cryptodacne* Sharp, 1878.

DIAGNOSIS: Body small to large; subcylindrical, oblong or elliptical; shiny, convex, glabrous dorsally; sometimes pubescent. Head mostly without stridulatory organ except *Dacne*, *Phonodacne*, *Thallis and Neothallis*; antenna clavate, apical three antennomeres forming large and compact club; apical maxillary plapomere cylindrical, narrowing apically. Elytra mostly striate-punctate, often confusedly punctuate. Legs mostly slender; tibiae not strongly dilated apically; tarsi cylindrical; tarsomeres 1–3 almost equal in size; fourth tarsomere nearly equal to, or a little smaller than preceding tarsomeres, all tarsomeres visible dorsally.

Remarks: This tribe has a world-wide distribution. Its members may be more primitive (Boyle, 1956; Goodrich and Skelley, 1991), considering the host association and the shape of tarsus and maxillary palpomere.

Genera: 6 (2 in Korea), over 30 species (4 In Korea).
Distribution: Palaearctic and Oriental regions.

Key to the Korean genera of Dacnini

1. Eyes rather coarsely facetted; mesoventrite very small, mostly covered by prosternal process ····· ····· *Microsternus*
– Eyes finely and closely facetted; mesoventrite large, never hidden by prosternal process ····· *Dacne*

Genus *Dacne* Latreille, 1797

Dacne Latreille, 1797: 12. Type species: *Ips humeralis* Fabricius, 1787 (= *Dermestes bipustulatus* Thunberg, 1781).
Engis Paykull, 1800: 349. Type species: *Ips humeralis* Fabricius, 1787 (= *Dermestes bipustulatus* Thunberg, 1781).
Cnecosophagus Reitter, 1875: 42. Type species: *Cnecosophagus jekeli* Reitter, 1875 (= *Dermestes bipustulatus* Thunberg, 1781).

DIAGNOSIS: Body small, elongate-oblong, convex; eyes small, widely separated, finely or rather coarsely facetted; apical three antennomeres forming club, wider than long; apical maxillary palpomere longer than wide. Elytra elongate or rounded apically, strongly convex, striate-punctate or confusedly punctuate; mesoventrite large, never hidden by the prosternal process.

Species: over 16 (4 in Korea).

Distribution: Palaearctic region, North America.

Key to the Korean species of *Dacne*

1. Pronotum entirely or mostly reddish brown ····· 2
– Pronotum entirely or mostly black ····· 3
2. Head, pronotum and scutellum reddish brown ····· *D. osawai*
– Head and scutellum reddish brown; pronotum mostly reddish brown, with large black marking at middle ····· *D. picta*
3. Elytral markings oblique, widely separated from sutural line and not bent toward elytra base ····· *D. fungorum nigrocephala*
– Elytra markings not oblique, more closely approaching sutural line and weakly bent toward elytra base ····· *D. zonaria*

13–1. *Dacne fungorum fungorum* Lewis, 1887

Dacne fungorum fungorum Lewis, 1887a: 56; Narita, 1939: 47; Ishii, 1940: 38; Kim *et al*., 1994: 169.
Engis binaeva Reitter, 1897: 123.

Specimens examined: None.

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

Remarks: No Korean specimens of this species were available. Since Narita (1939) reported this species from Mt. Soyo, Gyeonggi-do in 1939, no more locality data in Korea were published except for Ishii's record (1940). When Narita was only a high school student, he recorded this species on the report of his school. Therefore, misidentification for other *Dacne* species was possible. It is doubtful whether this species is distributed or absent in Korea because of non-existing materials and lack of distributional information. Further studies and review are needed.

13–2. *Dacne fungorum nigrocephala* Mt. Chûjô, M. Chûjô & Lee, 1993 [Pls. C10, J10, N10, S10]

Dacne fungorum nigrocephala Mt. Chûjô, M. Chûjô & Lee, 1993: 99; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 537; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 3.2–4.0 mm; Body elongate-oblong, convex dorsally, glabrous; mostly black dorsally and shining; antennae, elytral markings, legs and last abdominal ventrite reddish brown. **Head** with rough and dense punctures; eyes finely and closely facetted and relatively small, ocular distance about twice wider than eye diameter; antenna relatively short, not reaching basal margin of pronotum; third antennomere about 1.2 times longer than fourth; antennomeres 9–11 strongly widened, forming a distinctly compact and flattened club; each antennomeres broader than long; apical maxillary palpomere and apical labial palpomere cylindrical, narrowing apically. **Pronotum** distinctly broader than long, narrowing anteriorly; strongly convex; coarsely and densely punctuate; anterior margin weakly rimmed, anterior angles weakly produced and rounded; lateral sides strongly rimmed and slightly rounded, gradually narrowing anteriad, widest at basal 1/3; basal margin weakly rimmed and strongly sinuous; posterior angles not produced and rounded. Scutellum pentagonal. **Elytra** elongate, about 1.6 times longer than wide, convex, parallel-sided, narrowing from apical 1/5 to apex; striate-punctate; strial punctures distinct and regular at basal 1/2, weakly shoallow and irregular at apical 1/2 ; interstriae almost flat and smooth. All femora of **legs** slightly swollen; all tibiae gradually enlarged apically; fifth tarsomere longer than four preceding tarsomeres combined. Prosternal proccess elongate and widen apically, reaching anterior part of mesoventrite and distinctly separating front coxae.

Specimens examined: [SL] 3exs. Mt. Bukhan, Gugi-dong, Jongno-gu, 24.vi.2006, B.H. Jung, from *Bjerkandera adusta*; **[GG]** 4exs. Gwansan-dong, Deogyang-gu, Goyang-si, 29.iv.2004, B.H. Jung, from mycelia; 19exs. Mt. Mani, Ganghwa-gun, Incheon, Ganghwa Island, 6.x.2006, B.H. Jung, from *Armillaria mellea*; 2exs. Iseongsanseong, Chungung-dong, Hanam-si, 24.v.2007, B.H. Jung, from *Pluteus atricapillus*; 1ex. Donggureung Royal Tombs, Guri-si ,10.vi.2015, B.H. Jung, from *Daedaleopsis styracina*.

Host fungi: *Bjerkandera adusta* (Willd: Fr.) Karst., *Pluteus atricapillus* (Batsch) Fayod., *Daedaleopsis styracina* (P. Henn. et Shirai) Imaz., *Armillaria mellea* (Vahl) P. Kumm., mycelia.

Distribution: Korea (South Korea).

Korea: SL, GG.

Remarks: This subspecies is similar to the nominate subspecies, but can be separated from the latter by having head and thorax black (Chûjô *et al*., 1993).

14. *Dacne osawai* Ashida & Kim, 1999 [Pls. D11, J11, N11, S11]

Dacne osawai Ashida & Kim, 1999: 381; Wegrzynowicz, 2007: 538; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 3.3 mm; Body elongate-oblong, moderately convex dorsally, glabrous; head, pronotum, scutellum and ventral surface shining reddish brown; antennae, mouthparts and legs reddish brown; elytra shinyly black, with two large, transverse reddish brown patches, each placed obliquely from humeral part to suture, joining each other near sutrure, not reaching sutural line. **Head** somewhat with sparse punctures; eyes finely and closely facetted and relatively small; ocular distance about twice wider than eye diameter; antenna relatively short, not reaching basal margin of pronotum; third antennomere longer than second and fourth; eighth antennomere subtriangular, twice wider than long; antennomeres 9–11 strongly widened, forming distinctly compact and flattened club. **Pronotum** distinctly broader than long, about 1.4 times wider than long at middle; moderately convex; closely and strongly punctuate; anterior margin arcuate in middle and emarginated on each side, anterior angles weakly and bluntly produced anteriad; lateral sides slightly rounded, gradually narrowing anteriad; basal margin sinuous, arched backward in middle; posterior angles obtuse. Scutellum subpentagonal with sparse and fine punctures. **Elytra** elongate, about 1.6 times longer than wide; almost parallel-sided, widest at basal 3/8 and gently narrowing to apex; convex dorsally; striate-punctate; strial punctures distinct, sparse and regular; interstriae almost flat and smooth. All femora of **legs** slightly swollen; all tibiae gradually enlarged apically; tarsi cylindrical, fifth tarsomere longer than four preceding tarsomeres combined.

Specimens examined: [JJ] 1ex. Gyorae Gotjawal Gyorae-ri, Jocheon-eup, Jeju-si, 11.v.2016, J.B. Seung; 1ex. Seongpanak, Mt. Halla, Jocheon-eup, Jeju-si, 13.vi-21.vii.2016, J.B. Seung and B.H. Jung.

Distribution: Korea (South Korea, Jeju-do).

Remarks: This species is closely related with *D. japonica* Crotch, 1873, but distinguished from the latter by the following characters: body slender; dorsal surface strongly punctuate; pronotum less convex; elytral markings not reaching sutural line and median lobe of male genitalia robust. The type specimens were obtained from a kind of brown rot fungus (*Paxillus pannoides*?) on a living pine tree (*Pinus ghunbergii*) (Ashida & Kim, 1999).

15. *Dacne picta* Crotch, 1873 [Pls. D12, J12, N12, S12]

Dacne picta Crotch, 1873a: 188; Narita, 1939: 47; Chûjô *et al*., 1993; 100; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 538; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 2.7–3.5 mm. Body elongate-oblong, convex dorsally, glabrous; body mostly black dorsally and shining; mouthpart, antennae, pronotum partially (surrounding of all margins), scutellum, elytral markings, apical part of elytra, ventrites and legs reddish brown; pronotum with large black marking on middle. **Head** finely punctuate, with shallow transverse groove between eyes; eyes finely and closely facetted and relatively small, ocular distance about twice wider than eye diameter; antenna relatively short, not reaching basal margin of pronotum; first antennomere robust, second about 1.2 times shorter than third; antennomeres 9–11 strongly widened, forming distinctly compact and flattened club, each antennomeres broader than long; apical maxillary palpomere and apical labial palpomere cylindrical, narrowing apically. **Pronotum** distinctly broader than long, narrowing anteriad; strongly convex; regularly and finely punctuate; anterior margin weakly rimmed, anterior angles weakly produced and rounded; lateral sides strongly rimmed and slightly rounded, gradually narrowing anteriad, widest at basal 1/3; basal margin weakly rimmed and strongly sinuous; posterior angles not produced and rounded. Scutellum somewhat pentagonal**. Elytra** elongate, about 1.5 times longer than wide, convex, parallel-sided, narrowing from apical 1/5 to apex; two large yellow transverse markings situated from humeral part to near suture; striate-punctate; strial punctures distinct and regular at basal 1/2 , slightly diminishing and irregular at apical 1/2; interstriae almost flat and smooth. All femora of **legs** slightly swollen all tibiae gradually widened apically; fifth tarsomere longer than four preceding tarsomeres combined. Prosternal proccess elongate and widening apically, reaching anterior part of mesoventrite and distinctly separating front coxae.

Specimens examined: [GW] 1ex. Sammachi-ri, Hongcheon-gun, 30.iv.2004, B.H. Jung; **[SL]** 20exs. Gildong Ecological Park, Gil-dong, Gangdong-gu, 24.vi.2006, B.H. Jung, from *Lentinula edodes*; 3exs. Mt. Choan, Dobong-dong, Ganbuk-gu, 31.v.2007, B.H. Jung, from *Armillaria mellea*; 5exs. Gildong Ecological Park, Gil-dong, Gangdong-gu, 20.vi.2016, B.H. Jung, from *Lentinula edodes***; [GG]** 1ex. Mt. Mani, Ganghwa-gun, Incheon, Ganghwa-do, 26.v.2004, B.H. Jung, from mycelia; 2exs. Mt. Mugab, Gwangju-gun, 27.v.2006, J.B. Seung, from mycelia; 17exs. Byeokje-dong, Deogyang-gu, Goyang-si, 10.vi.2006, J.B. Seung, from *Laetiporus sulphureus*; 1ex. Mt. Mani, Ganghwa-gun, Incheon, Ganghwa-do, 7.x.2006, J.B. Seung; 8exs. Iseongsanseong, Chungung-dong, Hanam-si, 24.v.2007, B.H. Jung, from *Pluteus atricapillus*; 2exs. Byeokje-dong, Deogyang-gu, Goyan-si, 27.v.2007, B.H. Jung, from *Cerrena unicolor*; 1ex. Donggureung Royal Tombs, Guri-si, 20.ix.2007, B.H. Jung, from *Inonotus mikadoi*; 3exs. Donggureung Royal Tombs, Guri-si, 21.vi.2008, B.H. Jung, from *Laetiporus sulphureus*; 1ex. Donggureung Royal Tombs, Guri-si, 9.viii.2008, B.H. Jung, from *Bjerkandera adusta*; 10exs. Sinbong valley, Sinbong-dong, Suji-gu, Yongin-si, 30.vi.2011, B.H. Jung, from *Daedaleopsis styracina* and *Laetiporus sulphureus*; 2exs. Donggureung Royal Tombs, Guri-si, 10.vi.2015, B.H. Jung, from *Daedaleopsis styracina*; 3exs. Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 2.vi.2016, B.H. Jung, from *Lentinula edodes*; 6exs. Mt. Jungmi, Okcheon-myeon, Yangpyeong-gun, 25.vi.2016, B.H. Jung, from *Lentinula edodes*.

Host fungi: *Bjerkandera adusta* (Willd: Fr.) Karst., *Pluteus atricapillus* (Batsch) Fayod., *Daedaleopsis styracina* (P. Henn. et Shirai) Imaz., *Armillaria mellea* (Vahl) P. Kumm., mycelia, *Lentinula edodes* (Berk.) Sing, *Laetiporus sulphureus* (Fr.) Murr., *Bjerkandera adusta* (Willd: Fr.) Karst, *Cerrena unicolor* (Bull.) Murrill, *Inonotus mikadoi* (Lloyd) Imaz.

Distribution: Korea, Japan, Russia (Far East), China (Guandong, Hubei, Zhejiang), introduced to Europe (Germany, Czech Republic).

Korea: GW, SL, GG.

16. *Dacne zonaria zonaria* Lewis, 1887 [Pls. D13, J13, N13, S13]

Dacne zonaria zonaria Lewis, 1887a: 56; Chûjô *et al*., 1993; 100; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 538; Hong and Lee, 2014: 178

Engis jureceki Pic, 1921: 2.

DESCRIPTION: Body length 3.0–3.2 mm. Body elongate-oblong, convex dorsally, glabrous; body mostly black dorsally and shining; mouthparts, antennae, front border of pronotum and elytral markings reddish brown; legs mostly black, tibiae and tarsi yellowish brown or obscure reddish brown. **Head** with large, coarse and regular punctures; eyes finely and closely facetted and relatively small, ocular distance about twice wider than eye diameter; antenna relatively short, not reaching basal margin of pronotum; third antennomere about 1.2 times longer than fourth; antennomeres 9–11 strongly enlarged, forming a distinctly compact and flattened club, each antennomeres broader than long; apical maxillary palpomere and apical labial palpomere cylindrical, narrowing apically. **Pronotum** distinctly broader than long, narrowing anteriad; strongly convex and regularly and finely punctuate; anterior margin weakly rimmed, anterior angles weakly produced and rounded; lateral margins strongly rimmed and slightly rounded, gradually narrowing anteriad, widest at basal 1/3; basal margin weakly rimmed and strongly sinuous; posterior angles not produced and rounded. Scutellum is somewhat pentagonal**. Elytra** elongate and oblong, convex, weakly shagreened, parallel-sided, narrowing from apical 1/5 to apex; two large reddish markings extending from humeral part to sutural line, closely and weakly bent toward elytra base; striate-punctate; strial punctures deep, coarse, distinct and regular at basal 1/2, weakly shallow and irregular at apical 1/2; interstriae flat, with moderate and irregular punctures. All femora of **legs** slightly swollen; all tibiae gradually widened apically; fifth tarsomere longer than four preceding combined. Prosternal proccess elongate and widened apically, reaching anterior part of mesoventrite and distinctly separating front coxae.

Specimens examined: [GW] 1ex. Mt. Odae, Jinbu-myeon, Pyeongchang-gun, 3.vii.2008, B.H. Jung, from *Bjerkandera adusta*; 1ex. Mt. Odae, Jinbu-myeon, Pyeongchang-gun, 27.v.2013, S.J. Park *et al*., preserved

in NIBR; **[JB]** 1ex. Guamsa, Sunchang-gun, 16.vii.2016, B.H. Jung and H.C. Park; **[JN]** 1ex. Near Hanjae, Mt. Baekun, Oknyeong-myeon, Gwangyang-si, 8.iX.2016, B.H. from the mycelia; **[GB]** 1ex. Mt. Unmun, Cheongdo-gun, 24.vii.2008, J.W. Lee; **[JJ]** 5exs. Gyorae Natural Recreation Forest, Jocheon-eup, Jeju-si, 12.vi.2016, J.B. Seung and B.H. Jung, from mycelia under the bark; 2exs. Gyorae Natural Recreation Forest, Jocheon-eup, Jeju-si, 12.vi-23.vii.2016, J.B. Seung and B.H. Jung.

Host fungi: *Bjerkandera adusta* (Willd: Fr.) Karst. and mycelia.

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

Korea: GW, JB, GB, JJ.

Genus *Microsternus* Lewis, 1887

Microsternus Lewis, 1887b: 3. Type species: *Megalodacne ulkei* Crotch, 1873.

DIAGNOSIS: Body small to medium-sized, elongate-oval or elongate-oblong, strongly convex dorsally. Eyes large rather coarsely facetted; third antennomere nearly equal to second and longer than fourth; antennomeres 9–11 forming loosely articulated club and wider than long; apical maxillary palpomere spindle-shaped; apical labial palpomere pear-shaped. Elytra elongate, basal angles sharply produced; striate-punctate; interstriae with fine punctures. Legs rather robust; fourth tarsomere shorter and narrower than third; fifth tarsomere much longer than preceding combined. Mesoventrite very small, mostly covered by the prosternal process.

Key to the Korean species of *Microsternus*

1. Elytra dark brown to black, with two reddish brown patches; each elytron with anchor-shaped reddish brown patch on basal area and reddish brown transverse band on apical 1/3 ····· *M. perforatus*
– Elytra dark brown to black, with three reddish brown patches; each elytron with anchor-shaped reddish brown patches on basal 1/5, median transverse band on apical 3/5 and posterior markings on apex ····· *M. tokioensis*

17. *Microsternus perforatus* (Lewis, 1883) [Pls. D14, J14, N14, S14]

Episcapha perforatus Lewis, 1883: 140.

Microsternus perforatus: Lewis, 1887b: 3; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 5.0–7.0 mm. Body elongate-oblong, strongly convex dorsally, glabrous; body mostly black dorsally and shining; base of tibiae, tarsi and ventrites brownish black; elytra with anchor-shaped reddish brown patches on basal part and transverse reddish brown band on apical 1/3; all markings weakly produced anteriorly and apically, forming a short branch. **Head** finely and moderately puctured; eyes rather coarsely facetted; relatively large, ocular distance about 1.2 times wider than eye diameter; antenna relatively short, not reaching basal margin of pronotum; first antennomere robust, third antennomere about 1.5 times longer than fourth; antennomeres 9–11 strongly widened, forming a distinctly large and flattened club, each antennomeres broader than long; apical maxillary palpomere and apical labial palpomere cylindrical, narrowing apically. **Pronotum** distinctly broader than long, narrowing anteriad; strongly convex; with fine, moderate and sparse punctures; anterior angles weakly produced and rounded; lateral sides strongly rimmed and slightly rounded, gradually narrowing anteriad, widest at basal 1/3; basal margin weakly rimmed and strongly sinuous. Scutellum somewhat pentagonal, rounded at each angles. **Elytra** elongate strongly convex, parallel-sided, narrowing from apical 1/5 to apex; striate-punctate, strial punctures small and regular; interstriae almost flat, with small punctures. All femora of **legs** slightly swollen; all tibiae strongly enlarged apically; all tarsi visible dorsally, with dense setae ventrally, fourth tarsomere shorter than third; fifth tarsomere longer than four preceding combined. Prosternal process; elongate-triangular and strongly enlarged apically, reaching to mesoventrite.

Specimens examined: [GW] 2exs. Near Yongso Fall, Osaek-ri, Seo-myeon, Yangyang-gun, 5.vii.2015, H.C. Park; 3exs. Near Yongso Fall, Osaek-ri, Seo-myeon, Yangyang-gun, 15.vii.2015, J.B. Seung; **[GG]** 5exs. Mt. Jugeum, Eumhyeon-ri, Naechon-myeon, Pocheon-si, 22.vii.2011, H.C. Park; 5exs. Hwanghak-dong, Namyangju-si, 13.v.2014, H.C. Park.

Distribution: Korea, Japan, Taiwan.

Korea: GW, GG.

18. *Microsternus tokioensis* Nakane, 1961 [Pls. E15, K15, O15, T15]

Microsternus tricolor tokioensis Nakane, 1961: 5.

Microsternus tokioensis: Nakane, 1981: 45; Chûjô and Lee, 1992: 26; Chûjô *et al*., 1993; 99; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 538; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 4.0–5.0 mm. Body elongate-oblong, strongly convex dorsally, glabrous; body mostly black dorsally; head, antennomeres 1–8, legs and ventrites reddish brown; elytra with three reddish brown patches; anchor-shaped reddish brown patches on basal 1/5, not reaching sutural line and weakly produced posteriorly, forming a short branch; median transverse reddish brown band on apical 3/5,

reaching sutural line, weakly produced anteriorly and posteriorly, forming a short branch; posterior reddish brown markings on apex, reaching sutural line. **Head** finely and moderately puctured; eyes rather coarsely facetted; relatively large, ocular distance about 1.5 times wider than eye diameter; antennae relatively short, not reaching basal margin of pronotum; first antennomere robust, third antennomere about 1.8 times longer than fourth; antennomeres 9–11 strongly enlarged, forming distinctly loose and flattened club, each antennomeres broader than long; apical maxillary palpomere and apical labial palpomere cylindrical, narrowing apically. **Pronotum** about twice broader than long, narrowing anteriad; strongly convex; with small and sparse punctures; anterior angles weakly produced anteriad and rounded; lateral margins strongly rimmed and slightly rounded, gradually narrowing anteriad, widest at basal 1/3; basal margin weakly rimmed and strongly sinuous. Scutellum somewhat pentagonal, rounded at each angles. **Elytra** elongate strongly convex, parallel-sided narrowing from apical 1/5 to apex; striate-punctate; strial punctures small and a little sparse; interstriae almost flat, with small punctures. All femora of **legs** slightly swollen; all tibiae strongly enlarged apically; all tarsi visible dorsally, with dense setae ventrally, fourth tarsomere shorter than third; fifth tarsomere longer than four preceding combined. Prosternal proccess elongate-triangular and strongly widen apically, reaching mesoventrite.

Specimens examined: [GW] 6exs. Near Yongso Fall, Osaek-ri, Seo-myeon, Yangyang-gun, 15.vii.2015, J.B. Seung; **[SL]** 1ex. Mt. Bukhan, Chongno-gu, 25.vii.2005, B.H. Jung, from *Inonotus mikadoi*; 2exs. Gildong Ecological Park, Gil-dong, Gangdong-gu, 15.vi.2006, B.H. Jung, from *Inonotus xeranticus*; **[GG]** 1ex. Mt. Mani, Ganghwa-gun, Incheon, Ganghwa-do, 25.vi.2006, B.H. Jung, from *Phellinus* sp.; 22exs. Jinjeop-eup, Namyangju-si, 9.ix.2008, B.H. Jung, from *Inonotus mikadoi*; 2exs. Donggureung Royal Tombs, Guri-si, 20.ix.2009, B.H. Jung, from *Inonotus mikadoi*; 1ex. Mt. Yongmun, Yongmun-myeon, Yangpyeong-gun, 30.iv.2006, B.H. Jung, from *Inonotus mikadoi*; 4exs. Donggureung Royal Tombs, Guri-si, 10.viii.2012, B.H. Jung, from *Inonotus mikadoi*; **[JB]** 2exs. Near Guamsa, Sunchang-gun, 15.vii.2016, B.H. Jung and H.C. Park, from *Inonotus mikadoi*; **[JN]** 3exs. Piagol, Mt. Jiri, Gurye-gun, 9.vi.2016, B.H. Jung, from *Inonotus mikadoi*; **[GN]** 7exs. Mt. Jiri, Gungsan-ri, Sancheong-gun, 9.ix.2016, B.H. Jung, from the mycelia; **[JJ]** 2exs. Gwaneumsa, Mt. Halla, Jocheon-eup, Jeju-si, 11.vi.2016, B.H. Jung, from *Inonotus mikadoi*; 3exs. Gyorae Natural Recreation Forest, Jocheon-eup, Jeju-si, 12.vi.2016, J.B. Seung and B.H. Jung, from *Inonotus mikadoi*; 5exs. Seoguipo Natural Recreation Forest, Seoguipo-si, 13.vi.2016, J.B. Seung and B.H. Jung, from *Inonotus mikadoi*; 2exs. Gyorae Natural Recreation Forest, Jocheon-eup, Jeju-si, 22.vii.2016, J.B. Seung and B.H. Jung, from *Inonotus mikadoi*; 6exs. Seoguipo Natural Recreation Forest, Seoguipo-si, 23.vii.2016, J.B. Seung and B.H. Jung, from *Inonotus mikadoi*.

Host fungi: *Inonotus mikadoi* (Lloyd) Imaz. *Inonotus xeranticus* (Berk.) Imaz.et Aoshi., *Phellinus* sp.

Distribution: Korea, Japan.

Korea: GW, SL, GG, JB, JJ.

Tribe Encaustini Crotch, 1876

Encaustini Crotch, 1876: 476. Type genus: *Encaustes* Lacordaire, 1842.
Encaustites Chapuis, 1876: 16. Type genus: *Encaustes* Lacordaire, 1842.
Encaustinae Chûjô, 1936: 27–28. Type genus: *Encaustes* Lacordaire, 1842.

DIAGNOSIS: Body very large, strongly elongate and parallel-sided at middle, or small to medium-sized with the oval or oblong outline, strongly convex and glabrous dorsally. Head without stridulatory file; antnnae rather long, reaching over elytral base; apical three antennomeres forming a comparatively small club; apical maxillary palomere mostly strongly transverse, sometimes subrotundate. Elytra are more or less regularly striate-punctate. Leg rather long and slender; fourth tarsomere is very small, hidden at base of third tarsomere.

Genera: 13 (4 in Korea), over 71 species (8 in Korea).
Distribution: Asia and Oriental region.

Key to the Korean genera of Encaustini (based on Chûjô, 1969)

1. Body moderate in size (4.0–12.0 mm); Body oval or elongate-oval, not parallel-sided ····· *Aulacochilus*
– Body very large (over 12.0 mm); Body elongate, parallel-sided at middle ····· 2
2. Elytral base distinctly broader than base of pronotum ····· *Encaustes*
– Elytral base nearly equal to or slightly broader than base of pronotum ····· 3
3. Third antennomere longer than fourth ····· *Megalodacne*
– Third antennomere nearly equal to, or slightly longer than fourth ····· *Episcapha*

Genus *Aulacochilus* Chevrolat, 1837

Aulacochilus Chevrolat, 1837: 429.
Type species: *Erotylus quadripustulatus* Fabricius, 1801.

DIAGNOSIS: Body oval to elongate-oval, rather small to medium-sized (4.0–12.0 mm), distinctly convex and glabrous dorsally. Head small without stridulatory files on occipital region; third antennomere longer than second or fourth, three apical antennomeres forming a distinct club; apical maxillary palpomere broad; apical labial palpomere cup-shaped and rather broader than long. Elytral base is equal to or slightly broader than base of pronotum; elytra striate-punctate dorsally. Tibiae flattened; fourth tarsomere minute and hidden to base of third tarsomere.

Species: 20 (2 in Korea).

Distribution: Palaearctic and Oriental Regions.

Key to the Korean species of *Aulacochilus*

1. Elytra with two pairs of oblique bands with simple edges (Chûjô, 1969) ····· *A. japonicus*
– Elytra with a pair of flame-shaped markings with zigzag edges ····· *A. luniferus decoratus*

19. *Aulacochilus japonicus* Crotch, 1873

Aulacochilus japonicus Crotch, 1873a: 189; Miwa, 1929: 120; Kamiya and Adachi, 1935: 16; Niimura, 1939: 64, 66; Matsushita, 1941: 690; Nobuchi, 1954: 3; ZSK, 1968: 107; Chûjô, 1969: 128; Ministry of Education, 1969: 228; Woo and Cho, 1988: 107; Chûjô and Chûjô, 1989: 75; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 538; Hong and Lee, 2014: 178.

DESCRIPTION (based on Chûjô, 1969): **Body** length 5.0–7.0 mm. Body elongate-oval, strongly convex dorsally, and glabrous; body mostly blackish blue and shiny dorsally; antennae and legs black; ventrites black, less shiny than dorsum; elytra with two pairs of reddish brown oblique bands with simple edges, not completely reaching lateral border of elytra. **Head** small, sparsely puctured; first antennomere triangular, third antennomere longer than following combined; antennomeres 9–11 widened, forming distinct and loose club. **Pronotum** about twice broader than long, narrowing anteriad; weakly convex; Elytron with eight rows of punctures; interstriae very finely but not closely punctuate and pubescent.

Specimens examined: None.

Distribution: Korea, Japan.

Remarks: Korean specimens were not examined. This species was firstly reported by Miwa (1929) from Suwon. Further collections and studies are needed.

20. *Aulacochilus luniferus decoratus* Reitter, 1879 [Pls. E16, K16, O16, T16]

Aulacochilus decoratus Reitter, 1879: 223; Miwa, 1929: 120; Nakane, 1958a: 45; Nakane, 1963: 201; ZSK, 1968: 107; Chûjô, 1969: 131; Seok, 1970: 67; Lee *et al*., 1985: 404; Sasaji, 1985: 217; Chûjô and Chûjô, 1989: 75; Chûjô *et al*., 1993: 100; Kim *et al*., 1994: 169.

Aulacochilus luniferus decoratus M.t. Chûjô, 1961: 9; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 538;

Hong and Lee, 2014: 178.

DESCRIPTION: Body length 5.5–7.0 mm. Body elongate-oval, strongly convex dorsally, glabrous; body mostly bluish black, somewhat metallically shiny dorsally; underside blackish and less shiny than dorsum; antennae black; base of tibiae, tarsi and ventrites brownish black; elytra with anchor-shaped reddish brown patches on basal part and transverse reddish brown band on apical 1/3; all markings weakly produced anteriorly and apically, forming short branch. **Head** finely and moderately puctured; eyes rather coarsely facetted; relatively large, ocular distance about 1.2 times wider than eye diameter; antenna relatively short, not reaching base of pronotum; first antennomere robust, third antennomere about 1.5 times shorter than fourth; antennomeres 9–11 strongly widened, forming distinct and flattened club, each antennomeres broader than long; apical maxillary palpomere and apical labial palpomere cylindrical, narrowing apically. **Pronotum** distinctly broader than long, narrowing anteriad; strongly convex; with fine, moderate and sparse punctures; anterior angles weakly produced anteriad and rounded; lateral margins strongly rimmed and slightly rounded, gradually narrowing anteriad, widest at basal 1/3; basal margin weakly rimmed and strongly sinuous. Scutellum somewhat pentagonal, rounded at each angles. **Elytra** elongate strongly convex, parallel-sided, narrowing from apical 1/5 to apex; striate-punctate; strial punctures small and regular; interstriae almost flat, with small punctures. Prosternal proccess elongate-triangular and strongly widen apically, reaching mesoventrite; mesoventrite very small, mostly covered by the prosternal process. All femora of **legs** slightly swollen; all tibiae strongly enlarged apically; all tarsi visible dorsally, with dense setae ventrally, fourth tarsomere shorter than third; fifth tarsomere longer than four preceding tarsomeres combined together.

Specimens examined: [GW] 2exs. Neukgu-ri, Dogye-eup, Samcheok-si, 2.viii.2014, J.B. Seung, from *C oriolus versicolor*; 4exs. Near Yongso Fall, Osaek-ri, Seo-myeon, Yangyang-gun, 5.vii.2015, J.B. Seung; **[SL]** 4exs. Olympic Park, Bangi-dong, Songpa-gu, 17.vi.2005, B.H. Jung, from *Lenzites betulina***; [GG]** 3exs. Mt. Mugab, Chowoel-eup, Gwangju-si, 6.viii.2005, B.H. Jung, from *Lenzites betulina*; 8exs. Iseongsanseong, Chungung-dong, Hanam-si, 18.viii.2005, B.H. Jung, from *Coriolus versicolor*; 5exs. Jije-myeon, Yangpyeong-gun, 14.v.2006, B.H. Jung, from *Lenzites betulina*; 2exs. Donggureung Royal Tombs, Guri-si, 24.ix.2008, B.H. Jung, from *Lenzites betulina*; [CN] 2exs. Mt. Seongju, Seongju-ri, Seongju-myeon, Boryeong-si, 5.vii.2014, J.B. Seung, from *Lenzites betulina*; **[JN]** 7exs. Piagol, Mt. Jiri, Gurye-gun, 4.viii.2014, B.H. Jung, from *Coriolus hirsutus***; [JJ]** 2exs. Gwaneumsa, Mt. Halla, Jocheon-eup, Jeju-si, 11.vi.2016, B.H. Jung, from *Lenzites betulina*; 1ex. Gyorae Natural Recreation Forest, Jocheon-eup, Jeju-si, 12.vi.2016, J.B. Seung and B.H. Jung, from *Lenzites betulina*; 2exs. Gyorae Natural Recreation Forest, Jocheon-eup, Jeju-si, 22.vii.2016, J.B. Seung and B.H. Jung, from *Lenzites betulina*; 5exs. Seoguipo Natural Recreation Forest, Seoguipo-si, 23.vii.2016, J.B. Seung and B.H. Jung, from *Lenzites betulina*.

Host fungi: *Lenzites betulina* (L.: Fr.) Fr.; *Coriolus hirsutus***,** *Coriolus versicolor* (L.) Quél.

Distribution: Korea, Japan, China (Fujian), Russia (Far East), Oriental region.

Korea: GW, SL, GG, CN, JN, JJ.

Genus *Encaustes* Lacordaire, 1842

Encaustes Lacordaire, 1842: 33. Type species**:** *Engis verticalis* W. S. MacLeay, 1825.
Engis W. S. MacLeay, 1825: 41 [HN].

DIAGNOSIS: Body very large, strongly elongate, parallel- or subparallel-sided; convex and glabrous dorsally. Antennae comparatively long, reaching elytral base; third antennomere much longer than second and fourth, apical three antennomeres forming comparatively small, flatten and compact club; apical maxillary palpomere boat-shaped, with broad sensorial face; apical labial palpomere club-shaped. Anterior angle of pronotum strongly produced anteriad. Elytra strongly elongate. Tarsi broad, tarsomeres 2–3 broader, second tarsomere smaller than third, fourth tarsomere minute, hidden under base of third tarsomere.

Species: 6 (1 in Korea).
Distribution: Asia (mostly south) and Oriental Region.

21. *Encaustes cruentapraenobilis* Lewis, 1883

Encaustes cruentapraenobilis Lewis, 1883: 138; Delkeskamp, 1933: 188; Chûjô, 1969: 124; Ju, 1969 (North Korea): 118; Chûjô and Chûjô, 1989: 75; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 539; Hong and Lee, 2014: 178.

DESCRIPTION (based on Chûjô, 1969): **Body** length 16.0–36.0 mm. Body very large, very much differ in size by individuals, strongly elongate, parallel-sided at median part; strongly convex dorsally, and glabrous; body mostly black; pronoum with a large transverse reddish patch at middle part; patch stretches out two projections from its four directions(anterior, posterior, right and le and left); **elytra** with a longitudinal reddish patch at each; latero-basal part a transverse reddish patch near apex. **Head** strongly coarsely puctured; with a distinct longitudinal sulcus along inner border of each eye; clypeus strongly depressed and emarginated at front border. **Pronotum** subquadrate, rather broad than long. Male Protibia armed with a row of denticles at basal 1/3 part; female protibia smooth and without such structures as male.

Specimens examined: None.
Distribution: Korea, Japan, China (Henan), Russia (Far East).

Remarks: Korean specimens were not examined. Delkeskamp (1933) firstly reported this species from Korea and Ju (1969) reported it from North Korea without closer locality data. Therefore, this species has been included in several Korean checklists based on their records. I have been tried to collect this species for several years, without success. Further studies are needed. Description is based on Chûjô (1969).

Genus *Episcapha* Dejean, 1836

Episcapha Dejean, 1836: 137. Type species**:** *Engis quadrimacula* Wiedemann, 1823.

DIAGNOSIS: Body medium-sized, elongate-oblong or strongly elongate, slightly to moderately convex dorsally; pubescent or glabrous. Head without stridulatory files on occipital region; third antennomere equal to fourth in shape and a little longer than fourth in length; apical three antennomeres strongly enlarged and flattened, about three times longer than wide; apical maxillary palpomere cylindrical, longer than wide, gradually narrowing apically and truncated at apex; apical labial palpomere securiform, straightly truncated at apex. Elytra strongly elongate, as wide as or slightly broader than prothorax at base; confusedly punctuate or striate-punctate. Three basal tarsomeres with dense setae ventrally; fourth tarsomere is smaller than third; and fifth tarsomere strongly elongate.

Genera: 13 (4 in Korea), 4 subspecies (none in Korea).
Distribution: Asia and Oriental Regions.

Key to the Korean species of *Episcapha*

1. Body completely glabrous dorsally; ocular distance about three times wider than short eye diameter ····· ····· *E. morawitzi*
– Body more or less covered with hairs dorsally; ocular distance below three times wider than short eye diameter ····· 2
2. Humeral spot of elytra black, not extending latero-basal part and entirely surrounding reddish flame-shaped markings ····· *E. flavofasciata*
– Humeral spot of elytra black, extending latero-basal part and partially surrounding reddish flame-shaped markings ····· 3
3. Body finely and sparsely pubescent; ocular distance about twice wider than eye diameter, with lateral ridges developing toward anterior edge of each eye but not angularly produced ····· *E. gorhami*

– Body with dense hairs longer than in preceding species; ocular distance about 1.5–2 times wider than eye diameter, with lateral ridges not developing toward anterior part of each eye but not angularly produced (Chûjô, 1969) ····· *E. fortunii*

22. *Episcapha flavofasciata flavofasciata* (Reitter, 1879) [Pls. E17, K17, O17, T17]

Megalodacne flavofasciata Reitter, 1879: 223.

Episcapha hamata Lewis, 1879: 465.

Episcapha flavofasciata: Reitter, 1887: 5; Araki, 1949: 4; Nakane, 1963: 20; Chûjô, 1969: 108; Seok, 1970: 67; Lee *et al*., 1985: 404; Sasaji, 1985: 217; Chûjô and Chûjô, 1989: 75; Chûjô and Lee, 1992: 25; Chûjô *et al*., 1993:100; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 540; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 12.0–14.0 mm. Body elongate-oblong, strongly convex dorsally, glabrous and shiny; with very short hairs (visible under microscope), but latero-marginal and posterior areas sparsely covered with short blackish hairs; body mostly black, elytra with two yellowish red patches, not reaching sutural line; anchor-shaped marking on basal 1/5, humeral black spot, not extending latero-basal part and entirely surrounding reddish flame-shaped markings; transverse reddish brown band on basal 4/5, weakly produced anteriorly and posterioly, forming short branch. **Head** with tiny, regular and dense puctures; distinctly ridged at each side along inner border of each eyes, with short V-shaped sulcus and shallowly depressed between eyes; eyes rather coarsely facetted and relatively large, ocular distance about 1.3 times wider than short eye diameter; 1–8 antennomeres monilifrom; 9–11 antennomeres strongly enlarged, forming distinct and flattened club; first antennomere robust, third antennomere about 1.2 times longer than fourth; apical maxillary palpomere cylindrical, gradually narrowing apically and truncated at apex; apical labial palpomere securiform, straightly truncated at apex. **Pronotum** broader than long, weakly narrowing anteriad; with moderate, coarse and dense punctures; covered short pubescence; anterior margin almost straight and produced anteriad from sublateral part, anterior angles sharp and tapered; lateral sides strongly rimmed and explante and flatten, weakly narrowing anteriad; basal margin weakly rimmed and strongly sinuous, basal angles obtuse. Scutellum transverse pentagon, rounded at each angles. **Elytra** elongate strongly convex, parallel-sided, narrowing from apical 1/5 to apex; not striate-punctate; with moderate, coarse and dense puctures; covered with short pubescence. All femora of **legs** slightly swollen; all tibiae moderately enlarged apically; all tarsi visible dorsally, with golden and dense setae ventrally, fourth tarsomere about 1.3 times shorter than third; fifth tarsomere little shorter than four preceding combined. Prosternal proccess is trapezoidal, widest and sinuous at apex, not reaching basal margin of mesoventrite.

Specimens examined: [GW] 6exs. Near Yongso Fall, Osaek-ri, Seo-myeon, Yangyang-gun, 5.vii.2015, J.B. Seung; 2exs. Near Yongso Fall, Osaek-ri, Seo-myeon, Yangyang-gun, 10.viii.2015, H.C. Park; **[GB]** 1ex. Mt. Geumo, Research and Training Institute environment, 19-20.viii.2001, J.I. Kim and A.Y. Kim; **[JN]** 2exs. Chusan, Mt. Baikun, Gwangyang-si, iv.- x.2014, K.J. Hong (preserved in NIBR); **[JJ]** 7exs. Donnaeko, Seogwipo-si, 10.vii.2015, J.B. Seung; 5exs. Jeolmul Natural Recreation Forest, Jeju-si, 10.v.2016, J.B. Seung, from mycelia; 10exs. Gyorae Natural Recreation Forest, Gyorae –ri, Jocheon-eup, Jeju-si, 12.vi.2016, J.B. Seung and B.H. Jung from mycelia; 5exs, Seogwipo Natural Recreation Forest, Seogwipo-si, 13.vi.2016, J.B. Seung and B.H. Jung from mycelia; 3exs, Andeok Valley, Seogwipo-si, 22.vii.2016, J.B. Seung and B.H. Jung from mycelia; 1ex, Hwasun Gotzawal, Seogwipo-si, 22.vii.2016, J.B. Seung and B.H. Jung; 5exs. Gyorae Natural Recreation Forest, Gyorae–ri, Jocheon-eup, Jeju-si, 21.vii.2016, J.B. Seung and B.H. Jung from mycelia; 4exs. Seongpanak, Mt. Halla, Jocheon-eup, Jeju-si, 21.vii.2016, J.B. Seung and B.H. Jung from mycelia; 5exs, Seogwipo Natural Recreation Forest, Seogwipo-si, 23.vii.2016, J.B. Seung and B.H. Jung from mycelia.

Host fungi: Mycelia.

Distribution: Korea, Japan (Hokkaido), Russia (East Sibeira, Far East) China (Henan, Guizhou, Fujian, Sichuan, Northern Territory).

Korea: GW, GB, JN, JJ.

Remarks: The color of elytral markings is yellowish green when this species is alive, but the color of elytral markings turn into yellowish red when it is dead.

23. *Episcapha fortunii fortunii* Crotch, 1873

Episcapha fortunii Crotch, 1873a: 188; Araki, 1949: 4; Chûjô, 1969: 114; Kim and Kim, 1972: 189; Chûjô and Chûjô, 1988: 139; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 540; Hong and Lee, 2014: 178.

Episcapha fortunei Lewis, 1879: 30.

Specimens examined: None.

Distribution: Korea, Japan. China, Himalaya.

Remarks: Korean specimens of this species were not examined. I have examined more than 100 specimens of Korean *Episcapha* species, but no specimens of *Episcapha fortunii* Crotch were found. This species is similar to other species of *Episcapha*, so perhaps different *Episcapha* species were long time ago misidentified as *Episcapha fortunii*. Further studies are needed.

24. *Episcapha gorhami* Lewis, 1879 [Pls. F18, K18, O18, T18]

Episcapha gorhami Lewis, 1879: 465; Cho, 1955: 27; ZSK, 1968; 107; Hyun and Woo, 1969: 186; Chûjô and Chûjô: 1988, 139; Woo and Cho, 1988: 231; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 11.0–13.0 mm. Body elongate-oblong, strongly convex dorsally, glabrous and shiny; body mostly black, elyton with two yellowish red patches, not reaching sutural line; anchor shaped marking on basal 1/5, humeral black spot not entirely surrounding reddish flame-shaped markings; transverse reddish brown band on basal 4/5, weakly produced anteriorly and posterioly, forming short branch. **Head** with moderate, coarse and dense punctures; covered with short pubescence; distinctly ridged at each side along inner border of each eyes, with short V-shaped sulcus and shallowly depressed between eyes; eyes rather coarsely facetted; ocular distance about twice wider than short eye diameter; antennomeres 1–8 monilifrom; antennomeres 9–11 strongly enlarged, forming distinct and flattened club; first antennomere robust, third antennomere a little longer than second and almost equal to fourth; apical maxillary palpomere cylindrical, gradually narrowing apically and truncated at apex; apical labial palpomere securiform, straight truncated at apex. **Pronotum** broader than long, weakly narrowing anteriad; with moderate, coarse and dense punctures; covered with short pubescence; anterior margin almost straight and produced anteriad from sublateral part, anterior angles sharp and tapered; lateral sides strongly rimmed, explanate and flattened, weakly narrowing anteriad; basal margin weakly rimmed and strongly sinuous, basal angles obtuse. Scutellum transverse pentagonal, rounded at each angles. **Elytra** elongate, strongly convex, parallel-sided, narrowing from apical 1/5 to apex; not striate-punctate; with moderate, coarse and dense punctures; covered short pubescence. All femora of **legs** slightly swollen; all tibiae moderately enlarged apically; all tarsi visible dorsally, with golden and dense setae ventrally, fourth tasomere shorter than third; fifth tarsomere a little shorter than four preceding tarsomeres combined together. Prosternal proccess is trapezoidal, widest and sinuous at apex, not reaching basal margin of mesoventrite.

Specimens examined: [SL] 2exs. Gildong Ecological Park, Gil-dong, Gangdong-gu, 7.vii.2003, B.H. Jung, B.H. Jung; 1ex. Gildong Ecological Park, Gil-dong, Gangdong-gu, 2.v.2015, B.H. Jung, from mycelia**; [GG]** 4exs. Yeogi-san, Suwoen-si, 3.viii.1991, J.Y. Choi; 1ex. Mt. Mugab, Gwangju-gun, 27.viii.2005, B.H. Jung, from mycelia**;** 1ex. Byoekje, Goyang-si, 10.vi.2006; B.H. Jung, from mycelia; 1ex. Mt. Mani, Ganghwa-gun, Incheon, Ganghwa-do, 25.vi.2006, B.H. Jung; 2exs. Sinbong valley, Suji-gu, Yongin-si, 30.vi.2011; B.H. Jung, from mycelia; 2exs. Botonggol, Namhansanseong, Seongnam-si, 4.viii.2011, H.C. Park; **[CN]** 4exs. Mt. Buso, Buyeo-eub, 31.x.2009, B.H. Jung, from mycelia; 1ex. Near Donghak-sa, Kyeryong-myeon, 30.iv.2006, B.H. Jung, from mycelia; **[GN]** 1ex. Seok-dong, Jinhai-si, 10.viii.2009, Y.B. Lee and I.S. Yoo.

Host fungi: Mycelia.

Distribution: Korea, Japan, China (Guizhou, Hunan).

Korea: SL, GG, CN, GN.

25. *Episcapha morawitzi morawitzi* (Solsky, 1871) [Pls. F19, K19, O19, U19]

Dacne morawitzi Solsky, 1871: 266.

Episcapha taishoensis Lewis, 1874: 79; Okamoto, 1924: 195; Miwa, 1929: 120; Kamiya and Adachi, 1935: 16; Cho, 1936: 27; Chûjô, 1936: 139; Mochizuki and Matsuhi, 1939: 51; Cho, 1963: 206; ZSK, 1968; 107; Ministry of Education, 1969: 97; Kim, 1981: 343; Lee *et al*., 1985: 404; Chûjô and Chûjô, 1988: 139.

Episcapha morawitzi: Chûjô, 1969: 104; Ministry of Education, 1969; Seok, 1970: 69; Sasaji, 1985: 217; A Checklist of Japanese Insect, 1989: 380; Chûjô *et al*., 1993:100; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Kim, 1995: 163; Kim and Kim 1997, 163; Wegrzynowicz, 2007: 540; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 11.0–14.0 mm. Body elongate-oblong, strongly convex dorsally, strongly glabrous and shiny; body mostly black, elytra with two yellowish red patches, not reaching sutural line; anchor-shaped marking on basal 1/5, humeral black spot not entirely surrounding reddish flame-shaped markings; transverse reddish brown band on basal 4/5, weakly produced anteriorly and apically, forming a short branch. **Head** with tiny, regular and dense punctures and covered very short hairs (visible under microscope); distinctly ridged at each side along inner border of each eyes, with short V-shaped sulcus and strongly depressed between eyes; eyes rather coarsely facetted; relatively small, ocular distance about three times wider than short eye diameter; antennomeres 1–8 monilifrom; antennomeres 9–11 strongly enlarged, forming distinct and flattened club, each antennomeres a little broader than long; first antennomere robust, third antennomere a little longer than second and fourth; apical maxillary palpomere cylindrical, gradually narrowing apically and truncated at apex; apical labial palpomere securiform, straightly truncated at apex. **Pronotum** broader than long, weakly narrowing anteriad; with tiny, regular and dense punctures; anterior margin almost straight and abruptly produced anteriad from sublateral part, anterior angles strongly sharp and tapered; lateral sides strongly rimmed, explante and flattened, weakly narrowing anteriad; basal margin weakly rimmed and strongly sinuous, basal angles obtuse. Scutellum transverse pentagonal, rounded at each angles. **Elytra** elongate, strongly convex, parallel-sided, narrowing from apical 1/5 to apex; not striate-punctate; with tiny, regular and dense punctures and covered with very short hairs (visible under microscope). All femora slightly swollen; all tibiae moderately enlarged apically; all tarsi visible dorsally, with golden and dense setae ventrally, fourth tarsomere about 1.2 times shorter than third; fifth tarsomere almost equal to a little short than four preceding tarsomeres combined together. Prosternal proccess is trapezoidal, widest and sinuous at apex, not reaching basal margin of mesoventrite.

Specimens examined: [GW] 3exs. Yeongwoel Yeongwoel-gun, 3.viii.2003, J.B. Seung; 1ex. Near Soyang-ho, Buksan-myeon, Chuncheon-si, 28.viii.2005, B.H. Jung; 4exs.Neukgu-ri, Dogye-eup, Samcheok-si, 2.viii.2014, J.B. Seung, from mycelia; **[SL]** 1ex. Gildong Ecological Park, Gil-dong, Gangdong-gu, 2.v.2006, B.H. Jung, from *Lenzites beulina*; **[GG]** 1ex. Yeogi-san, Suwoen-si, 4.viii.1991; 1ex. Korean Folk Village, Bora-dong, Giheung-gu, Yongin-si, 30.ix.1993, J.Y. Choi; 1ex. Mt. Mugab, Gwangju-gun, 6.vi.2006, J.B. Seung and B.H. Jung, from mycelia; 1ex. Mt. Mugab, Gwangju-gun, 21.vi.2006, B.H. Jung; 4exs. Okhyeon-ri, Jipyeong-myeon, Yangpyeong-gun, 14.v.2006, B.H. Jung, from *Coriolus versicolor*; 1ex. Mt. Mani, Ganghwa-gun, Incheon, Ganghwa-do, 25.vi.2006, B.H. Jung, from mycelia; 4exs. Donggureung Royal Tombs, Guri-si, 8.x.2006, B.H. Jung, from mycelia; 1ex. Naegak-ri, Jinseop-eup, Namyangju-si, 24.vi.2007, B.H. Jung, from mycelia; 2exs. near Gwangneung forest, 5.x.2009, B.H. Jung, from *Lenzites beulina*; **[CN]** 6exs. Mt. Seongju, Seongju-myeon, Boryeong-si, 12.vii.2013, J.B. Seung; 28exs. Mt. Seongju, Seongju-myeon, Boryeong-si, 23.vii.2014, J.B. Seung; **[JN]** 1ex. Piagol valley, Mt. Jiri, Gurye-gun, 5.viii.2015, B.H. Jung, from mycelia; **[GN]** 5exs. Mt. Jiri, Gungsan-ri, Sancheong-gun, 9.ix.2016, B.H. Jung, from mycelia.

Host fungi: *Coriolus versicolor* (L.: Fr.) Quél, *Lenzites beulina* (L.: Fr.) Fr., mycelia.

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

Korea: GW, SL, GG, CN, JN.

Genus *Megalodacne* Crotch, 1873

Megalodacne Crotch, 1873b: 352.
Type species**:** *Ips fasciata* Fabricius, 1777.

DIAGNOSIS: Body oblong or elongate-oblong, convex; shiny and glabrous; more or less pubescent ventrally; antennae rather long and robust; apical maxillary palpomere cylindrical or subcylindrical, thinned apically and sraight or rather obliquely truncated apex; elytra with two dentate yellowish red markings–humeral marking extending forwards and isolating a black spot and subapical fascia band placed on basal 4/5 –both markings not reaching elytral suture; third tarsomere elongate, much longer than second and fourth (Chûjô, 1969).

Species: 4 (1 in Korea).

Distribution: Korea, Russia (Far East), Japan, China (Sichuan), Pakistan.

26. *Megalodacne bellula* Lewis, 1883

Megalodacne bellula Lewis, 1883: 139; Woo and Cho, 1988: 231; Chûjô *et al*., 1993:100; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 540; Hong and Lee, 2014: 178.

Specimens examined: None.

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

Remarks: Korean specimens were not examined. Though this species was reported from Mt. Jiri (Imgollyeong) located in sourthern parts of Korea (Woo and Cho, 1988), specimens of this species were not found and examined. Also Chûjô *et al*. (1993) has reported this species (Kwangnung, Pochon Gun, 14–19.v.1992, M. T. Chûjô) from Krean. However, as a result of careful examination, this voucher specimen which Chûjô *et al* reported from Kwangnung was misidentified for *Episcapha flavofasciata flavofasciata* (Reitter, 1879). Further collections and studies are needed. It is doubtful whether this species is distributed or absent in Korea because of of non-existing materials and lack of distributional information.

Tribe Tritomini Curtis, 1834

Tritomidae Curtis, 1834: plate 498. Type genus: *Tritoma* Fabricius, 1775 [placed on the Official List of Generic Names in Zoology (ICZN 1994a)].

Triplacinae Erichson, 1847: 179. Type genus: *Triplax* Herbst, 1793.

Renaninae Chûjô, 1941: 10. Type genus: *Renania* Lewis, 1887.

Cyrtotriplacina Chûjô, 1969: 201. Type genus: *Cyrtotriplax* Crotch, 1873 [syn. of *Tritoma* Fabricius, 1775].

DIAGNOSIS: Body small to medium-sized, mostly oval or oblong, with variable width, rarely almost rotundate or subrotundate, or elongate and parallel- or subparallel-sided, convex and generally glabrous dorsally. Head with a pair of stridulatory files on occipital region in many cases: antennae variable in length and structure, apical three (four or five in some case) antennomeres forming club; apical maxillary palpomere distinctly wider than long or triangular; from base of first tarsomere to apex of third tarsomere enlarged; fourth tarsomere minute, hidden under third.

Genera: 18 (6 in Korea), over 201 species (15 in Korea).

Distribution: Palaearctic and Oriental region.

Key to the Korean genera of Tritomini

1. Apical three antennomeres forming distinct club ····· 2
– Apical four antennomeres forming distinct club ····· *Pselaphandra*
2. Sexual characteristics indistinct, male elytra wholly shiny ····· 3
– Sexual characteristics distinct, male tibiae wider, apical half of elytra more opaque or darker in coloration ····· *Neotriplax*
3. Apical maxillary palpomere strongly transverse and wide triangular, about three times wider than long ··· ····· *Dactylotritoma*
– Apical maxillary palpomere transverse and wide triangular, less than three times wider than long ····· 4
4. Procoxal lines generally not well-developed or variable in their development by the species, only slightly produced beyond anterior margin of procoxal cavities or almost not produced ····· 5
– Procoxal lines well-developed, completely approaching each other in front of antero-medial border margin of prosternum ····· *Pseudotritoma*
5. Apical maxillary palpomere semicircular or subtriangular, about twice wider than long; apical labial palpomere moderately thick; intercoxal area broad ····· *Tritoma*
– Apical maxillary palpomere weakly to strongly widened and shortened, about 2–3 times wider than long; apical labial palpomere thicker than that of *Tritoma*; intercoxal area comparatively narrow ····· *Triplax*

Genus *Dactylotritoma* Arrow, 1925

Dactylotritoma Arrow, 1925: 105.
Type species: *Triplax apicata* Crotch, 1876.

DIAGNOSIS: Body medium-sized, elongate-oval or elongate, slightly convex dorsally. Eyes widely separately each other; apical maxillary palpomere strongly wide triangular, about three times wider than long; apical labial palpomere ovate. Pronotum marginated on lateral and basal margins. Scutellum is comparatively small nearly pentagonal or cordiform. Elytra are striate-punctate strial puncture regular. Coxal lines absent prosternal process elongate emarginated at medial part of apex. Tarsomeres 1–3 strongly enlarged, visible dorsally, fourth tarsomere small and hidden under third, not visible dorsally.

Species: over 4 (1 in Korea).
Distribution: Asia and Oriental region.

27. *Dactylotritoma atricapilla* (Lewis, 1887) [Pls. F20, K20, O20, U20]

Triplax atricapilla Lewis, 1887a: 71.

Dactylotritoma atricapilla: Chûjô, 1936: 68–69**;** Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Hong and Lee, 2014; 178.

DESCRIPTION: Body length 6.0–6.5 mm. Body elongate-oval, convex dorsally, glabrous; body mostly yellowish red and shiny; head (except occipital region), antennae, apical 1/2 of elytra and legs black. **Head** with fine and regular punctures; medium-sized, ocular distance about three times wider than short eye diameter; antennae relatively short, not reaching base of pronotum; first antennomere robust, third antennomere about 1.8 times longer than fourth and about 1.7 times longer than second; antennomeres 9–11 strongly enlarged, forming flattened and large club, club wider than long; apical antennomere circular; apical maxillary palpomere strongly transverse and wide triangular, about three times wider than long; apical labial palpomere bowl-shaped. **Pronotum** wider than long, gradually narrowing anteriad; slightly convex and with fine and regular punctures; anterior margin weakly rimmed, anterior angles not produced and roundly obtuse; lateral sides strongly rimmed and slightly rounded, slightly narrowing anteriad; basal margin distinctly rimmed and sinuous; posterior angles not produced and roundly obtuse. Scutellum is somewhat cordiform with sparse punctures. **Elytra** elongate, convex almost parallel-sided, slightly narrowing from apical 1/10 to apex; distinctly striate-punctate, with nine striae of distinct punctures; strial punctures moderate and regular; interstriae weakly flat with tiny and sparse punctures. **Legs** robust**;** all femora strongly swollen; femora with distinct longitudinal furrow at underside for reception of corresponding tibiae when in repose; all tarsi with densely golden setae on inner part; tarsomeres 1–3 strongly enlarged, visible dorsally; fourth tarsomere small and hidden under third, not visible dorsally; fifth tarsomere a little shorter than four preceding combined. Prosternal proccess elongate trapezoidal, enlarged apically and emarginate at middle of apex.

Specimens examined: 10exs. Neungkyeongbong, Daegwallyeong-myeon, Pyeongchang-gun, 21.ix.2015 (collected larvae; emerged on 10.x.2015), H.G. Ahn, from *Inonotus hispidus* (Bull.) P. Karst.

Host fungus: *Inonotus hispidus* (Bull.) P. Karst.

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

Korea: GW.

Genus *Neotriplax* Lewis, 1887

Neotriplax Lewis, 1887a: 60. Type species: *Neotriplax atrata* Lewis, 1887.

DIAGNOSIS: Body oval and strongly convex. Head with a pair of distinct stridulatory files on occipital region; apical maxillary palpomere large triangular, almost semicircular or transverse oval; apical labial palpomere nearly oval, slightly truncated at apex; third antennomere almost equal to fourth and fifth combined, three apical antennomeres forming flat club. Eytra striate-punctate. Tarsomeres 1–3 strongly enlarged, visible dorsally; fourth tarsomere very small and hidden under third, not visible dorsally. Male tibiae wider, apical 1/2 of elytra more opaque or darker than basal 1/2. Prosternal process emarginate at middle of apex.

Species: 6 (1 in Korea).
Distribution: Asia and Oriental Regions.

28. *Neotriplax lewisii* (Crotch, 1873) [Pls. F21, L21, P21, U21]

Cyrtotriplax lewisii Crotch, 1873a: 189.
Neotriplax lewisii: Lewis, 1887a: 61; Chûjô *et al*., 1993; 100; Kim *et al*., 1994: 169; Kim, 1995: 129; Wegrzynowicz, 2007: 542; Hong and Lee, 2014; 178.

DESCRIPTION: Body length 6.0–6.5 mm. Body elongate-oval, strongly convex dorsally, glabrous; mostly yellowish brown and shiny; clypeus, eyes, mouthparts (labrum often yellowish brown), antennae and legs black. **Head** with sparse and small punctures; eyes relatively small, ocular distance about four times wider than short eye diameter; first antennomere robust, third antennomere about twice longer than second and fourth; antennomeres 9–11 strongly widened, forming distinct and flattened club, apical antennomere compactly attatched to ninth and slightly narrower than antennomeres 9–10; clypeus distinctly separated from frons by arched suture, weakly rounded at anterior margin; apical maxillary palpomere wide triangular, about 1.5 times wider than long; apical labial palpomere narrowly elongate triangular, truncate at apex. **Pronotum** convex, with sparse and small punctures; all margins rimmed; anterior margin rounded, anterior angles not produced and rounded obtuse; lateral sides strongly rimmed and slightly rounded, slightly narrowing anteriad; basal margin arched posteriorly at middle; posterior angles not produced and rounded obtuse. Scutellum is nearly triangular. **Elytra** elongate, strongly convex almost parallel-sided, slightly narrowing from apical 1/10 to apex; irregularly striate-punctate; strial punctures irregular and shallow; interstriae almost flat, with small and dense punctures. All femora of **legs** swollen; tarsomeres 1–3 strongly enlarged, visible dorsally; fifth tarsomere a little

shorter than four preceding combined. Prosternal process is almost elongate-trapezoidal, enlarged apically.

Sexual characteristics: Male: tibiae much more enlarged, apical 1/2 of elytra a little opaque or darker than basal 1/2.

Specimens examined: [GW] 2exs. Neukgu-ri, Dogye-eup, Samcheok-si, 4.viii.2014, J.B. Seung, from *Coriolus versicolor*; **[CN]** 20exs. Near Gabsa, **Gyeryong-myeon, Gongju-si,** 20.x.2009**,** B.H. Jung, from *Coriolus versicolor*; **[JB]** 9exs. Near Gemsansa, Geumsan-myeon, Gimje-si, 23.x.2005, B.H. Jung, from *Coriolus versicolor* and *Coriolus hirsutus*; 10exs. Mt. Hoemun, Gurim-myeon, Sunchang-gun, 25.x.2016, B.H. Jung, from *Coriolus versicolor* (larva); 5exs. Mt. Unjang, Jeongcheon-myeon, Jinan-gun, 2.v.2016, B.H. Jung and H.C. Park, from *Coriolus versicolor*; **[CB]** 3exs. Hwayanggugok, Hwayang-ri, Cheongcheon-myeon, Goesan-gun, 27.vi.2016, B.H. Jung, from *Coriolus versicolor*; **[GB]** 2exs. Near Byeongsanseowon, Byeongsan-ri, Pungcheon-myeon, Andong-si, 8.vi.2008, B.H. Jung, from *Coriolus versicolor*.

Host fungi: *Coriolus versicolor* (L.: Fr.) Quél., *Coriolus hirsutus* (Wulf. : Fr.) Quél.

Distribution: Korea, Japan.

Korea: GW, CN, CB, JB, GB.

Genus *Pselaphandra* Jakobson, 1905

Pselaphandra Jakobson, 1905: xxxv. Type species: *Triplax cinnabarina* Reitter, 1879.
Tetratriplax M. Chûjô, 1969: 210. Type species: *Dactylotritoma inornata* Chujó, 1941.

DIAGNOSIS: Body oblong, moderately convex. Head with pair of well-developed stridulatory files on occiput; four apical antennomeres forming large club; tarsomeres 1–3 distinctly dilated, fourth tarsomere minute, hidden under third.

Species: 2 (2 in Korea).

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

29. *Pselaphandra cinnabarina* (Reitter, 1879)

Triplax cinnabarina Reitter, 1879: 222.
Triplax nigriceps Reitter, 1888: 9.
Pselaphandra cinnabarina Jakobson, 1905: xxxv; Wegrzynowicz, 2007: 542 (North Korea).
Tritoma cinnabarina: Nakane, 1958a: 45 (North Korea).

Tetratriplax cinnabarina: Chûjô et Chûjô, 1990: 56; Kwon *et al*., 1996: 158.
Pselaphanda inornata atrocephala Chûjô *et al*., 1993: 102; Hong and Lee, 2014; 178.

Specimens examined: None.

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

Remarks: Korean specimens were not examined. Since Nakane (1958a) firstly reported this species from Korea without exact locality data, Chûjô et Chûjô (1990) mentioned it in the "Catalog of the Erotylidae from the Old Word", based on Nakane's record. However, Ju (1969) deleted this species from North Korean checklist. Nevertheless, the "National List of Species of Korea <Insect> (Coleoptera II)" (Hong and Lee, 2014) was cited it again and synomized *Pselaphanda inornata atrocephala* Chûjô, Chûjô & Lee, 1993 to this species without any information and sound basis. It is doubtful whether this species is present or absent in Korea because of lack of materials and distributional information. Further studies are needed.

30. *Pselaphandra inornata inornata* (M. Chûjô, 1941) [Pls. G22, L22, P22, U22]

Dactylotritoma inornata M. Chûjô, 1941: 14.
Tritoma inornata Nakane, 1950: 7.
Tetratritoma inornata Nakane, 1958a: 51.
Tetratriplax inornata Chûjô, 1969: 210; Lee *et al*., 1985: 404; Kim *et al*., 1994: 169.
Pselaphandra inornata Takakura et Kido, 1980: 54.
Pselaphandra inornata atrocephala Mt. Chûjô, M. Chûjô & Lee, 1993: 102; Kwon *et al*., 1996: 159; Wegrzynowicz, 2007: 542.

DESCRIPTION: Body length 5.0–5.5 mm; Body oblong, convex dorsally, glabrous; body mostly reddish brown and shiny; antennae and legs black. **Head** with moderate, deep and slightly coarse punctures, eyes relatively small, ocular distance about 3.2 times wider than eye diameter; antennae almost reaching basal margin of pronotum; third antennomere about 1.7 times longer than second and about 1.2 times longer than fourth; antennomeres 8–11 strongly widened, forming loosely articulated and flattened club, eighth antennomere narrower and smaller than tenth; apical antennomere ovate, truncated at apex**;** apical maxillary palpomere very strongly wide and transverse triangular, about four times wider than long; apical labial palpomere small securiform. **Pronotum** transverse, widest at basal 1/3; convex; with small, regular and a little sparse punctures; anterior margin weakly rimmed and rounded anteriad, anterior angles weakly and roundly produced anteriad and obtuse; lateral margins strongly rimmed, gradually narrowing anteriad; basal margin weakly rimmed and sinuous; posterior angles not produced and roundly obtuse. Scutellum is nearly elongate-triangular and smooth. **Elytra** elongate, strongly convex almost parallel-sided, slightly narrowing

from apical 1/10 to apex; distinctly striate-punctate; strial punctures deep, large and regular; interstriae weakly convex, with tiny and sparse punctures. All femora of **legs** swollen; tibiae gradually enlarged apically; tarsomeres 1–3 strongly enlarged and visible dorsally, with dense short golden setae ventrally; fifth tarsomere a little shorter than four preceding combined. Prosternal proccess is almost elongate-trapezoidal, enlarged apically and emarginate at middle of apex.

Specimens examined: [GW] 1ex. near Mt. Seokbyeong-san, Imkye-ri, Imkye-myeon. 22.v.2002, J.D. Yeo; 4exs. Mt. Odae-san, near Weoljeongsa, Jinbu-myeon, 3.x.2008, B.H. Jung, from *Pholiota adiposa*; 6exs. Mt. Odae-san, Seonjai-gil, Jinbu-myeon, 20.v.2015, B.H. Jung; **[SL]** 1ex. Mt. Bukhan, Chongno-gu, 26.v.1990, J.H. Gye; 1ex. Mt. Bukhan, Chongno-gu, 20.ix.2005, B.H. Jung; **[GG]** 4exs. Manisan, Ganghwa-gun, Incheon, Ganghwa-do, 6.x.2006, J.B. Seung, from *Armillaria mellea*; 5exs. Mt. Mugab, Gwangju-gun, 30.x.2006, B.H. Jung, from *Armillaria mellea*; 9exs. Pocheon park cemetery, Sohol-eup, Pocheon-si, 30.x.2007, B.H. Jung, from *Armillariella tabescens*; 2exs. Donggureung Royal Tombs, Guri-si, 21.vi.2008, B.H. Jung, from *Pholiota aurivella*; [**JB]:** 3exs. Near Guam-sa, Suchang-gun, 30.v.2016, H.C. Park**; [JJ];** 2exs. Jeolmul Natural Recreation Forest, Jeju-si, 10.v.2016, J.B. Seung (W. T.); 2exs. Gyorae Natural Recreation Forest, Gyorae –ri, Jocheon-eup, Jeju-si, 12.vi.2016, J.B. Seung and B.H. Jung; 10exs, Hwasun Gotjawal, Andeok-myeon, Seogwipo-si, 13.vi.2016, J.B. Seung (W. T.).

Host fungi: *Armillaria mellea* (Vahl) P. Kumm., *Armillariella tabescens*, *Pholiota aurivella* (Batsch: Fr.) Kummer**,** *Pholiota adiposa* (Fr.) Kumm.

Distribution: Korea, Japan.

Korea: GW, SL, GG, JB, JJ.

Remarks: Chûjô *et al*. (1993) described *Pselaphandra inornata atrocephala* as a subspecies of *Pselaphandra inornata inornata* (M. Chûjô, 1941) from Jeonglyeong Chi (Samnae Myeon, Jeonlabuk-do) in Korea. They separated it from the nominate subspecies by the following characters: much larger in general size, head black to blackish brown, apical maxillary palpomere about 5 times as wide as long. However, closer examination of aedeagus and distribution led to the conclusion that *Pselaphandra inornata atrocephala* was not distinct from the nominotypical subspecies. The distributions of the two 'subspecies' are not isolated. Several individuals with character states of both *Pselaphandra inornata atrocephala* and *Pselaphandra inornata inornata* were collected on the same day and trees in the Gyorae Natural Recreation Forest and Hwasun Gotjawal of Jejudo. *Pselaphandra inornata atrocephala* is no more than a color variation of *Pselaphandra inornata inornata*, therefore *Pselaphandra inornata atrocephala* is synonymized with *Pselaphandra inornata inornata*.

Genus *Pseudotritoma* Gorham, 1888

Pseudotritoma Gorham, 1888: 147. Type species: *Tritomidea nigrocruciata* Crotch, 1876.
Aporotritoma Arrow, 1925: 103. Type species: *Aporotritoma jucunda* Arrow, 1925.

DIAGNOSIS: Body oval to elongate-oval, strongly convex dorsally; lacinia armed with pair of curved spinule-like projections at apex; second antennomere thick, circular and third antennomere elongate, longer than second and fourth; apical maxillary palpomere almost equilateral triangular or more transverse, about twice wider than long; prosternum forming remarkable triangular plate, procoxal lines well-developed, completely approaching each other in front of antero-medial border of prosternum.

Species: over 11 (4 in Korea).
Distribution: Asia, Europe (Azerbaijan, Georgia, Caucasus).

Key to the Korean species of *Pseudotritoma*

1. Pronotum entirely black ····· 2
– Pronotum partially black ····· 3
2. Elytra mostly black, with large red markings ····· *P. consobrina consobrina*
– Elytra unicolored, bluish black, without markings ····· *P. laetabilis*
3. Pronotum mostly black, with reddish brown lateral patches; elytra entirely black ··· *P. arakii fuscocephala*
– Pronotum mostly brownish yellow, with two black circular patches at middle; elytra mostly black, with yellowish brown lateral patches ····· *P. nigrovariegata intersecta*

31. *Pseudotritoma arakii fuscocephala* (Mt. Chûjô, M. Chûjô and Lee, 1993) [Pls. G23, P23, V23]

Aporotritoma arakii fuscocephala Mt. Chûjô, M. Chûjô and Lee, 1993: 101; Kwon *et al*., 1996: 158.
Pseudotritoma arakii fuscocephala: Wegrzynowicz, 2007: 542; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 3.0–3.3 mm. Body convex, elongate-oval, shining and glabrous; color mostly black; head (except for black postero-median part), antennae, mouthparts, lateral sides of pronotum and legs brownish yellow. **Head** with tiny and sparse punctures; ocular distance about twice wider than eye diameter; antennae short, not reaching basal margin of pronotum; third antennomere about 1.5 times longer than second and about twice longer than fourth; apical three antennomeres forming distinctly compact club,

antennomeres 9–10 broader than long; apical antennomere oval, closely articulated in ninth and smaller than antennomeres 9–10; apical maxillary palpomere almost equilateral triangular, about 1.2 times wider than long; apical labial palpomere elongate triangular. **Pronontum** with yellow lateral patches; anterior part almost equal to elytral base; convex; with fine and regular punctures; all margins thinly rimmed; anterior margin rounded; lateral sides gradually and roundly narrowing anteriad; basal margin strongly arched. Scutellum pentagonal. **Elytra** strongly convex distinctly striate-punctate; strial punctures deep and regular; interstriae slightly flat, with tiny and sparse punctures. Femora of **legs** swollen; tibiae widened apically; tarsomeres 1–4 with dense setae ventrally; fourth tarsomere minute, inserted into third; fifth tarsomere a little longer than four preceding combined. Prosternum triangularly elevated at middle, with flat prosternal process dorsally.

Specimens examined: [GG]: 6exs. Mt. Jugeum, Naechon-myeon, Pocheon-si, 25.vii.2006, B.H. Jung, from *Trametes suaveolens*; **[JN]:** 2ex. Hanjai, Mt. Baikun, Oknyeong-myeon, Gwangyang-si, 19.ix.2009, S.S. Kim, from *Trametes* (http://dachori.blog.me).

Host fungi: *Trametes suaveolens* (L.: Fr.) Fr, *Trametes* sp.

Distribution: Korea (South Korea).

Korea: GG, JN, JB

Remarks: Chûjô *et al*. (1993) described *Pseudotritoma arakii fuscocephala* as a subspecies of *Pseudotritoma arakii arakii* (Nakane, 1954) from Jeonglyeong Chi (Samnae Myeon, Jeonlabuk-do) in Korea. They separated it from the nominate species by the following characters: much larger in general size, head dark red except for black postero-median part. Perhaps this subspecies may be proved as a color variation of *P. arakii arakii*. Further studies are needed.

32. *Pseudotritoma consobrina consobrina* (Lewis, 1874) [Pls. G24, L24, P24, V24]

Cyrtotriplax consobrina Lewis, 1874: 78.
Cyrtotriplax solivaga Lewis, 1887a: 66.
Tritoma consobrina Kuhnt, 1909: 79.
Tritoma solivaga Kuhnt, 1909: 79.
Aporotritoma consobrina Nakane, 1963: 203; Chûjô *et al*., 1993: 101; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158.
Pseudotritoma consobrina: Wegrzynowicz, 2007: 542; Hong and Lee, 2014: 178.

DESCRIPTION: Body length 4.0–4.5 mm. Body strongly convex, elongate-oval, glabrous and shining; color mostly black, elytra with large red markings on basal 1/3. **Head** with fine, regular and sparse punctures; frons with little red spot; ocular distance about 2.5 times wider than eye diameter; antennae short, not

reaching basal margin of pronotum; third antennomere elongate, about 1.8 times longer than second and about 2.5 times longer than fourth; apical three antennomeres forming distinctly compact club, antennomeres 9–10 broader than long; apical antennomere oval, closely articulated in ninth and a little smaller than 9–10; apical maxillary palpomere almost equilateral triangular, about 1.2 times wider than long; apical labial palpomere elongate triangular. **Pronotum** widest at base, twice wider than long, narrowing anteriad; strongly convex; with fine and regular punctures; anterior margin rounded; lateral sides rounded, slightly narrowing anteriad; basal margin strongly arched. **Elytra** about 1.6 times longer than wide; strongly convex, distinctly striate-punctate; strial punctures dense, regular and distinct; interstriae weakly convex, with tiny and sparse punctures. Femora of **legs** swollen; tibiae widened apically; tarsomeres 1–4 with dense setae ventrally; fourth tarsomere short, inserted into third; fifth tarsomere slightly longer than four preceding combined. Prosternum triangularly elevated at middle, with flat prosternal process dorsally.

Specimens examined: [GW]: 1ex. Weolsong 1-ri, Seo-myeon, Chuncheon-si, 9.vii.2006, H.C. Park; 2exs. Near Temple Cheoneunsa, Samcheok-si, 4.viii.2014, J.B. Seung; **[SL]:** 2exs. Gildong Ecological Park, Gildong, Gangdong-gu, 17.v.2004, B.H. Jung from *Daedaleopsis tricolor*; **[GG]:** 1ex. Mt. Cheonggye-san, Uiwang-si, 10.v.1991, H.C. Park; 1ex. Gwansan-dong, Deokyang-gu, Goyang-si, 29.iv.2004, B.H. Jung, from *Daedaleopsis tricolor*; 5exs. Dongguneong, Guri-si, 25.iv.2007, B.H. Jung from *Coriolus versicolor*; 1ex. Dongguneong, Guri-si, 10.vi.2015, B.H. Jung from *Daedaleopsis styracina*; 1ex. Saneum Nature Recreation Forest, Danweol-myeon, Yangpyeong-gun, 14.vi.2015, J.B. Seung; **[GB]:** 1ex. Byeongsan-seoweon, Pungcheon-myeon, Andong-si, 8.vi.2008, B.H. Jung from *Coriolus versicolor*; **[JJ]:** 3exs. Hwansun-ri, Andeok-myeon, Seoguipo-si, 9.vii.2015, J.B. Seung.

Host fungi: *Daedaleopsis tricolor* (Bull.: Fr.) Bond. et Sing., *Coriolus versicolor* (L.: Fr.) Quél., *Coriolus hirsutus* (Wulf.: Fr.) Quél., *Daedaleopsis styracina* (P. Henn. et Shirai) Imaz.,

Distribution: Korea, Russia (East siberia, Far East), Japna, Mongolia.

Korea: All provinces.

Remarks: This species is abundant in fruiting bodies of Aphyllophorales associated with dead or decaying trees from early spring to summer. Red markings on the basal part of elytra are variable among individuals.

33. *Pseudotritoma nigrovariegata intersecta* (Mt. Chûjô, M. Chûjô and Lee, 1993)

Aporotritoma nigrovariegata intersecta Mt. Chûjô, M. Chûjô and Lee, 1993: 101: Kwon *et al*., 1996: 158.
Pseudotritoma nigrovariegata intersecta: Wegrzynowicz, 2007: 542; Hong and Lee, 2014: 178.

Specimens examined: None.

Distribution: Korea (South Korea).

Remarks: No Korean specimens were available. Chûjô *et al*. (1993) described this subspecies from Jeonglyeong Chi (Samnae Myeon, Jeonlabuk-do) in Korea. It is similar to the nominate subspecies, but is easily distinguished from the latter by the following characters: elytral fascia is widely interrupted in middle, scutellum red only in central part (Chûjô *et al*., 1993)

34. *Pseudotritoma laetabilis* (Lewis, 1887) [Pls. H25, L25, P25, V25]

Triplax laetabilis Lewis, 1887a: 70.
Tritoma atripes Araki, 1943: 561.
Tritoma kirishimensis Araki, 1943: 558.
*Pseudotritoma laetabilis***:** Jung, 2015: 176.

DESCRIPTION: Body length 3.0–3.5 mm. Body convex, elongate-oval, shining and glabrous; color mostly black; antennae and legs brownish yellow; abdomen reddish black. **Head** with fine and sparse punctures; ocular distance about four times wider than eyes diameter; antennae short, not reaching basal margin of pronotum; third antennomere elongate, about 1.5 times longer than second and about twice longer than fourth; apical three antennomeres forming distinctly compact club, antennomeres 9–10 broader than long; apical antennomere oval, closely articulated in ninth and a little smaller than 9–10; apical maxillary palpomere almost equilateral triangular, about 1.2 times wider than long; apical labial palpomere elongate triangular. **Pronotum** convex; with fine and sparse punctures; all margins thinly rimmed; anterior margin rounded; lateral sides gradually and roundly narrowing anteriad; basal margin strongly arched. Scutellum pentagonal. **Elytra** strongly convex striate-punctate; strial punctures shallow, fine and regular; interstriae slightly flat, with tiny and sparse punctures. Femora of **legs** swollen; tibiae stronly widened apically; 1–4 tarsomeres with dense setae ventrally; fifth tarsomere longer than four preceding combined; fourth tarsomere minute, inserted into third. Prosternum triangularly elevated at middle, with flat prosternal process dorsally.

Specimens examined: [GW]: 1ex. Jangneung, Yeongweol-gun, 21.v.2015, J.B. Seung, from *Trametes*; **[GB]:** 1ex. near Unmun-sa, Mt. Unmunsan, Cheongdo-gun, 5.v.2008, B.H. Jung; **[JN]:** 1ex. Hanjai, Mt. Baikun, Oknyeong-myeon, Gwangyang-si, 8.ix.2016, B.H. Jung, from *Trametes trogii* Berk.

Host fungus: *Trametes*.

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

Korea: GW, GB, JN.

Genus *Triplax* Herbst, 1793

Triplax Herbst, 1793: 146. Type species: *Silpha russica* Linnaeus, 1758.
Platichna C. G. Thomson, 1859: 96. Type species: *Erotylus rufipes* Fabricius, 1787.
Ogcotriplax Heller, 1920: 29. Type species: *Triplax pseuda* Heller, 1920.
Peudotriplax Heller, 1920: 29. Type species: *Triplax tabayasi* Heller, 1920.

DIAGNOSIS: Body elongate-oval to elongate-oblong, elongate-elliptical. Head with pair of stridulatory files on occipital region; antennae longer than in *Tritoma*; third antennomere slender, longer than second and fourth combined; apical three antennomeres forming distinct club, each antennomere about twice broader than long. Apical maxillary palpomere weakly to strongly widened and shortened, about 2–5 times wider than long. Apical labial palpomere is thicker than that of *Tritoma*. Intercoxal area is comparatively narrow, procoxal line variable in development.

Remarks: According to Skelley (1988) species of the *Triplax* group occur mostly in *Plerurotus* spp.

Species: over 67 (3 in Korea).

Distribution: Palaearctic region, North America.

Key to the Korean species of *Triplax*

1. Head red ····· 2
– Head black ····· *T. sibirica connectens*
2. Pronotum reddish brown, with large subrotundate markings at middle of antero-marginal area ··· *T. devia*
– Pronotum reddish brown, without markings ····· *T. japonica*

35. *Triplax ainonia* Lewis, 1887 [Pls. G26, L26, V26]

Triplax ainonia Lewis, 1887a: 69; Jung and Park, 2017: 291.

DESCRIPTION: Body length 3.0–3.5 mm. Body elongate oval, weakly convex, color mostly black, lustrous; antennae (except for blackish brown clubs), mouth-part, pronotum and legs yellowish brown to reddish brown; pronotum with a black spot at basal-middle part and at middle part of anterior maringin; ventral part black, with yellowish brown at lateral and apical part. **Head** coarsely punctured at posterior part; shallowly impressed at each side; ocular distance about 3.2 times wider than eye diameter; antenna short, not reaching to basal margin of pronotum; third antennomere about 1.8 times longer than fourth;

three apical antennomeres forming a loose club; eighth antennomere triangular, ninth antennomere bowl-shaped and apical antennomere rotundate. **Pronotum** weakly convex, about twice wider than length; lateral margins gradually narrowed anteriad, with a small pore at each; basal margin arched posteriad at median part. Scutellum is almost cordifrom with fine punctures. **Elytra** weakly convex; strial punctures distinct; interstriae weakly convex, with small and sparse punctures. All tibiae of **legs** strongly widened apically; 1–4 tarsomeres with dense seta ventrally; fifth tarsomere longer than four preceding tarsomeres combined together; fourth tarsomere minute, inserted into third.

Specimens examined: [GG]; 1ex. Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 21.vi-30vi.2016, J.B. Seung and B.H. Jung (W. T.); **[JJ];** 20exs. Hwasun Gotjawal, Andeok-myeon, Seogwipo-si, 13.vi.2016, J.B. Seung and B.H. Jung, from *Pleurotus pulmonarius*.

Host fungus: *Pleurotus pulmonarius* (Fr.) Quél.

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

Korea: GG, JJ.

36. *Triplax devia* Lewis, 1887 [Pl. G27]

Triplax devia Lewis, 1887a: 69; Chûjô *et al*., 1993: 102; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 544; Hong and Lee, 2014: 178.

Tritoma devia: Chûjô, 1963: 86.

DESCRIPTION: **Body** length 4.0 mm. Body elongate oval, convex, color black, shiny, head and pronotum reddish brown; clypeus blackish brown; pronotum with small and subrotundate black spot at middle of anterior marginal area and larger black spot just before scutellum; antennae dark brown with club blackish brown; underside of prothorax reddish brown or blackish brown with prosternal process black; legs piceous to black; in some specimens, head and antennae entirely reddish brown, and pro– and mesotibiae rather dark reddish brown; **Head** with fine and rather dense punctures; eyes small, ocular distance about three times wider than eyes diameter; antennae short, not reaching to basal margin of pronotum; third antennomere slender, about 2.5 times longer than fourth; 9–11 antennomere enlarged, forming a densely articulated club, apical antennomere rotundate and narrower than tenth. **Pronontum** about twice wider than its length, widest at base; convex; with fine and regular punctures; anterior margin round; lateral sides gradually narrowed anteriad; basal margin strongly arched. Scutellum is cordate shape. **Elytra** has strongly convex; with 8 files of distinct striae-puncture; strial punctures deep, distinct and regular; interstriae weakly convex, with tiny and irregular punctures. Tibiae widened apically; tarsomeres 1–4 with dense seta ventrally.

Specimens examined: [GB] 1ex. Mt. Jiri, Jeonglyeong Chi, Samnae Myeon, 16.vii. 1991, M.T. Chûjô (Voucher specimen, preserved in National Institute of Biological Resources)**.**

Distribution: Korea, Japan.

37. *Triplax japonica* Crotch, 1873 [Pl. H28]

Triplax japonica Crotch, 1873a: 189; Chûjô *et al*., 1993: 102; Kim *et al*., 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 544; Hong and Lee, 2014: 178.
Tritoma japonica: Chûjô, 1963: 86.

DESCRIPTION: Body length 3.0–4.5 mm. Body color mostly orange-yellow, or reddish brown and shiny; antennae with terminal antennomeres more or less infuscated; scutellum and elytra shining black; meso- and metathorax and metacoxae black and somewhat shiny; sometimes one to three fuscous spots appear on middle of pronotum in dried specimens. **Head** with shallow impression at each side of frons; with fine and dense punctures, with a shallow impression at each side of frons; third antennomeres a little longer than fourth; three apical antennomeres forming a loosely articulated club. Basal part of **ponotum** about twice broader than length; anterior margin deeply emarginated, but median part nearly straight; **Elytra** lightly convex dorsally; each elytron with nine files of distinct punctures; interstriae with fine punctures.

Specimens examined: [GW] 1ex. Mt. Gariwang, Jeongseon-eup, Jeongseon-gun, 17.vi-5vii. 2009, W.Y. Choi (preserved in National Institute of Biological Resources)**; [GG];** 1ex. Deoksu-ri, Danweol-myeon, Yangpyeong-gun, 6–17vi.2017, J.B. Seung and B.H. Jung (W. T.); **[GN]** 1ex. Dooryu Dong, Joochun Myeon, Samchung Gun, 25. ix. 1991, M.T. Chûjô (Voucher specimen, preserved in National Institute of Biological Resources)**.**

Host fungus: *Pleurotus ostreatus* Fr.

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

38. *Triplax nagaoi* Nakane, 1977 [Pl. H29, L29, V29]

Triplax nagaoi Nakane, 1977: 98; Jung and Park, 2017: 291.

DESCRIPTION: Body length 3.4–4.3 mm. Body moderately convex, oval, shiny and glabrous; body color mostly reddish-yellow; eyes, a spot on vertex, a pair of round spots on pronotum, scutellum, elytra and meso- and metasternum black. **Head** with fine and rather coarse punctures, with shortly transverse

and impression behind front margin; eyes slightly obliqe, moderately rounded-produced; ocular distance about three times wider than eyes diameter; antennae short, not reaching to basal margin of pronotum; third antennomere slender and longer than fourth; 9–11 antennomere enlarged, forming a loosely articulated club, apical antennomere circular and narrower than tenth. **Pronontum** about twice wider than its length, widest at base; convex; with fine punctures; anterior margin round; lateral sides abruptly narrowed anteriad; basal margin strongly arched. Scutellum tongue shape. **Elytra** has strongly convex; with 8 files of distinct striae-puncture; strial punctures deep, distinct and dense; interstriae weakly convex, with tiny irregular punctures. Tibiae widened apically; tarsomeres 1–4 with dense seta ventrally.

Specimens examined: [JN] 10ex. Han-jai, Mt. Baikun, donggok-ri, Oklyeong-myeon, Gwangyang-si, 8.ix. 2016, B.H. Jung and H.C. Park, from *Trametes* sp.

Host fungi: *Trametes trogii* Berk., *Trametes* sp.

Distribution: Korea, Japan.

39. *Triplax sibirica connectens* (Lewis, 1887) [Pl. H30]

Cyrtotriplax connectens Lewis, 1887a: 68.

Tritoma connectens: Kuhnt, 1909: 88.

Triplax connectens: Nakane, 1958b: 55.

Triplax sibirica connectens Delkeskamp, 1959: 39; : Chûjô, 1969: 199; Chûjô *et al*., 1993: 102; Kim *et al*.,; 1994: 169; Kwon *et al*., 1996: 158; Wegrzynowicz, 2007: 545; Hong and Lee, 2014: 178.

Triplax (*Pseudotriplax*) *sibirica*: Chûjô, 1969: 176.

DESCRIPTION: **Body** length 3.0 mm. Body elongate-oval, strongly convex, shiny and glabrous; mostly black, shiny; antennae yellowish brown, with club dark brown to blackish brown; palps yellowish; pronotum yellowish brown to reddish brown, median part of anterior and posterior marginal areas tinged with black; underside of prothorax and legs yellowish brown. **Head** with fine and sparse punctures; ocular distance about 3.5 times wider than eyes diameter; antennae short, not reaching to basal margin of pronotum, third antennomere longer than 4–5 antennomeres combine; about 1.5 times longer than second; apical three antennomeres forming a distinct club, apical antennomeres broader than rotundate. **Pronontum** about twice wider than its length, widest at base; weakly convex; with fine and rather dense punctures; anterior margin round; lateral sides gradually narrowed anteriad; basal margin strongly arched. **Elytra** weakly convex; with 8 files of distinct striae-puncture, strial punctures deep and moderate; interstriae weakly convex, with fine and sparse punctures. Tibiae widened apically; tarsomeres 1–4 with dense setae ventrally.

Specimens examined: [GN] 1ex. Dooryu Dong, Joochun Myeon, Samchung Gun, 25. ix. 1991, M.T. Chûjô (Voucher specimen, preserved in National Institute of Biological Resources)**.**

Distribution: Korea, Japan.

Genus *Tritoma* Fabricius, 1775

Tritoma Fabricius, 1775: 68. Type species: *Tritoma bipustulata* Fabricius, 1775.
Cyrtotriplax Crotch, 1873a: 189 [Replacement name].

DIAGNOSIS: Body oval to elongate-oval, moderately or strongly convex. Head with pair of stridulatory files on occipital region; third antennomere longer than second and fourth combined; apical three antennomeres forming club; apical maxillary palpomere semicircular or subtriangular, about twice wider than long; apical labial palpomere distinctly narrow. Elytra has distinctly striate-punctae. Intercoxal area is broad; procoxal lines generally not well-develop, only slightly produced beyond anterior margin of procoxal cavities or almost not produced. Tibiae moderately to very strongly dilated apcially, dorsal edge distinctly thin and blade-like apically.

Species: over 62 (3 in Korea).

Distribution: Palaeartic and Oriental regions.

Key to the Korean species of *Tritoma*

1. Body unicolored ····· 2
– Body not unicolored ····· 3
2. Body entirely black, antennae (except club) and palps blackish brown ····· *T. niponensis*
– Body mostly (not entirely) black or reddish brown ····· 3
3. Body mostly black, elytra with red markings ····· *T. subbasalis*
– Body mostly reddish brown, elytra with four black circular spots ····· *T. cenchris*

40. *Tritoma cenchris* (Lewis, 1887) [Pls. H31, L31, P31]

Cyrtotriplax cenchris Lewis, 1887a: 64; Chûjô and Lee, 1992: 27; Kim *et al*.; 1994: 169; Choi and Woo, 1995: 83; Kwon *et al*., 1996: 158.
Tritoma cenchris: Kuhnt, 1909: 79; Wegrzynowicz, 2007: 545 (South Korea); Hong and Lee, 2014: 178

DESCRIPTION: Body length 2.5–3.0 mm. **Head** and pronotum reddish brown, with black spots; **elytra** reddish brown, with two longitudinally placed (one placed near elytral base and other placed at middle, and both nearer to lateral border than sutural border), large black markings on each elytron, surrounding area of these two spots often tinged with yellowish brown, and apical area of elytra dark brown.

Specimens examined: [JB]: 2exs. near Guam-sa, Bokheuing-myeon, Sunchang-gun, 14–29.vi.2016, J.B. Seung, B.H. Jung and H.C. Park (W.T.); **[JJ];** 1ex. Hwasun Gotjawal, Andeok-myeon, Seogwipo-si, 14.vi–21vii.2016, J.B. Seung and B.H. Jung (W. T.); 1ex. Near Seongpanak, Mt. Halla, Jocheon-eup, Jeju-si, 14.vi-21vii.2016, J.B. Seung and B.H. Jung (W. T.).

Distribution: Korea, Japan.

Korea: JB, JJ.

41. *Tritoma pantherina* (Lewis, 1887)

Cyrtotriplax pantherina Lewis, 1887a: 63; Choi and Woo, 1995: 83.
Tritoma pantherina: Hong and Lee, 178.

DESCRIPTION (after Chûjô, 1969)**: Body** length 4.0–4.5 mm. Body strongly convex, oval, shining and glabrous; color mostly reddish brown, front-occipital area with a large black spot (without this spot in some cases); antennal club and scutellum black or brownish black; **pronotum** with two large black spots at each side, touching basal border; **elytra** with four black markings, one placed behind scutellum, two behind humerus; very large and broad band –like one placed at apical 1/3 part.

Specimens examined: None.

Distribution: Korea, Japan.

Remarks: No Korean specimens of this species were available. Though this species was reported from Jejudo (Choi and Woo, 1995), specimens of this species were not found and examined. Further collections and studies are needed. Description provide based on Chûjô (1969).

42. *Tritoma subbasalis* (Reitter, 1896)

Cyrtotriplax subbasalis Reitter, 1896: 265; Kwon *et al*., 1996: 158.
Cyrtotriplax jakowlewi Semenov, 1898: 550.
Cyrtotriplax sibirica Semenov, 1898: 553.

Tritoma subbasalis: Wegrzynowicz, 2007: 546 (North Korea); Hong and Lee, 178.

Specimens examined: None.

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

Korea: North Korea.

Remarks: No Korean specimens of this species were available. This species is distributed in North Korea and there is no information and collection data for this species. It will be collect and examine furthermore.

43. *Tritoma niponensis* (Lewis, 1874) [Pls. H32, L32, Q32]

Cyrtotriplax niponensis Lewis, 1874: 78.
Tritoma niponensis Kuhnt, 1909: 79; Jung, 2015: 168.

DESCRIPTION: Body length 3.0–4.0 mm. Body strongly convex, oval, shining and glabrous; color mostly black, antennae (except club) and palps dark brown or blackish brown. **Head** with fine and irregular punctures, reticulated between punctures; ocular distance about twice wider than eyes diameter; antennae short, not reaching basal margin of pronotum, third antennomere about 1.5 times longer than second and about four times longer than fourth; apical three antennomeres forming distinct club, each antennomeres broader than long; apical maxillary palpomere transverse triangular; apical labial palpomere nearly cylindrical. **Pronontum** about twice wider than long, widest at base; convex; with fine, irregular and sparse punctures; anterior margin rounded; lateral sides abruptly narrowing anteriad; basal margin strongly arched. Scutellum tongue shape. **Elytra** strongly convex; with 8 striae depressed at basal part of 5th stria; humeri distinctly raised and produced; strial punctures deep, moderate and dense; interstriae weakly convex, with tiny irregular punctures. Tibiae widened apically; tarsomeres 1–4 with dense setae ventrally.

Specimens examined: [GW]: 1ex. Mountain Hambaik-san, Jungseon-gun, Imkye-myeon. Imkye-ri, 1.viii.2009, B.H. Jung, from *Coriolus hirsutus* (Wulf.: Fr.) Quél.; 1ex. Seonjaryeong, Daegwanryeong-myeon, Pyeongchang-gun, 25.v.2015, B.H. Jung, from *Polyporus brumalis* (Pers.) Fr.

Host fungi: *Coriolus hirsutus* (Wulf.: Fr.) Quél., *Polyporus brumalis* (Pers.) Fr.

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

Korea: GW.

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PLATES

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Plate A (Adults of Korean Erotylidae)

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Plate B (Adults of Korean Erotylidae a: dorsal; b: ventral)

4A

4B

6A

6B

Plate C (Adults of Korean Erotylidae a: dorsal; b: ventral)

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Plate D (Adults of Korean Erotylidae a: dorsal; b: ventral)

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14

Plate E (Adults of Korean Erotylidae a: dorsal; b: ventral)

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16A

16B

17

Plate F (Adults of Korean Erotylidae a: dorsal; b: ventral)

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Plate G (Adults of Korean Erotylidae a: dorsal; b: ventral)

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Plate H (Adults of Korean Erotylidae a: dorsal; b: ventral)

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Plate I (Antennae of Korean Erotylidae)

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Plate J (Antennae of Korean Erotylidae)

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Plate K (Antennae of Korean Erotylidae)

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Plate L (Antennae of Korean Erotylidae)

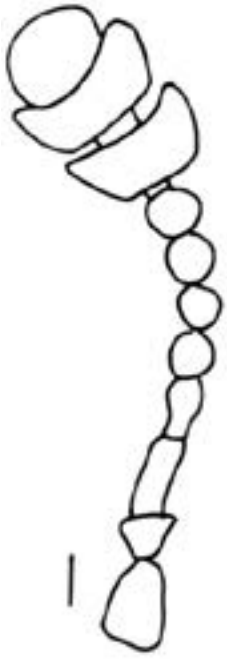

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Plate M (Head of Korean Erotylidae)

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Plate N (Head of Korean Erotylidae)

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Plate O (Head of Korean Erotylidae)

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Plate P (Head of Korean Erotylidae)

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Plate Q (Head of Korean Erotylidae)

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Plate R (Aedeagus of Korean Erotylidae; Each scale bar = 0.1mm; Male genitalia, lateral)

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Plate S (Aedeagus of Korean Erotylidae; Each scale bar = 0.1mm; Male genitalia, lateral; 11, 12: scale bar= 0.5 mm)

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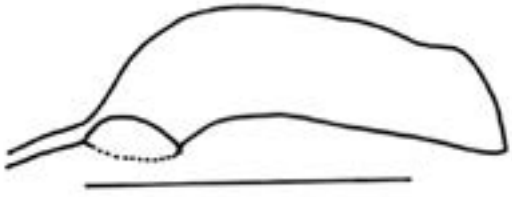

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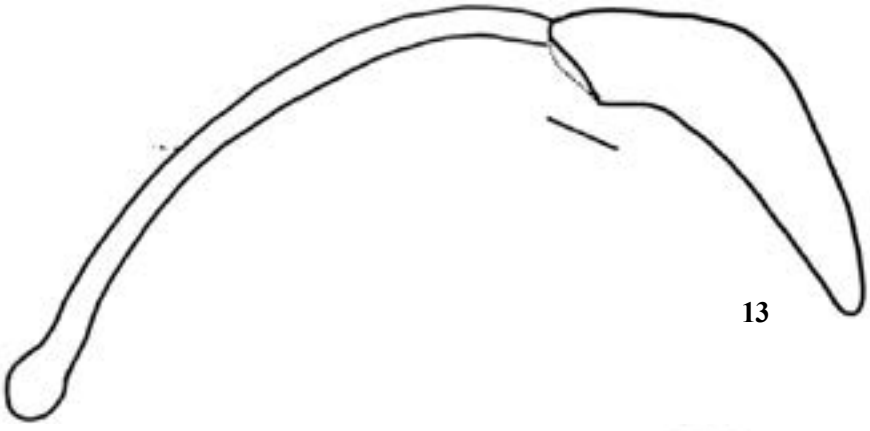

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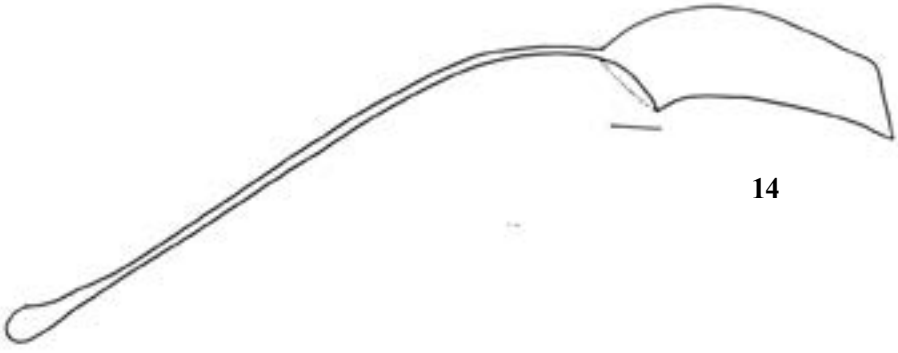

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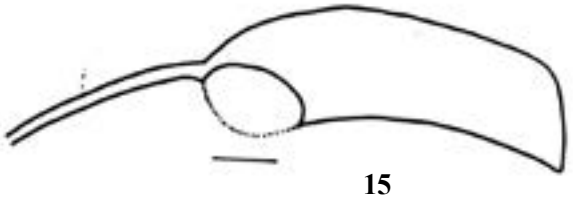
Plate T (Aedeagus of Korean Erotylidae; Each scale bar = 0.1mm; Male genitalia, lateral**)**



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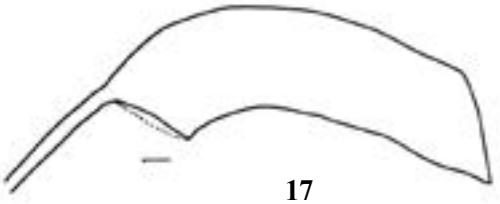

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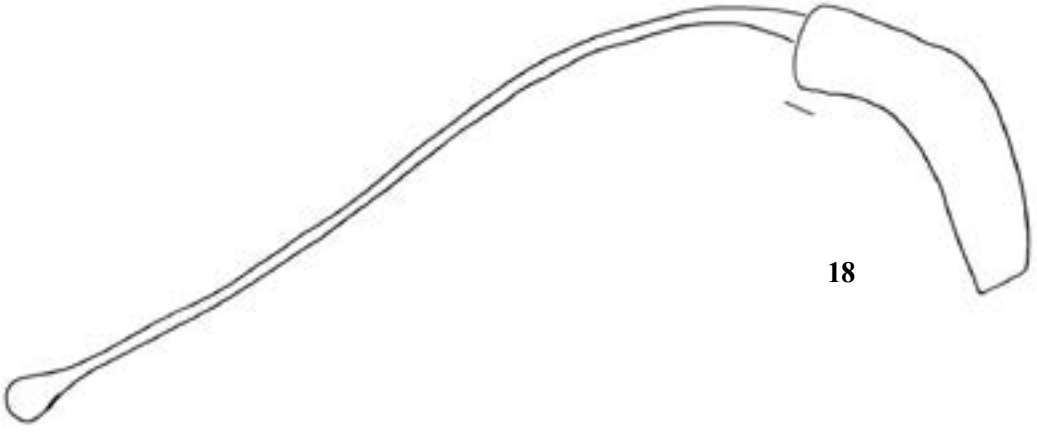

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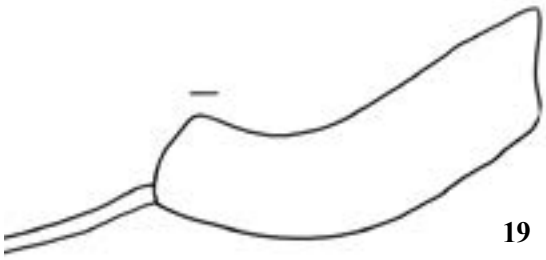
Plate U (Aedeagus of Korean Erotylidae; Each scale bar = 0.1mm; Male genitalia, lateral**)**



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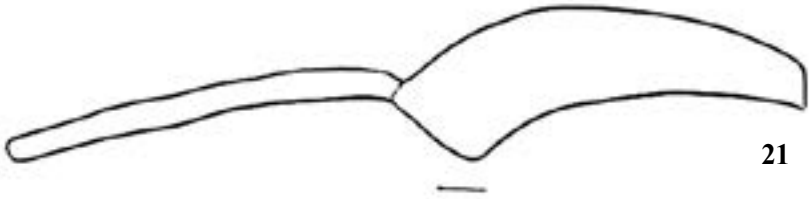

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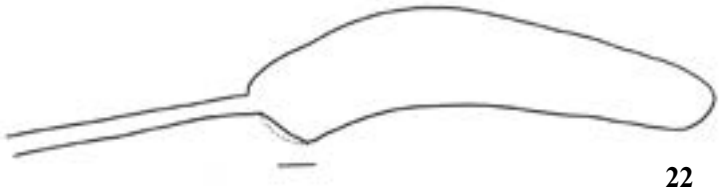

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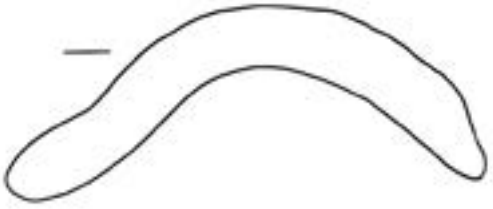
Plate V (Aedeagus of Korean Erotylidae; Each scale bar = 0.1mm; Male genitalia, lateral**)**

23



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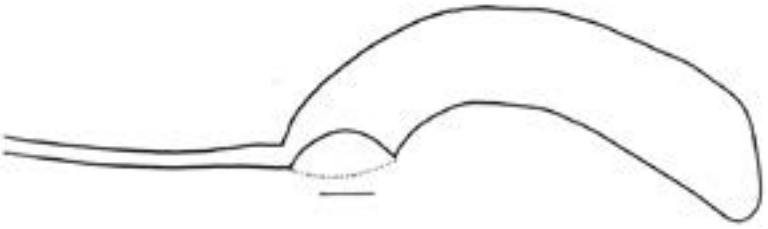

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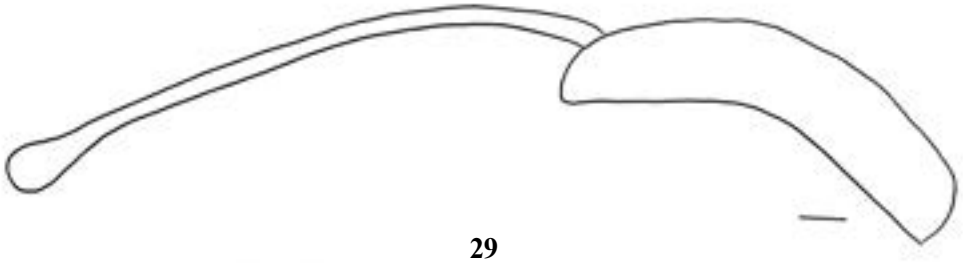

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