



Original Article

Taxonomic revision of the genus *Oberea* Dejean, 1835 (Coleoptera: Cerambycidae: Lamiinae) from Korea

Kyungmi Kim^a, Jinyoung Park^b, Eun Young Choi^a, Jong Kyun Park^{a,*}^a Department of Ecological Science, College of Ecology and Environmental Science, Kyungpook National University, Sangju City, Republic of Korea^b Department of Nature Survey, National Institute of Ecology, Seocheon, Republic of Korea

ARTICLE INFO

Article history:

Received 2 August 2017

Received in revised form

26 August 2017

Accepted 5 September 2017

Available online 17 October 2017

Keywords:

Cerambycidae

Korea

Oberea

Revision

ABSTRACT

All the known Korean species of the genus *Oberea* Dejean, 1835 are revised by confirmation of specimen. The recorded species of Korea were very confused and cited sequentially because of lacking confirmation, among them, *O. fuscipennis*, *O. inclusa*, and *O. pupillata* were misidentified as *O. atropunctata*, *O. vittata*, and *O. heyrovskyi*, respectively. And, *O. simplex* was synonym of *O. atropunctata* already. Totally, 12 species of the genus *Oberea* were recognized from Korea. Diagnoses, illustrations of habitus male genitalia, host plants, distribution for each species, and a key for Korean *Oberea* species are provided.

© 2017 National Science Museum of Korea (NSMK) and Korea National Arboretum (KNA), Publishing Services by Elsevier. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

The coleopteran species are found worldwide, particularly palearctic region is the most popular habitat (Choi et al 2016a,b). Since the first study of Okamoto (1927), the genus *Oberea* of Korea was studied mostly by foreign scientists (Danilevsky 1988, 1992a,b, 1997, 2010; Gressitt 1942; Kurihara 2009; Ohbayashi et al 1992), and studied sporadically by Korean researchers (Cho 1941, 1946, 1961, 1962; Lee 1979, 1980, 1981a,b, 1982a,b, 1983; Newman, 1942).

The genus *Oberea* Dejean, 1835 is defined by the following combination of characteristics: body elongate and cylindrical; legs very short, apex of hind femur not reaching beyond abdominal second sternite (Cherepanov 1991).

The genus *Oberea* contains about 270 species around the world (Ohbayashi and Niisato 2007). In the Palearctic region, 14 species in Korea (Hwang 2015), six species in Europe (Danilevsky 2011a), 15 species in Russia (Danilevsky 2011b), 49 species in China (Hua 2002), and 15 species in Japan (Ohbayashi and Niisato 2007).

Recently, studies of cerambycid species from Korea were intellectually active; however, there were some confusion in the genus

Oberea (Lobl and Smetana 2010; Kim 2011; Hong and Lee 2014; Hwang 2015; Jang et al 2015).

For these reasons, this study reviewed the previous taxonomic studies on Korean *Oberea* to solve the existing taxonomic problems and to provide the improved classification. In addition, photos of habitus (Figures 1–11 and 12–23), genitalia (Figures 22–32), and pictorial key (Figure 33) were provided in here. *Oberea formosana* was excluded from this study because Korean occurrence of this species is questionable based on our comprehensive survey although there are records in Korea (Lobl and Smetana 2010; Hong and Lee 2014; Hwang 2015; Jang et al 2015).

Materials and methods

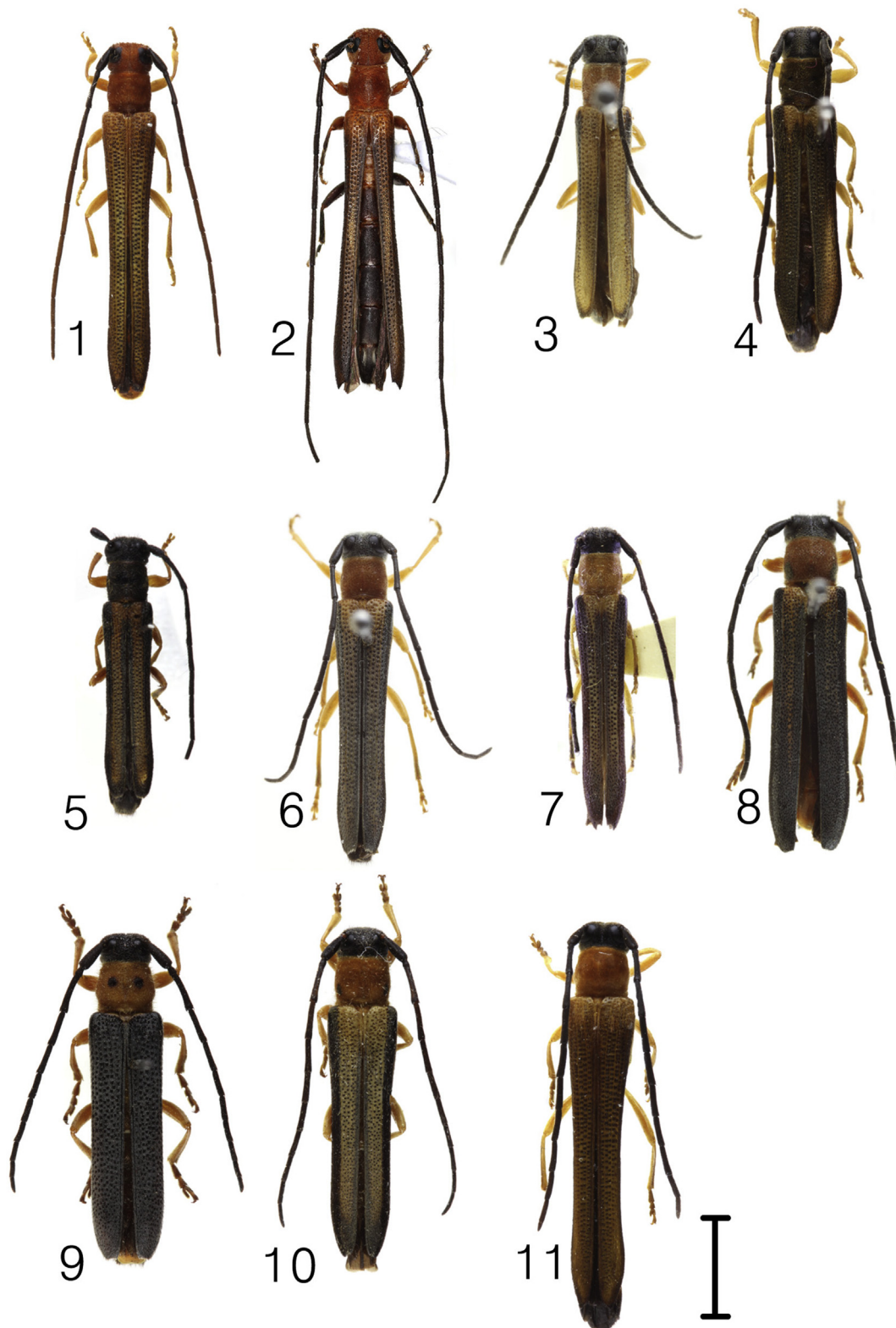
To observe morphological and anatomical characteristics, stereoscopic microscopes (Olympus SZ61, Japan) were used. To examine male genitalia, abdomens of specimen were separated from the thorax. Then, separated abdomen and 15% KOH solution were added in beaker, and heated in boiling water for 10 minutes. For further dissection, softened abdomen was moved to a hole-glass in distilled water. Male genitalia were taken out of the abdomen.

The morphological characters of the specimen and the male genitalia were imaged using Canon EOS 500D and Carl Zeiss Axio Imager A1 with Axio Cam MRc5, respectively.

* Corresponding author. Tel.: +82 541215; fax: +82 541218.

E-mail address: entopark@knu.ac.kr (J.K. Park).

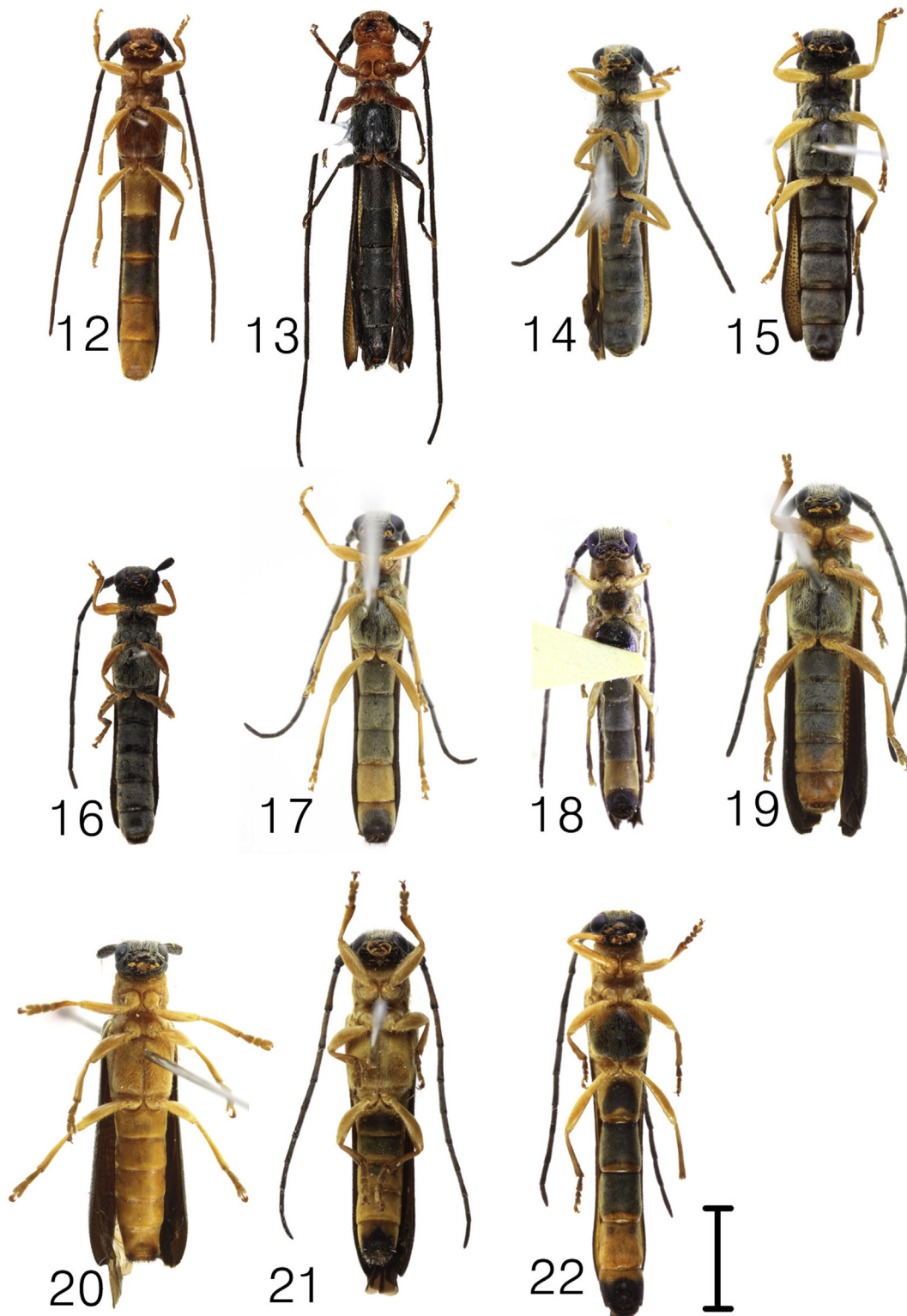
Peer review under responsibility of National Science Museum of Korea (NSMK) and Korea National Arboretum (KNA).



Figures 1–11. Habitus of *Oberea* spp. (dorsal view): 1, *O. atropunctata* Pic; 2, *O. nigriventris* Bates; 3, *O. herzi* Ganglbauer; 4, *O. coreana* Pic; 5, *O. morio* Kraatz; 6, *O. vittata* Blessig; 7, *O. infranigrescens* Breuning; 8, *O. depressa* Gebler; 9, *O. oculata* (Linnaeus); 10, *O. heyrovskyi* Pic; and 11. *O. tsuyukii* Takashi & Nobuo. <scale bar = 5 mm>.

The abbreviations are as follows: KNA, Korea National Arboretum (Pocheon-si); HII, Hampyeong Insect Institute (Hampyeong-gun); NIAST, National Institute of Agricultural Science and Technology (Wanju-gun); KFRI, Korea Forest Research Institute (Seoul-

si); KNUL, Kangwon National University (Wonju-si); UI, University of Incheon (Incheon-si); SNU, Seoul National University (Seoul-si); NSM, National Science Museum (Daejeon-si); GW, Gangwon-do; GG, Gyeonggi-do; CB, Chungcheongbuk-do; CN, Chungcheongnam-



Figures 12–22. Habitus of *Oberea* spp. (ventral view): 12, *O. atropunctata* Pic; 13, *O. nigriventris* Bates; 14, *O. herzi* Ganglbauer; 15, *O. coreana* Pic; 16, *O. morio* Kraatz; 17, *O. vittata* Blessig; 18, *O. infranigrescens* Breuning; 19, *O. depressa* Gebler; 20, *O. oculata* (Linnaeus); 21, *O. heyrovskyi* Pic; and 22, *O. tsuyukii* Takashi & Nobuo. <scale bar = 5 mm>.

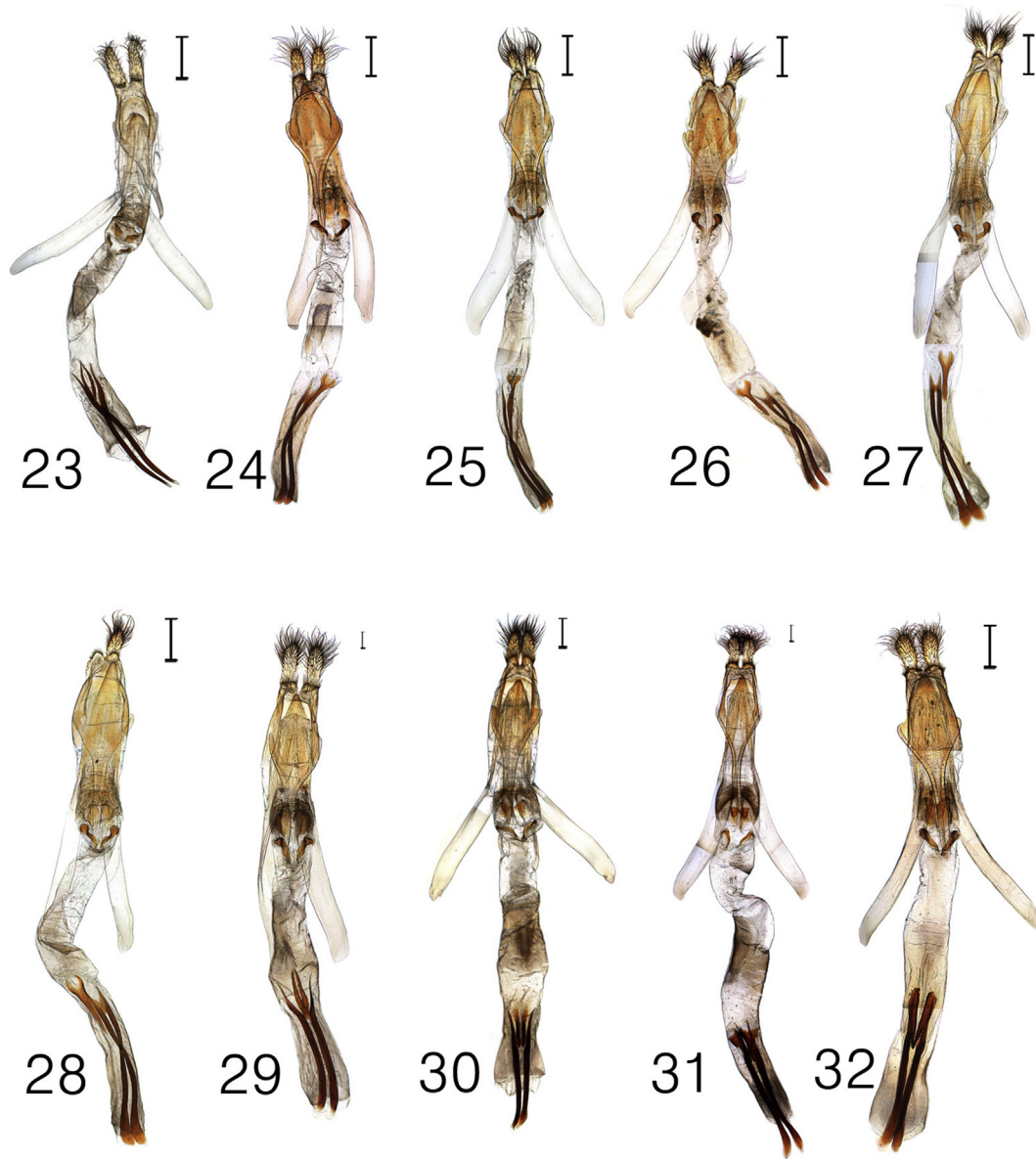
do; JB, Jeollabuk-do; JN, Jeollanam-do; GB, Gyeongsangbuk-do; GN, Gyeongsangnam-do; JJ, Jeju-do. For convenience of classification, metropolitan cities put under the provinces such as Seoul and Incheon in Gyeonggi-do, Daejeon in Chungcheongbuk-do, Daegu in Gyeongsangbuk-do, Ulsan and Busan in Gyeongsangnam-do, and Gwangju in Jeollanam-do.

Systematic accounts

Genus *Oberea* Dejean, 1835

Oberea Dejean, 1835: 351. Type species: *Cerambyx oculatus* Linnaeus, 1758.

Isosceles Newman, 1842: 318.



Figures 23–32. Male genitalia of *Oberea* spp.: 23, *O. atropunctata* Pic; 24, *O. herzi* Ganglbauer; 25, *O. coreana* Pic; 26, *O. morio* Kraatz; 27, *O. vittata* Blessig; 28, *O. infranigrescens* Breuning; 29, *O. depressa* Gebler; 30, *O. oculata* (Linnaeus); 31, *O. heyrovskii* Pic; and 32, *O. tsuyukii* Takashi & Nobuo. <scale bar = 5 mm>.

Amaurostoma Müller, 1906: 222. Type species: *Cerambyx erythrocephalus*

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

- 1. Head yellowish brown or reddish.....2
 - Head black.....3
- 2. Outside of first antennal segment without carina.....*O. atropunctata* Pic
 - Outside of first antennal segment with longitudinalcarina *O. nigriventris* Bates
- 3. Pronotum black or partly black.....4
 - Pronotum yellowish brown or reddish.....5
- 4. Elytra entirely black basally with an extensive yellow pattern.....*O. coreana* Pic
 - Elytra yellow with a black with lateral longitudinal band.....*O. morio* Kraatz

- 5. Metasternum yellowish.....6
 - Metasternum black or partly black.....7
- 6. Last sternite yellow with apically black hairs.....
 - Last sternite largely black..... *O. oculata* (Linnaeus)
 - *O. heyrovskii* Pic
- 7. Mesosternum yellowish.....*O. tsuyukii* Takashi & Nobuo
 - Mesosternum black or partly black.....8
- 8. Scutellum black.....*O. depressa* Gebler
 - Scutellum yellowish.....9
- 9. Sternites IV grayish.....*O. herzi* Ganglbauer
 - Sternites IV yellowish.....10
- 10. Elytra apically obtuse.....*O. vittata* Blessig
 - Elytra apically deep curved and pointed.....
 -*O. infranigrescens* Breuning

* *O. formosana* not included here, because of no available specimen.

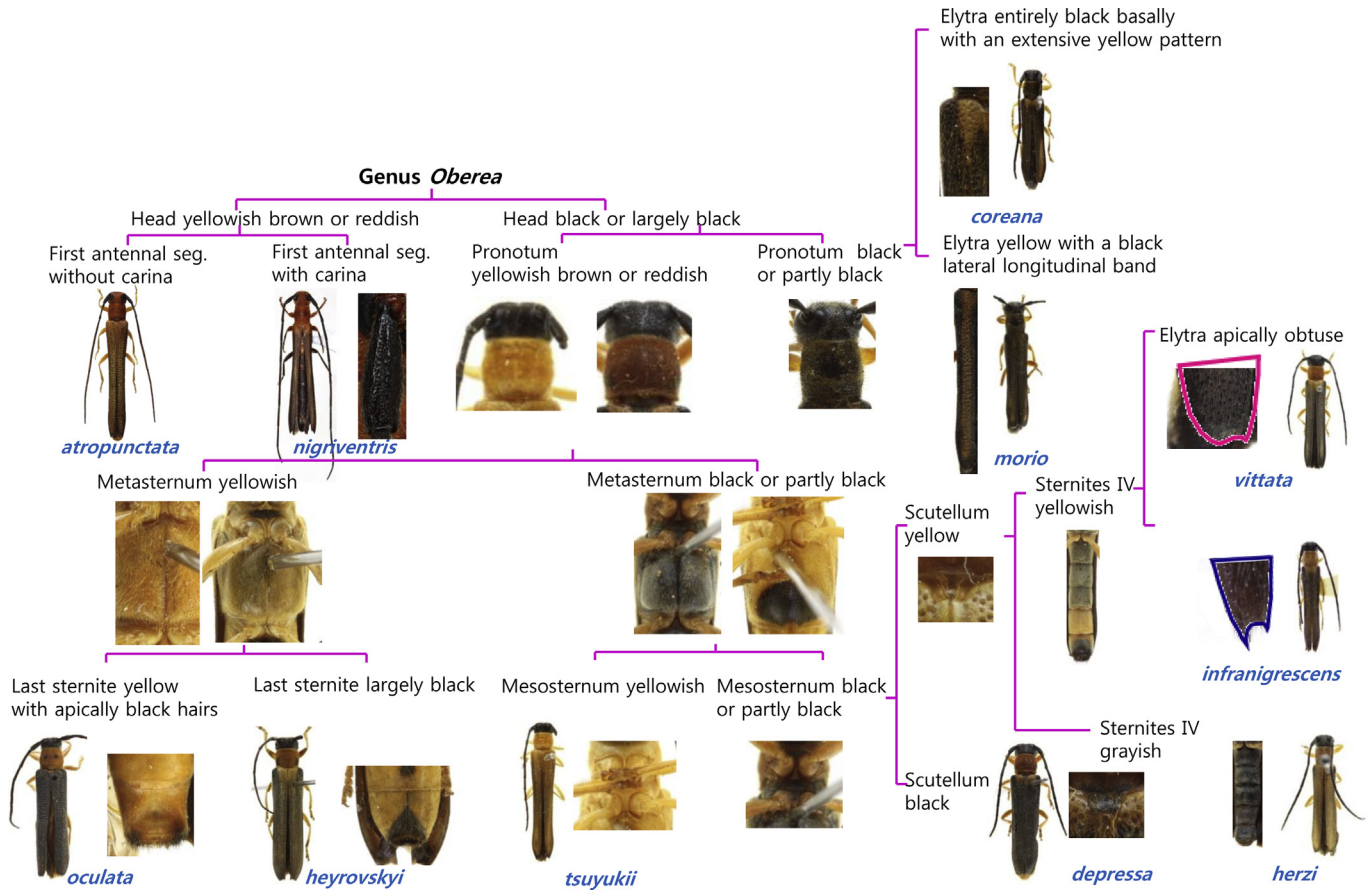


Figure 33. Pictorial key of the genus *Oberea* from Korea.

1. *Oberea atropunctata* Pic, 1916

Oberea atropunctata Pic, 1916: 17. Type locality: Yunnan, China.

Oberea atropunctata coreensis Breuning, 1947: 58. (Korea).

Oberea atropunctata coreensis Gressitt, 1951: 633.

Oberea simplex Gressitt, 1942: 79.

Diagnosis. Body length ♂ 16–19 mm, ♀ 15.5–19 mm. Head yellowish brown or reddish, from anterior frons to posterior margin of occiput with narrow longitudinal groove. Antennae almost up to apex of elytra, basally black to reddish brown. Pronotum yellowish brown or reddish. Elytra yellowish brown with deep and large dark brownish punctures, minute adherent dark brownish pubescence, apically slightly incised. Legs yellow and inner side of tibia and claw reddish-brown. Body ventrally with minute compact adherent pubescence, pro-, meso-, metasternum reddish brown. Abdomen reddish brown with black markings on the second and the third, the fifth sternite medially with narrow longitudinal groove in female. Male genitalia tegmen with lateral lobes elongate, inner side straight, and outer side slightly bent to apex; rod-like sclerites and flagellum-like sclerites relatively very long and slender baculiform, of which flagellum-like sclerites 3.45 times as long as the length of rod-like sclerites.

Materials examined. CB: 1♀, Cheongju-si, 10 vi 1992 (JK Noh, leg.)-coll. SNU; 1♀, Mt. Worak, Hansu-myeon, Jecheon-si, 20 vi 1992 (KSJ, leg.)-coll. KNA; GB: 1ex, Yongyeonsa, Bansong-ri, Okpo-myeon, Dalseong-gun, Daegu, 6 vi 1970 (SM Lee, leg.)-coll. HII; GG: 1♀, Agricultural College, Seoul University, Suwon-si, v 1968 (TS Chon, leg.)-coll. SNU; 1♀, ditto, 16 vi 1992 (NEH, leg.)-coll. SNU; 1♀, Anyang-si, 29 vi 1991 (NSD, leg.)-coll. SNU; 1♂,

Gwanggyo, 10 vi 1990 (KJH, leg.)-coll. SNU; 1♂, ditto, 28 vi 1991 (H Han, leg.)-coll. SNU; 1♀, Gwangreung, Jinjeop-up, Namyangju-si, 29 v 1983 (OJ Im, leg.)-coll. NIAST; 1♀, ditto, 15 vi 1995 (GJ Weon, leg.)-coll. KNA; 1♂, ditto, 23 vi 1997 (GJ Weon, leg.)-coll. KNA; 1♀, ditto, 10 vii 1997 (GJ Weon, leg.)-coll. KNA; 1♂, ditto, 11 vii 1997 (GJ Weon, leg.)-coll. KNA; 1♂, ditto, 11 vi 1998 (GJ Weon, leg.)-coll. KNA; 1♀, Icheonsi, 20 vi 1992 (SJH, leg.)-coll. SNU; 1♀, Mangu-dong, Jungnang-gu, Seoul, 5 vi 1993 (NR Kim, leg.)-coll. NIAST; 1ex, Mt. Cheonma, Hwado-up, Namyangju-si, 30 v 1970 (SM Lee, leg.)-coll. HII; 1♀, Mt. Gwanak, Seoul, 10 vi 1988 (JH Shin, leg.)-coll. SNU; 1ex, Mt. Myeongji, Baekdun-ri, Buk-myeon, Gapyeong-gun, 29 v 1982 (SM Lee, leg.)-coll. HII; 1ex, Namhansanseung, Seongnam-si, 6 vi 1985 (SM Lee, leg.)-coll. HII; 1♀, Singal-dong, Yongin-si, 12 vi 1992 (SS Kang, leg.)-coll. KNA; 1♂, ditto, 24 vi 1992 (CDJ, leg.)-coll. SNU; 1♂, Suwon-si, 13 vi 1995 (JA Kim, leg.)-coll. SNU; 1♂, ditto, 10 vi 1997 coll. NIAST; GN: 1♂, Geoje-recreational forests, Dongbu-myeon, Geoje-si, 2 vii 2009 (SH Kang, leg.)-coll. KNA; GW: 1♂, Chunseong, Chuncheon-si, 6 vi 1988 (JS Han & JO Weon, leg.)-coll. KNU; 1♀, ditto, 17 vi 1989 (NH Her, leg.)-coll. KNU; 1♀, Hongcheon-gun, 27 v 1988 (IH Chor, leg.)-coll. KNU; 1♂, ditto, 12 vi 1992 (JE Yun & SH Ji, leg.)-coll. KNU; 1ex, Mt. Taebaek, Taebaek-si, 19 vi 1983 (SM Lee, leg.)-coll. HII; JB: 1♀, Namwon-si, 24 vii 1990 (DG Park, leg.)-coll. SNU; JJ: 2exs, Seoguipo-si, 21 vi 1976 (SM Lee, leg.)-coll. HII; 1♀, Seongpan-ak, Gyrae-ri, Jocheon-eup, Jeju-si, 30 vii 2007 (SW Park, leg.)-coll. SNU; 1♂, 30 v 1991 (KBH, leg.)-coll. SNU.

Host plants. *Salix* spp., *Populus* spp. (Hua 2002; Bense 1995).

Distribution. Palearctic (Korea, China), Oriental (Nepal).

Remarks. Based on examine of voucher specimens, this species has been misidentified as *O. fuscipennis* (Chevrolat).

2. *Oberea nigriventris* Bates, 1873

Oberea nigriventris Bates, 1873: 389. Type locality: Japan.
Oberea nigriventris Lee, 1981a: 53. (Korea).

Diagnosis. Body length 12–16 mm. Head reddish, from anterior frons to posterior margin of occiput with narrow longitudinal groove. Antennae black, longer than body, outside of first antennomere provided with longitudinal carina. Pronotum reddish. Elytra with deep dark brown punctures, minute adherent dark brown pubescence, apically slightly incised. Legs almost black, and fore leg and mid femur reddish brown. Body ventrally with minute compact adherent pubescence, metasternum black. Abdomen black, the fifth sternite with small triangular depression in male, here with dense bristles.

Materials examined. GW: 1♂, Jinae-ri, Dong-myeon, Chuncheon-si, 16–30 vii 2009 (SJ Jang, leg.)-coll. KFRI.

Host plants. *Pyrus pyrifolia* var. *culta* (Makino) Nakai, *Anodendron affine* (Hook. & Arn.) Druce., *Cynanchum wilfordii* (Maxim.) Hemsl., *Cynanchum grandifolium* Hemsley, *Marsdenia tomentosa* Morren & Decne., *Vincetoxicum* spp. (Hua, 2002; Ohbayashi & Niisato, 2007; Kojima & Nakamura, 2011).

Distribution. Palearctic (Korea, China, Japan), Oriental (Vietnam, Laos, Taiwan, Indochina, Malaysia).

3. *Oberea herzi* Ganglbauer, 1887

Oberea herzi Ganglbauer, 1887: 23. Type locality: Peking, China.

Diagnosis. Body length ♂ 11.5–14.5 mm, ♀ 13–17 mm. Head black, medially from vertex to posterior margin of occiput with narrow longitudinal groove, with yellow adherent pubescence and a few of long setiform erect black hairs. Antennae barely short of reaching apex of elytra, inner side of antennae first and third to fourth yellow, the others dark brown to black. Pronotum light reddish brown with yellow hairs. Elytra yellow with yellow adherent pubescence, with large round punctures. Legs brown, femur with a little adherent yellow pubescence, tibia with numerous yellow pubescence, tarsus with light yellow and black pubescence. Body ventrally black with minute compact adherent grayish pubescence. Abdomen black with grayish pubescence, the fifth sternite with triangular depression in male, medially with narrow longitudinal groove in female. Male genitalia tegmen with lateral lobes straight, the apex rounded, relatively separated to each other; rod-like sclerites almost fused, separated widely by forming membrane at 1/3 point from apex; flagellum-like sclerites relatively very long and slender baculiform, fused at nearby apex, of which flagellum-like sclerites 2.94 times as long as the length of rod-like sclerites.

Materials examined. CB: 1♀♂, Suanbo-myeon, Chungju-si, 13 v 2008 (KH Kim, leg.)-coll. KNA; GB: 1♂, Cheonjeon-ri, Imha-myeon, Andong-si, 9 v 2010 (SH Kang, leg.)-coll. KNA; 2♂, Gojan-ri, Giran-myeon, Andong-si, 29 v 1993 (DS Ku, leg.)-coll. KNA; 1♀♂, Guryongpo-eup, Nam-gu, Pohang-si, 27 viii 2009 (JY Park, leg.)-coll. KNA; 3♀, Jungdong-myeon, Sangju-si, 6 ix 2008 (JR Lim, leg.)-coll. KNA; 1♂, Namyang-ri, Maejeon-myeon, Cheongdo-gun, 7 vi 2010 (BS Kim, leg.)-coll. KNA; GG: 1♀, Seodun-dong, Suwon-si, 14 vi 1969 (CS Kim, leg.)-coll. SNU; 1♂, Singal-dong, Yongin-si, 18 vi 1992 (DHL, leg.)-coll. SNU; GW: 1♀, Balsan2-ri, Sinbuk-eup, Chuncheon-si, 28 v 1998 (HC Park, leg.)-coll. NIAST; 1♀, Chunseong, Chuncheon-si, 26 v 1989 (HM Kim & HS Sin, leg.)-coll. KNU; 2♀, Jinbu-myeon, Pyeongchang-gun, 8 vii 2008 (SH Kim, leg.)-coll. KNA.

Host plants. Unknown.

Distribution. Palearctic [Korea, China, Russia (Siberia)].

4. *Oberea coreana* Pic, 1912

Oberea coreana Pic, 1912: 21. Type locality: Korea.

Diagnosis. Body length ♂ 14 mm, ♀ 9 mm. Head black, medially from vertex to posterior margin of occiput with narrow longitudinal groove, with large deep punctuation. Antennae black, shorter than body, numerous short black hairs like spine and some long hairs. Pronotum black with densely yellow hairs. Elytra entirely black basally with an extensive yellow pattern. Legs yellow. Body ventrally black with minute compact adherent yellow pubescence. Abdomen the fifth sternite with triangular depression in male, medially with narrow longitudinal groove in female.

Male genitalia. Tegumen with lateral lobes straight, the apex rounded, relatively more long hairs than *O. herzi* Ganglbauer; rod-like sclerites almost fused, separated widely by forming heart-shaped membrane at 1/5 point from apex; flagellum-like sclerites relatively very long and slender baculiform, of which flagellum-like sclerites 2.82 times as long as the length of rod-like sclerites.

Materials examined. CB: 1♂, Mt. Daemi, Chungju-si, 19 v 1997 (HC Park, leg.)-coll. NIAST; GG: 1♀, Agricultural College, Seoul University, Suwon-si, 6 v 1990 (SJ Kim, leg.)-coll. SNU.

Distribution. Palearctic [Korea, China, Russia (Siberia)].

Remarks. Lee (1987) synonymized *O. coreana* Pic as *O. morio* Kraatz. Based on the pictures of syntype specimen, *O. coreana* Pic must be an endemic of Korea because it has densely pubescence on pronotum, and relatively shorter than *O. morio* Kraatz.

5. *Oberea morio* Kraatz, 1879

Oberea morio Kraatz, 1879: 117. Type locality: East Siberia.

Oberea linearis Saito, 1932: 444 (Korea).

Diagnosis. Body length ♂ 11.8 mm. Head black with gray adherent pubescence and a few of long setiform erect black hairs, with medially from vertex to posterior margin of occiput with narrow longitudinal groove, with large deep punctuation. Antennae black, shorter than body, numerous short black hairs like spine and some long hairs. Pronotum dark black with some golden hairs. Elytra apically obtuse, basally reddish brown to yellow, along suture except for basal portion and laterally black, with large round punctures forming longitudinal rows. Legs reddish brown, with yellowish pubescence. Body ventrally black with minute compact adherent yellow pubescence. Abdomen black with grayish pubescence, the fifth sternite with largely tetragonal depression in male, medially with narrow longitudinal groove in female.

Male genitalia. Tegumen with lateral lobes rounded apex, relatively more dark and thick hairs than *O. herzi* Ganglbauer; rod-like sclerites almost fused, separated widely at 2/7 point from apex; flagellum-like sclerites relatively very long and slender baculiform, fused at nearby apex, of which flagellum-like sclerites 2.89 times as long as the length of rod-like sclerites.

Distribution. Palearctic [Korea, China, Russia (Siberia)].

Materials examined. GB: 1♂, Mt. Bohyeon, Cheongsong-gun, 13 vi 2008 (SH Kim, leg.)-coll. KNA.

Host plants. Unknown.

Distribution. Palearctic [Korea, China, Russia (Siberia)].

6. *Oberea vittata* Blessig, 1873

Oberea vittata Blessig, 1873: 221. Type locality: Amur, Russia.

Oberea vittata Ganglbauer, 1887: 132 (Korea).

Oberea inclusa Lee, 1987: 285.

Diagnosis. Body length ♂ 12.5–17 mm, ♀ 15–18.5 mm. Head black with white adherent pubescence, with deep punctuation. Antennae barely reaching apex of elytra in male or definitely not reaching in female, with basally black to apically brown (dorsally) and gray (ventrally) fine pubescence. Pronotum reddish brown with numerous thin erect hairs, with dense punctuation. Elytra with large round black punctures forming uniform longitudinal rows, fine compact adherent yellow pubescence. Legs yellow, hind tibia apically with brownish tinge. Body ventrally with short adherent grayish pubescence. Abdomen the first to the third sternites black, the fourth sternite and sides of the first to the third sternites yellow in female or only fourth sternite yellow in male, tip of abdomen black.

Male genitalia. Tegumen with lateral lobes rounded apex, relatively darker and longer hairs, slightly bent to outer side; rod-like sclerites almost fused, separated widely at 2/7 point from apex, outer side slightly bent to apex; flagellum-like sclerites relatively very long and slender baculiform, fused at nearby apex, of which flagellum-like sclerites 3.21 times as long as the length of rod-like sclerites.

Materials examined. CB: 1♀, Cheongju-si, 10 vi 1992 (JK Noh, leg.)-coll. KNA; 1♀, Cheongwon-gun, 24 vi 1992 (CDS, leg.)-coll. KNA; 1♀, Mt. Minjooji, Yeungdong-gun, 4 vi 2000 (JH Choi, leg.)-coll. KNA; 1♀, Mt. Worak, Hansu-myeon, Jecheon-si, 22 vi 1992 (CM Park, leg.)-coll. KNA; GB: 1♂, Cheonjeon-ri, Imha-myeon, Andong-si, 9 v 2010 (SH Kang, leg.)-coll. KNA; 1♀1♂, Mt. Cheongryang, Myeongho-myeon, Bonghwa-gun, 8 viii 2009 (JY Park, leg.)-coll. KNA; 1♀, Mt. Sobaek-recreational forests, Yeongju-si, 22 v 2007 (HM Kwon, leg.)-coll. KNA; 2♀1♂, Naechil-ri, Sannae-myeon, Gyeongju-si, 11 vi 2010 (HM Kwon, leg.)-coll. KNA; 1♀1♂, Namyang-ri, Maejeon-myeon, Cheongdo-gun, 7 vi 2010 (BS Kim, leg.)-coll. KNA; 2♀1♂, Seokdong-dong, Andong-si, 1 ix 2009 (JR Lim, leg.)-coll. KNA; GG: 1♀, Anyang-si, 25 vi 1989 (SH Chae, leg.)-coll. KNA; 1♀, Baran-ri, Hyangnam-eup, Hwaseong-si, 27 v 1993 (JS Her leg.)-coll. KNA; 1♀, Bupyeong-gu, Incheon, 5 viii 1996 (SW Park, leg.)-coll. KNA; 1♀, Gwanggyo, 23 vi 1992 (HK, leg.)-coll. KNA; 1ex, Gwan-greung, Jinjeop-up, Namyangju-si, 17 vi 1976 (SM Lee, leg.)-coll. HII; 4exs, ditto, 29 v 1978 (SM Lee, leg.)-coll. HII; 1♀, ditto, 2 vi 1990 (KH Kim, leg.)-coll. KNA; 1♀, ditto, 17 vi 1992 (GJ Weon, leg.)-coll. KNA; 1♂, Hwaseong-si, 12 vi 1992 (SW Park, leg.)-coll. KNA; 1ex, Jeondeungsa, Is. Ganghwa, 30 vi 1977 (SM Lee, leg.)-coll. HII; 1ex, Mt. Cheonma, Hwado-up, Namyangju-si, 4 vi 1968 (SM Lee, leg.)-coll. HII; 1♂, ditto, 24 v 1973 (SM Lee, leg.)-coll. HII; 1ex, ditto, 25 v 1973 (SM Lee, leg.)-coll. HII; 2exs, ditto, 27 v 1982 (SM Lee, leg.)-coll. HII; 2exs, Mt. Deogam, 25 v 1978 (SM Lee, leg.)-coll. HII; 1ex, Mt. Myeongji, Baekdum-ri, Buk-myeon, Gapyeong-gun, 22 v 1983 (SM Lee, leg.)-coll. HII; 3exs, ditto, 26 vi 1983 (SM Lee, leg.)-coll. HII; 1ex, Mt. Myeongseong, Youngbuk-myeon, Pocheon-si, 16 v 1982 (SM Lee, leg.)-coll. HII; 1ex, Mt. Wangbang, Tapdong-dong, Dongducheon-si, 20 vi 1976 (SM Lee, leg.)-coll. HII; 1♂, Seodun-dong, Suwon-si, 21 v 2001 (TW Kim, leg.)-coll. NIAST; 1♂, Sihwa green-belt, Siheung-si, 11 v 2003 (JC Son, leg.)-coll. NIAST; 1♀, Singal-dong, Yongin-si, 25 vi 1992 (YJK, leg.)-coll. KNA; GN: 1ex, Mt. Jiri, Sicheon-myeon, Sancheong-gun, 28 v 1982 (SM Lee, leg.)-coll. HII; 1ex, ditto, 25 vi 1982 (SM Lee, leg.)-coll. HII; GW: 1♂, Bongmyung-ri, Dongsan-myeon, Chuncheon-si, 5 vi 1995 (SS Lee & HT Kim, leg.)-coll. KNU; 1ex, Chuncheon-si, 29 v 1972 (SM Lee, leg.)-coll. HII; 1♂, ditto, 16 v 1987 (JS Jung, leg.)-coll. KNU; 1♂, ditto, 20 vi 1992 (RSK, leg.)-coll. SNU; 1♂, Dutayeon, Yanggu-gun, 24 vii 1996 (GJ Weon, leg.)-coll. KNA; 1♀, Gajeong-ri, Nam-myeon, Chuncheon-si, 17 vii 2006 (HU Cho, leg.)-coll. KNA; 1ex, Geumdae-ri, Panbu-myeon, Weonju-si, 30 v 1982 (SM Lee, leg.)-coll. HII; 1♂, Hangbong-ri, Gonggeun-myeon, Hoengseong-gun, 26 vi 2009 (SW Park, leg.)-coll. KNA; 1♂, Jinbu-

myeon, Pyeongchang-gun, 8 vii 2008 (SH Kim, leg.)-coll. KNA; 1ex, Mt. Chiak, Wonju-si, 7 vii 1996 (SM Lee, leg.)-coll. HII; 1♀, Mt. Gariwang, Jeongseon-gun, 23 v 2001 (GJ Weon, leg.)-coll. KNA; 1♂, ditto, 26 vi 2001 (GJ Weon, leg.)-coll. KNA; 1♀, Mt. Maebong, Nam-myeon, Inje-gun, 17 vi 2010 (SY Park, JS Lim, & BK Byun, leg.)-coll. KNA; 1ex, Mt. Odae, Jinbu-myeon, Pyeongchang-gun, 1 viii 1976 (SM Lee, leg.)-coll. HII; 1ex, Mt. Seorak, buk-myeon, Inje-gun, 17 vi 1978 (SM Lee, leg.)-coll. HII; 1ex, ditto, 24 vi 1978 (SM Lee, leg.)-coll. HII; 1ex, ditto, 21 vi 1980 (SM Lee, leg.)-coll. HII; 1♀, Mt. Unbongsan, Toseong-myeon, Goseong-gun, 11 vi 2010 (BK Byun, SY Park, & JS Lim, leg.)-coll. KNA; 1♀, Myeongjumogi, Mt. Sangweol, Imgye-myeon, Jeungseon-gun, 25 viii 1997 (HC Park, leg.)-coll. NIAST; 1♂, Shinnam, 28 v 1991 (JS Kim & JS Hwang, leg.)-coll. KNU; 2exs, Weolha-ri, Cheolweon-gun, 15 v 1983 (SM Lee, leg.)-coll. HII; 1ex, Yongdae-ri, Inje-gun, 25 vii 1982 (SM Lee, leg.)-coll. HII; JN: 1ex, Mt. Jogye, 5 vi 1983 (SM Lee, leg.)-coll. HII; 1♂, Nogodan, Mt. Jiri, Gurye-gun, 29 vii 1999 (JS Ahn, leg.)-coll. KNA.

Host plants. *Lespedeza* ssp., *Wistaria brachybotrys* Sieb. & Zucc. (Akira & Akamatsu, 1957, Ohbayashi & Niisato, 2007).

Distribution. Palearctic [Korea, China, Japan, Russia (Amur)].

Remarks. *O. inclusa* Pascoe has been recorded as the misidentification of *O. vittata* Blessig.

7. *Oberea infranigrescens* Breuning, 1947

Oberea japonica m. *infranigrescens* Breuning, 1947: 58. Type locality: Japan.

Oberea inclusa infranigrescens Breuning: Kojima & Hayashi, 1969: 161 (Korea).

Diagnosis. Body length ♂ 13.5 mm. Head black with yellow adherent pubescence, with deep punctuation. Antennae barely reaching apex of elytra, with basally black to apically brown (dorsally) and gray (ventrally) fine pubescence. Pronotum yellowish brown with numerous thin erect hairs, with dense punctuation. Elytra with large round black punctures forming uniform longitudinal rows, fine compact adherent yellow pubescence, apically deep curved, and pointed. Legs yellow, hind tibia apically with brownish tinge. Body ventrally with short adherent yellowish pubescence. Abdomen black except for the fourth sternite in male, the fifth sternite with triangular depression in male, medially with narrow longitudinal groove in female.

Male genitalia. Tegumen with lateral lobes rounded apex, relatively darker and longer hairs, slightly bent to outer side; rod-like sclerites almost fused, separated and pointed slenderly at 1/4 point from apex, outer side bent to apex, pointed at base; flagellum-like sclerites relatively very long and slender baculiform, fused at nearby apex, of which flagellum-like sclerites 2.43 times as long as the length of rod-like sclerites.

Materials examined. JN: 1♂, Is. Jindo, Jindo-gun, 19 vii 1984 (SM Lee, leg.)-coll. NIAST.

Host plants. Unknown.

Distribution. Palearctic (Korea, China, Japan).

Remarks. A specimen deposited in HII and labeled as *O. inclusa* Pascoe, but mistaken of *O. infranigrescens* Breuning.

8. *Oberea depressa* Gebler, 1825

Oberea depressa Gebler, 1825: 51. Type locality: Siberia.

Oberea depressa: Ganglbauer, 1887: 132 (Korea).

Diagnosis. Body length ♂ 15–17 mm, ♀ 16–19 mm. Head black, with large deep punctuation. Antennae almost up to apex of elytra in male or not in female, with adherent gray hairs on lower side,

dark brown on upper side. Pronotum reddish brown. Elytra with deep black punctures, bright grayish pubescence, apically obtuse. Legs yellow with long yellow erect hairs. Body ventrally with minute compact adherent pubescence. Abdomen largely black except for the fifth sternite, the last sternite with triangular depression in male, medially with narrow longitudinal groove in female.

Male genitalia. Tegumen with lateral lobes straight, rounded apex, relatively separated to each other; rod-like sclerites fused from base to 2/9 point; flagellum-like sclerites relatively very long and slender baculiform, tapered at the apex, of which flagellum-like sclerites 2.68 times as long as the length of rod-like sclerites.

Materials examined. CB: 1♂, Mt. Songni, Boeun-gun, 26 v 2002 (JC Son, leg.)-coll. NIAST; GB: 1♂, Cheonjeon-ri, Imha-myeon, Andong-si, 9 v 2010 (SH Kang, leg.)-coll. KNA; 11exs, Jeungsan-myeon, Gimcheon-si, 1 vi 1979 (SM Lee, leg.)-coll. HII; 1♀, Mt. Euhak, Dongmyeong-myeon, Chilgok-gun, 18 vi 2008 (MJ Lee, leg.)-coll. KNA; GG: 1♀, Agricultural College, Seoul University, Suwon-si, 13 viii 2008 (RK Kim, leg.)-coll. KNA; 1♀, Botonggol, Namhansanseung, Seongnam-si, 5 vi 2000 (HC Park, leg.)-coll. NIAST; 1♀, Cheongpyeong-myeon, Gapyeong-gun, 10 vi 1987 (YK Chang, leg.)-coll. SNU; 1♀, Gugokpokpo, Gangchon, 29 v 1999 (JC Son, leg.)-coll. NIAST; 1♂, Gwanggyo, 6 vi 1972 (YJD, leg.)-coll. SNU; 1♂, ditto, 30 v 1987 (CKS, leg.)-coll. SNU; 1♀, ditto, 21 vi 1989 (SH Lim, leg.)-coll. SNU; 1♂, ditto, 29 v 1990 (ZL, leg.)-coll. SNU; 1♂, ditto, 2 vi 1990 (JH Seo, leg.)-coll. SNU; 1♀, ditto, 4 vi 1990 (SJ Kim, leg.)-coll. SNU; 1♂, Gwangreung, Jinjeop-up, Namyangju-si, 6 vi 1970 (B, leg.)-coll. SNU; 1♀, Hagwanggyo-dong, Suwon-si, 19 v 1998 (KM Kim, leg.)-coll. NIAST; 1♂, Jogaegol, Yongmun-myeon, Yangpyeong-gun, 31 v 1986 (YS Kim, leg.)-coll. NIAST; 1♂, Mt. Cheonggye, Gwacheon-si, 24 v 1986 (MS Jung, leg.)-coll. KNU; 1ex, Mt. Cheonma, Hwado-up, Namyangju-si, 5 v 1968 (SM Lee, leg.)-coll. HII; 1♂, ditto, 22 v 1968 (SM Lee, leg.)-coll. HII; 1♀, ditto, 24 v 1974 (SM Lee, leg.)-coll. HII; 1ex, ditto, 28 v 1976 (SM Lee, leg.)-coll. HII; 3exs, ditto, 27 v 1982 (SM Lee, leg.)-coll. HII; 1ex, Mt. Godae, Yeoncheon-gun, 27 v 2000 (Bae, Lee, Lee, & Oh, leg.)-coll. IU; 1♀1♂, Mt. Goryeo, Is. Ganghwa, 8 vi 2009 (SY Park & JS Lim, leg.)-coll. KNA; 1♂, Mt. Gwanak, Seoul, 22 v 1999 (KO Joo, leg.)-coll. SNU; 1♀, ditto, 8 vi 2009 (CO Lee, leg.)-coll. SNU; 1♂, Mt. Gwanggyo, Suwon-si, 23 v 2003 (HJ Kim, leg.)-coll. SNU; 1ex, Mt. Hwaya, Namyangju-si, 28 v 1999 (Kim, leg.)-coll. IU; 1♀, Mt. Jeongbal, Ilsandong-gu, Goyang-si, 13 vi 2000 (DH Song, leg.)-coll. KNA; 1♀, Mt. Taehwa, Docheog-myeon, Gwangju-si, 14–27 vi 2008 (JO Lim, leg.)-coll. SNU; 1ex, Neungnae-ri, 23 vi 1968 (SM Lee, leg.)-coll. HII; 1♂, Paldang-dam, Yangpyeong-gun, 11 vi 1994 (SH Lee, leg.)-coll. NIAST; 1♂, Pocheon-si, 10 vi 1988 (JH Lee, leg.)-coll. SNU; 1♂, Singal-dong, Yongin-si, 24 vi 1992 (JI Kang, leg.)-coll. SNU; 1♀, Seoul University Gwanak-arboretum, Anyang-si, 12 v 1995 (JW Kim, leg.)-coll. SNU; 1♂, ditto, 26 v 1996 (AY Kim, leg.)-coll. SNU; 1♀, ditto, 7 v 2005 (S Lee, H Kim, J Lim, C Kin, & W Lee, leg.)-coll. SNU; 1♂, Yangseo-myeon, Yangpyeong-gun, 26 v 2007 (SW Park, leg.)-coll. KNA; GW: 1♂, Changchon-ri, Namsan-myeon, Chuncheon-si, 29 v 1992 (JB Pyo & YK Kim, leg.)-coll. KNU; 1♂, Hongcheon-gun, 12 vi 1992 (KS Han & OS Park, leg.)-coll. KNU; 2exs, Mt. Chiak, Wonju-si, 15 vi 1984 (SM Lee, leg.)-coll. HII; 1♂, Mt. Dapgok, Musa-ri, Miro-myeon, Samcheok-si, 22 vi 1988 (CM Park, leg.)-coll. SNU; 1♂, Mt. Jeombong, Girin-myeon, Inje-gun, 30 vi 2010 (BW Lee, JS Lim, & KM Kim, leg.)-coll. KNA; 1ex, Mt. Seorak, buk-myeon, Inje-gun, 20 vi 1980 (SM Lee, leg.)-coll. HII; 1ex, ditto, 2 vii 1984 (SM Lee, leg.)-coll. HII; 1ex, Seongsan, Myeongji-gun, 24 vi 1980 (SM Lee, leg.)-coll. HII; 2exs, Wonha-ri, Cheolweon-gun, 15 v 1983 (SM Lee, leg.)-coll. HII; 1ex, Wonju-si, 30 v 1982 (TC Son, leg.)-coll. HII; 1♀, JB: Gaok-ri, Jeoksang-myeon, Muju-gun, 29 v 2000 (SJ Jang, leg.)-coll. NIAST.

Host plants. Unknown.

Distribution. Palearctic [Korea, China, Russia (Siberia), Central Asia].

9. *Oberea oculata* (Linnaeus, 1758)

Cerambyx oculatus Linnaeus, 1758: 394. Type locality: Europe.
Oberea oculata Ganglbauer, 1887: 132 (Korea).

Diagnosis. Body length ♂ 16–18.5 mm, ♀ 17–18 mm. Head with fine gray compact adherent pubescence. Antennae black, shorter than body. Pronotum yellowish brown or reddish with a pair of round black spots, basally with barely perceptible transverse groove, with comparatively compact punctation. Elytra black with densely gray pubescence, with black round punctures. Legs yellow. Body ventrally yellow. Abdomen the fifth sternite with deep broad depression in male, medially with narrow longitudinal groove in female.

Male genitalia. Tegumen with lateral lobes straight, rounded apex; rod-like sclerites and flagellum-like sclerites relatively very long and slender baculiform, rod-like sclerites slightly expanded by forming membrane at apex, flagellum-like sclerites tapered at the apex, of which flagellum-like sclerites 2.83 times as long as the length of rod-like sclerites.

Materials examined. GG: 1♂, Anyang-si, 21 vi 1992 (OSB, leg.)-coll. SNU; 1ex, Byeongje-ri, 9 vi 1980, (SM Lee, leg.)-coll. HII; 1ex, Gwangreung, Jinjeop-up, Namyangju-si, 29 v 1970 (SM Lee, leg.)-coll. HII; 1♂, ditto, 20 vi 1982 (G Jung, leg.)-coll. KNA; 1♂, Mt. Cheonma, Hwado-up, Namyangju-si, 21 v 1974 (SM Lee, leg.)-coll. HII; 1♂, Mt. Jugeum, Sang-myeon, Gapyeong-gun, 27 vi 1984 (GJ Weon, leg.)-coll. KNA; 1♂, Suwon-si, 9 vii 1969-coll. HII; GW: 1♀, Chuncheon-si, 21 vi 1983 (SY Lee, leg.)-coll. KNU; 1♀, Chunseong, Chuncheon-si, 3 vi 1982 (YC Byun, leg.)-coll. KNU; 1♂, ditto, 18 vi 1983 (GS Jang, leg.)-coll. KNU; 1♀, ditto, 5 vi 1988 (HY Choi, leg.)-coll. KNU; 1ex, Hongcheon-gun, 4 vi 1981 (SM Lee, leg.)-coll. HII; 1ex, Janghak-ri, Dong-myeon, Chuncheon-gun, 5 vi 1982 (SM Lee, leg.)-coll. HII; 1♂, Sachang-ri, Sanae-myeon, Hwacheon-gun, 28 v 1992 (YM Lee & CI Kweon, leg.)-coll. KNU; JN: 1♂, Dapgok, Gwangyang-si, Suncheon-si, 23 vi 1995 (CP Choe, leg.)-coll. SNU.

Host plants. *Salix* spp., *Populus* spp. (Bense, 1995, Hua, 2002, Sama, 2002).

Distribution. Palearctic [Korea, China, Russia (Siberia), Europe, Morocco, Caucasus, Iran, Iraq].

10. *Oberea heyrovskyi* Pic, 1927

Oberea heyrovskyi Pic, 1927: 9–11.

Oberea pupillata Lee, 1987: 287.

Oberea heyrovskyi Pic Danilevsky, 1988: 35–39 (Korea).

Diagnosis. Body length ♂ 17 mm, ♀ 17.5–18 mm. Head black with densely punctures. Antennae barely reaching apex of elytra in male or definitely not reaching in female. Pronotum yellowish brown with laterally a pair of black spots. Body ventrally yellowish brown with most area of sternites black. Abdomen the first to the second sternites in male or the first to the third sternites in female almost black, the fifth sternite with black mark, the last sternite medially with narrow longitudinal groove in female.

Male genitalia. Tegumen with lateral lobes straight, the apex rounded, numerous darker and longer hairs; rod-like sclerites forming the largely expanded membrane at middle to apex, pointed at base, flagellum-like sclerites relatively very long and slender baculiform, of which flagellum-like sclerites 3.77 times as long as the length of rod-like sclerites.

Materials examined. CB: 1♀, Mansu vally, Mt. Songni, Boeun-gun, 27 vii 2002 (MA Kim, leg.)-coll. NIAST; CN: 1♂, Mt. Kwangduk,

Cheonan-si, 22 vii 1994 (SS Kim, leg.)-coll. NIAST; GW: 1♀, Mt. Gariwang, Jeongseon-gun, 30 vi 1997 (JC Shon, leg.)-coll. KNU; 1♂, Mt. Taebaek, Taebaek-si, 19 vi 1983 (SM Lee, leg.)-coll. HII.

Host plants. Unknown.

Distribution. Palearctic (Korea, Russia).

Remarks. *O. pupillata* (Gyllenhal) was misidentification of *O. heyrovskyi* Pic.

11. *Oberea tsuyukii* Kurihara & Ohbayashi, 2007

Oberea tsuyukii Kurihara & Ohbayashi, 2007: 193–219. Type locality: Taiwan.

Diagnosis. Body length ♂ 17–19 mm, ♀ 19 mm. Head black in male, except for brownish base in female, from anterior frons to posterior margin of occiput with narrow longitudinal groove. Pronotum yellowish brown or reddish. Elytra yellowish brown and slightly darkened at the apex, with deep and large punctures. Body ventrally yellowish brown with most area of metasternum black. Abdomen sternites partly black, the first sternite a largely heart-shaped mark in male or a pair of black spots in female, the second and the third mostly black except for apical margin and lateral sides, the fifth sternite mainly black except for basal margin. Male genitalia tegmen with lateral lobes straight, the apex rounded; rod-like sclerites gradually wide and apart from each other toward the apex, pointed at base, flagellum-like sclerites relatively very long and slender baculiform, tapered at the apex, of which flagellum-like sclerites 2.67 times as long as the length of rod-like sclerites.

Materials examined. CB: 1♂, Mt. Daemi, Chungju-si, 19 v 1997 (HC Park, leg.)-coll. NIAST; GG: 1♂, Seungchunsa, Mt. Myeongji, Baekdun-ri, Buk-myeon, Gapyeong-gun, 28 v 2001 (HA Lee, leg.)-coll. NIAST; GW: 1♀, Chuncheon Dam, Sinbuk-eup, Chuncheon-si, 20 v 1991 (HJ Yu & SK Min, leg.)-coll. KNU; 1♀, Mt. Chiak, Wonju-si, 29 vi 2000 (HB Kim, leg.)-coll. NIAST; 1♀, Ssangyong-ri, Hanbando-myeon, Yeongwol-gun, 21 v 1999 (MA Kim, leg.)-coll. NIAST.

Host plants. Unknown.

Distribution. Palearctic (Korea), Oriental (Taiwan).

12. *Oberea formosana* Pic, 1911

Oberea formosana Pic, 1911: 20.

Oberea holoxantha Saito, 1932: 458.

Oberea ruficornis Breuning, 1956: 235.

Oberea clarior Breuning, 1960: 43.

Oberea spinpennis Breuning, 1960: 43.

Remarks. This species recorded and cited from Korea sequentially (Lee, 1987; ESK.KSAE, 1994; Lobl and Smetana, 2010; Hong and Lee, 2014; Jang et al, 2015; Hwang, 2015). However, Korean occurrence of this species is questionable based on our comprehensive survey.

Conflicts of interest

The authors declare that there is no conflicts of interest.

Acknowledgments

The authors would like to extend our heartfelt gratitude to Dr Mikhail Leontievitch Danilevsky (A.N. Severtsov Institute of Ecology and Evolution, Moscow, Russia) and Dr Takashi Kurihara (Ehime University, Matsuyama, Japan) for giving taxonomic comments. Also, they thank to Dr BW Lee, Dr IK Kim, Dr JO Lim, Mrs SY Park (KNA), Mr HB Lee (HII), Dr HC Park (NIAST), Dr WI Choi

(KFRI), Prof SK Kim (KNU), Prof YS Bae (UI), Prof SH Lee (SNU), and Dr SL An (NSM) for the loan of the materials.

References

- Akira N, Akamatsu T. 1957. Notes on the bionomics of *Oberea vittata* Blessig (Coleoptera, Cerambycidae). *The Entomological Society of Japan* 25:33–36.
- Bates HW. 1873. On the longicorn Coleoptera of Japan. *The Annals and Magazine of Natural History, London* 4 (12):389.
- Bense U. 1995. Longhorn beetles, illustrated key to the Cerambycidae and Vesperidae of Europe. Weikersheim: Margraf Verlag. p. 512.
- Blessig C. 1873. Trudy russk. *Entomol. Obschch* 9:191.
- Breuning S. 1947. Quelques nouvelles formes des genres *Nupserha* Thoms. *Oberea* Muls., *Conizonia* Fairm. et *Phytoecia* Muls. (Col, Cerambycidae). *Miscellanea Entomologica* 44:57–61.
- Breuning S. 1956. Quelques nouvelles formes du genre *Dorcadion*. *Dalrn. Longicornia* 3:723–728.
- Breuning S. 1960. Révision des espèces asiatiques du genre *Nupserha* Thomson (Coleoptera, Cerambycidae). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique. Bruxelles* 36 (10):1–62.
- Cherepanov AI. 1991. *Cerambycidae of northern Asia, Volume III-3, Lamiinae-Saperdini, Tetraopini*. New Delhi: Oxonian Press Privately Held Company. p. 395.
- Cho PS. 1941. On some longicorn beetles from Korea (IV). *Journal of Chosen Natural History Society* 8 (32):59–60.
- Cho PS. 1946. A list of longicorn beetles from Korea. *Bulletin of the Zoological Section of the National Science Museum, Seoul* 1 (3):27–61.
- Cho PS. 1961. A taxonomical study on the longicorn beetles in Korea (Ceramby. Col.). *Journal of the National Academy of Science, Korea* 3. 1–171, pl. 1-3.
- Cho PS. 1962. *A historical sketch on the longicorn beetles in Korea*, vol. 5. Humanities and Sciences, Korea University. pp. 89–120.
- Choi EY, Lee JG, Lee DW, Park JY, Park JK. 2016a. Notes on the tribe Aphanisticini (Coleoptera: Buprestidae) from Korea. *Journal of Asia-Pacific Biodiversity* 9:250–252.
- Choi JJ, Lim JK, Park JY, Park JH, Park JK. 2016b. Study on the genus *Daptus* ground-beetles (Coleoptera: Carabidae) from Korea. *Journal of Asia-Pacific Biodiversity* 9: 34–38.
- Danilevsky ML. 1988. Siberian longicorn beetles of the genus *Oberea pupillata* group (Coleoptera, Cerambycidae), Russian. *Vestnik Zoologii* 1:35–40.
- Danilevsky ML. 1992a. New species of Cerambycidae (Coleoptera) from East Asia with some new records. *Annales Historico-Naturales Musei Nationalis Hungarici, Tomus* 84:111–116.
- Danilevsky ML. 1992b. Taxonomic and zoogeographical notes on the family Cerambycidae (Coleoptera) of Russia and adjacent regions. *Russian Entomological Journal* 1 (2):37–39.
- Danilevsky ML. 1997. Remarks and additions to the key to longicorn beetles (Coleoptera, Cerambycidae) from “Key to the insects of Russian Far East”. *Russian Entomological Journal* 6 (1–2):49–55.
- Danilevsky ML. 2010. Four new *Phytoecia* (Coleoptera: Cerambycidae) from Turkey. *Studies and Reports Taxonomical Species* 6 (1–2):19–30.
- Danilevsky ML. 2011a. A check-list of longicorn beetles (Coleoptera, Cerambycoidea) of Europe. Available online, <http://www.cerambycidae.net>.
- Danilevsky ML. 2011b. A check list of the longicorn beetles (Cerambycoidea) of Russia. Available online, <http://www.cerambycidae.net>.
- Dejean PFMA. 1835. *Catalogus des coleopteres de la collection de M. le comte Dejean*. Deuxieme Edition (Livraison 4). Paris: Mequignon-Marvis Pere et Fils. pp. 257–360.
- ESK KSAE. 1994. *The Entomological Society of Korea and Korean Society of Applied Entomology*. Check List of Insects from Korea. Korea: Kon-kuk University Press. p. 744.
- Ganglbauer L. 1887. Die Bockkäfer der Halbinsel Korea. *Horae Societatis Entomologicae Rossicae* 20:131–138.
- Gebler FA. 1825. IV. Coleopterorum Siberia species novae. *Essais Entomologiques* 4: 42–57.
- Gressitt JL. 1942. Nouveaux longicornes de la Chine orientale. *Notes D'Entomologie Chinoise* 9 (5):79–97. 2 pls.
- Gressitt JL. 1951. Longicorn beetles of China. *Longicornia* vol. II. p. 667.
- Hua LZ. 2002. . *List of Chinese insects*, vol. II. Zhongshan (Sun Yat-sen) University Press. p. 612.
- Hong KJ, Lee SH. 2014. *National list of species of Korea: insect (Coleoptera II)*. Incheon: National Institute of Biological Resources. pp. 1–657.
- Hwang SH. 2015. Long-horned beetles in Korea. Checklist of Organisms in Korea 14. Nature and Ecology. p. 551.
- Jang HK, Lee SH, Choi W. 2015. *Cerambycidae of Korea*. GEOBOOK. p. 399.
- Kim KM. 2011. *Taxonomic revision of the genus Oberea Dejean, 1835 (Coleoptera: Cerambycidae) from Korea*. MS Degree Thesis. Kyungpook National University. p. 38.
- Kojima K, Hayashi M. 1969. *Insects life in Japan. Longcorn beetles*. Hoiskusha Publ. 1. pp. 1–302.
- Kojima K, Nakamura S. 2011. *Food plants of cerambycid beetles (Cerambycidae, Coleoptera) in Japan*. Hiba Society of Natural History. p. 173.
- Kraatz G. 1879. Neue Kafer aus Amur. *Deutsche Entomologische Zeitschrift* 23 (1):122–144.

- Kurihara T, Ohbayashi N. 2007. Revisional study on the genus *Oberea* DEJEAN of Taiwan, with description of three new species (Coleoptera, Cerambycidae). *Japanese Journal of Systematic Entomology* 13:193–219.
- Kurihara T. 2009. Review of the genus *Oberea* from Continental Asia (Coleoptera, Cerambycidae) part I: *Nigriceps* species-group. *Special Bulletin of the Japanese Society of Coleopterology, Tokyo* 7:391–420.
- Lee SM. 1979. A synonymic list of longicorn beetles of Korea. *The Korean Journal of Entomology* 9 (2):29–83.
- Lee SM. 1980. Longicorn beetles of Gwang-Neung, Korea. *The Korean Journal of Entomology* 10 (2):61–70.
- Lee SM. 1981a. Longicorn beetles of Mt. Seol-Ag-San, Korea. *The Korean Journal of Entomology* 11 (1):43–53.
- Lee SM. 1981b. Eleven unrecorded longicorn beetles of Korea. *The Korean Journal of Entomology* 11 (2):47–49.
- Lee SM. 1982a. Longicorn beetles of Korea (Coleoptera, Cerambycidae). *Insecta Koreana Series* 1:1–101.
- Lee SM. 1982b. Nine unrecorded longicorn beetles of Korea (Col. Cerambycidae). *The Korean Journal of Entomology* 12 (2):67–69.
- Lee SM. 1983. Four unrecorded species of longicorn beetles of Korea (Col. Cerambycidae). *The Korean Journal of Entomology* 13 (1):79–80.
- Lee SM. 1987. *The longicorn beetles of Korean Peninsula*. Seoul, Korea: National Science Museum. p. 287.
- Linnaeus CC. 1758. *Systema naturae per regna tria naturae secundum classes, ordines, genera, species, cim characteribus, differentiis, synonymis locis, Systema naturae*. Laur. Salvius. Holmiae. 1: iii + 824 pp. Ed. 10.
- Lobl I, Smetana A. 2010. *Catalogue of Palaearctic Coleoptera*, vol. 6. Chrysomeloidea: Apollo Book, Stenstrup. p. 924.
- Müller J. 1906. *Beiträge zur kenntnis einiger cerambyciden*, vol. 25. Wien: Wiener Entomologische Zeitung. pp. 221–224.
- Newman E. 1942. Cerambycitem insularum manillarum D. Cuming captorum enumeration digesta. *Entomogist* 1:318.
- Ohbayashi N, Niisato T, Kojima K. 1992. *An illustrated guide to identification of longicorn Beetles of Japan*. Tokyo: Tokai University Press. p. 673.
- Ohbayashi N, Niisato T. 2007. *Longicorn beetles of Japan*. Kanagawa: Tokai University Press. p. 818.
- Okamoto H. 1927. The longicorn beetles from Korea. *Insecta Matsumurana* 2 (2):62–86.
- Pic M. 1911. Longicornes de Chine en partie nouveaux. *Materiaux pour servir a l'etude des Longicornes* 8 (1):19–21.
- Pic M. 1912. Longicornes de Chine et des regions avoisinantes. *Materiaux pour servir a l'etude des Longicornes* 8 (2):21.
- Pic M. 1916. Longicornes asiatiques. *Materiaux pour servir a l'etude des Longicornes* 10 (1):12–19.
- Pic M. 1927. Notes diverse, description et diagnoses (Suit.). *L'Echange, Revue Linneene* 43 (429):9–11.
- Saito K. 1932. *On the longicorn beetles of Korea.- Scientific papers of the 25 the Annual Agriculture and Forestry College Suigen*. pp. 439–478.
- Sama G. 2002. *Atlas of the Cerambycidae of Europe and the Mediterranean Area Vol. 1: Northern, Western, Central and Eastern Europe. British Isles and Continental Europe from France (excl. Corsica) to Scandinavia and Urals*. Zlin: Nakladatelstvi Kabourek. p. 173.