

The Korean Species of the Genus *Oxytelus* Gravenhorst (Coleoptera: Staphylinidae: Oxytelinae)

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ABSTRACT

A taxonomic study of the genus *Oxytelus* Gravenhorst in Korea is presented. Seven species are recognized, three of which are identified for the first time in Korea (*O. incisus* Motschulsky, *O. migrator* Fauvel, and *O. takahashii* Ito). A key and diagnostic characters with illustrations are provided.

Key words: Taxonomy, Coleoptera, Staphylinidae, Oxytelinae, *Oxytelus*, Korea

INTRODUCTION

The genus *Oxytelus* Gravenhorst contains 198 species and is distributed worldwide. They are usually found under dung of herbivorous mammals, decaying vegetables or leaf litters. Thirty five species and eleven species of the genus have been recorded in Palaearctic region and Japan, respectively. To date, four species *O. bengalensis* Erichson, *O. nigriceps* Kraatz, *O. piceus* (Linnaeus), and *O. varipennis* Kraatz, have been reported in Korea (Cho and Ahn, 2001; Herman, 2001; Smetana, 2004).

Members of the *Oxytelus* are characterized by the combination of following features: body flattened dorsoventrally; scutellar impression diamond-shaped; basolateral ridges present on abdominal tergites II-VII; tarsal formula 3-3-3, tarsomere 1 longer than 2, tarsomere 3 longer than 1 and 2 combined. They also show sexual dimorphism and males usually have bigger head.

In this paper, we report seven *Oxytelus* species, three of which are identified for the first time in Korea (*O. incisus* Motschulsky, *O. migrator* Fauvel, and *O. takahashii* Ito). We also provide a key and diagnostic characters with illustrations.

MATERIALS AND METHODS

Preparation of permanent microscopic slides was performed using the techniques described by Makranczy (2006). Terms followed Herman (1970) and Makranczy (2006). All photographs have been made with a Nikon D100 digital SLR camera in combination with 60 mm macro lens and a set of extension tubes. Post processing was done in Adobe Photoshop 6.0. Specimens are deposited in Chungnam

National University Insect Collection (CNUIC, Daejeon), Korea.

Following abbreviations are used for the locality data: GG, Gyeonggi-do; GW, Gangwon-do; CB, Chungcheongbuk-do; CN, Chungcheongnam-do; GB, Gyeongsangbuk-do; GN, Gyeongsangnam-do; JB, Jeollabuk-do; JN, Jeollanam-do; JJ, Jeju-do; NK, North Korea.

SYSTEMATIC ACCOUNTS

Key to the species of *Oxytelus* Gravenhorst in Korea

1. Central lobe of male sternite VIII triangular (Figs. 3E, 6E) 2
 - Central lobe of male sternite VIII rectangular (Figs. 2E, 4E, 5E, 7E) 3
2. Antennomeres 9 and 10 longer than wide, last antennomere less than 2 times longer than wide (Fig. 3A); male sternite VIII without reticulation in middle (Fig. 3E); tip of paramere slender (Fig. 3G) *O. incisus*
 - Antennomeres 9 and 10 wider than long, last antennomere more than 2 times longer than wide (Fig. 6A); male sternite VIII with reticulation in middle (Fig. 6E); tip of paramere expanded and broadly rounded (Fig. 6G) *O. takahashii*
3. Posterior margin of central lobe of male sternite VIII prominent medially (Figs. 2E, 5E) 4
 - Posterior margin of central lobe of male sternite VIII not prominent medially (Figs. 4E, 7E) 5
4. Pronotum yellowish brown with nearly black pronotal margin (Fig. 1A); central lobe of male sternite VIII about 1.8 times wider than long (Fig. 2E) *O. bengalensis*
 - Pronotum brown to black (Fig. 1E); central lobe of male sternite VIII about 1.1 times wider than long (Fig. 5E) *O. piceus*
5. Length 2.2-2.7 mm; posterior margin of male sternite VII very slightly prolonged (Fig. 4D); posterior margin of

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central lobe of male sternite VIII truncated (Fig. 4E); tip of paramere slender and curved (Fig. 4F, G)

- *O. migrator*
- Length 3.5-5.6 mm; posterior margin of male sternite VII prolonged (Fig. 7D); posterior margin of central lobe of male sternite VIII emarginated medially (Fig. 7E); tip of paramere pointed and arrow-shaped (Fig. 7F, G)
- *O. varipennis*

¹**Oxytelus bengalensis* Erichson, 1840 (Figs. 1A, 2)

Oxytelus bengalensis Erichson, 1840: 789; Bernhauer and Schubert, 1911: 110; Cameron, 1930: 232; Scheerpeltz, 1933: 1094; Herman, 1970: 409; Hammond, 1975: 149; Shibata, 1976: 151; Watanabe, 1985: 273; Yuh et al., 1985: 227; Kim et al., 1994: 140; Cho and Ahn, 2001: 42. See Herman (2001) and Smetana (2004) for more synonymy and references.

Materials examined. Total 7 specimens. [JJ] 5♂2♀, Jungang-mokjang, Gyorae-ri, Bukjeju-gun, Jeju-do, Korea, 23.v.2006, S.-I. Lee, Y.-H. Kim, ex horse dung (2♂, on slide and 2♂1♀, in alcohol collection).

Description. Length 4.6-6.2 mm. Body weakly shining, more or less flattened dorsoventrally. Color usually yellowish brown, head black, legs yellow, anterior part of elytral sutures and pronotal margin nearly black, anterior part of each tergite black.

Head. Slightly wider than long. Eyes large and convex, setae absent between facets. Two longitudinal ridges present on middle of head. Temples weakly developed in both male and female. Labrum transverse, slightly emarginated with long setae. Mandible (Fig. 2B) moderately pointed, curved near apex, two subapical teeth present, mola well developed, prostheca well developed. Maxillary palpomere 4 subulate, digitiform sensilla placed on basal third of palpomere 4, palpomere 3 and 4 equal in length. Labial palpomere 1 wider than long and shortest, palpomere 2 longest, palpomere 3 slender. Antenna (Fig. 2A) long and moniliform. Scape robust, about 3.0 times longer than wide; pedicel about 1.8 times longer than wide, shorter and narrower than scape; antennomere 3 about 2.0 times longer than wide, shorter and narrower than pedicel; 4 small and about 1.4 times wider than long; 5 about 1.6 times wider than long; 6-10 about 1.1 times wider than long; 11 about 1.3 times longer than wide.

Thorax. Pronotum about 1.4 times wider than long, widest at anterior third, single median longitudinal groove and two pairs of longitudinal ridges present. Prosternal process slightly developed and weakly pointed. Hypomeron

moderately developed. Scutellar impression diamond-shaped. Elytra longitudinally sculptured and about 1.3 times wider than long. Mesosternal process weakly developed and truncated. Metasternal process well developed and truncated.

Abdomen. Posterior margin of tergite X modified as in Fig. 2C. Male sternite VII (Fig. 2D) prolonged at middle of posterior margin. Male sternite VIII (Fig. 2E) modified, central lobe more or less rectangular, about 1.8 times wider than long, apex of central lobe slightly prolonged. Female sternite VIII slightly prolonged. Aedeagus (Fig. 2F, G) oval, internal sac moderately developed, paramere moderately slender and deeply curved at posterior third, a pair of setae present at anterior sixth of paramere, tip of paramere moderately slender and deeply curved.

Remarks. This species is very similar to *O. nigriceps* and *O. piceus*, but can be distinguished by the structure of male sternite VIII (Fig. 2E).

Distribution. Korea, Japan, China, and Oriental region (Smetana, 2004).

²**Oxytelus incisus* Motschulsky, 1857 (Figs. 1B, 3)

Oxytelus incisus Motschulsky, 1857: 504; Bernhauer and Schubert, 1911: 114; Cameron, 1930: 263; Scheerpeltz, 1933: 1097; Herman, 1970: 410; Hammond, 1975: 150; Shibata, 1976: 153; Frank and Thomas, 1981: 400; Watanabe, 1985: 274; Hammond, 1998: 275; Herman, 2001: 1433.

See Herman (2001) and Smetana (2004) for more synonymy and references.

Materials examined. Total 55 specimens. [GW] 1♂12♀, Misiryong, Gangwon-do, Korea, N38°26'90", E128°38'19", 21.vii.2004, S.-M. Choi, J.-S. Park, sifting; 11♂7♀, Bonghwasan Mt., Gajeong-ri, Chuncheon City, Gangwon-do, Korea, 23.viii.2005, J.-S. Park, S.-I. Lee, ex cow dung (2♂1♀, on slide); [GG] 8♂7♀, Manisan Mt., Hwado-myeon, Ganghwa-gun, Incheon City, Korea, 10.ix.2005, J.-S. Park, S.-I. Lee, ex decaying vegetables (1♂, on slide); 1♀, Yeoksam-dong, Seoul, Korea, 23.vi.1994, K.-J. Ahn, ex light; [GB] 1♂, Geumosan Mt., Gumi City, Gyeongsangbuk-do, 19.vii.2001, K.-J. Ahn, S.-J. Park, C.-W. Shin, ex light; [GN] 1♀, Gyeongsang Univ., Gajoa-dong, Jinju City, Gyeongsangnam-do, 7.viii.2003, C.-S. Lim, ex bait; 1♀, same data as former except for 13.viii.2003.

Description. Length 2.7-3.9 mm. Body moderately shining, more or less flattened dorsoventrally. Color usually reddish brown to dark brown, elytra yellowish brown to dark brown, pronotal margin dark brown, legs yellow, tergites

¹*인도줄반날개, ²*붉은줄반날개 (신칭)

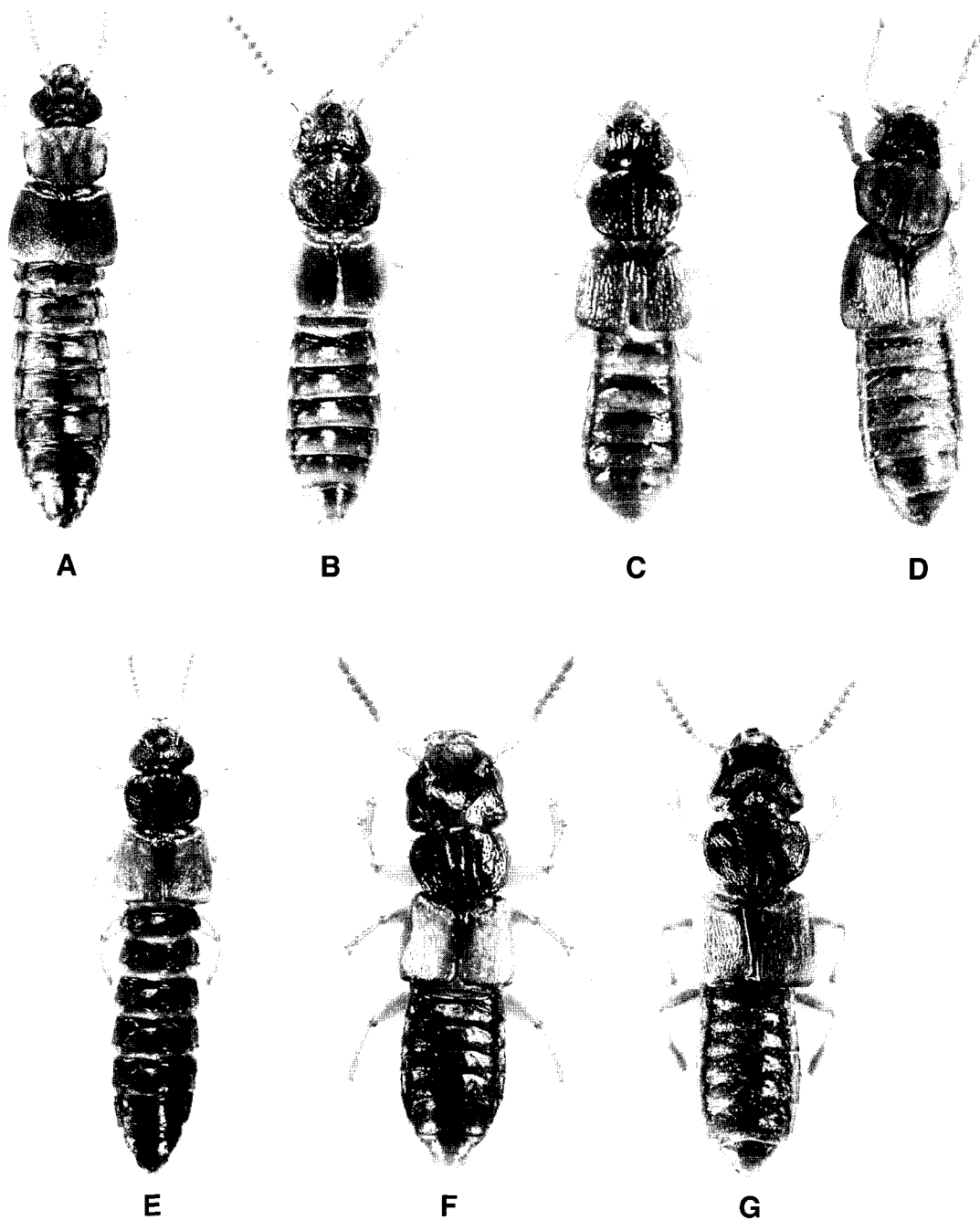


Fig. 1. Habitus. A, *Oxytelus bengalensis*, female, 6.3 mm; B, *O. incisus*, male, 3.7 mm; C, *O. migrator*, male, 2.7 mm; D, *O. nigriceps*, male, Lectotype; E, *O. piceus*, female, 5.3 mm; F, *O. takahashii*, male, 3.9 mm; G, *O. varipennis*, male, 4.9 mm.

yellowish brown to dark brown with anterior part of each tergite black.

Head. Slightly wider than long. Eyes moderately large and convex, setae absent between facets. Temples moderately developed in male and weakly developed in female. Labrum transverse, moderately emarginated with long

setae. Mandible (Fig. 3B) weakly pointed, slightly curved near apex, two subapical teeth present, mola well developed, prosthema well developed. Maxillary palpomere 4 subulate, digitiform sensilla placed on basal third of palpomere 4, palpomere 4 longest, palpomere 2 and 3 nearly equal in length. Labium with all palpomeres longer than wide,

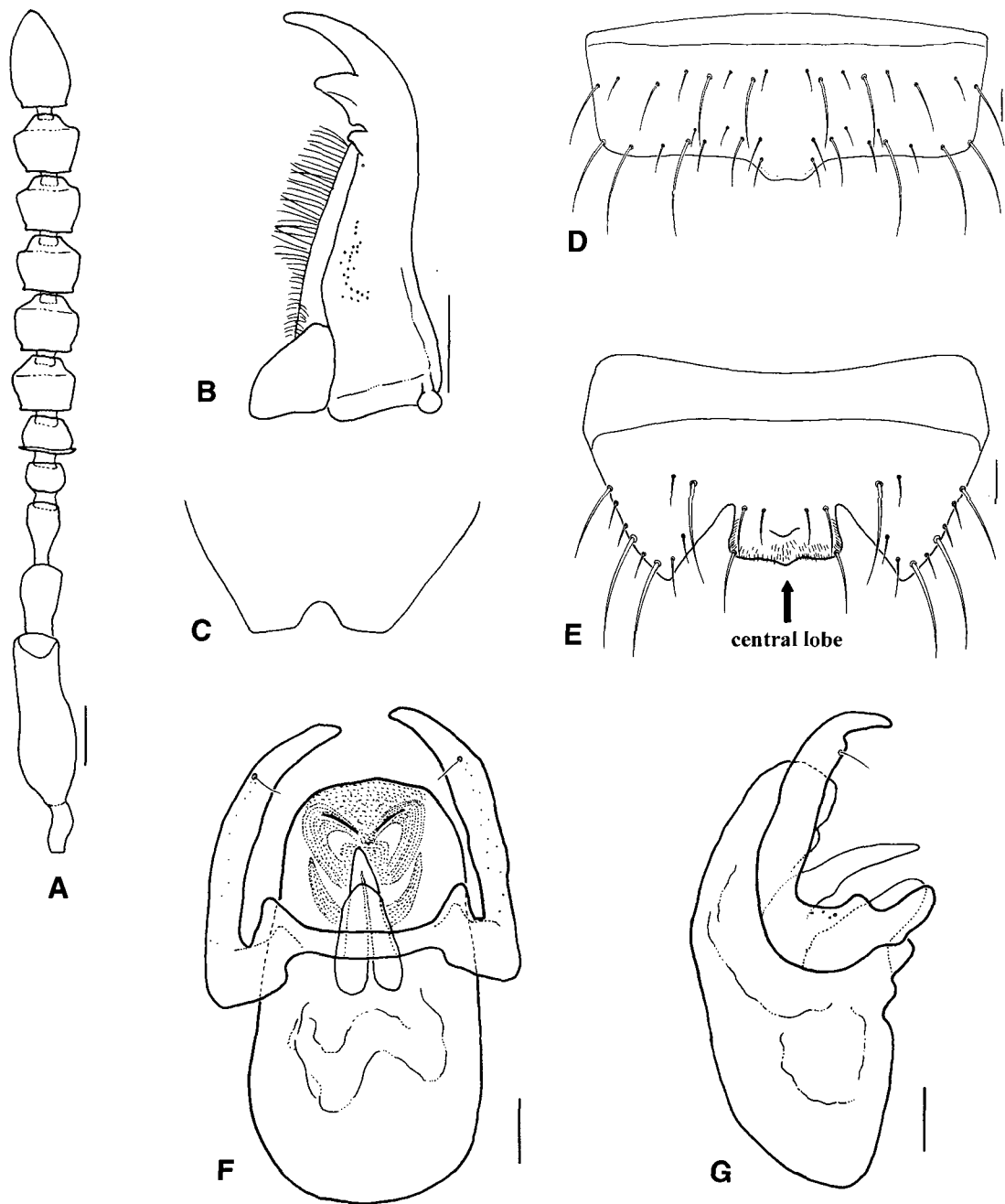


Fig. 2. *Oxytelus bengalensis*. A, antenna, ventral aspect; B, mandible, ventral aspect; C, posterior margin of male tergite X, dorsal aspect; D, male sternite VII, ventral aspect; E, male sternite VIII, ventral aspect; F, aedeagus, ventral aspect; G, aedeagus, lateral aspect. Scale bars=0.1 mm.

palpomere 1 shortest, palpomere 2 longest, palpomere 3 slender. Antenna (Fig. 3A) long and moniliform. Scape robust, about 3.6 times longer than wide; pedicel about 1.8 times longer than wide, shorter and narrower than scape; antennomere 3 about 1.7 times longer than wide, shorter and narrower than pedicel; 4 small and about 1.3 times

wider than long; 5 about 1.2 times wider than long; 6-8 as long as wide, 9-10 about 1.1 times longer than wide; 11 about 1.9 times longer than wide.

Thorax. Pronotum about 1.3 times wider than long, widest at anterior third, single median longitudinal groove present with a pair of longitudinal curved grooves near

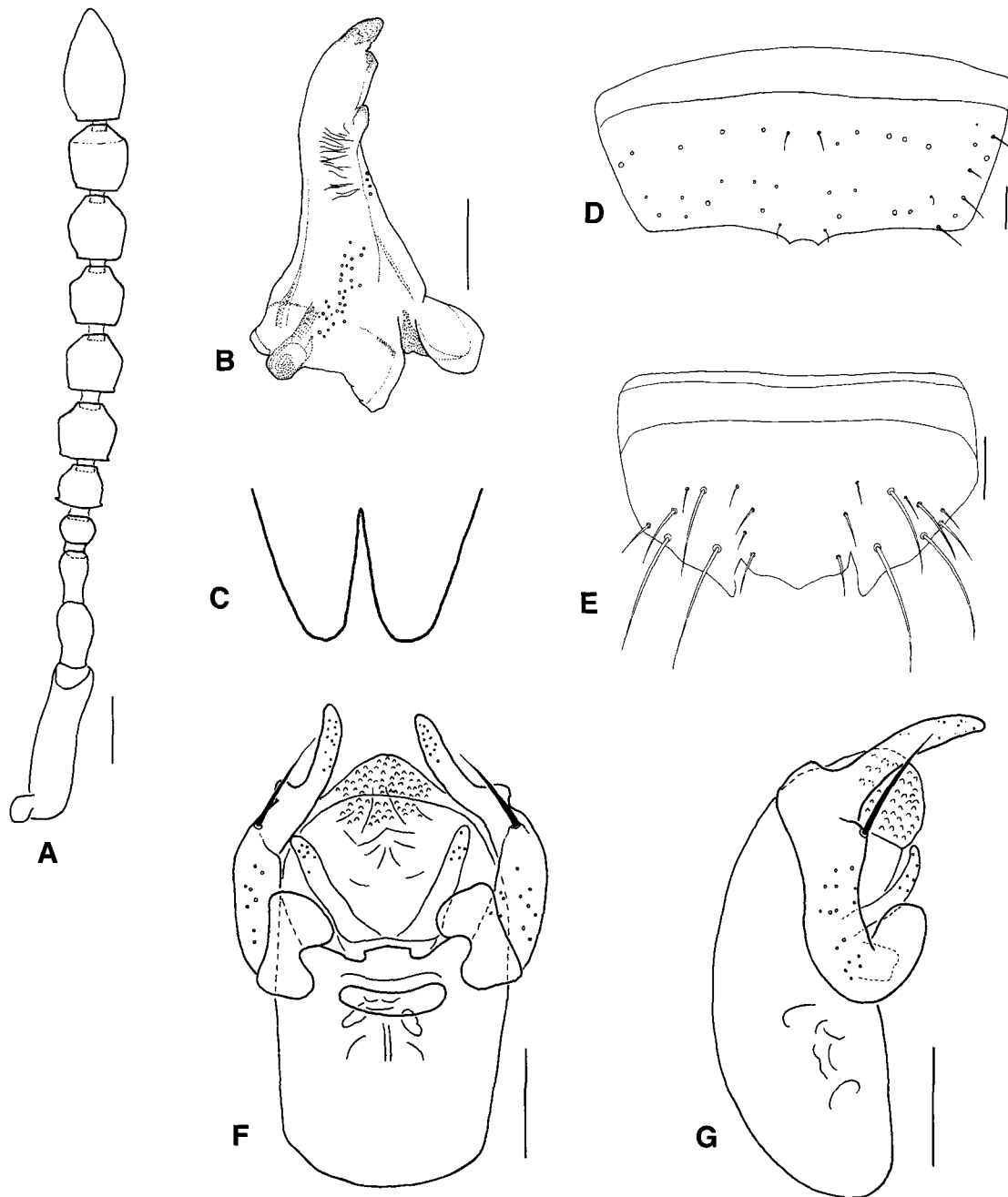


Fig. 3. *Oxytelus incisus*. A, antenna, ventral aspect; B, mandible, ventral aspect; C, posterior margin of male tergite X, dorsal aspect; D, male sternite VII, ventral aspect; E, male sternite VIII, ventral aspect; F, aedeagus, ventral aspect; G, aedeagus, lateral aspect. Scale bars=0.1 mm.

median groove. Prosternal process well developed and moderately pointed. Hypomeron moderately developed. Scutellar impression diamond-shaped. Elytra longitudinally sculptured and about 1.3 times wider than long. Mesosternal process weakly developed and truncated. Metasternal process well developed and truncated.

Abdomen. Posterior margin of tergite X modified as in Fig. 3C. Male sternite VII (Fig. 3D) with a pair of small projections at middle of posterior margin. Male sternite VIII (Fig. 3E) modified, central lobe about 3.3 times wider than long, apex of central lobe slightly prolonged. Female sternite VIII broadly rounded posteriorly. Aedeagus (Fig.

3F, G) rectangular, internal sac moderately developed, paramere moderately slender and deeply curved at posterior fifth, a pair of long setae present at middle of paramere, a projection present at anterior third of paramere. Spermatheca deeply curved.

Remarks. This species can be easily distinguished from the other Korean *Oxytelus* species by the antennomeres 9 and 10 longer than wide (Fig. 3A), and the structures of male sternites VII and VIII (Fig. 3D, E).

Distribution. Korea, Japan, China, Taiwan, Iran, Nepal, Pakistan, Yemen, and Canada (Smetana, 2004).

¹*Oxytelus migrator* Fauvel, 1904 (Figs. 1C, 4)

Oxytelus migrator Fauvel, 1904: 100; Bernhauer and Schubert, 1911: 116; Scheerpeltz, 1933: 1100; Herman, 1970: 410; Hammond, 1975: 150; Shibata, 1976: 156; Watanabe, 1985: 274; Haghebaert and Bruge, 1988: 41; Schülke and Uhlig, 1988: 4; Owen, 1997: 303; Hammond, 1998: 273; Herman, 2001: 1443.

See Herman (2001) and Smetana (2004) for more synonymy and references.

Materials examined. Total 16 specimens. [GW] 1 ex., Misi-ryeong, Gangwon-do, Korea, N38° 26'90", E128° 38'19", 21.vii.2004, S.-M. Choi, J.-S. Park, sifting; [GG] 1 ex., Seodun-dong, Suwon City, Gyeonggi-do, Korea, 2.x.2003, J.-C. Sohn; [CN] 1 ex., Mansusan Mt., Puyo-gun, Chungcheongnam-do, Korea, 19.vii.1999, H.-J. Kim, *ex light*; [GB] 2 ex., Nokjeon, Andong City, Gyeongsangbuk-do, Korea, 10.vii.1985, K.-S. Lee, *ex light*; 3 ex., Mount Daegeumsan, Myeongdong-ri, Geojedo, Gyeongsangbuk-do, Korea, 1-3.ix.1997, Y.B. Cho; 6 ex., Eunhaesa-temple, Gyeongsangbuk-do, Korea, 8.vii.1986 (1♂ 1♀, on slide); [JJ] 2 ex., Gyora-ri, Jeju-do, Korea, 10.vi. 1985, K.-S. Lee, *ex light* near stock farm.

Description. Length 2.2-2.7 mm. Body moderately shining, more or less flattened dorsoventrally. Color usually yellowish brown, head black, pronotum dark brown, pronotal margin sometimes black, legs yellow, tergites with anterior part of each tergite black.

Head. Slightly wider than long, longitudinally sculptured, expanded at posterior fifth of eyes, anterior margin of clypeus slightly emarginated. Eyes large and convex, setae absent between facets. Temples very weakly developed in both male and female. Labrum transverse, broadly emarginated with long setae. Mandible (Fig. 4B) moderately pointed, slightly curved near apex, two subapical teeth present, mola well developed, prosthema well developed. Maxillary palpomere 4 subulate, digitiform sensilla placed on

basal half of palpomere 4, palpomeres 3 slightly shorter than 4. Labial palpomere 1 widest, palpomere 3 slender and longest. Antenna (Fig. 4A) long and moniliform. Scape robust, about 2.7 times longer than wide; pedicel about 2.2 times longer than wide, shorter and narrower than scape; antennomere 3 about 1.8 times longer than wide, slightly shorter and narrower than pedicel; 4 about 1.2 times wider than long; 5 about 1.3 times wider than long; 6-9 about 1.1 times wider than long; 10 about 1.1 times longer than wide; 11 about 1.8 times longer than wide.

Thorax. Pronotum about 1.3 times wider than long, widest at anterior third, single median longitudinal groove present with a pair of longitudinal curved grooves near median groove, longitudinally sculptured. Prosternal process moderately developed and slightly pointed. Hypomeron moderately developed. Scutellar impression diamond-shaped. Elytra longitudinally sculptured and about 1.2 times wider than long. Mesosternal process weakly developed and truncated. Metasternal process well developed and truncated.

Abdomen. Posterior margin of tergite X modified as in Fig. 4C. Male sternite VII (Fig. 4D) very slightly prolonged at middle of posterior margin. Male sternite VIII (Fig. 4E) modified, central lobe more or less rectangular, about 2.0 times wider than long, apex of central lobe truncated. Female sternite VIII broadly rounded posteriorly. Aedeagus (Fig. 4F, G) oval, internal sac moderately developed, paramere slender and curved anteriorly, a pair of long setae present at anterior third of paramere.

Remarks. This species can be easily distinguished from the other Korean *Oxytelus* species by the truncated male sternite VIII (Fig. 4E).

Distribution. Korea, Japan, China, Europe, and Oriental region (Smetana, 2004).

²*Oxytelus nigriceps* Kraatz, 1859 (Fig. 1D)

Oxytelus nigriceps Kraatz, 1859: 171; Sharp, 1874: 93; Bernhauer and Schubert, 1911: 116; Scheerpeltz, 1933: 1100; Nakane, 1963: 84; Herman, 1970: 410; Hammond, 1975: 149; Shibata, 1976: 157; Watanabe, 1985: 274; Yuh et al., 1985: 227; Kim et al., 1994: 140; Cho and Ahn, 2001: 43; Herman, 2001: 1444.

See Herman (2001) and Smetana (2004) for more synonymy and references.

Remarks. This species was recorded by Yuh et al. (1985) in Korea. However, we could not find any Korean specimens.

Distribution. Korea, Japan, China, and Oriental region (Smetana, 2004).

¹작은줄반날개 (신칭), ²검은머리줄반날개

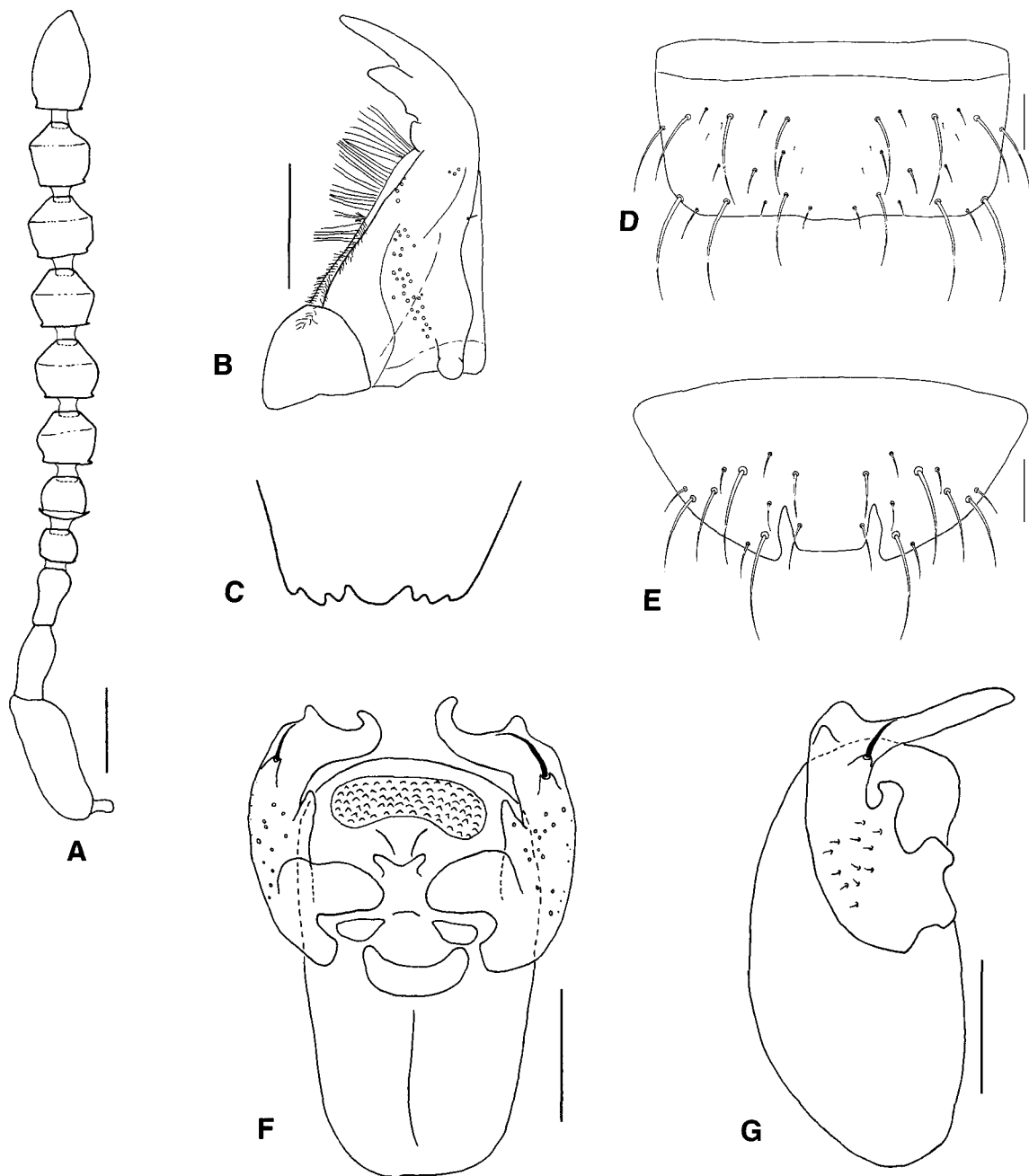


Fig. 4. *Oxytelus migrator*. A, antenna, dorsal aspect; B, mandible, ventral aspect; C, posterior margin of male tergite X, dorsal aspect; D, male sternite VII, ventral aspect; E, male sternite VIII, ventral aspect; F, aedeagus, ventral aspect; G, aedeagus, lateral aspect. Scale bars=0.1 mm.

¹**Oxytelus piceus* (Linnaeus, 1767) (Figs. 1E, 5)

Staphylinus piceus Linnaeus, 1767: 686.

Oxytelus piceus: Bernhauer and Schübert, 1911: 117;

Scheerpeltz, 1933: 1101; Nakane, 1963: 84; Herman,

1970: 410; Shibata, 1976: 158; Frank, 1982: 14; Yuh et

al., 1985: 227; Watanabe, 1985: 273; Schülke and Uhlig,

1988: 5; Staniec, 1992: 31; Kim et al., 1994: 140;

Kashcheev, 1999: 155; Cho and Ahn, 2001: 43; Herman,

2001: 1447.

See Herman (2001) and Smetana (2004) for more synonymy

¹*노랑딱지줄반날개

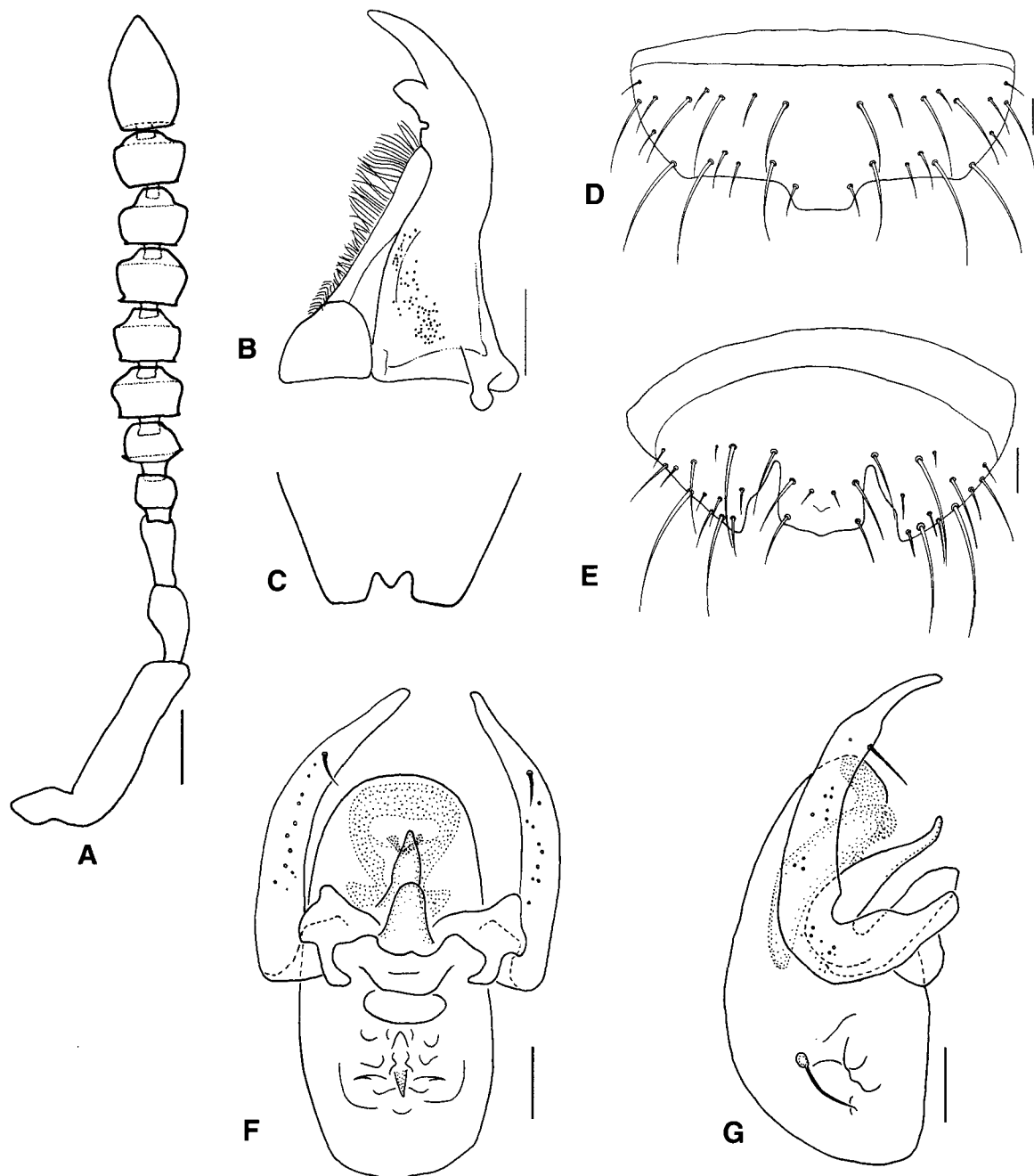


Fig. 5. *Oxytelus piceus*. A, antenna, ventral aspect; B, mandible, ventral aspect; C, posterior margin of male tergite X, dorsal aspect; D, male sternite VII, ventral aspect; E, male sternite VIII, ventral aspect; F, aedeagus, ventral aspect; G, aedeagus, lateral aspect. Scale bars=0.1 mm.

and references.

Materials examined. Total 81 specimens. [GW] 3♂3♀, Duribong Mt. (Duwonbong), Nam-myeon, Jeongseon-gun, Gangwon-do, Korea, 22.vii.2000, Y.B. Cho, sifting (1♀, on slide); 1♂, Mukho-dong, Donghae City, Gangwon-do,

Korea, 22.v.2005, J.-C. Paik, *ex* sandy beach; [GG] 2 ex., Ganghwado Is., Gyeonggi-do, 30. vi.1986, K.-S. Lee; 3♂, Manisan Mt., Hwado-myeon, Ganghwa-gun, Incheon City, Korea, 10.ix.2005, J.-S. Park, S.-I. Lee, *ex* decaying vegetables (1♂, on slide) [GB] 17♂12♀, Cheongryongsan Mt., Gachang-myeon, Daegu City, Korea, 12-13.viii.1997, Y.B.

Cho (1♂1♀, on slide); 1♂, Nokjeon, Andong City, Gyeongsangbuk-do, Korea, 10.vii.1986, K.-S. Lee, *ex light*; 1♂, same data as former except for 10.vii.1985; 1♂, Nokjeon, Andong City, Gyeongsangbuk-do, Korea, 15.vii.1987, Y.B. Cho; [GN] 1♂2♀, Whangmaesan Mt., Dunnae-ri, Kahoi-myeon, Hapcheon-gun, Gyeongsangnam-do, Korea, 29.vi.1998, Y.B. Cho, *ex cow dung*; [JJ] 2♂4♀, Jungang-mokjang, Gyorae-ri, Bukjeju-gun, Jeju-do, Korea, 23.v.2006, S.-I. Lee, Y.-H. Kim, *ex horse dung* (2♂1♀, in alcohol collection); [NK] 16♂12♀, Cheonmasan Mt., Gae-seong-si, North Korea, 11.vi.1996.

Description. Length 3.2-5.3 mm. Body moderately shining, more or less flattened dorsoventrally. Color usually dark brown to black, pronotum brown to black, pronotal margin black, elytra yellowish brown to dark brown, anterior part of elytral sutures black, legs yellow, abdomen brown to black.

Head. Slightly wider than long, expanded in middle of eyes, anterior margin of clypeus truncated. Eyes large and convex, setae absent between facets. Temples very weakly developed in both male and female. Labrum transverse, very slightly emarginated with long setae. Mandible (Fig. 5B) moderately pointed, curved near apex, two subapical teeth present, mola well developed, prostheca well developed. Maxillary palpomere 4 subulate, digitiform sensilla placed on basal third of palpomere 4, palpomeres 3 and 4 equal in length. Labium with all palpomeres longer than wide, palpomere 1 widest, palpomere 2 longest, palpomere 3 slender and equal in length with 1. Antenna (Fig. 5A) long and moniliform. Scape robust, about 4.0 times longer than wide; pedicel about 1.8 times longer than wide, shorter and narrower than scape; antennomere 3 about 2.1 times longer than wide, slightly shorter and narrower than pedicel; 4 small and about 1.3 times wider than long; 5 about 1.5 times wider than long; 6 about 1.4 times wider than long; 7-10 about 1.3 times wider than long; 11 about 1.7 times longer than wide.

Thorax. Pronotum about 1.4 times wider than long, widest at anterior third, single median longitudinal groove present with a pair of longitudinal curved grooves near median groove. Prosternal process moderately developed and weakly pointed. Hypomeron moderately developed. Scutellar impression diamond-shaped. Elytra longitudinally sculptured and about 1.3 times wider than long. Mesosternal process weakly developed and truncated. Metasternal process well developed and truncated.

Abdomen. Posterior margin of tergite X modified as in Fig. 5C. Male sternite VII (Fig. 5D) prolonged at middle of posterior margin. Male sternite VIII (Fig. 5E) modified,

central lobe more or less rectangular, about 1.1 times wider than long, apex of central lobe slightly prolonged. Female sternite VIII slightly prolonged. Aedeagus (Fig. 5F, G) oval, internal sac moderately developed, paramere moderately slender and deeply curved at posterior third, a pair of setae present on anterior fifth of paramere.

Remarks. This species is very similar to *O. varipennis*, but can be distinguished by the slightly prolonged male sternite VIII (Fig. 5E) and the slender apex of paramere (Fig. 5G).

Distribution. Korea, Japan, China, Russia, Europe, and Africa (Smetana, 2004).

¹**Oxytelus takahashii* Ito, 1994 (Figs. 1F, 6)

Oxytelus (Tanykraerus) takahashii Ito, 1994: 44; Smetana, 2004: 517.

Oxytelus takahashii: Herman, 2001.

Materials examined. Total 13 specimens. [GW] 4♂1♀, Biseondae, Seolaksan Mt., Sokcho City, Gangwon-do, Korea, 30.vii-15.ix.2002, S.-J. Park, J.-S. Park, FIT (1♂, on slide); 4♀, same data as former except for Osaekyaksu, 31.vii-15.ix.2002, S.-J. Park, C.-W. Shin, J.-S. Park (1♀, on slide); [CN] 1♂, Site 6, Gyeryongsan Mt., Sangsin-ri, Banpo-myeon, Gongju City, Chungcheongnam-do, Korea, N36° 22'03'', E127° 12'50'', 26.vii-15.viii. 2005, S.-M. Choi, S.-I. Lee, FIT (1♂, on slide); [GB] 1♂, Eungbongsan Mt., Deokgu-ri, Buk-myeon, Uljin-gun, Gyeongsangbuk-do, Korea, 22-23.vii.2000, Y.B. Cho, *ex bait*; [JJ] 1♂1♀, Near Goipyongiorem, Gyorae-ri, Jocheon-eup, Bukjeju-gun, Jeju-do, Korea, 30.v-17.vi. 2003, Y.B. Cho.

Description. Length 2.5-4.5 mm. Body shining, more or less flattened dorsoventrally. Color usually reddish brown to dark brown, elytra yellowish brown to reddish brown, antennae and legs yellowish brown.

Head. Slightly longer than wide. Male head expanded toward posterior margin of temple, anterior margin of clypeus tri-sinuate. Eyes moderately large and convex, setae absent between small facets. Temples well developed and about 2.0 times longer than eye. Female head smaller than that of male, anterior margin of clypeus not modified, temples moderately developed. Labrum transverse, broadly emarginated with long setae. Mandible (Fig. 6B) long, weakly pointed, remarkably curved near apex, two subapical teeth present, mola well developed, prostheca well developed. Maxillary palpomere 4 subulate, digitiform sensilla placed on basal half of palpomere 4, palpomeres 3 and 4 equal in length. Labium with all palpomeres longer than wide, palpomere 1 wider than 2 and 3, palpomere 2 longest. Antenna (Fig. 6A) long and moniliform. Scape robust, about

¹*실악산출반날개 (신칭)

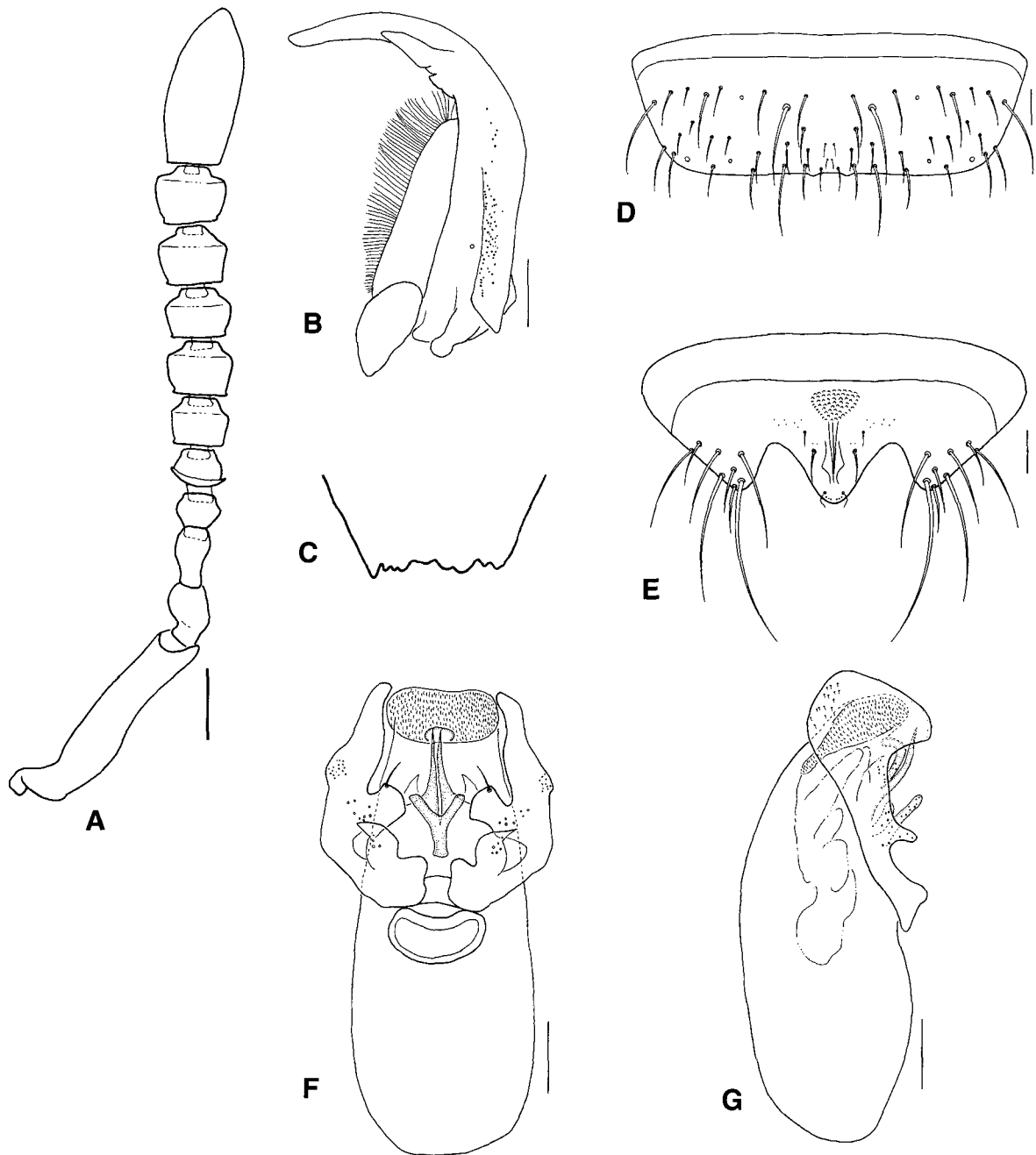


Fig. 6. *Oxytelus takahashii*. A, antenna, ventral aspect; B, mandible, ventral aspect; C, posterior margin of male tergite X, dorsal aspect; D, male sternite VII, ventral aspect; E, male sternite VIII, ventral aspect; F, aedeagus, ventral aspect; G, aedeagus, lateral aspect. Scale bars=0.1 mm.

4.6 times longer than wide; pedicel about 1.5 times longer than wide, shorter and narrower than scape; antennomere 3 about 1.9 times longer than wide, slightly narrower than pedicel; 4 small and about 1.3 times wider than long; 5 about 1.5 times wider than long; 6-10 about 1.2 times wider than long; 11 about 2.2 times longer than wide.

Thorax. Pronotum about 1.4 times wider than long, widest at anterior fifth, narrowest at base, single median longitudinal groove present with a pair of longitudinal curved grooves near median groove. Prosternal process moderately developed and slightly pointed. Hypomeron moderately developed. Scutellar impression diamond-shap-

ed. Elytra about 1.3 times wider than long. Mesosternal process weakly developed and slightly arcuate. Metasternal process well developed and slightly emarginated.

Abdomen. Posterior margin of tergite X modified as in Fig. 6C. Male sternite VII (Fig. 6D) with a pair of small projections at middle of posterior margin. Male sternite VIII (Fig. 6E) modified, central lobe triangular, reticulate in middle. Female sternite VIII broadly rounded posteriorly. Aedeagus (Fig. 6F, G) oval, internal sac moderately developed, paramere expanding toward anterior part with a projection at posterior third.

Remarks. This species is very similar to *O. lividus* Motschulsky, but can be distinguished by the structures of male sternites VII and VIII (Fig. 6D, E) from *O. lividus* with more complicated male sternites VII and VIII (see Hammond, 1975: 153-154). They are also different from *O. pallidipennis* Cameron by the tri-sinuated anterior margin of clypeus in male (Fig. 1F). *O. pallidipennis* have slightly sinuated clypeus at anterior margin in male (see Ito, 1994: 45).

Distribution. Korea and Japan.

¹*Oxytelus varipennis* Kraatz, 1859 (Figs. 1G, 7)

Oxytelus varipennis Kraatz, 1859: 172; Bernhauer and Schubert, 1911: 121; Scheerpeltz, 1933: 1105; Herman, 1970: 411; Hammond, 1975: 150; Shibata, 1976: 159; Watanabe, 1985: 274; Kim et al., 1994: 140; Cho and Ahn, 2001: 43; Herman, 2001: 1461.

See Herman (2001) and Smetana (2004) for more synonymy and references.

Materials examined. Total 40 specimens. Lectotype, female, labeled as follows: 'LECTOTYPE, coll. DEI Müncheberg, *Oxytelus varipennis* Kr. P. M. Hammond det. 1974 LECTOTYPE ♀, *Oxytelus varipennis* Kr., Ceylon, Coll. Kraatz, 168.' [CB] 1♂, Janggye-ri, Okcheon, Chungcheongbuk-do, Korea, 4.viii.1986, Y.B. Cho; [GB] 9♂, Daeguumsan Mt., Myeongdong-ri, Geojedo, Gyeongsangbuk-do, Korea, 1-3.ix.1997, Y.B. Cho (1♂, on slide); [JN] 1♀, Suncheon, Jeollanam-do, Korea, 14.vii. 1988, J.-C. Paik; [JJ] 5♂3♀, Seogwipo, Jeju-do, Korea, 29.xi.1984; 1♂, same data as former except for 13.vi.1985, K.-S. Lee, *ex* under seaweed; 2♂1♀, same data as former except for 28.xi.1984, K.-S. Lee, *ex* cow dung (1♀, on slide); 1♂, same data as former except for 14.vii.1985, K.-S. Lee; 1♂, same data as former except for 10.vi.1985, K.-S. Lee *ex* under straw; 1♂, same data as former except for 29.vii. 1985, *ex* light; 1♂, same data as former except for 21.ix. 1985, K.-S. Lee (1♂, on slide); 1♂, Seongpanak, Jeju-do

Korea, 6.ix, *ex* vegetable; 2♂, Donnaeko, Seogwipo, Jeju-do, Korea, 5.vii.1986, K.-S. Lee; 1♂, same data as former except for 20.iii.1985, K.-S. Lee *ex* under stone; 3♂3♀, Girinsaseum, Jeju-do, Korea, 28.xi.1984, K.-S. Lee, *ex* cow dung (1♀, on slide); 1♂, Gyorae-ri, Jeju-do, Korea, 10.v. 1985, K.-S. Lee; 1♀, same data as former except for 10.vi. 1985, *ex* light near stock farm.

Description. Length 3.5-5.6 mm. Body slightly shining, more or less flattened dorsoventrally. Color usually dark brown, head black, pronotum dark brown to nearly black, elytra brown to dark brown, elytral sutures sometimes nearly black, legs yellowish brown.

Head. Slightly wider than long. Eyes large and convex, setae absent between facets. Temples well developed or not in male, temples very weakly developed in female. Labrum transverse, slightly emarginated with long setae. Mandible (Fig. 7B) weakly pointed or blunt, curved near apex, two subapical teeth present, mola well developed, prosthema well developed. Maxillary palpomere 4 subulate and longest, digitiform sensilla placed on basal third of palpomere 4, palpomere 3 smaller than 4. Labium with all palpomeres longer than wide, palpomere 1 widest and shortest, palpomere 2 longest, palpomere 3 slender. Antenna (Fig. 7A) long and moniliform. Scape robust, about 4.2 times longer than wide; pedicel about 2.0 times longer than wide, shorter and narrower than scape; antennomere 3 about 2.2 times longer than wide, slightly shorter and narrower than pedicel; 4 small and about 1.4 times wider than long; 5 about 1.3 times wider than long; 6-10 about 1.1 times wider than long; 11 about 1.8 times longer than wide.

Thorax. Pronotum about 1.4 times wider than long, widest at anterior third, single median longitudinal groove present with a pair of longitudinal curved grooves near median groove, longitudinally sculptured. Prosternal process slightly developed and weakly pointed. Hypomeron moderately developed. Scutellar impression diamond-shaped. Elytra longitudinally sculptured and about 1.3 times wider than long. Mesosternal process weakly developed and truncated. Metasternal process well developed and truncated.

Abdomen. Posterior margin of tergite X modified as in Fig. 7C. Male sternite VII (Fig. 7D) prolonged at middle of posterior margin. Male sternite VIII (Fig. 7E) modified, central lobe more or less rectangular, about 1.3 times wider than long, apex of central lobe slightly emarginated. Female sternite VIII slightly prolonged. Aedeagus (Fig. 7F, G) oval, internal sac moderately developed, paramere moderately slender and deeply curved at posterior third, a pair of setae present at anterior fifth of paramere, tip of paramere pointed

¹*태백산줄반날개

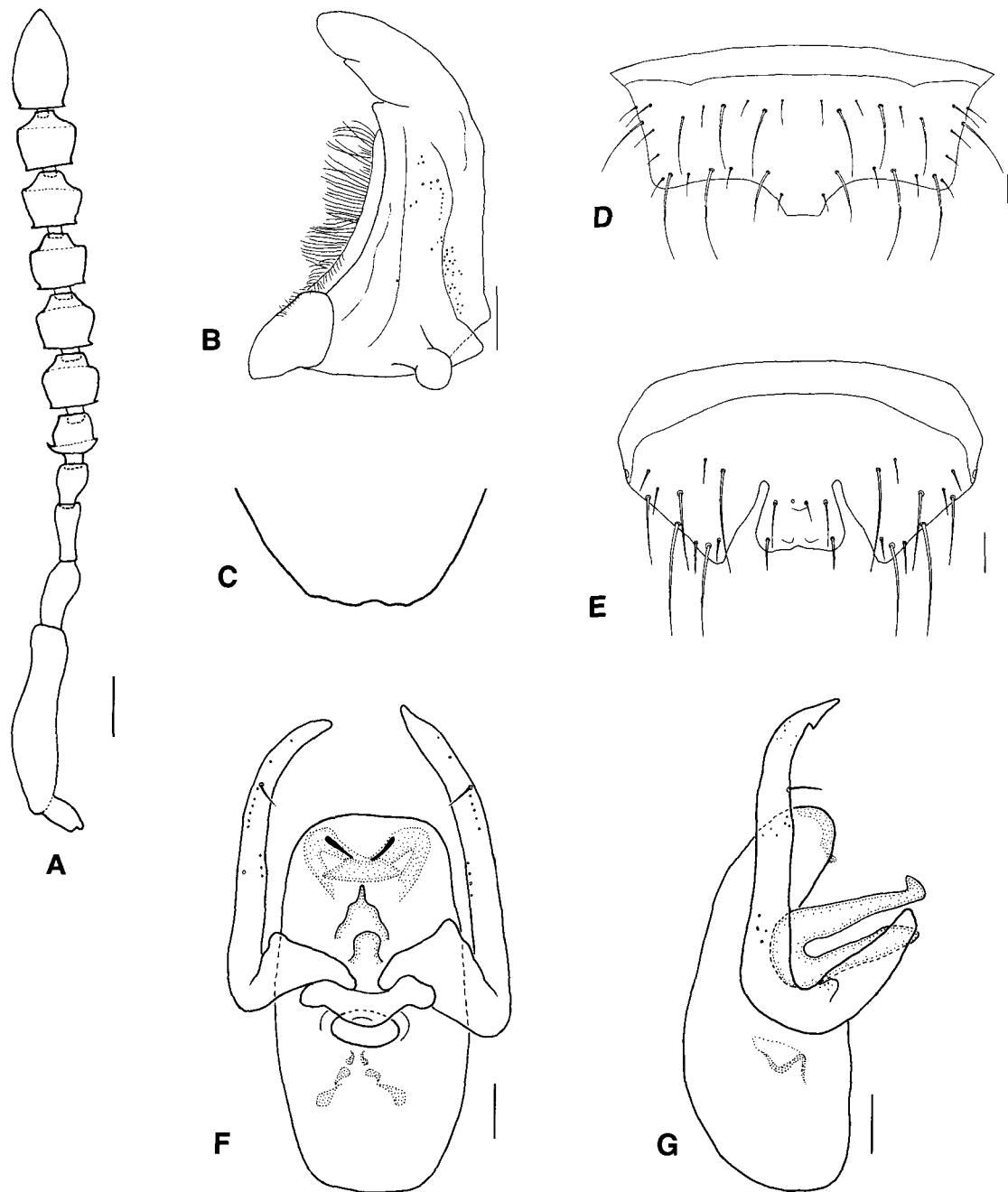


Fig. 7. *Oxytelus varipennis*. A, antenna, ventral aspect; B, mandible, ventral aspect; C, posterior margin of male tergite X, dorsal aspect; D, male sternite VII, ventral aspect; E, male sternite VIII, ventral aspect; F, aedeagus, ventral aspect; G, aedeagus, lateral aspect. Scale bars=0.1 mm.

and arrow-shaped.

Remarks. This species is very similar to *O. piceus*, but can be distinguished by the slightly emarginated male sternite VIII (Fig. 7E) and the arrow-shaped apex of paramere (Fig. 7G).

Distribution. Korea, Japan, China, and Oriental region

(Smetana, 2004).

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