

Notes on Harpalini (Coleoptera, Carabidae) from Korea (4)

Moon, Chang-Seop and Jong-Cheol Paik*

(Division of Applied Life and Environmental Sciences, Suncheon National University, Suncheon 540-742, Korea)

韓國產 먼지벌레 족(4)

문 창 섭 · 백 종 철*

(순천대학교 농업생명과학대학 생명환경과학부)

ABSTRACT

Twenty three species of the subtribe Stenolophina from the Korean Peninsula are treated, of which *Dicheirotichus punctatellus* (Reitter 1894) is listed for the first time in South Korea.

Key words : Coleoptera, Carabidae, Harpalini, Stenolophina, fauna, Korea

Subtribe Stenolophina Kirby, 1837 좁쌀먼지벌레 아족

Stenolophina Kirby, 1837, Fauna Boreali-Americana, p. 46.

Type-genus: *Stenolophus* Dejean, 1821 (not Stephenes, 1829).

Stenolophidae Hope, 1838, Col. Man., 2: 89.

Type-genus: *Stenolophus* Dejean, 1821 (not Stephenes, 1829). Treated as junior synonym of Harpalina by Noonan, 1976: 15.

Polpochilini Bates, 1891, Introduction, Coleoptera, p. 10.

Type-genus: *Polpochila* Solier, 1849. Synonymized by Noonan, 1976: 15.

Acupalpini Tschitschérine, 1900, Horae Soc. Ent. Rossicae, 34: 342, 354, 361 (partim).

Type-genus: *Acupalpus* Lareille, 1829. Synonymized by Noonan, 1976: 15.

Cratocarini Casey, 1914, Memoirs on the Coleoptera, 5: 48, 299.

Type-genus: *Cratocara* LeConte, 1863. Synonymized by Noonan, 1976: 15.

Agonoderi Csiki, 1932, Coleopt. Cat., 121: 1188.

Type-genus: *Agonoderus* Dejean, 1829. Treated as junior synonym of Harpalina by Noonan, 1976: 15.

Bradycelli Cski, 1932, Coleopt. Cat., 121: 1222.

Type-genus: *Bradycellus* Erichson, 1837. Treated as junior synonym of Harpalina by Noonan, 1976: 15.

Pachytracheli Csiki, 1932, Coleop. Cat., 121: 1082.

Type-genus: *Pachytrachelus* Chaudoir, 1852. Synonymized by Noonan, 1976: 15.

Dichirotrichi Burmeister, 1939, Europaischen Käfer, p. 186.

Type-genus: *Dicheirotichus* Jacquelin du Val, 1855 (based on *Dichirotrichus* Gemminger & Harold, 1868). Synonymized by Noonan, 1976: 15.

Hippolaetina [sic] Basilewsky, 1951, Ann. Mus. Congo Belge, (8), Zool., 9: 118, 258.

Type-genus: *Hippoloetis* Laporte, 1835. Treated as junior synonym of Harpalina by Noonan, 1976: 15.

Anthracini Schuler, 1969, L'Entomologiste, 25: 113.

Type-genus: *Anthracus* Motschulsky, 1850. Synonymized by Noonan, 1976: 15.

Diagnosis. Clypeus and labrum symmetric; frontal impressions extending posteriolaterally; penultimate segment of labial palpi generally with two setae at inner side; suture between mentum and submentum complete. Elytra with complete basal border; scutellar striae between stria 1 and 2, or absent; marginal series of pores widely interrupted at middle. For more details, see Noonan (1976) or Habu (1973).

Notes. This subtribe is worldwide, including numerous species arranged in 35 genera. A subtribe of more temperate distribution, and represented in the tropics by only a few genera.

* Corresponding author
Phone) +82-61-750-3863, Fax) +82-61-750-3208
E-mail) jcpaik@sunchon.ac.kr

Noonan (1976) gave the tribe a new definition, including in it elements of various different groups. In the Korean Peninsula, there has been 23 species listed. Among these the following 8 species are not collected in South Korea; *Bradycellus curtulus*, *B. kataevi*, *B. laevicollis*, *Dicheirotichus coreanus*, *Lioholus jedlickai*, *Loxoncus impubis*, *Stenolophus meyeri* and *S. agnoides*.

Genus *Acupalpus* Latreille, 1829 꼬마노랑먼지벌레 속
Acupalpus Latreille, 1829 in Cuvier's Règne Animal, 2 ed., 4: 391.

Type-species: *Carabus meridianus* Linnaeus, 1761, by subsequent designation of Blanchard in Audouin *et al.*, 1842: pl. 21.

Manicellus Moschulsky, 1864, Bull. Soc. Nat. Mosc., 37(2): 207.

Type-species: *Stenolophus elegans* Dejean, 1829, by subsequent designation of Jeannel, 1942: 712. Treated as a junior synonym by Csiki, 1932: 1243.

Diagnostic characters. The chief diagnostic characters are, small species (less than 5 mm), body impunctate except the basal area of pronotum, dorsal side glabrous, antennae pubescent from segment 3; absence of an anterior supra-orbital puncture on frons, as well as of a seta at hind-angle of pronotum. Mentum tooth absent. Last segment of maxillary palp acuminate. Hind tarsus not carinated externally. Meta-tarsi not carinate externally. Male with pro-tarsi and usually, though faintly, meso-tarsi dilated.

Notes. A markedly diverse, cosmopolitan genus. Divided into many subgenera of which 2 subgenera, 2 species have been recorded in the Korean Peninsula. The species of this genus are hygrophilous and mostly found at the margin of fresh water. For more details of this genus, see Habu (1973: 325).

Key to the subgenera and species from Korea
(based on literature)

- 1(2) Pronotum with basal angles well angulate; mandibles relatively long like in *Anthracus*; antennal segment 2 glabrous; tarsal segment 5 glabrous on ventral side; prosternum with some long setae; prosternal process without distinct setae. Subgenus *Pseudanthracus* Habu, 1973
- 2(1) Pronotum with basal angles not angulate, more or less rounded; mandibles short.
- 3(4) Tarsal segment 5 with one seta on each ventrolateral mar-

gin; Prosternum before fore coxae glabrous or with very short setae; prosternal process glabrous or with some very short setae at tip. Subgenus *Acupalpus* s. str.

4(3) Tarsal segment 5 glabrous on ventral side; prosternum more or less setose.

5(6) Prosternal process with two distinct setae; antennal segment 2 pubescent. Subgenus *Setacupalpus* (털꼬마노랑먼지벌레 아속)

A single species. Prothorax, mandibles, labrum, and two basal antennal segments orange; head black, abdomen and elytra dark brown to black, sutural intervals yellowish; palpi and legs yellow, antennal segments 3-11 darkened. Smaller, 3.0-3.4 mm. Korea, Russian Far East.

..... *A. (S.) hilaris* (털꼬마노랑먼지벌레)

6(5) Prosternal process without distinct setae; antennal segment 2 glabrous except for one seta on ventral side. Subgenus *Palcuapus* (꼬마노랑먼지벌레 아속)

A single species occurs in Korea. Dorsum of body brownish yellow or light brown, under side lighter, two antennal basal segments, palpi and legs pale yellow, other antennal segments darkened. Eyes black. L. 3.7-4.0 mm. Korea, Japan, China, Russian Far East. *A. (P.) inornatus* (꼬마노랑먼지벌레)

Subgenus *Palcuapus* Habu, 1973 꼬마노랑먼지벌레 아속
Palcuapus Habu, 1973, Harpalini, Fauna Japonica, p. 332.

Type-species: *Acupalpus inornatus* Bates, 1873, by original designation.

***Acupalpus (Palcuapus) inornatus* Bates, 1873**
꼬마노랑먼지벌레

- Acupalpus inornatus* Bates, 1873, Ent. Soc. Lond., p. 268-269 (Japan, China); Okamoto, 1924, Bull. Agric. Exp. Sta. Gov.-Gen. Chosen, 1(2): 163 (Korea); Habu, 1942, Kontyu, 17: 77; Kurosa, 1949, Bull. Takarazuka Ins., 60: 11 (Korea); Habu, 1950, Icon. Ins. Jap. (rev. ed.), p. 953 (Korea); Habu, 1954, Bull. Nat. Inst. Agr. Sci., (C), 4: 285; Cho, 1957, Hum. & Sci., Nat. Sci. Korea Univ., 2: 191 (Korea); Jedlička, 1960, Anns hist.-nat. Mus. natn. hung., 52: 231 (Korea); Nakane, 1963, Icon. Ins. Jap. Colore Nat., 2, Col., p. 45 (Korea); Paik, 1997b, Korean J. Soil Zool., 2(1): 29 (Korea).
- Acupalpus (Anthracus) inornatus* Bates: Csiki, 1932, Col. Cat., pars 121, p. 1257 (cat.); Uéno, 1964, Kontyû, 32: 259.
- Anthracus inornatus* (Bates): Młynář, 1974, Acta zool. cracov., 19(6): 109 (N. Korea).
- Acupalpus (Palcuapus) inornatus* Bates: Habu, 1973, Fauna Japonica, Harpalini, p. 333-337 (Korea); Lafer, 1989, Key Ins. Russian Far East, (3), Col., 1: 197 (Korea).

Diagnostic characters. See above key to species. For more detail, see Habu (1973).

Material examined. **JJ:** 1 ♂, 2-VIII-1985, Jeju (Light Trap) (SCNAE); 3 ♀, 4-IX-2004, Myeongdoam, Jeju-si (SCNAE). **CB:** 1 ♀, 19-V-2001, Mt. Weolaksan, Jecheon-si (SCNAE); 5 ex., 30-VII-1998, Dandon, Cheongpung, Jecheon-si (NIAS). **CN:** 5 ex., 30-VII-1998, Yanghwa-ri, Yanghwa-myeon, Buyeo-gun (SCNAE); 3 ex., 11-VIII-1993; 4 ex., 6-VI-1993, Nonsan, Buyeo-gun (NIAS). **GB:** 8 ♂, 3 ♀, 6-VIII-1999, Sangju-si (SJNAE). **GG:** 1 ex., 2-VIII-1986, Mt. Surisan, Gunpo-si (NIAS); 1 ex., 22-V-1990, Yongin-si (NIAS); 10 ex., 31-V-1997, Seodun-dong, Suweon-si (NIAS). **GW:** 3 ♂, 3 ♀, 14-VI-2004, Paro-ho, Yoho-ri, Gandong-myeon, Hwacheong-gun (SCNAE); 2 ex., 28-VII-1997, Chuncheon-si (NIAS); 1 ex., 11-IX-1993, Pyeongchang-eup, Pyeongchang-gun (NIAS); 2 ♀, 13-VIII-1999, Mt. Odaesan (SJNAE); 3 ex., 11-VII-1993, Samcheok-si (NIAS). **JB:** 1 ♀, 3-VI-2005, Donchon-ri, Mt. Maisan, Maryeong-myeon, Jinan-gun (SCNAE). **JN:** 6 ♀, 9-V-1995, Sueo Dam, Jinsang-myeon, Gwangyang-si (SCNAE); 1 ♀, 10-IX-2002, Joryeong-ri, Bonggang-myeon, Gwangyang-si (SCNAE); 5 ♀, 10-VI-1995, Oecheo, Oe-Narodo, Goheung-gun (SCNAE); 1 ♀, 6-X-2002, Aprok, Ogok-myeon, Gokseong-gun (SCNAE); 1 ♀, 13-VI-1997, Piagol, Mt. Jiri-san, Gurye-gun (SCNAE); 2 ex., 30-VI-1995, Cheongso-ri, Seo-myeon, Suncheon-si (SCNAE); 2 ex., 25-VI-1991, Mt. Baekunsan, Chusan, Gwangyang-si (NIAS); 21 ex., 6-VIII-1975, Is. Heuksando, Sinan-gun (NIAS); 3 ex., 18-V-1996, Suncheon-si (NIAS).

Distribution. Korea (North, Central, South), Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyu), China (FUJ, HEB, JIX, SHA, SHG, YUN, ZHE), Taiwan, Russian Far East.

Notes. First record for the Korean Peninsula by Okamoto (1924). Common species.

This species is widely distributed from southern part of the Korean Peninsula including in Jeju (=Quelpart Is.). Body 3.5-4.0 mm in length, yellowish brown in color. Elytra with rainbow-like lustre. Prothorax straight posteriorly but narrows eventually, and hind angles round. Rather common near water basin or marshy areas. Attracted to light at night.

Subgenus *Setacupalpus* Habu, 1973

털꼬마노랑먼지벌레 아속

Setacupalpus Habu, 1973, Harpalini, Fauna Japonica, p. 329.

Type-species: *Acupalpus sobosanus* Habu, 1954, by original designation.

Acupalpus (Setacupalpus) hilaris Tschitschérine, 1899

털꼬마노랑먼지벌레

Acupalpus hilaris Tschitscherine, 1899, L'Abbeille, 29: 274 (Ussuri); Reitter, 1900, Verh. Naturf. Ver. Brünn, 38: 138 (footnote).

Acupalpus (Acupalpus) hilaris Tschitschérine: Schaubberger, 1930, Coleopt. Centralblatt, 4: 208-209; Csiki, 1932, Col. Cat., 121: 1249 (cat.).

Acupalpus (Setacupalpus) hilaris Tschitschérine: Habu, 1981, Ent. Rev. Japan, 35(1/2): 41-44 (redescription); Lafer, 1989, Key Ins. Russian Far East, (3), 1: 198 (Korea); Paik, 1998, Korean J. Soil Zool., 3(1): 2 (Korea).

Diagnostic characters. See above key for species. For more detail, see Habu (1981).

Material examined. **JN:** 1 ♀, 13-IV-2002, Temple Hangrimsa, Suncheon-si (SCNAE); 1 ♀, 17-V-1994, Mt. Baekunsan, Gwangyang-si (SCNAE).

Distribution. Korea (South), Japan (Hokkaido, Honshu), Russian Far East.

Notes. First record for the Korean Peninsula by Lafer (1989). This species is easily distinguished from other species by the black head and shape of aedeagus. Body ca. 3.5 mm in length. Differ from *A. (P.) inornatus* by the color of body. Occurs in water side or stream side. Very rare.

Genus *Bradycellus* Erichson, 1837 좁쌀애먼지벌레 속

Bradycellus Erichson, 1837, Käfer Mark Brand., 1: 64.

Type-species: *Carabus collaris* Paykull, 1798, by 1798 (= *Acupalpus caucasicus* Chaudoir, 1846), by subsequent designation of Andrewes, 1935: 20.

Diagnostic characters. Small ground beetles, more convex than *Acupalpus* species, and with entirely pale pubescence. Separated from other small harpalines by the presence of a mentum tooth. Anterior margin of prosternum elevated. Wings often reduced. Male with at least fore tarsus dilated. The genus is also distinguished by an oval, punctate and pubescent, fovea on 3rd abdominal sternite.

Notes. More than 130 species of this worldwide genus are divided into many subgenera. Of the six subgenera listed by Jaeger & Kataev (2003, in Löbl & Smetana), only three have Korean representatives. Eight species has been hitherto known from the Korean Peninsula (Lafer 1989, Jaeger & Kataev in Löbl & Smetana 2003, Paik & Jung 2005), arranged in three subgenera. However, three species, *B. (T.) curtulus* (Motschulsky 1860), *kataevi* Jaeger & Wrase, 1994, and *grabulatulus*

Lafer, 1989 have not yet been collected from southern part of the Korean Peninsula. On the other hand, Paik (1997) reported *B. anchomenoides* from South Korea, however, it is a misidentification of *B. grandiceps*. Needs to be detailed for the Korean Peninsula species.

The species are fully distinguished only on armature by endofallus, the female is rather difficult. Quite recently, Jager (1990, 1993, 1999), Jaeger, B. & D.W. Wrase (1994, 1996) revised this genus. The following simple key rather easily separates for Korean species (based on literature). For more information, see Jeager & Wrase (1993, 1994).

Key to the subgenera and species from Korea

- 1(4) Ventriles (visible stenites) 2 and 3 of both male and female without ciliate depressed area; mid tarsi of male with adhesive hairs ventrally.
- 2(3) Elytra without basal pore, without scutellary striole, without dorsal pore on interval 3, striae incomplete (Subgenus *Bradycelloides* Habu, 1973). Pronotum sinuate at lateral margins before basal angles, basal angles obtuse and distinct; dorsal side without microsculpture; head with scattered distinct punctures; pronotum less contracted posteriorly (WP/WBP: 1.10-1.17). *B. (Bradycelloides) fimbriatus* (둥근좁쌀애먼지벌레)
- 3(2) Elytra with basal pore, scutellary striole, and dorsal pore on interval 3 or sometimes absent; antennal segment 3 pubescent (Subgenus *Desbodesius* Maindron, 1906). Pronotum orange, not sinuate at lateral margins before basal angles, basal angles more or less rounded; dorsal side with microsculpture. *B. (Desbodesius) laeticolor* (노란목좁쌀애먼지벌레)
- 4(1) Ventriles 2 and 3 of male with ciliate depressed area at middle.
- 5(6) Mid tarsi of male without adhesive hairs ventrally (Subgenus *Bracycellus* Erichson, 1837).
- 6(5) Mid tarsi of male with adhesive hairs ventrally (Subgenus *Tachycellus* Morawitz, 1862).
- 7(14) Last ventrite with 2 long setae in male;
- 8(11) In male elytra without reticulation, glossy shiny, usually lighter than head and pronotum, brown.
- 9(10) Elytra with distinct isodiametric reticulation in both sexes. Pronotum with widely rounded hind angles, usually without punctures, rarer with punctures at base, with rough isodiametric reticulation at hind angles. Brownish black, elytra sometimes dark brown. Antennal segment 1,

- lateral beads of pronotum, elytral suture and tibiae brown. Antennae and legs dark brown. L: 4.2-5.5 mm. *B. (T.) laevicollis* (Poppius, 1907) [좁쌀애먼지벌레]
- 10(9) Head black, pronotum dark brown, elytra, legs, antennae and palpi brown. Endophallus with two longitudinal sclerites, each of contains 6-7 closely adjoining conical sclerites. Smaller, 4.1 mm. *B. (Tachycellus) grabulatulus* (향산좁쌀애먼지벌레: 신칭)
- 11(8) Elytral microsculpture distinct, forming transverse meshes; head rather small (WP/WH: more than 1.30); mandibles moderately slender and hooked at apex.
- 12(13) Elytral suture generally (not always) reddish; pitchy brown, lateral beads of pronotum, antennae and legs brown. Smaller, 4.1-4.3 mm. *B. (Tachycellus) subditus* (도림좁쌀애먼지벌레)
- 13(12) Elytral suture black; Larger, 5.2-5.5 mm. *B. (Tachycellus) anchomenoides* (Bates, 1873) [검정좁쌀애먼지벌레]
- 14(7) Last ventrite with 4 long setae in male.
- 15(16) Left mandible normal form, with distinct tip; upper surface of body pitchy brown to brownish black; palpi, 1st antennomere, base of tibiae light brown, other appendages darkened. L: 5.0-6.0 mm. *B. (Tachycellus) curtulus* (암록좁쌀애먼지벌레: 신칭)
- 16(15) Left mandible broadly truncate, without distinct tip.
- 17(18) Elytral microsculpture without meshes, at most single rudiment visible; first antennal segment light. L: 5.3-7.3 mm. *B. (Tachycellus) koltzei* Reitter, 1900
- 18(17) Elytral microsculpture rather distinct, forming transverse meshes; pronotum black except yellowish brown lateral margins.
- 19(20) Black, shiny; median lobe of aedeagus weakly curved ventrally with short terminal lamella; head large (WP/WH = 1.21-1.30). L: 5.7-7.2 mm. *B. (Tachycellus) grandiceps* (장구좁쌀애먼지벌레)
- 20(19) Brownish black to pitchy black; median lobe of aedeagus distinctly curved ventrally with long terminal lamella; L: 5.2-5.9 mm. *B. (Tachycellus) kataevi* (대륙좁쌀애먼지벌레: 신칭)

Subgenus *Bradycelloides* Habu, 1973

둥근좁쌀애먼지벌레 아속
Bradycelloides Habu, 1973, Fauna Japonica, Harpalini, p. 322.
 Type-species: *Bracycellus fimbriatus* Bates, 1873, by original designation.

***Bradycellus (Bradycelloides) fimbriatus* Bates, 1873**

등근좁쌀애먼지벌레

Bradycellus fimbriatus Bates, 1873, Trans. R. ent. Soc. Lond., p. 267-268 (Japan).

Trichocellus (Trichocellus) fimbriatus Bates: Csiki, 1932, Col. Cat., 121: 1224 (cat.); Jedlička, 1953, Ent. Blätt., 49: 147; Nakane, 1963, Icon. Ins. Jap., colore natur. edit., 2 (Col.), p. 45, pl. 23, fig. 5.

Bradycellus (Bradycelloides) fimbriatus Bates: Habu, 1973, Fauna Japonica, Harpalini, p. 306, 322-325; Kwon & Lee, 1986, Ins. Koreana, 6: 40 (Korea); Paik, 1998, Korean J. Soil Zool., 3(1): 2 (Korea).

Diagnostic characters. See above key to species. For more detail, see Habu (1973).

Materials examined. JN: 1 ♀, 15-V-2002; 1 ♀, 20-V-2002; 2 ex., 27-VII-1998, Suncheon-si (SCNAE); 17 ex., 4-VII-1995; 3 ex., 15-VII-1995, Cheongso-ri, Seo-myeon, Suncheon-si (SCNAE); 5 ♂, 10 ♀, 20-VI-2002, Jungsan, Ganjeon-myon, Gurye-gun (SCNAE); 2 ♀, 3 ♂, 22-VI-1988, Mt. Jirisan, Toji-myeon, Gurye-gun (SCNAE).

Distribution. Korea (South), Japan (Honshu, Sikoku, Kyushu), China (FUJ, HEB, JIX, JIA, SCH, SHA, SHG, SHN, YUN, ZHE).

Notes. Listed from Korea by Kwon & Lee (1986), but the earlier references could not be traced. The occurrence of this species in the Korean Peninsula was confirmed by Paik (1998). Found either under wet stones or decaying grass roots in hills and flat lands. Rare species, but often abundant at specific sites.

Subgenus *Desbordesus* Maindron, 1906

노란목좁쌀애먼지벌레 아속

Desbordesus Maindron, 1906, Bull. Soc. Ent. France, p. 252. New name for *Pselaphoxys* Tschitschérine, 1897.

Type-species: *Bradycellus laeticolor* Bates, 1873, by Monotypy.

Pselaphoxys Tschitschérine, 1897, L'Abeille, 29: 60-61. Preoccupied (nec Raffray, 1890).

Type-species: *Bradycellus laeticolor* Bates, 1873, by Monotypy.

***Bradycellus (Desbordesus) laeticolor* Bates, 1873**

노란목좁쌀애먼지벌레

Bradycellus laeticolor Bates, 1873, Trans. Ent. Soc. Lond., p. 267 (Japan, China).

Pselaphoxys laeticolor Bates: Tschitschérine, 1897, L'Abeille,

29: 61.

Tachycellus laeticolor Bates: Tschitschérine, 1901, Horae Soc. Ent. Ross., 35: 248 (foot-note).

Tachycellus (Desbordesus) laeticolor Bates: Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2 (Col.), p. 45, pl. 23, fig. 6.

Lioholus laeticolor (Bates): Lafer, 1989, Keys Id. Ins. Russian Far East, (3), 1: 197 (Korea).

Bradycellus (Lioholus) laeticolor Bates: Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 569 (cat.).

Bradycellus (Desbordesus) laeticolor Bates: Csiki, 1932, Col. Cat., pars 121, p. 1227 (cat.); Habu, 1973, Fauna Japonica, Harpalini, p. 306, 315-317; Kwon & Lee, 1986, Ins. Koreana, 6: 40 (Korea); Paik, 1988, J. Agric. Sci. Res. Sunchon Natl. Univ., 2: 46 (Korea); Paik, 1993, Korean J. Ent., 23(1): 7 (Jejudo).

Diagnostic characters. See above key to species. For more detail, see Habu (1973).

Material examined. JJ: 4 ♀, 10-X-1991, Jeju-si (SCNAE); 1 ♀, 17-IV-1993, Gyora (JFNHM); 1 ♀, 22-VII-1993, Seonheul (JFNHM). JN: 3 ♀, 23-VI-2000, Is. Dolsan, Yeosu-si (SCNAE); 6 ♂, 8 ♀, 20-VI-2002, Jungsan, Ganjeon-myon, Gurye-gun (SCNAE).

Distribution. Korea (Central, South), Japan (Honshu, Shikoku, Kyushu), China (FUJ, JIA, SCH, SHG, ZHE), Taiwan.

Notes. First record for Korea by Kwon & Lee (1986). It is easily distinguished from related species by the orange color of pronotum. Body 4.5-6 mm, black. Prothorax orange brown to red. Elytra shiny. Rather common species. Found commonly in the hills and fields. Widely distributed including Jujudo.

Subgenus *Tachycellus* A. Morawitz, 1862

좁쌀애먼지벌레 아속

Tachycellus A. Morawitz, 1862, Mém. Biol., 4: 185, 223.

Type-species: *Stenolophus curtulus* Motschulsky, 1860, by monotypy.

***Bradycellus (Tachycellus) curtulus* (Motschulsky, 1860)**

압록좁쌀애먼지벌레 (신칭)

Stenolophus curtulus Motschulsky, 1860, in Schrenk's Reisen u. Forsch. Amurl., 2: 92 (Kamschatka & Kurils).

Bradycellus nigrifolius Reitter, 1894, Wien. Ent. Zeit., 13: 125 (Wladivostok). Synonymized by Jaeger & Wrase, 1994: 450.

Bradycellus (Tachycellus) anchomenoides (Motschulsky): Habu, 1973, Fauna Japonica, Harpalini, p. 309-312 (partim).

Bradycellus (Tachycellus) nigrutilus Reitter: Lafer, 1989, Opred. naseko. Daln. Vostoka, 3(1): 200 (RFE).

Bradycellus (Tachycellus) curtulus (Motschulsky): Jaeger & Wrase, 1994, Linzer biol. Beitr., 26(1): 450 (North Korea: Yalu river).

Diagnostic characters. See above key to species.

Materials examined. No specimen was available for the present study. North Korea: Yalu River (after Jaeger & Wrase 1994: 450).

Distribution. Korea (North), Japan (Hokkaido, Honshu, Shikoku, Kyushu), China (HEI, NMO, XIN), Russian Far East.

Notes. First record for North Korea, at Yalu River by Jaeger & Wrase (1994), but has not yet been collected from southern part of the Korean Peninsula. For more details, see Jaeger & Wrase (1994: 450-456).

***Bradycellus (Tachycellus) glabratulus* Lafer, 1989**

좁쌀애먼지벌레

Bradycellus glabratulus Lafer, 1989, Opred. naseko. Daln. Vostoka, 3(1): 200 (Vladivostok).

Tetraplatypus laevicollis (Poppius): Młynář, 1974, Acta zool. cracov., 19(6): 108 (N. Korea). Misidentification (see Jaeger, 1993: 937-938).

Bradycellus (Tachycellus) glabratulus Lafer: Jaeger, 1993, Linzer Biologische Beitrage 25(2): 937-938 (N. Korea).

Diagnostic characters. See above key to species.

Materials examined. No specimens was available for the present study. North Korea (Mt. Myohyangsan, Samziyon. After Jaeger 1993: 937 ad Młynář 1974).

Distribution. Korea (North), China (GAN), Russia (E Siberia, Far East).

Notes. First record for North Korea by Młynář (1974) as *B. laevicollis*, however, his material has been a misidentification of this species (cf. Jaeger 1993). This species has not yet been collected from southern part of the Korean Peninsula. For more details, see Jaeger (1993: 937-938).

***Bradycellus (Tachycellus) grandiceps* (Bates, 1873)**

장구좁쌀애먼지벌레

Tachycellus grandiceps Bates, 1873, Trans. R. ent. Soc. Lond., p. 266-267 (Japan); Jedlička, 1935, Ent. Blätt., 49: 144, 147; Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2 (Col.), p. 45, pl. 23, fig. 7.

Stenolophus korgei Jelička, 1964, Annot. zool. Bot., 3: 3-4 (Japan). Synonymy established by Jaeger, 1995: 1071.

Bradycellus (Desbordesius) grandiceps (Bates): Csiki, 1932, Col. Cat., pars 121: 1227.

Bradycellus (Tachycellus) grandiceps (Bates): Lindroth, 1968, Opusc. Ent., Suppl., 33: 895-896; Habu, 1973, Fauna Japonica, Harpalini, p. 306, 312-315 (partim); Kwon & Lee, 1986, Ins. Koreana, 6: 40 (Korea); Jaeger, 1993, Linzer biol. Beitr., 25(2): 941; Jaeger & Wrase, 1994, Linzer biol. Beitr., 26(1): 458; Jager, 1995, Linzer biol. Beitr., 27(2): 1071, 1073 (syn.); Paik, 1998, Korean J. Soil Zool., 3(1): 2 (Korea).

Diagnostic characters. Rather easily distinguishable from other Korean species by the big head. Body 6.3-7.0 mm in length, shiny black. Antennae, palpi, and legs reddish brown or dark brown. Head relatively big, while mandibles are thick. Common species mostly found under a wet stone or grass piles.

Materials examined. JJ: 1 ♂, 11-VI-1992, Seonheul, Jocheon-gup (SCNAE). **GB:** 1 ♂, 22-V-2005, Mt. Tonggosan, Seo-myeon, Uljin-gun (SCNAE). **GW:** 1 ♀, 24-VII-1995, Jiam-ri, Sabuk-myeon, Chuncheon-si (SCNAE). **JN:** 13 ♂, 15 ♀, 20-VI-2002, Seongja, Jungsan-ri, Ganjeon-myon, Gurye-gun (SCNAE); 1 ♀, 28-IV-2001, Temple Dorimsa, Gokseong, Gokseong-gun (SCNAE).

Distribution. Korea (South), Japan (Hokkaido, Honshu, Shikoku, Kyushu).

Notes. Listed from Korea by Kwon & Lee (1986), but the earlier references could not be traced. The occurrence of this species in the Korean Peninsula was confirmed by Paik (1998). This species is rather easily distinguishable by the large body size and the truncated with sharp shape of left mandible from other South Korean species. Habu (1973: 362) treated *St. korgei* Jedlička as a junior synonym of of *St. agonoides* Bates. However, Jaeger (1995) examined the type specimen of this species and said that it is conspecific with *Br. grandiceps* (Bates).

***Bradycellus (Tachycellus) kataevi* Jaeger & Wrase, 1994**

대륙좁쌀애먼지벌레 (신칭)

Bradycellus (Tachycellus) kataevi Jaeger & Wrase, 1994, Linzer biol. Beitr., 26(1): 461 (China: Fujian-Kuantun); Jaeger & Kataev in Löbl & Smetana, 2003, 1: 401 (North Korea).

Diagnostic characters. See above key to species.

Materials examined. No specimens were available for the present study. North Korea (Unknown place. After Jaeger & Kataev in Löbl & Smetana 2003).

Distribution. North Korea (after Jaeger & Kataev in Löbl

& Smetana 2003), China (Fujian, Sichuan).

Notes. This species is distributed in North Korea, but the earlier reference could not be traced. It may be restricted in northern part of the Korean Peninsula. However, this species and *kolzei* Reitter, 1990, probably could be in South Korea.

Bradycellus (Tachycellus) subditus (Lewis, 1879)

도림좁쌀애먼지벌레

Tachycellus subditus Lewis, 1879, Ann. Mag. nat. Hist., (5), 4: 459-460 (Japan: Hiogo); Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2 (Col.), p. 45, pl. 23, fig. 8.

Tachycellus mandli Jedlička, 1953, Ent. Blätter, 49(3): 143 (Nikolsk Ussurisk). by Jaeger, 1995: 1070.

Bradycellus (Tachycellus) kuznetzovi Lafer, 1989, Opred. naseko. Daln. Vostoka, 3(1): 200 (Primorskiy Kraj). Synonymy established by Jaeger, 1993: 939.

Bradycellus (Desbordesus) subditus Lewis: Cskiki, 1932, Col. Cat., 121: 1227.

Bradycellus (Tachycellus) subditus (Lewis, 1879): Habu, 1973, Fauna Japonica, Harpalini, p. 306-309 (partim); Jaeger, 1993, Linzer biol. Beitr., 25(2): 939 (syn.); Jaeger & Wrase, 1994, Linzer biol. Beitr., 26(1): 480; Jaeger, 1995, Linzer biol. Beitr., 27(2): 1070 (syn.); Paik & Jung, 2004, Korean J. Soil Zool., 9(1/2): 33 (Jejudo).

Diagnostic characters. See above key to species.

Materials examined. Jejudo (after, Paik & Jung, 2004); Gokseong (after, Paik & Jung, 2004).

Distribution. Korea (South), Japan (Hokkaido, Honshu, Shikoku, Kyushu), China (GAN, QIN, SCH, SHA, ZHE), Russian Far East.

Notes. First record for South Korea by Paik & Jung (2004).

Genus *Dicheirotrichus* Jacquelin du Val, 1857

좁쌀털머리먼지벌레 속

Dicheirotrichus Jacquelin du Val, 1857, Gen. Col. Eur., Cicind., Carabid., p. 35-36, 65.

Type-species: *Harpalus obsoletus* Dejean, 1829, by original designation and monotypy.

Dichirotrichus Schaum, 1860, Naturg. Ins. Deutschl. Col., 1(1): 561. Unjustified emendation.

Diagnostic characters. This genus is rather easily separated from other relatives as follows: Entire upper surface, including the eyes, densely punctate and pubescent; tarsi pubescent above; pronotum with sides sinuate before the sharp, almost rectangular hind-angles; elytra without or an abbreviated scu-

tellar striole; 3rd elytral interval with setigerous punctures or rarely absent; wings are full; male with the dilated fore-tarsal segments which are provided with irregularly adhesive hairs; third abdominal sternite foveate (as in *Bradycellus*).

Notes. Divided into several subgenera (see Kryzhanovskij *et al.* 1995: 135, foot note 269), but the subgenus *Trichocellus* Ganglbauer, 1892, and *Dicheirotrichus* s. str. occurs from the Korean Peninsula. However, the subgenus *Trichocellus* has often been treated as a separate genus (Noonan 1976, Lindroth 1986 & etc.). The species has been found in shore drift in spring and water sides of river or streams of mountains. Body 5 mm in length, dark brown with light lustre. Found at waterside of river or valley. This genus differs from others by its dense pubescence.

The subgenus *Trichocellus* distinguishing from other subgenera by the disc of elytron with a large setigerous puncture in interval 3 adjoined 2nd stria (rarely without); elytron with vestiture of very short depressed setae, etc.

Three species of the genus *Dicheirotrichus* J. du Val are distributed from the Korean Peninsula, but *D. coreanus* Mlynář, 1974 has not yet been collected from southern part of the Korean Peninsula. Other two species from southern part of the Korean Peninsula are confirmed.

Key to subgenera and species

- 1(2) Elytral disc without setigerous puncture in interval 3, very roughly punctured dorsally, with vestiture of erect setae; dorsal surface without microsculptural lines (Subgenus *Oreoxenus* Tschitschérine, 1899).
- 2(1) Disc of elytron with large setigerous puncture in interval 3.
 - 3(4) 3rd elytral interval, sometimes also 5th interval with a row of discal pores arranged along the middle of the interval(s) (Subgenus *Dicheirotrichus* s. str.).
..... *D. (Dicheirotrichus) coreanus* (좁쌀털머리먼지벌레)
 - 4(3) 3rd interval with a single discal pore near 2nd stria (seldom without); elytron with vestiture of very short depressed setae (Subgenus *Trichocellus* Ganglbauer).
 - 5(6) Hind angles obtuse but angulate at tip, distinct. Pronotum at lateral margins with two setae.
..... *D. (Trichocellus) tenuimanus*
(검정좁쌀털머리먼지벌레: 신칭)
 - 6(5) Hind angles of pronotum very obtuse, rounded or nearly rounded. Pronotum at lateral margins usually with 3 setae.
..... *D. (Trichocellus) punctatellus*
(팔마좁쌀털머리먼지벌레: 신칭)

Subgenus *Dicheirotichus* Jacquelin du Val, 1857

좁쌀털머리먼지벌레 아속

Dicheirotichus Jacquelin du Val, 1857, Gen. Col. Eur., Cicind., Carabid., p. 35-36, 65.Type-species: *Harpalus obsoletus* Dejean, 1829, by original designation and monotypy.***Dicheirotichus (Dicheirotichus) coreanus***

(Mlynář, 1974) 좁쌀털머리먼지벌레

Dicheirotichus coreanus Mlynář, 1974, Acta zool. cracov., 19(6): 109 (N. Korea: Nampo); Kirschenhofer, 1997, Annl. hist.-nat. Mus. natn. hung., 89: 109 (N. Korea).*Dicheirotichus (Dicheirotichus) coreanus* (Mlynář): Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 336; Jaeger & Kataev in Löbl & Smetana, 2003, 1: 402; Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 353.**Diagnostic characters.** See original description by Mlynář (1974).**Materials examined.** No specimens were available for the present study. North Korea (After Mlynář, 1973).**Distribution.** Korea (North).**Notes.** Described from Nampo, North Korea by Mlynář (1974), but has not yet been collected from southern part of the Korean Peninsula.**Subgenus *Trichocellus* Ganglbauer, 1892**

검정좁쌀털머리먼지벌레 아속

Trichocellus Ganglbauer, 1892, Käf. Mitteleur., 1: 365-366.Type-species: *Harpalus placidus* Gyllenhal, 1827, by subsequent designation of Andrewes, 1934: 201. Reduced to subgeneric rank by Kryzhanovskij *et al.* (1995).***Dicheirotichus (Trichocellus) punctatellus* (Reitter, 1894)**

팔마좁쌀털머리먼지벌레 (신칭)

Trichocellus punctatellus Reitter, 1894, Deut. Ent. Zeitschr., p. 38 (Ussuri); Reitter, 1900, Verh. Naturf. Ver. Brünn, 38: 127; Tschitschérine, 1899, Horae Soc. Ent. Rossicae, 32: 460, 474; Tschitschérine, 1900, Horae Soc. Ent. Rossicae, 34: 55; Csiki, 1932, Col. Cat., 121: 1226 (cat.).*Dicheirotichus (Trichocellus) punctatellus* (Reitter): Lafer, 1996, Key Ins. Russian Far East, (3), Col., 3: 408 (RFE); Jaeger & Kataev in Löbl & Smetana, 2003, 1: 403 (N. Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 780.**Diagnostic characters.** Body length less than 5 mm. Hind-angles of pronotum very obtuse, rounded or nearly rounded;

lateral margin of pronotum usually with 3 setae. Pronotum mainly yellowish brown with narrow oblong blackish patch along median line, dilated posteriad. Elytra densely punctate and pubescent throughout, punctures placed at intervals in two or three rows; in general light to brownish yellow, usually with distinct brown patches. Head black along middle and with reddish brown lateral sides and mandibles. Under side of body mainly brownish black becoming lighter towards abdominal apex. Antennae and tarsi brownish yellow. Aedeagus with a small sclerite in endophallus located near apex of membrane field (in dorsal view). Tarsal segments of fore legs in male strongly dilated (segment 3 broader than its length).

Materials examined. CN: 1 ♀ (teneral), 8-V-2005, Bangpo, Is. Anmyeondo, Taean-gun (SCNAE). JB: 1 ♀ (teneral), 12-V-2005, Jangbaek-ri, Muju-eup, Muju-gun (SCNAE); 3 ♀ (teneral), 13-V-2005, Gamdong, Songpung-ri, Yongdammyeon, Jinan-gun (SCNAE). JN: 1 ♀ (teneral), 14-V-2005, Temple Hyangrimsa, Suncheon-si (SCNAE); 1 ♂, 1 ♀, 9-V-2002 (teneral), Cheongso-ri, Suncheon-si, JN (SCNAE).**Distribution.** Korea (North, South), China (HEI), Russia (E Siberia, Far East).**Notes.** Jaeger & Kataev (2003, in Löbl & Smetana) noted that this species occurs in North Korea but the origin has not yet been traced. The distribution of this species from South Korea is also confirmed. Seldom. Body ca. 5 mm in length, color varies but black with brown patches in general. The species has been found in shore drift in spring and water sides of river or valley.***Dicheirotichus (Trichocellus) tenuimanus amplipennis***

(Bates, 1873) 검정좁쌀털머리먼지벌레 (신칭)

Dicheirotichus amplipennis H.W. Bates, 1873, Trans. R. ent. Soc. London, p. 326 (China: Shanghai); Tschitschérine, 1900, Horae Soc. Ent. Ross., 34: 368; Csiki, 1932, Col. Cat., 121: 1222 (cat.).*Dicheirotichus (Trichocellus) tenuimanus amplipennis* (Bates): Kryzhanovskij *et al.*, 1995, Checklist of ground-beetles of Russia, p. 135-136 (Korea).**Diagnostic characters.** Body length 5.2-5.5 mm. Hind angles obtuse but angulate at tip, distinct. Pronotum at lateral margins with two setae. Upper surface of head blackish, a little lighter at lateral sides; pronotum mainly black but with broad reddish brown margination along all margins; elytra light brown with indistinct darkened chestnut patch at hind third, divided by light sutural intervals. Under side of body chestnut brown; antennae and legs yellow brown. For more

details, see Habu (1973: 302-304) as *D. tenuimmanus*.

Materials examined. GB: 1 ♂, 1 ♀, 21-V-2005, Sinchon, Sinweon-ri, Subi-myeon, Yeongyang-gun (SCNAE); 2 ♂, 28-VI-1991, Youngcheon (SJNAE); 1 ♀, 23-II-1980, Dasanmyon, Goryeong-gun (SJNAE). JN: 1 ♂, 1 ♀, 25-V-2002, Mt. Mudeungsan, Gwangju (SCNAE).

Distribution. Korea (North, South), Japan (Hokkaido, Honshu, Shikoku, Kyushu), China (JIA, SHG), Russian Far East.

Notes. Noted from Korea by Kryzhanovskij *et al.* (1995) as *D. tenuimanus amplipennis* Bates. The distribution of this species from South Korea is confirmed for the first time. This species is divided into two forms by Kataev (1995 in Kryzhanovskij *et al.*, p. 135), the nominotypical subspecies occurs from Japan and Russian Far East (S. Sakhalin; S. Kuril) and another subspecies *amplipennis* Bates occurs in East Asia mainland including Korea.

Genus *Lioholus* Tschitschérine, 1897

북방좁쌀애먼지벌레 속

Lioholus Tschitschérine, 1897, L'Abeille, 29: 64.

Type-species: *Lioholus metallescens* Tschitschérine, 1897, by monotypy.

Notes. Lafer (1989: 197) treated *Desbodesius* Maindron as a junior synonym of *Lioholus* Tschitschérine. But Kataev (In: Kryzhanovskij *et al.* 1995: 136, footnote 281) disagreed with the treatment and regarded *Lioholus* as a distinct genus. For more information, see Kataev's (1995 in Kryzhanovskij *et al.* 1995: 136 footnote).

***Lioholus jedlickai* Lafer, 1989** 북방좁쌀애먼지벌레

Lioholus jedlickai Lafer, 1989, Key Ins. Russian Far East, (3), 1: 197 (Russian Far East); Kryzhanovskij *et al.*, 1995, Checklist of ground-beetles of Russia, p. 136.

Materials examined. No specimens were available for the present study. North Korea: Unknown place (after Lafer 1989).

Distribution. ?Korea, China (SCH, SHA), Russian Far East.

Notes. Although first mentioned from Korea by Lafer (1989), but the distribution in Korea uncertain. It has not yet been collected from southern part of the Korean Peninsula. The occurrence of this species from Manchuria, Russia and Korean borders is strongly suggested. In Palaearctic Region, two species are known. Lafer (1989) divided them as follow.

- 1(2) Pronotum orange red, head and elytra black. 4.8-6.1.- Japan (Honshu, Shikoku, Kyushu), China, Taiwan.

..... *L. laeticolor* Bates [= *Bradycellus*]

- 2(1) Dorsum of body black or brownish black, elytra with iridescent or greenish tinge. Lateral beads of pronotum and elytra, sometimes elytral suture, brownish.

- 3(4) Legs fully brownish yellow. Smaller, 5.3-5.7 mm. Russian Far East. ?Korea, China.

..... *L. jedlickai* Lafer (북방좁쌀애먼지벌레)

- 4(3) Femora darkened. Larger, 6.4 mm. China.

..... *L. metallescens* Tschitschérine, 1897

Genus *Loxoncus* Schmidt-Göbel, 1846

노랑테머리먼지벌레 속

Loxoncus Schmidt-Göbel, 1846, Faun. Coleopt. Birm., plate 3, fig. 9 (on back cover).

Type-species: *Loxoncus elevatus* Schmidt-Göbel, 1846, by original monotypy.

Anoplogenus Chaudoir, 1852, Bull. Soc. Nat. Mosc., 25(1): 88-90.

Type-species: *Stenolophus alacer* Dejean, 1831, by subsequent designation of Lacordaire, 1854: 304. Synonym established by Noonan, 1976: 18.

Megrammus Motschulsky, 1857, Étude Entom., 6: 26.

Type-species: *Megrammus circumcinctus* Motschulsky, 1857 (= *Harpalus cyanescens* Hope, 1845), by original monotypy. Treated as a junior synonym of *Anoplogenus* by Csiki, 1932: 1236.

Lepithrix Nietner, 1857, Jour. Asiat. Soc. Bengal., 26: 151.

Type-species: *Lepithrix follolosa* Nietner (= *Anoplogenus discophorus* Chaudoir, 1852), by original monotypy. Treated as a junior synonym of *Anoplogenus* by Csiki, 1932: 1236.

Diagnosis characters. The chief diagnostic characters are: Body quadrate. Labrum punctate; clypeus transverse; head convex and glabrous. Pronotum cordate, transverse, lateral margins sinuate at base, finely and densely punctured along the basal margin. Elytra quadrate, striae deep and prominent, intervals flat and glabrous.

Notes. Two species are known from the Korean Peninsula, but *L. impubis* (Kolbe 1886) has not yet been collected at present time. Often attracted to light.

***Loxoncus circumcinctus* (Motschulsky, 1857)**

노랑테머리먼지벌레

Megrammus circumcinctus Motschulsky, 1857, Etud. Ent., 6: 27 (Japan); Motschulsky, 1860, Etud. Ent., 9: 5. Treated as a junior synonym of *cyanescens* by Csiki, 1932: 1236.

Harpalus cyanescens Hope, 1845, Trans. Ent. Soc. Lond., 4: 15 (China: Canton). Preoccupied by Motschulsky, 1844: 209.

Anoplogeniis circuminctus Motschulsky: Bates, 1873, Trans. R. ent. Soc. London, p. 269 (Japan); Kolbe, 1886, Archiv f. Naturgesch., 52(1): 177 (Korea); Heyden, 1887, Horae Soc. ent. Rossicae, 29: 247 (Korea); Tschitschérine, 1897, Abeille, 29: 61 (Korea); Kano, 1924, Ins. world, (Konchusekai), 28(326): 350 (Korea); Yano, 1941, Nippon no Kôchû, 4(1): 32 (Korea); Bates, 1873, Trans. Ent. Soc. Lond., p. 269; Cho, 1957, Hum. & Sci., Nat. Sci. Korea Univ., 2: 191 (Korea).

Anoplogeniis cyanescens (Hope): Andrewes, 1919, Trans. R. ent. Soc. London, p. 177 (Korea); Csiki, 1932, Coleopt. Cat., 121: 1236 (cat.); Andrewes, 1933, Trans. R. ent. Soc. London, 81: 6; Wu, 1937, Cat. Ins. Sinensium, 3: 169 (Korea); Kurosa, 1949, Bull. Takarazuka Ins., 60: 11 (Korea); Habu, 1950, Icon. Ins. Jap. (rev. ed.), p. 954 (Korea); Cho, 1957, Hum. & Sci., Nat. Sci. Korea Univ., 2: 191 (Korea); Jedlička, 1960, Annls hist.-nat. Mus. natn. hung., 52: 231 (Korea); Nakane, 1963, Icon. Ins. Jap. Colore Nat., 2, Col., p. 44 (Korea); Habu, 1973, Fauna Japonica, Harpalini, p. 396-402 (Korea); Paik, 1988, J. Agric. Sci. Res. of Suncheon Natl. Univ., 2: 45 (Korea); Paik, 1993, J. Sci. & Education, Suncheon Natl. Univ., 1: 85 (Korea).

Loxoncus cyanescens (Hope): Kryzhanovskij *et al.*, 1995, Checklist of ground-beetles of Russia, p. 137; Paik, 1997, Korean J. Soil Zool., 2(1): 34 (Korea).

Loxoncus circuminctus (Motschulsky): Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 334; Kataev *et al.* in Löble & Smetana, 2003, 1: 404 (Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 333.

Diagnostic characters. See above generic key. For more detail, see Habu (1973).

Material examined. **JJ:** 1 ♀, ?-VIII-1992, Jeju-do (SCNAE). **CB:** 1 ex., 25-VI-1975, Jincheon, Jincheon-gun (NIAST); 1 ex., 6-X-1989, Yeongi, Yeongi-gun (NIAST). **CN:** 1 ♂, 13-V-2005, Sangdong-ri, Namil-myeon, Geumsan-gun (SCNAE); 3 ♂, 7 ♀, 30-VII-1995, Narong-ri, Yanghwa-myeon, Buyeo-gun (SCNAE); 1 ex., 12-V-1987, Cheongyang, Cheongyang-gun (NIAST); 1 ex., 2-VII-1975, Seocheon, Seocheon-gun (NIAST); 6 ex., 8-VII-1996, Is. Anmyeondo, Taeon-gun (NIAST); 1 ex., 3-IV-1973, Yesan, Yesan-gun (NIAST). **GB:** 8 ex., 6-VII-1993, Bonghwa, Bonghwa-gun (NIAST); 4 ex., 04-X-1981, Kyungpook Univ. Campus, Daegu City (NIAST); 2 ex., 1-IX-1995, Mt. Sudosan, Jeungsan-myeon, Gimcheon-

si (NIAST); 2 ♂, 3 ♀, 21-V-1999, Sangju-si (SJNAE); 6 ex., 11-VII-1993, Euseong, Euseong-gun (NIAST); 1 ex., 2-VIII-1977, Is. Ulleungdo (NIAST). **GG:** 2 ♀, 5-IX-1964, Suweon (Light Trap) (SCNAE); 1 ex., 20-IX-1984, Anyang-si (NIAST); 1 ex., 1-IV-1973, Mt. Cheonggaesan, Gwacheon-si (NIAST); 8 ex., 15-VI-1996, Gicheon-ri, Paltan-myeon, Hwaseong-gun (NIAST); 1 ex., 30-VII-1994, Pocheon, Pocheon-gun (NIAST); 7 ex., 17-VII-1961, Suwon (NIAST); 2 ex., 15-VI-1997, Mt. Yumyeongsan, Yangpyeong-gun (NIAST). **GN:** 1 ♀, 7-VII-2001, Junam, Changweon-si (SCNAE); 1 ♀, 8-VII-1980, Jinju-si (Light Trap) (SCNAE). **GW:** 1 ♀, 9-VIII-1994, Jiam-ri, Sabuk-myeon, Chuncheon-si (SCNAE); 2 ♂, 1 ♀, 14-VI-2004, Meonnaegol, Yucheon-ri, Gandong-myeon, Hwacheon-gun (SCNAE); 1 ♀, 14-VI-2004, Paro-ho, Yoho-ri, Gandong-myeon, Hwacheon-gun (SCNAE); 5 ex., 27-VII-1994, Bukbang-ri, Bukbang-myeon, Honcheong-gun (NIAST); 1 ex., 11-VII-1993, Pyeongchang, Pyeongchang-gun (NIAST); 1 ex., 15-VI-1973, Samcheok-si (NIAST). **JB:** 1 ♂, 12-V-2005, Hadong, Donghwa-ri, Beonam-myeon, Jangsu-gun (SCNAE); 1 ♂, 12-V-2005, Tookdong, Mt. Deokyusan, Jangsu-gun (SCNAE); 1 ♂, 1 ♀, 13-V-2005, Weolpyeong-ri, Jeongcheon-myeon, Jinan-gun (SCNAE); 2 ♂, 2 ♀, 22-VI-1995, Is. Biando, Okgu-gun (SCNAE); 1 ♀, 13-VII-2002, Eochi-ri, Donggyemyon, Sunchang-gun, LT (SCNAE); 1 ♀, 30-IV-1992, Mt. Geonjisan, Jeonju-si, JB (JBNAE); 2 ex., 26-VII-1993, Muju, Muju-gun (NIAST). **JN:** 13 ex., 1 ♀, 4-VI-2001, Suncheon-si (SCNAE); 4 ♀, 1-VI-2000, Is. Dolsan, Yeosu-si (SCNAE); 1 ♀, 13-V-1994, Yeoecheon, Yeosu-si (SCNAE); 4 ♂, 15 ♀, 28-VII-1995, Mt. Baekunsan, Gwangyang-si (SCNAE); 2 ♂, 5-VI-1993, Boseong-eup, Boseong-gun (SCNAE); 7 ♂, 7 ♀, 5-VI-1994, Unjusa, Doam-myeon, Hwasun-gun (SCNAE); 1 ♀, 2-V-1993, Is. Nae-Narodo, Goheung-gun (SCNAE); 1 ♀, 5-VI-1996, Is. Oe-Narodo, Goheung-gun (SCNAE); 9 ex., 1-VIII-1975, Is. Heuksando, Sinan-gun (NIAST).

Distribution. Korea (North, Central, South), Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyus), China (GUA, GUX, JIA, JIX, ScH, SHG, YUN, ZHE), Russian Far East.

Notes. First record for Korea by Kolbe (1866). Widely distributed including in Jeju-do, and common species. This species occurs near the water place, and preys upon the eggs and larvae of mole cricket, *Gryllotalpa africana* (Gryllotalpidae) and *Paederus fuscipes* (Staphilidae) (after Habu, 1973). Body ca. 9 mm in length, black and iridescent. Often attracted to light sources.

Loxoncus impubis Kolbe, 1886 콜베먼지벌레
Anoplogeniis impubis Kolbe, 1886, Archiv f. Naturgesch.,

52(1): 177 (Korea: Seoul); Kano, 1924, Ins. world, (Konchusekai), 28(326): 350 (Korea); Yano, 1941, Nippon no Kôchû, 4(1): 32 (Korea).

Diagnostic characters. This species is smaller to and light colored than the former species. Body yellowish brown, impunctate. Pronotum somewhat shorter, base distinctly narrower than apex; hind angle of pronotum rounded. Elytral stria simple, not deep; 3rd interval with 1 setigerous puncture behind at middle. Antennae light brown, first 2 segments light. Length of body 7 mm. (after original description).

Materials examined. No specimen was available for the present study.

Distribution. Korea (Seoul).

Notes. Described from Seoul, Korea by Kolbe (1886), but has not yet been collected from southern part of the Korean Peninsula.

Genus *Stenolophus* Dejean, 1821 좁쌀먼지벌레 속
Stenolophus Dejean, 1821, Cat. Coll. Col., p. 15.

Type-species: *Carabus vaporariorum* Linnaeus sensu Fabricius, 1787 (= *Carabus teutonius* Schrank, 1871), by subsequent designation of Westwood, 1838: 5.

Diagnostic characters. Small, elongate oblong, subconvex. Related to *Acupalpus* but of larger size, this species being over 5 mm long. The clypeo-ocular line is well developed. Last segment of maxillary palpi blunt (in *Acupalpus* acuminate). Hind-angles of pronotum broadly rounded, sides not sinuously narrowed basally. Elytral striae impunctate, third interval with a single discal puncture behind middle; posterior group of marginal punctures of elytra interrupted at middle; scutellar stria present. First segment of hind tarsus with thin keel externally. Fore tarsus of male dilated, 4th segment strongly bilobed.

Notes. This large genus is represented in all of the major zoogeographical region of the world, but most of the species are in Holarctic region. The species are hygrophilous, living in damp meadows and near the border of ponds and lakes. Body generally iridescent. Adults fly at night, and often attracts at light.

Some authors regard subgenus *Egadroma* as a distinct genus because of characters such as lustre in the body and last sternite bare. The genus is divided into several subgenera, but the subgenus *Egadroma* Motschulsky has been treated as a distinct genus from *Stenolophus* on the basis of the chromosome number and meiotic behavior of chromosomes (Serrano & Galián, 1998: 198). Three subgenera are known from the Korean

Peninsula.

Key to subgenera and species from Korea

(based on Habu 1973)

- 1(8) A(B) Tarsal segment 5 without seta on ventral side; sternites 4 to 6 or 3 to 6 well pubescent (Subgenus *Stenolophus* Dejean, 1821).
- 2(3) 1(2) Elytral apex with small tooth; pronotum and elytra yellowish brown to brownish yellow, with dark patch at median area; ligula fully wide, paraglossae not reaching level of ligula.
..... *St. (St.) connotatus* (흑가슴좁쌀먼지벌레)
- 3(2) 2(1) Elytral apex not dentate but rounded; pronotum wholly black, except lateral margins or wholly orange; ligula not fully wide, paraglossae extending beyond ligula.
- 4(5) Pronotum wholly orange, basal foveae smooth or with a few faint punctures; elytra reddish brown, interval 1 yellowish, intervals 2 to 4 blackish except basal and apical areas; sternite 6 of male with two setae on either side.
..... *St. (St.) propinquus* (붉은가슴좁쌀먼지벌레)
- 5(4) Pronotum wholly black except narrow yellowish lateral margins, elytra black, sometimes brownish partly or wholly.
- 6(7) Pronotum roundly contracted posteriorly; penultimate segment of labial palpi without apical seta; hind tarsi at least as long as width of head; sternite 6 of male with one seta on either side.
..... *St. (St.) castaneipennis* (무지개좁쌀먼지벌레)
- 7(6) Pronotum evenly contracted posteriorly; penultimate segment of labial palpi with moderately long apical seta; sternite 6 of male with two setae on either side.
..... *St. (St.) agonoides* (긴좁쌀먼지벌레)
- 8(1) Tarsal segment 5 with setae on each ventrolateral margin; sternites 3 to 5 glabrous, sometimes sparsely pubescent.
- 9(12) Tarsal segment 5 with two setae on each ventrolateral margin; sternite 6 pubescent at median area of posterior half (Subgenus *Astenolophus* Habu, 1973).
- 10(11) Upper side black, shiny; elytra fairly iridescent; microsculpture of elytra vestigial; pronotum disk somewhat densely punctate in and basal foveae. L. 4.5-5.3 mm.
..... *St. (A.) fulvicornis* (꼬마좁쌀먼지벌레)
- 11(10) Upper side pitchy brown to pitchy black; elytra with fine transverse lines or isodiametric meshes; basal part of pronotum with dense punctures. L. 5.0 mm.
..... *St. (A.) meyeri* (좁쌀먼지벌레)
- 12(9) Tarsal segment 5 with one seta on each ventrolateral

margin; sternite 6 glabrous (Subgenus *Egadroma* Motschulsky, 1855).

13(14) Dorsal side with greenish metallic tinge; elytra with distinct microsculpture forming transverse meshes.

..... *St. (E.) difficilis* (초록좁쌀먼지벌레)

14(13) Dorsal side without greenish metallic tinge, iridescent or not iridescent; microsculpture hardly visible, apical patch(es) generally present, sometimes absent.

..... *St. (E.) quinquepustulatus* (점박이좁쌀먼지벌레)

Subgenus *Stenolophus* Dejean, 1821 좁쌀먼지벌레 아속
Stenolophus Dejean, 1821, Cat. Coll. Col., p. 15.

Type-species: *Carabus vaporariorum* Linnaeus sensu Fabricius, 1787 (= *Carabus teutonius* Schrank, 1871), by subsequent designation of Westwood, 1838: 5.

***Stenolophus (Stenolophus) agonoides* Bates, 1883**

긴좁쌀먼지벌레

Stenolophus agonoides Bates, 1883, Trans. R. ent. Soc. London, p. 241 (Japan: Niigata); Kano, 1923, Ins. world, (Konchusekai), 27(315): 382 (Korea: Gupo); Kano, 1924, Ins. world, (Konchusekai), 28(326): 350 (Korea); Yano, 1941, Nippon no Kôchû, 4(1): 32 (Korea: Keijo); Nakane, 1963, Icon. Ins. Jap. Colore Nat., 2, Col., p. 44; Tanaka, 1962, Kontyu, 30: 271; Kwon & Lee, 1986, Ins. Koreana, 6: 41 (Korea).

Acupalpus (Stenolophus) agonoides Bates: Schauburger, 1930, Kol. Rundsch., 15: 207; Csiki, 1932, Col. Cat., 121: 1260.

Stenolophus (Stenolophus) agonoides Bates: Habu, 1973, Fauna Japonica, Harpalini, p. 359-362 (Korea).

Diagnostic characters. See above key to species. For more detail, see Habu (1973).

Materials examined. No specimens was available for the present study. South Korea: Gupo, GN (After Kano, 1923; Keijo (=Seoul) (After Yano, 1941).

Distribution. ?Korea, Japan (Honshu).

Notes. Kano (1923) noted that this species is distributed from the Korean Peninsula, but his identification is very doubtful. This species resembles *St. castaneipennis* but body of the former is ca. 6.5 mm and that of latter ca. 5.5 mm.

***Stenolophus (Stenolophus) castaneipennis* Bates, 1873**

무지개좁쌀먼지벌레 (검정좁쌀먼지벌레)

Stenolophus castaneipennis Bates, 1873, Trans. R. ent. Soc. Lond., 269 (Japan).

Acupalpus (Stenolophus) castaneipennis ab. *adustus* Schau-

berger, 1930, Kol. Rdschau, 15(5/6): 208 (China: Yunnan).
Acupalpus (Stenolophus) castaneipennis ab. *atripennis* Schauburger, 1930, Koleop. Rdschau, 15(5/6): 208 (Korea: Chemulpo); Jedlička, 1960, Annls hist.-nat. Mus. natn. hung., 52: 231 (Korea).

Acupalpus (Egadroma) iridicolor Redtenbacher: Wu, 1937, Cat. Ins. Sinensium, 3: 169 (partim) (Korea).

Stenolophus iridicolor Redtenbacher: Kolbe, 1886, Archiv f. Naturgesch., 52(1): 177 (Korea); Kano, 1924, Ins. world, (Konchusekai), 28(326): 350 (Korea); Yano, 1941, Nippon no Kôchû, 4(1): 32 (Korea); Nakane, 1963, Icon. Ins. Jap. Colore Nat., 2, Col., p. 44 (Korea); Paik, 1988, J. Agric. Sci. Res. Suncheon Natl. Univ., 2: 16. Misidentification.

Stenolophus (Stenolophus) iridicolor Redtenbacher: Habu, 1973, Fauna Japonica, Harpalini, p. 243, 354-359.

Acupalpus (Stenolophus) castaneipennis (Bates): Schauburger, 1930, Coleopt. Rdschau, 15(5/6): 208.

Acupalpus (Egadroma) castaneipennis Bates: Csiki, 1932, Col. Car., 121: 1239 (Korea).

Egadroma castaneipennis (Bates): Mlynář, 1974, Acta zool. cracov., 19(6): 109 (N. Korea).

Stenolophus castaneipennis Bates: Tschitschérine, 1897, Abeille, 29: 61; Jacobson, 1907, The beetles of Russia, p. 385; Jedlička & Chûjô, 1964, Nature & Life in Southeast Asia, 3: 173; Matalin, 1996, Ent. Obozr., 75(1): 77 (Korea); Paik, 1997, Korean J. Soil Zool., 2(1): 37 (Korea); Paik & Jung, 2003, Korea J. Soil Zoology, 8: 51 (Jejudo).

Diagnostic characters. See above key to species. For more detail, see redescription as *S. iridicolor* by Habu (1973).

Material examines. JJ: 5 ex., 20-IX-1990, Donnaeko, Seogwipo, JJ (SCNAE); 1 ex., 29-V-1996, Seongpanak, Mt. Hallasan (NIAS). [GB: 1 ♂, 20-VII-1998, Sangju-si (SJNAE). GG: 1 ex., 15-VI-1996, Gicheon-ri, Paltan-myeon, Hwaseong-gun (NIAS). GW: 1 ♂, 1 ♀, 14-VI-2004, Paro-ho, Yoho-ri, Gandong-myeon, Hwacheon-gun (SCNAE); 1 ♂, 3 ♀, 14-VI-2004, Meonnaegol, Yucheon-ri, Gandong-myeon, Hwacheon-gun (SCNAE). JN: 1 ♀, 10-IV-1987; 1 ♀, 25-VI-1986, Suncheon-si (SCNAE); 1 ♀ (UV Light), 4-VI-1994, Temple Unjusa, Hwa-sun-gun (SCNAE); 2 ♂, 4 ♀, 13-VII-1995, Piagol, Mt. Jirisan, Gurye-gun (SCNAE); 4 ex., 10-IV-1987, Suncheon-si (NIAS).

Distribution. Korea (North, Central, South), Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyus), China (ANH, BEI, FUJ, HEI, JIA, JIX, SCH, SHA, SHN, YUN, ZHE), Oriental Region.

Notes. First record for the Korean Peninsula by Kolbe

(1886) as *St. iridicolor* Redtenbacher. Body ca. 5.5-6.0 mm in length. Elytra iridescent, length longer than width. Widely distributed including Jejudo. Fairly common, throughout the Korean Peninsula. Found at damp meadows. For more details, see Habu (1973) and Matalin (1996).

***Stenolophus (Stenolophus) connotatus* Bates, 1873**

흑가슴좁쌀먼지벌레

Stenolophus connotatus Bates, 1873, Trans. Ent. Soc. Lond., p. 327 (China); Bates, 1883, Trans. Ent. Soc. Lond., p. 240; Tanaka, 1962, Kontyu, 30: 271; Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2 (Col.), p. 44; Habu, 1973, Fauna Japonica, Harpalini, p. 342, 343-349; Mlynář, 1974, Acta zool. cracov., 19(6): 109 (N. Korea); Paik, 1988, J. Agric. Sci. Res. Suncheon Natl. Univ., 2: 49 (Korea).

Acupalpus (Stenolophus) connotatus Bates: Schaubberger, 1930, Kol. Rundsch., 15: 205, 208-209; Csiki, 1932, Col. Cat., pars 121: 1260.

Stenolophus (Stenolophus) connotatus Bates: Habu, 1973, Fauna Japonica, Harpalini, p. 343-349; Matalin, 1996, Ent. Obozr., 75(1): 72 (N. Korea).

Diagnostic characters. See above key to species. For more detail, see Habu (1973).

Materials examined. **CB:** 16 ex., 30-VII-1998, Dandon, Cheongpung-myeon, Jecheon-si (NIAST). **CN:** 2 ♀, 5-VI-1998; Naesong-ri, Yanghwa-myeon, Buyeo-gun (SCNAE); 3 ♂, 4 ♀, 24-V-1997, Songjeong-ri, Yanghwa-myeon, Buyeo-gun (SCNAE). **GB:** 3 ♂, 3 ♀, 26-V-2002, Mt. Cheongryangsan, Bonghwa-gun (SCNAE). **GG:** 1 ♀, 15-VI-1996, Gijeon-ri, Hwaseong-si (SCNAE). **GW:** 3 ♂, 6 ♀, 14-VI-2004, Paroho, Yongho-ri, Gandong-myeon, Hwacheon-gun (SCNAE); 1 ♂, 3 ♀ & 29 ex., 23-V-2002, Yongho-ri, Gandong-myeon, Hwacheon-gun (SCNAE); 7 ♂, 17 ♀, 14-VI-2004, Meonnaegol, Yucheon-ri, Gandong-myeon, Hwacheon-gun (SCNAE). **JB:** 1 ♀, 22-VI-1995, Is. Biando, Okgu-gun (SCNAE). **JN:** 1 ♀, 4-VI-1994, Temple Unjusa, Hwasun-gun (SCNAE); 1 ♂, 30-VI-1995, Suncheon-si (SCNAE).

Distribution. Korea (North, Central, South), Japan (Hokkaido, Honshu), China (FUJ, HEI, JIX, SCH), Russian Far East.

Notes. First record for North Korea by Mlynář (1974). Later this species was reported from southern part of the Korean Peninsula by Paik (1988).

It may be rather easily distinguished from other *Stenolophus* species by the apical small tooth of elytra and median patch of elytra. Body 6.5-7.5 mm in length, generally light yellowish

brown. Widely distributed. Rather common species. This species occurs near water basin and marshy areas. Often attracted to lights.

***Stenolophus (Stenolophus) propinquus* Morawitz, 1862**

붉은가슴좁쌀먼지벌레

Stenolophus propinquus Morawitz, 1862, Mém. Biol., 4: 222-223 (E. Siberia); Morawitz, 1863, Mém. Acad. Imp. Sci. St.-Petersb., (7), 6(3): 80 (Japan); Bates, 1873, Trans. Ent. Soc. London, p. 269 (Japan); Harold, 1877, Deutsch. Ent. Zeitschr., 21: 339; Bates, 1883, Trans. R. ent. Soc. London, p. 241; Matsumura, 1905, Thousand Ins. Japan, 2: 152; Andrewes, 1928, Trans. Ent. Soc. London, 76: 8; Matsumura, 1931, 6000 Illustr. Ins. Japan Empire, p. 116; Matsumura, 1931, Illust. Common Ins. Japan, 3: 10 (in Japanese), 16 (in English); Yano, 1941, Nippon no Kôchû, 4(1): 32 (Korea); Nakane, 1948, Trans. Kinki col. Soc., 3(1): 7; Kurosa, 1949, Bull. Takarazuka Ins., 60: (Korea); Cho, 1957, Hum. & Sci., Nat. Sci. Korea Univ., 2: 191 (Korea); Tanaka, 1962, Kontyu, 30: 271; Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2 (Col.): 45; Paik, 1988, J. Korean Entomol. Soc., 18(4): 248 (Korea).

Stenolophus japanus Motschulsky, 1864, Bull. Soc. Nat. Mosc., 37(2): 203 (Japan). Synonym established by Bates, 1973: 269.

Acupalpus (Stenolophus) propinquus Morawitz: Schaubberger, 1930, Kol. rundsch., 15: 206; Csiki, 1932, Col. Cat., 121: 1264.

Stenolophus (Stenolophus) propinquus Morawitz: Habu, 1973, Fauna Japonica, Harpalini, p. 349-354.

Diagnostic characters. See above key to species. For more detail, see Habu (1973).

Materials examined. **JJ:** 1 ♀, 27-IX-2004, Gyorae-ri, Jocheon-eup (SCNAE); 1 ♀, 4-VI-1983, Sujangol, Mt. Hallasan (JFNHM); 1 ex., 12-VII-1985, Seongpanak, Mt. Hallasan (NIAST). **CB:** 1 ♀, 19-V-2001, Mt. Weokaksan, Jecheon-si (SCNAE); 2 ex., 11-IV-1998, Okcheon, Okcheon-gun (NIAST). **CN:** 1 ♀, 24-V-1997, Sonjeong-ri, Yanghwa-myeon, Buyeo-gun (SCNAE); 1 ex., 25-V-1998, Manripo, Taean-gun (NIAST). **GB:** 1 ♀, 9-VIII-1999, Sangju-si (SJNAE). **GG:** 1 ex., 6-VIII-1997, Seodun-dong, Suwoen-si; 1 ex., 10-V-1986, Mt. Gwanggyosan, Suweon-si (NIAST). **GN:** 1 ♀, 23-VII-2001, Eusin, Mt. Jirisan, Hadong-gun (SCNAE). **GW:** 1 ♀, 24-V-2002, Suin-ri, Yangu-gun (SCNAE); 2 ♂, 2 ♀, 24-VII-1995, Jiam-ri, Sabuk-myeon, Chuncheon-si (SCNAE). **JN:** 1 ♀, 10-V-1995, Temple Dorim-sa, Gokseong-eup, Gokseong-gun (SCNAE); 1

♀, 12-X-1989; 1 ♀, 18-V-1994, Mt. Baekunsan, Jinsang-myeon, Gwangyang-si (SCNAE); 1 ♂, 1 ♀, 22-VII-1994, Temple Heungguksa, Yeosu-si (SCNAE).

Distribution. Korea (North, Central, South), Japan (Hokkaido, Honshu, Shikoku, Kyushu), North Eastern China, Russia (Sakhalin, East Siberia).

Notes. First record for the Korean Peninsula by Yano (1941). Later Paik (1997) reported from South Korea. Body 5.0-6.0 mm in length, generally black. Prothorax reddish brown. Elytra black with yellow tinge. Easily separable from others with its iridescent characters. Widely distributed including in Jeju-do. Rather common species.

Subgenus *Astenolophus* Habu, 1973

꼬마좁쌀먼지벌레 아속

Stenolophus sg. *Astenolophus* Habu, 1973, Fauna Japonica, Harpalini, p. 365.

Type-species: *Stenolophus fulvicornis* Bates, 1863 from Japan, by original designation.

Stenolophus (Astenolophus) fulvicornis Bates, 1873

꼬마좁쌀먼지벌레

Stenolophus proximus Dejean var. *fulvicornis* Bates, 1873, Trans. Ent. Soc. Lond., p. 269-270 (Japan: Hiogo; China: Shanhai).

Stenolophus proximus Dejean: Morawitz, 1863, Mem. Acad. Imp. Sci. St.-Petersb., (7), 6(3): 80-81; Lewis, 1874, Ent. Monthly Mag., 10: 174; Okamoto, 1924, Bull. Agr. Exp. Sta. Gov.-Gen. Chosen, 1(2): 163 (Quelpart Is.); Yano, 1941, Nippon no Kôchû, 4(1): 32 (Korea); Kurosa, 1949, Bull. Takarazuka Ins., 60: 11 (Korea); Cho, 1957, Hum. & Sci., Nat. Sci. Korea Univ., 2: 191 (Korea).

Acupalpus (Stenolophus) fulvicornis Bates: Csiki, 1932, Col. Cat., 121: 1262.

Stenolopus (Egadroma) fulvicornis Bates: Habu & Baba, 1957, Rep. Nagaoka Mus., p. 8; Tanaka, 1962, Kontyu, 30: 270.

Stenolophus fulvicornis Bates: Paik, 1988, J. Agric. Sci. Res. Sunchon Natl. Univ., 2: 49 (Korea); Paik, 1993, J. Sci. & Education, Sunchon Natl. Univ., 1: 87 (Korea); Paik, 1995, Insects of Quelpart Island, p. 139 (Jeju-do); Paik, 1997, Korean J. Soil Zool., 2(1): 37 (Korea); Park & Paik, 2001, Ins. Korean, Suppl., 19: 106 (Ulleungdo, Jeju-do); Paik & Jung, 2003, Korea J. Soil Zoology, 8: 51 (Jeju-do).

Stenolophus (Astenolophus) fulvicornis Bates: Habu, 1973, Fauna Japonica, Harpalini, p. 365-369; Park & Paik, 2001, Ins. Korean, Suppl., 19: 106 (Korea).

Diagnostic characters. See above key to species. For more detail, see Habu (1973).

Material examined. **JJ:** 11 ex., 16-VII-1994, Yeongsil, Mt. Hallasan (SCNAE); 1 ex., 6-V-1975, Mt. Hallasan; 1 ex., 23-VII-1981, Jeju (SJNAE); 1 ex., 17-IX-1979, Seogwipo (SJNAE); 1 ex., 13-V-1982, Sancheondan, Jeju (SJNAE). **GB:** 1 ♂, 1 ♀, 25-V-1995, Mt. Seonginbong, Is. Ulleungdo (SCNAE). **GG:** 1 ♂, 9-VI-1984, Mt. Surisan, nr. Suweon (SNUAE). **GN:** 1 ♀, 13-VIII-1989, Mt. Geumsan, Is. Namhaedo (SCNAE); 1 ♂, 1-VII-1994, Is. Geojedo (SCNAE). **GW:** 4 ex., 18-V-1985, Mt. Samaksan, Chuncheon-si (SCNAE); 6 ex., 11-VIII-1994, Hongcheon, Hongcheon-gun (SCNAE); 1 ♀, 24-V-2002, Suin-ri, Yanggu-eup, Yanggu-gun (SCNAE). **JB:** 8 ex., 24-VI-1990, Jeonju-si (SCNAE). **JN:** 2 ex., 10-IV-1993, Mt. Baekunsan, Jinsang-myeon, Gwangyang-si (SCNAE); 8 ex., 15-V-1988, Sunchon-si (SCNAE); 10 ex., 4-VII-1995, Temple Jeonghaesa, Seomyeon, Suncheon-si (SCNAE); 4 ex., 1-V-1988, Temple Seonamsa, Seungju-eup, Suncheon-si (SCNAE); 1 ex., 5-VI-1999, Is. Dolsan, Yeosu-si (SCNAE); 8 ex., 23-VII-1994, Temple Heungguk-sa, Yeosu-si (SCNAE); 12 ex., 8-VII-1998, Is. Narodo, Goheung-gun (SCNAE); 2 ♂, 4 ♀, 20-VI-2002, Sinchon, Gurye-eup, Gurye-gun (SCNAE); 4 ♂, 10 ♀, 20-VI-2002, Jungsan, Ganjeon-myon, Gurye-gun (SCNAE).

Distribution. Korea (Central, South), Japan (Hokkaido, Honshu, Shikoku, Kyushu), China (SHG).

Notes. Recorded from Quelpart Island (=Jeju-do), Korea by Okamoto (1923) as *St. proximus* Dejean, but his material seems to be misidentification of *S. castanepennis* Bates. Body 4.5-5.0 mm in length, generally pitchy brown. Elytra iridescent. Antennae, maxillary palpi, and legs light yellowish brown. Widely distributed including Jeju-do. Rather common.

Stenolophus (Astenolophus) meyeri (Jedlička, 1935)

좁쌀먼지벌레

Egadroma meyeri Jedlička, 1935, Casopis Csl. spol. Ent., 32: 114 (China: Yunnan); Mlynář, 1974, Acta zool. cracov., 19 (6): 109 (N. Korea: Mt. Myohyangsan); Krischenhofer, 1990, Koleopt. Rdschau, 60: 12 (N. Korea: Mt. Kum gan san).

Stenolophus (Stenolophus) meyeri Jedlička: Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 332 (catalogue).

Stenolophus (Astenolophus) meyeri Jedlička: Jager & Kataev in Löbl & Smetana, 2003, 1: 405 (N. Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 642.

Diagnostic characters. See above key to species or Jedlička (1935).

Materials examined. No specimens were available for the present study. North Korea: Mt. Myohyangsan, Pyeongyang (After Mlynář 1974); Mt. Kumgansan (After Krischenhofer 1990).

Distribution. Korea (North), China (YUN).

Notes. First record for North Korea by Mlynář (1974) as *E. meyeri* Jedlička, but has not yet been collected from southern part of the Korean Peninsula. According to Kataev *et al.* (in CPC 2004), *E. meyeri* is treated as a subgenus *Astenolophus*, but *E. yunnana* is treated as a subgenus *Egadroma*.

Subgenus *Egadroma* Motschulsky, 1855

초록좁쌀먼지벌레 아속

Egadroma Motschulsky, 1855, Étude Ent., 4: 43.

Type-species: *Carabus smaragdulus* Fabricius, 1798, by monotypy.

Stenolophus (Egadroma) difficilis (Hope, 1845)

초록좁쌀먼지벌레

Harpalus difficilis Hope, 1845, Trans. Ent. Soc. Lond., 4: 15 (China: Canton).

Stenolophus chalceus Bates, 1873, Trans. Ent. Soc. Lond., p. 270 (Japan, China); Tschitschérine, 1897, L'Abeille, 29: 61. Treated as a junior synonym of *difficilis* by Csiki, 1932: 1240.

Stenolophus (Egadroma) chalceus Bates: Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2 (Col.), p. 45.

Acupalpus (Egadroma) iridicolor Redtenbacher: Csiki, 1932, Col. Cat., 121: 1239-1240 (partim) (Korea).

Acupalpus (Egadroma) difficilis (Hope): Schaubberger, 1930, Col. Centralb., 4: 206-207.

Egadroma difficilis (Hope): Jedlička, 1935, Časopis Čsl. Spol. Ent., 32: 112 (Korea); Jedlička, 1940, Neue Carab. aus Ostasien, 13: 17.

Stenolophus difficilis (Hope): Andrewes, 1919, Trans. Ent. Soc. Lond., p. 177-178; Jedlička, 1935, Acta Soc. Ent. Čsl., 32: 112; Paik, 1988, J. Agric. Sci. Res. of Suncheon Natl. Univ., 2: 15 (Korea).

Stenolophus (Egadroma) difficilis Hope: Tanaka, 1962, Kon-yu, 30: 271; Jedlička & Chûjô, 1964, Nature & Life in South-east Asia, 3: 170 (Korea); Habu, 1973, Fauna Japonica, Harpalini, p. 377, 389-393 (Korea).

Diagnostic characters. See above key to species key. For more detail, see Habu (1973).

Materials examined. JJ: 10 ex., 10-VII-1993, Bukjeju-gun

(NIAST); 1 ex., 22-IV-1984, Ara-dong, Jeju-si (NIAST); 3 ex., 2-VIII-1985, Jejudo (NIAST). **CB:** 1 ♀, 20-V-1985, Mt. Weolaksan, Jecheon-si (SCNAE); 2 ex., 11-VII-1993, Yeongdong, Yeongdong-gun (NIAST); 2 ex., 30-VII-1998, Dandong, Cheongpung-myeon, Jecheon-si (NIAST). **CN:** 3 ♀, 30-VII-1998, Naesong-ri, Yanghwa-myeon, Buyeo-gun (SCNAE); 1 ex., 26-VII-1993, Nonsan, Buyeo-gun (NIAST). **GB:** 1 ex., 10-VIII-1988, Janggal, Andong-si, GB (NIAST); 1 ♀, 20-VII-1998, Sangju-si (SJNAE). **GG:** 1 ♀, 28-VII-1998, Gwangneung, Soheul-eup, Pocheon-gun (SJNAE); 2 ex., 13-VI-1997, Seodun-dong, Suweon-si (NIAST). **GN:** 1 ♂, 26-V-1986, Jinju-si (Light Trap) (SCNAE); 1 ♀, 8-VII-1998, Jayang-ri, Danseong-myeon, Sancheong-gun (SCNAE). **GW:** 1 ♂, 23-V-2002, Yoho-ri; 5 ♂, 4 ♀, 14-VI-2004, Paro-ho, Yoho-ri, Gandong-myeon, Hwacheon-gun, GW (SCNAE); 7 ♂, 6 ♀, 14-VI-2004, Meonnaegol, Yucheon-ri, Gandong-myeon, Hwacheon-gun, GW (SCNAE); 1 ♂, 25-V-2002, Sogeumgang, Mt. Odaesan, Pyeongchang-gun (SCNAE); 8 ex., 12-V-1985, Mt. Samaksan, Chuncheon-si (NIAST); 1 ex., 6-VII-1993, Pyeongchang, Pyeongchang-gun (NIAST); 2 ex., 11-VII-1993, Samcheok-si (NIAST). **JB:** 1 ♀, 3-VI-2005, Donchon-ri, Mt. Maisan, Maryeong-myeon, Jinan-gun (SCNAE); 2 ♂, 3 ♀, 23-VI-1995, Is. Seonyudo, Okgu-gun (SCNAE); 1 ♂, 2 ♀, 24-VI-1995, Is. Biando, Okgu-gun (SCNAE); 1 ♂, 23-VI-1995, Is. Muyeodo, Okgu-gun (SCNAE); 1 ex., 25-VII-1992, Muju, Muju-gun (NIAST). **JN:** 1 ♀, 30-V-1988; 9 ex., 18-VI-1986; 2 ex., 15-VII-1987; 1 ♀, 25-VIII-1989; 1 ♀, 15-IX-1988, Suncheon-si (SCNAE); 4 ♂, 11 ♀, 9-VII-1995, Sueoe Dam, Jinsan-myeon, Gwangyang-si (SCNAE); 7 ♂, 8 ♀, 5-VIII-1995, Eochi-ri, Jinsang-myeon, Gwangyang-si (Light Trap), (SCNAE); 9 ex., 2-VI-2002, Seongja, Ganjeon-myeon, Gurye-gun (SCNAE); 1 ♂, 6 ♀, 1-VI-2002, Temple Dorimsa, Gokseong-eup, Gokseong-gun (SCNAE); 1 ex., 10-VI-1993; 2 ex., 1-VIII-1993, Goheung, Goheung-gun (NIAST); 3 ex., 5-VIII-1990, Chusan, Mt. Baeunsan, Gwangyang-si (NIAST); 2 ex., 21-VII-1975, Is. Heuksando, Sinan-gun (NIAST); 1 ex., 20-IV-1985, Yeongam, Yeongam-gun, JN (NIAST).

Distribuiton. Korea (North, Central, South), Japan (Honshu, Shikoku, Kyushu, Ryukyu), China (FUJ, GUA, JIX, SCH), Taiwan.

Notes. First record for the Korean Peninsula by Jedlička (1935) as *E. difficilis*. Body 5.0-6.0 mm in length, generally black with greenish lustre. Widely distributed including Jeju-do. Rather common. Occurs in wet place, near streams or standing water. Often attracted at light source.

Stenolophus (Egadroma) quinquepustulatus

(Wiedemann, 1823) 점박이좁쌀먼지벌레

Badister 5-pustulatus Wiedemann, 1823, Zool. Mag., 2: 58 (India).*Stenolophus quinquepustulatus* ab. *connexus* Schaubberger, 1928, Col. Centralbl., 3: 84-85.*Acupalpus (Egadroma) quinquepustulatus* Wiedemann: Schaubberger, 1930, Col. Centralbl., 4: 207; Csiki, 1932, Col. Cat., 121: 1240-1241 (see for additional references).*Stenolophus quinquepustulatus* Wiedemann: Bates, 1873, Trans. Ent. Soc. London, p. 270 (Japan); Jedlička, 1952, Ann. Hist.-Nat. Mus. Nat. Hung., 2: 79; Paik, 1988, J. Korean Entomol. Soc., 18(4): 248 (Korea).*Stenolophus (Egadroma) quinquepustulatus* Wiedemann: Habu, 1961, Nature & Life in Southeast Asia, 1: 276-277 (genitalia); Tanaka, 1962, Kontyu, 30: 271; Jedlička & Chûjô, 1964, Nature & Life in Southeast Asia, 3: 173; Habu, 1973, Fanua Japonca, Harpalini, p. 382-388.**Diagnostic characters.** See above key to species. For more detail, see Habu (1973).**Materials examined.** JJ: 1 ♀, 2-VII-1993, Temple Gwan-eumsa, Jeju-si (SCNAE); 2 ♂, 2 ♀, 1-VIII-2002, Seonheul, Jocheon-eup (SCNAE); 1 ♀, 6-V-1998, Seonheul, Light trap (SCNAE); 1 ex., 12-VII-1985, Seongpanak, Mt. Hallasan (NIAS); 1 ♀, 11-VI-1994, Seonheul (JFNHM); 1 ♂, 15-III-1994, Seongsan (JFNHM); 1 ♂, 3-IV-1994, Saekdal, Seogwipo-si (JFNHM); 1 ♀, 22-VII-1994, Jungmun, Seogwipo-si (JFNHM); 2 ♀, 25-V-1994, Topyeong, Seogwipo-si (JFNHM).**Distribution.** Korea (Jejudo), Japan (whole), China (FUJ, HKG, JIX, SHG, YUN), Taiwan, Oriental Region, Australia, New Guinea.**Notes.** First record for Jejudo, Korea by Paik (1988), but has not yet been collected from mainland of the Korean Peninsula. Body 5.5-6.6 mm in length, generally black and iridescent. Elytra with brown patches. Occur in wet places usually by standing water. This species is winged and fly to light.

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