

## Some Ground Beetles (Coleoptera, Carabidae) from Korea (15)

Paik, Jong-Cheol\* and Chang-Seop Moon

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

## 韓國產 먼지벌레(15)

白種哲\* · 文昶燮

(順天大學校 農業生命科學大學 生命環境科學部)

## ABSTRACT

Herein, 20 species of the ground beetles are reported from Jeju. Of these, 5 species, *Agonum mandli* Jedlička, 1933, *Agonum subfuliginosum* Habu, 1978, *Cymindis kuznevi* Sundukov, 2001, *Dicheirotrichus punctatellus* (Reitter, 1894), and *Harpalus rubripes* (Duftschmid, 1812) are listed for the first time from the Korean Peninsula.

**Key words :** Coleoptera, Carabidae, fauna, new record, Jeju, Korea

In this paper 20 species of the carabid beetles from the Korean Peninsula are reported with some additional collection data. Of these, 5 species are the first reports for the Korean Peninsula.

Materials collected by the authors were examined and the specimens are deposited in Department of Agricultural Biology, Suncheon National University (SCNAE). Also we included some examined specimens from the Department of Sericulture and Entomology Resources, Sangju National University, Sangju (SJNAE). Acronym CPC (2003) is "Catalogue of Palearctic Coleoptera, Vol. 1, edited by Löbl & Smetana (2003)". The area codes of China are after Löbl & Smetana (2003).

We thank Dr. G. Sh. Lafer (Vladivostok) who provided the specimens for comparison. We also thank Dr. Ahn, Kee-Jeong, Chungnam National University (CNNBE), Daejeon City and Dr. Park, Jong-Kyun, Sangju National University for their help. They also offered the valuable specimens.

## RESULTS

(01) *Agonum (Agonum) mandli* Jedlička, 1933

진부남작먼지벌레 (신칭)

*Agonum mandli* Jedlička, 1933, Ent. Nachrbl., Troppau, 7(3):

86 (Ussuri).

*Agonum (Agonum) babai* Habu, 1973, Ent. Rev. Japan, 25: 4-5 (Japan: Hokkaido); Habu, 1978, Fauna Japonica, Platyniny, p. 76-77; Lafer, 1992, Keys Id. Ins. Russian Far East., 3, Col., 2: 614; Kryzhanovskij *et al.*, 1995, p. 115; Lorenz, 1998, Systematic list of ground beetles, p. 385; Bousquet, 2003 in CPC, 1: 450. Synonymized by Lafer, 1992: 614.

**Materials examined.** 1 ♂, 2 ♀, 25-V-2002, Jinbu, Jinbunmyeon, Pyeongchang-gun, GW (SCNAE).

**Distribution.** Korea (Central), Japan (Hokkaido, N Honshu), NE China, Russian Far East.

**Notes.** New to Korea. Belongs to the subgenus *Agonum* s. str. Thank to Dr. G. Sh. Lafer, Vladivostok who offered Ussurian specimens of *A. mandli* for comparison and confirmed to my identification. Occurs on the banks of river side under stones. Attracted to light sources at night.

This large and complex genus, with a worldwide distribution, is rather diverse. The treatment of generic or subgeneric ranks are varied. This genus is presented here in broad sense, but some supraspecific ranks, i.e., *Sericoda* and *Loxocrepis*, are separated as full genera. Need to detail for the Korean Peninsula species.

(02) *Agonum (Europhilus) subfuliginosum* Habu, 1978

에기남작먼지벌레 (신칭)

*Agonum (Europhilus) subfuliginosum* Habu, 1978, Fauna

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

Japonica, Platynini, p. 54 (Japan).

*Agonum (Europhilus) fuliginosum* Panzer: Habu, 1963, Bull. Nat. Inst. Agr. Sci., (C), 16: 136, 137, 142-143.

**Materials examined.** 1 ♀, 19-V-2001, Mt. Weolaksan, Jecheon-si, CB (SCNAE); 2 ♀, 11-VIII-2001, Mt. Cheongryangsan, Bonghwa-gun, GB (SCNAE); 1 ♀, 29-VI-1999, Gwangneung, GG (SCNAE); 2 ♀, 27-V-1993, Jinbu, Jinbumeon, Pyeonchang-gun, GW (SCNAE).

**Distribution.** Korea (Central, South), Japan (Hokkaido, Honshu).

**Notes.** New to Korea. Belongs to the subgenus *Europhilus* Chaudoir (1858, Stett. Ent. Ztg., 20: 124-125). The above specimens entirely fit, judging from the external characters, to the descriptions and figures given by Habu (1978) for *A. subfuliginosum*.

*A. subfuliginosum* Habu suggested as a junior synonym of *Agonum bellicum* Lutshnik (1934, Ent. Nachr., 9: 30) by Lafer (1989). However, these two species are quite different each other by the body color (i.e., body fully black in *subfuliginosum*, but elytra always light brown in *bellicum*). For more detail of this species, see Habu (1978). Also this group needs further works on East Asian species.

**(03) *Bembidion (Asioperyphus) altestriatum* Netolitzky, 1934** 긴줄강변먼지벌레

*Bembidion altestriatum* Netolitzky, 1934, Koleopt. Rundsch., 20: 68 (Vladivostok).

*Bembidion bajani* Jedlička, 1966, Reichenbachia, 7(23): 208 (Mongolia).

*Bembidion allestriatum* [sic] Netolitzky: Yano, 1941, Nippon no Kôchû, 4(1): 24 (Korea).

*Bembidion (Peryphus) altestriatum* Netolitzky: Netolitzky, 1943, Koleopt. Rundsch., 29(1/3): 34 (Korea); Jedlička, 1965, Ent. Abh., 32(7): 125 (Korea); Kwon & Lee, 1986, Ins. Koreana, 6: 21 (Korea).

*Bembidion (Asioperyphus) altestriatum* Netolitzky: Lorenz, 1998, Syst. Carabidarum, p. 215; Marggi *et al.*, 2003 in CPC, 1: 243 (Korea).

**Materials examined.** 2 ♂, 2 ♀, 19-V-2001, Songgae, Mt. Weolaksan, Jecheon-si, CB (SCNAE); 1 ♀, 1 ♂, 16-VIII-2004, Sinjangri, Seongdong-ri, Yeongjung-myeon, Pocheon-gun, GG (SCNAE); 1 ♀, 26-V-2002, Mt. Mudeungsan, Gwangju-si, GJ (SCNAE); 2 ♂, 2 ♀, 25-V-2002, Jinbu, Pyeongchang-gun, GW (SCNAE).

**Distribution.** Korea (North, Central, South), China (Manchuria), Mongolia, Russia (Siberia, Far East).

**Notes.** Belongs to the subgenus *Asioperyphus* Vysoký (1986, Fauna Bohemiae Septentr., 11: 94). First record for northern part of the Korean Peninsula by Yano (1941). The distribution of this species from South Korea confirmed for the first time. Rather easily distinguishable from related species by the 7th elytral stria effaced. For more detail, see Netolitzky (1943). This species is very similar to *B. infuscatum* Dejean, 1831 which was reported from Korea by Yano (1941), but has not yet been collected from South Korea. It may be distributed in northern border of the Korean Peninsula near China and Russia.

**(04) *Bembidion (Cylindrobracteon) chloropus* Bates, 1883** 동해강변먼지벌레 (신칭)

*Bembidium chloropus* Bates, 1883, Trans. R. ent. Soc. Lond., p. 277 (Japan); Semenov, 1906, Rev. Russe d'Ent., 6: 270; Netolitzky, 1914, Ent. Blätt., 10: 51.

*Bembidion (Odontium) chloropus* Bates: Csiki, 1928, Coleopt. Cat., 97: 38; Maddison, 1993, Bull. Mus. Comp. Zool., 153 (3): 161; Kryzhanovskij *et al.*, 1995, Checklist of the Ground-beetles of Russia, p. 77; Lorenz, 1998, Syst. Carabidarum, p. 202; Marggi *et al.*, 2003 in CPC, 1: 257 (Korea).

*Bembidion (Cylindrobracteon) chloropus* Bates: Lafer *et al.*, 1997, Ent. Fennica, 8 (1): 14 (Korea).

**Materials examined.** 2 ex, 25-VII-2003, Mukho Port, Donghae City, K.-J. Ann leg. (SCNAE); 2 ex, 22-IV-2002, Okgye Beach, Gangneung City, K.-J. Ann leg. (SCNAE).

**Distribution.** Korea, Japan, NE China, Russia (E Siberia, Far East).

**Notes.** Belongs to the subgenus *Cylindrobracteon* Netolitzky (1940, Bulet. Fac. Sti. Cernauti, 13[1939]: 159). This subgenus was treated as a junior synonym of *Odontium* Leconte (1848, Ann. Lyc. Nat. Hist. N. York, 4: 451) by Maddison (1993: 160), Kryzhanovskij *et al.* (1995: 77), etc. However, in this paper treated as a distinct subgenus by the lateral setae on pronoum (in *Cylindrobracteon* with one pair, but *Odontium* with two pairs).

Lafer *et al.* (1997) noted that this species occurs in the Korean Peninsula. The distribution of this species from South Korea confirmed for the first time. Thanks to Dr. K.-J. Ahn, Chungnam University, Daejeon, who provided the above specimens. Occurs in seashore. Very seldom.

**(05) *Colpodes (Xestagonum) xestus* (Bates, 1883)**

윤출납작먼지벌레

*Anchomenus (Platynus) xestus* Bates, 1883, Trans. R. ent. Soc. Lond., p. 256 (Japan).

*Colpodes depressus* Jedlička, 1936, Acta Soc. Ent. Čsl., 33: 48, 50 (Japan). Syn. by Habu, 1969: Kontyû, 37(4): 384.

*Colpodes edai* Jedlička, 1952, Acta Mus. Silesiae, 2 (A): 53 (Japan). Syn. by Habu, 1969: Kontyû, 37 (4): 384.

*Colpodes chujianus* Jedlička, 1955, Acta Ent. Mus. Nat. Pragae, 30: 215 (Japan). Synonymized by Habu, 1969: 384.

*Colpodes chujioianus* Jedlička, 1963, Reichenbachia, 1: 307. Unjustified emendation.

*Colpodes xestoides* Nakane, 1962 in Kamimura *et al.*, Sci. Rept. Kyoto Pref. Univ. (Nat. Sci. & Liv. Sci.), 3(4): A204 (Japan). Synonymized by Habu, 1978: 102.

*Agonum (Platynus) xestum* Bates: Jakobson, 1907, Col. Russ., 5: 329; Csiki, 1931, Col. Cat., 115: 853.

*Agonum xestum* Bates: Habu, 1969, Kontyû, 37: 384-386.

*Agonum (Xestagonum) xestus* Habu: Habu, 1978, Fauna Japonica, Platynini, p. 102-105; Kwon & Lee, 1986, Ins. Koreana, 6: 16 (Korea).

*Agonum (Platynidius) xestum* Bates: Lafer, 1992, Lafer, 1992, Keys Id. Ins. Russian Far East., 3, Col., 2: 617 (Russian Far East).

*Colpodes xestus* Bates: Kamimura *et al.*, 1962, Sci. Rept. Kyoto Pref. Univ. (Nat. Sci. & Liv. Sci.), 3(4): A202; Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2 (Col.), p. 40, pl. 20, fig. 14.

*Colpodes (Platynidius) xestus* (Bates): Park & Paik, 2001, Ins. Koreana, Suppl., 19: 73 (Korea).

*Xestagonum xestum* (Bates): Bousquet, 2003 in CPC, 1: 469 (Korea).

**Materials examined.** 2 ♀, 7-VI-2001, Jungsan-ri, Mt. Jirisan, Sancheong, GN (SCNAE); 1 ♂, 4 ♀, 25-VII-1995, Jiam-ri, near Chuncheon, GW (IBPV Lafer leg.).

**Distribution.** Korea (North, Central, South), Japan (Hokkaido, Shikoku, Kyushu).

**Notes.** First record for South Korea by Kwon & Lee (1986). Widely distributed, but seldom.

The Platynini is large and more diverse group of carabid beetles, with a worldwide distribution. The supraspecific ranks of this tribe is rather vague and delicate. Sphodrini was treated as a distinct tribe by Casale (1982, 1988) and Kryzhanovskij (1983), but some authors regarded as a subtribe Sphodrini of the tribe Platynini (Bousquet & Larochelle 1993

etc.). The group has been included by many authors within the Pterostichini. However, the pygidial gland secretions suggest that the Platynini are probably more closely related to the Truncatipennes complex (Ball & Bousquet, 2001).

**(06) *Cymindis (Cymindis) kuznetzowi* Sundukov, 2001**

꼬마밀빠진먼지벌레 (신칭)

*Cymindis (Cymindis) kuznetzowi* Sundukov, 2001, Far Eastern Entomol., 103: 2 (Primorij Krai).

*Cymindis (Tarulus) vaporariorum immaculata* Dejean et Boisduval: Kwon et Lee, 1986, Ins. Korean, 6: 49 (Korea). Misidentification.

**Material examined.** 7 ex, 17-VIII-2001, Mt. Geumjeongsan, Busan City (SCNAE); 1 ♀, 28-V-1983, Mt. Palgongsan, nr. Daegu, GB (SJNAE); 1 ♂, 7-VIII-2001, Mt. Gapjongsan, Sangju, GB (SJNAE); 1 ♂, 5-IX-1998, Naesan, Is. Namhaedo, GN (SCNAE); 1 ♀, 18-VIII-2001, Temple Tongdosa, Yangsan, GN (SCNAE); 1 ex., 13-VII-1999, Mt. Hambaeksan, Gohan-eup, Jeongseon-gun, GW (SCNAE); 1 ex., 11-IX-1998, Mt. Hwaaksan, Hwacheon-gun, GW (SCNAE); 1 ♂, 20-VI-1978, Mt. Seolaksan, GW (SJNAE); 1 ♀, 18-V-1994, 1 ♀, 10-VIII-1994, Mt. Jiri-san, JN (SCNAE); 1 ♂, 2 ♀, 15-IX-2001, Dapgok, Mt. Baekunsan, Gwangyang, JN (SCNAE); 1 ♂, 1 ♀, 27-IX-2000; 1 ♀, 9-IX-2001, Piagol, Mt. Jirisan, Gurye-gun, JN (SCNAE).

**Distribution.** Korea (North, Central, South), China (Changbaishan), Russian Far East.

**Notes.** New to Korea. Belongs to the subgenus *Cymindis* s. str. Thank to Dr. G. Sh. Lafer, Vladivostok, for comparing with Ussurian species. He also confirmed to our identification of this species. We have also seen one specimen from Mt. Changbaishan, China which is deposited in Sangju National University. Kwon and Lee (1986) reported *C. vaporariorum*, but their materials are misidentification of *C. kuznezowi* Sundukov. *C. vaporariorum* undoubtedly occurs in the northern part of North Korea. This species is very similar to *C. larisae* Sundukov, 1999. The distinguishing characteristics are as follows (after original description and figures). For more detail, see Sundukov (1999, 2001).

1. Elytral intervals with a series of punctures; scutellum roughly and richly punctate on whole surface. Length 7.5-9.8 mm. ..... *C. larisae* Sundukov, 1999  
- Elytral intervals with irregularly scattered punctuations, consisting from 2 to 3 mixed lines; scutellum smooth, sometimes a few points visible at base. Length 8.3-9.2 mm.

..... *C. kuznetzowi* Sundukov, 2001

**(07) *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.

*Dicheirotichus (Trichocellus) punctatellus* (Reitter): Lafer, 1996, Key Id. Ins. Russian Far East, 3, Col., 3: 408; Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 337; Kataev *et al.*, 2003 in CPC, 1: 403 (N. Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 780.

**Materials examined.** 1 ♀ (teneral), 8-V-2005, Bangpo, Is. Anmyeondo, Taean-gun CN (SCNAE). 1 ♀ (teneral), 12-V-2005, Jangbaek-ri, Muju-eup, Muju-gun, JB (SCNAE); 3 ♀ (teneral), 13-V-2005, Gamdong, Songpung-ri, Yongdammyeon, Jinan-gun, JB (SCNAE). 1 ♀ (teneral), 14-V-2005, Temple Hyangrimsa, Suncheon-si JN (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.** Belongs to the subgenus *Trichocellus* Ganglbauer (1892, Käf. Mitteleur., 1: 365-6). Kataev *et al.* (in CPC, 2003: 403) noted that this species occurs in North Korea. 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.

Three species of the genus *Dicheirotichus* Jacquelin du Val, 1857 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. The following key rather easily separates our fauna.

- 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 *Dicheirotichus* s. str.).

..... *D. (Dicheirotichus) 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)

**참고.** 우리말 명칭은 순천의 팔마비 (八馬碑)에서 따왔다.

**(08) *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.

*Dicheirotichus (Trichocellus) tenuimanus amplipennis* (Bates): Kryzhanovskij *et al.*, 1995, Checklist of ground-beetles of Russia, p. 135-6 (Korea); Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 337; Kataev *et al.*, 2003 in CPC, 1: 403 (N. Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 912.

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

**(09) *Dyschirius (Dyschiriodes) cheloscelis* Bates, 1873**

투구알가슴먼지벌레 (신칭)

*Dyschirius cheloscelis* Bates, 1873, Trans. R. ent. Soc. Lond., p. 239 (Japan); Kult, 1949, Čas. Českosl. Spol. Ent., 45: 124; Jedlička, 1960, Anns hist.-nat. Mus. natn. hung., 52: 230 (N. Korea); Nakane, 1963, Icon. Ins. Jap. Colore Nat., 2, Col., p. 22; Lafer, 1989, Key Id. Ins. Russian Far East, 3, Col., 1: 133; Fedorenko, 1992, Ent. Obozr., 71 (1): 99.

*Dyschirius cheloscelis chinensis* Kult, 1949, Čas. Českosl. Spol. Ent., 45: 124, 131 (China or.).

*Dyschiriodes (Dyschiriodes) cheloscelis* (Bates): Fedorenko, 1996, Reclassification of world Dyschiriini, p. 156.

**Materials examined.** 6 ex, 23-V-2003, Yongho-ri, Hwacheon-gun, GW (SCNAE).

**Distribution.** Korea (North, Central), East China, South Japan, Russian Far East.

**Notes.** Belongs to *Dyschiriodes* Jeannel (1941, Faune de France, 39: 263). First record for North Korea by Jedlička (1960). New for South Korea. We have seen also 2 specimens which are collected from Mt. Chaingbaishan, China. This species is more variable, similar to *yezoensis*, but clypeus protruding at middle (in *yezoensis* almost straight).

The species of this genus live in burrows in wet, sandy places near fresh water (or sea shore). Body small, shining, usually black bronzed, more or less cylindrical with distinct peduncle between prothorax and hind body. According to Balkenohl (in CPC, 2003), the genus *Dyschiriodes* Jeannel was treated as a subgenus of the genus *Dyschirius* Bonelli, 1810. We followed it. In Korea two subgenera, *Dyschirioides* and *Eudyschirioides* occurred. For more detail of this group, see Fedorenko (1996).

**참고.** 몸길이는 약 4.8 mm로 야산이나 계곡의 물가에서 생활한다. 머리방패(clypeus)의 모양으로 쉽게 다른 종과 구별할 수 있으며, 우리말 이름은 머리 모양에서 따왔다.

**(10) *Dyschirius (Dyschiriodes) fassatii* (Kult, 1949)**

청진알가슴먼지벌레 (신칭)

*Dyschirius fassatii* Kult, 1949, Čas. Českosl. Spol. Ent., 46: 125, 132 (Lake Khanka); Jedlička, 1960, Anns hist.-nat. Mus. natn. hung., 52: 230 (N. Korea); Lafer, 1989, Key Id. Ins. Russian Far East, 3, Col., 1: 134; Fedorenko, 1995, Ent. Obozr., 74(1): 74 (Korea).

*Dyschiriodes (Dyschiriodes) fassatii* (Kult): Fedorenko, 1996, Reclassification of world Dyschiriini, p. 167-168 (Korea).

**Materials examined.** 1 ex., 24-V-1997, Songjeong-ri, Yanghwa-myeon, Buyeo-gun, CN (SCNAE); 9 ex., 14-VI-2004, Meonnaegol, Yucheon-ri, Gangdong-myeon, Hwacheon-gun, GW (SCNAE); 6 ex., 23-V-2003, Paro-ho, Yongho-ri, Gandong-myeon, Hwacheon-gun, GW (SCNAE); 6 ex., 23-V-2002, Yongho-ri, Gandong-myeon, Hwacheon-gun, GW (SCNAE); 1 ex., 28-VI-1986, Suncheon-si (Light Trap), JN (SCNAE).

**Distribution.** Korea (North, Central, South), NE China, Russia (Far East, Siberia), Mongolia.

**Notes.** First record for North Korea by Jedlička (1960). The occurrence of this species from South Korea is confirmed for the first time.

According to Lafer (personal communication, 2004), *D. tristis* occurs in Magadan areas, but *D. fassatii* is widely distributed in Ussuri region. Therefore, *D. fassatii* is distributed in the Korean Peninsula, but *D. tristis* do not occur even though it was reported from the Korean Peninsula by Fedorenko (1993).

As mentioned by Fedorenko (1996), he has not examined the type specimen of *D. fassatii* and the references of Pelwka (1970) and Fedorenko (1993), the figures of male genitalia of *D. tristis* quite differ each other.

**참고.** 우리말 명칭은 채집 장소인 북한 청진에서 따왔다.

**(11) *Harpalus (Harpalus) modestus* Dejean, 1829**

민머리먼지벌레

*Harpalus modestus* Dejean, 1829, Spec. gén. Coleopt., 4: 367. *Carabus aestivus* Duftschmid, 1812, Fauna Austriaca, p. 105 (Austria). Preoccupied by O.F. Müller (1776). Suggested as a junior synonym of *modestus* by Ganglbauer, 1892: 360.

*Harpalus flavitarsis* Dejean, 1829, Spec. gén. Coleopt., 4: 378. Treated as a junior synonym of *modestus* by Ganglbauer, 1892: 360.

*Harpalus flavitarsis* Dejean: Heyden, 1887, Horae Soc. ent. Rossicae, 29: 246, (Korea); Kano, 1924, Ins. world, (Konchusekai), 28(326): 350 (Korea); Yano, 1941, Nippon no Kôchû, 4(1): 31 (Korea).

*Harpalus (Pheuginus) modestus* Dejean: Reitter, 1900, Verhand. Naturf. Ver. Brünn, 38: 119; Reitter, 1908, Fauna Germanica, 1: 177.

*Harpalus (Harpalus) modestus* Dejean: Ganglbauer, 1892, Käfer Mitteleuropa, 1: 350, 360; Mlynář, 1974, Acta zool. cracov., 19(6): 120; Lafer, 1989, Keys Id. Ins. Russian Far East, 3, Col., 1: 194 (Korea); Lafer, 1996, Insecta Koreana, 13: 85 (Korea); Kataev, 1997, Steenstrupia, 23: 138 (China,

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Japan); Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 347; Kataev *et al.*, 2003 in CPC, 1: 379 (Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 652.

**Materials examined.** 1 ♂, 21-V-2005, Mt. Tonggosan, Seo-myeon, Uljin-gun, GB (SCNAE); 1 ♂, 3 ♀, 6-VI-2000, Naribunji, Is. Ulleungdo, GB (SCNAE); 2 ♀, 21-IV-1984, Suweon, GG (SCNAE); 1 ♂, 11-VI-1986, Suweon, GG (SCNAE); 1 ♂, 17-VIII-1976, Piagol, Mt. Jirisan, Gurye-gun, JN (SNUAE).

**Distribution.** Korea (North, Central South), Japan (Hokkaido, Honshu, Kyushu), China (HEI, LIA, QIN, SCH, SHX), Russia (Siberia, Far East), Central Europe.

**Notes.** First record for the Korean Peninsula by Heyden (1887) as *H. flavitarsis* Dejean. Later this species was reported from South Korea by Lafer (1996). This species is very similar to *H. bungei* in appearance but Mlynář (1974) clearly distinguished each other. Widely distributed in Korea excluding Jejudo, however, not common. This Eurosiberian species, ranging from central Europe to Russian Far East and Korea. Occurs on open fields in forest area.

Through the kindness of Dr. G. Sh. Lafer, Vladivostok, we have had an opportunity to compare with Ussurian species. He also offered paratypes of *H. chasanensis* Lafer.

Externally this species resembles *H. bungei*, *H. chasanensis*, and *H. tarsalis*. However, *H. chasanensis* has not yet been collected from the southern part of the Korean Peninsula. For more details, see Mlynář (1974: 120-122). Main differences are given in the following simple key of this group (modified from Lafer 1989: 194).

- 1(4) Larger, length of body more than 9.0 mm.
- 2(3) Hind angles of pronotum obvious, widely rounded, lateral margins before them arcuate convex. ....  
..... *Harpalus (H.) chasanensis* (자산머리먼지벌레)
- 3(2) Hind angles of pronotum almost rectangular. ....  
..... *Harpalus (H.) tarsalis* (애머리먼지벌레)
- 4(1) Smaller, less than 9.0 mm.
- 5(6) Hind coxa without setiferous pore at inner margin. ....  
..... *Harpalus (H.) bungei* (애기민머리먼지벌레)
- 6(5) Hind coxa with 1 setiferous pore at inner margin. ....  
..... *Harpalus (H.) modestus* (민머리먼지벌레)

**(12) *Harpalus (Harpalus) rubripes* (Duftschmid, 1812)**  
백두머리먼지벌레 (신칭)

*Carabus rubripes* Duftschmid, 1812, Fauna Austriae, 2: 77 (Austria).

*Harpalus glaberellus* Sturm, 1818, Deutschl. Ins., p. 57, t. 85, f. b, B (Deutschland). Treated as a junior synonym of *rubripes* by Csiki, 1932: 1159.

*Harpalus azureus* Gyllenhal, 1827, Ins. Suec., 1(4): 432 (Sweden). Treated as a junior synonym of *rubripes* by Csiki, 1932: 1159.

*Harpalus chloropterus* Stephens, 1828, Illustr. Brit. Ent. Mandib., 1: 148 (England). Treated as a junior synonym of *rubripes* by Csiki, 1932: 1159.

*Harpalus marginellus* Stephens, 1828, Illustr. Brit. Ent. Mandib., 1: 148 (England). Preoccupied (nec Gyllenhal, 1827: 432). Treated as a junior synonym of *rubripes* by Kataev *et al.*, in CPC, 2003: 381.

*Harpalus nigrocaeruleus* Stephens, 1828, Illustr. Brit. Ent. Mandib., 1: 149 (England). Treated as a junior synonym of *rubripes* by Csiki, 1932: 1160.

*Harpalus punctiger* Stephens, 1828, Illustr. Brit. Ent. Mandib., 1: 149 (England). Treated as a junior synonym of *rubripes* by Csiki, 1932: 1160.

*Harpalus ignavus* Stephens, 1828, Illustr. Brit. Ent. Mandib., 1: 153 (England). Preoccupied (nec Duftschmid, 1812: 85). Treated as a junior synonym of *rubripes* by Csiki, 1932: 1159.

*Harpalus sobrinus* Dejean, 1829, Spec. gén. Col., 4: 341. Treated as a junior synonym of *rubripes* by Csiki, 1932: 1160.

*Harpalus potisii* Stephens, 1835, Illustr. Brit. Ent. Mandib., 5: 380 (England). Treated as a junior synonym of *rubripes* by Csiki, 1932: 1159.

*Harpalus nobilitatus* Faldermann, 1836, Fauna Transcauc., 1: 86. Treated as a junior synonym of *rubripes* by Csiki, 1932: 1159.

*Harpalus amoenus* Heer, 1837, Käfer der Schweiz, p. 42 (Switzerland). Treated as a junior synonym of *rubripes* by Kataev *et al.*, in CPC, 2003: 385.

*Harpalus truncatus* Rosenhauer, 1842, Lauf. u. Schwimmkäfer Eriang, p. 12. Treated as a junior synonym of *rubripes* by Csiki, 1932: 1160.

*Harpalus rufipes* Motschulsky, 1844, Mém. Acad. Sci. St.-Péters., 13: 212 (Caucasus). Preoccupied (nec DeGeer, 1774: 96). Synonymy established by Kataev, 1989: 199.

*Harpalus hyperboreus* Motschulsky, 1844, Mém. Acad. Sci. St.-Péters., 13: 214 (Turkinsk). Synonymy established by Kataev, 1989: 199.

*Harpalus alpestris* L. Redtenbacher, 1849, Fauna Austr., p. 100 (Austria). Preoccupied (nec Heer, 1837: 44). Treated as a junior synonym of *rubripes* by Csiki, 1932: 1160.

*Harpalus viridulus* Solsky, 1874 in Fedtschenko, Reise Turkest. (2), 5: 82 (Turkestan). Preoccupied (nec Dejean, 1829: 297; nec Geoffroy in Fourcroy, 1785: 52). Synonymy established by Kataev, 1989: 199.

*Harpalus marginellus* var. *munganasti* Reitter, 1908, Fauna Germanica, 1: 175 (Germany). Synonymized by Kataev, 2002, Linzer biol. Beitr., 34(1): 725.

*Harpalus turkestanicus* Csiki, 1932, Col. Cat., 121: 1142. New name for *viridulus* Solsky, 1874: 82.

*Harpalus rubripes* (Duftschmid): Schaum, 1860, Naturg. Ins. Deutschl. Col., 1: 592; Ganglbauer, 1892, Käfer Mitteleuropa, 1: 349, 353; Kataev, 1989, Ins. Mongolia, 10: 199 (syn.).

*Harpalus (Amblystus) rubripes* (Duftschmid): Reitter, 1900, Verhand. Naturf. Ver. Brünn, 38: 100; Reitter, 1908, Fauna Germanica, 1: 175, t. 23, f. 7.

*Harpalus (Harpalus) rubripes* (Duftschmid): Csiki, 1932, Col. Cat., 121: 1159 (cat.); Lindroth, 1986, Fauna Ent. Scand., 15(2): 359 (diagnosis); Lafer, 1989, Key Id. Ins. Russian Far East, 3, Col., 1: 188 (key); Kataev, 2002, Linzer biol. Beitr., 34(1): 725 (syn.); Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 348-9; Kataev *et al.*, 2003 in CPC, 1: 381; Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 816.

**Material examined.** 1 ♀, 7-15-VI-2001, Mt. Baekdusan, North Korea (SJNAE).

**Distribution.** Korea (North), China (GAN, NE, NIN, QIN, SCH, SHA, SHX, XIN), Middle Asia, Russia (Caucasus, Siberia, Far East), Europe, North America (introduced).

**Notes.** New to the Korean Peninsula. Only one specimen collected from Mt. Baekdusan, North Korea and is deposited at Sangju National University. Thank to Dr. G. Sh. Lafer, Vladivostok, for comparing with Ussurian species and confirming our identification. Belongs to *honestus*-species group including several Himalaya and North Palearctic species. For more details of this group, see Kataev (2001).

This Eurasian species is rather easily distinguishable from other relatives by the 7th, also 5th elytral interval with apical setigerous punctures and last ventrite with some small additional setigerous punctures. Xerophilous, occurs on gravelly or sandy soil with sparse and short vegetation.

**(13) *Harpalus (Pseudoophonus) aenigma***

(Tschitschérine, 1897) 청동머리먼지벌레

*Ophonus (Migadophonus) aenigma* Tschitschérine, 1897, L'Abeille, 29: 47 (Korea).

*Harpalus kinfushanicus* Schaubberger, 1933, Wiener Ent. Zeitung, 50(1/2): 67 (China: Szeschuan mer.). Synonym established by Kataev, 1997: 126.

*Harpalus (Pseudophonus) ginfushanus* Jedlička, 1958, Acta Ent. Mus. Nat. Pragae, 32: 225 (China: Szeschuan). Synonym established by Kataev, 1997: 126.

*Harpalus (Pseudophonus) japonicus* Jedlička, 1958, Acta Ent. Mus. Nat. Pragae, 32: 224-225, (Japan). Preoccupied (nec Morawitz, 1863: 245). Synonym established by Kataev, 1997: 126.

*Harpalus kuangcensis* Mlynář, 1974, Acta Zool. Cracov., 19 (6): 116 (China: Fukien). Synonym established by Kataev, 1997: 126.

*Harpalus (Pardileus) aenigma* (Tschitschérine): Csiki, 1932, Col. Cat., 121: 1118 (Korea).

*Harpalus (Pseudoophonus) pseudoophonoides* Schaubberger: Paik, 1995, Insects of Quelpart Is., p. 137 (Jejudo). Misidentification.

*Pseudoophonus (Pseudoophonus) aenigma* (Tschitschérine): Lafer, 1996, Ins. Koreana, 13: 79 (Korea). Misidentification.

*Harpalus (Pseudophonus) aenigma* (Tschitschérine): Kirshenhofer, 1990, Koleopt. Rundschau, 60: 5 (Korea).

*Harpalus aenigma* (Tschitschérine): Kataev, 1997, Steenstrupia, 23: 126 (Korea).

*Harpalus (Pseudoophonus) aenigma* (Tschitschérine): Mlynář, 1974, Acta Zool. Cracov., 19(6): 107, 112-6 (N. Korea); Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 342; Kataev *et al.*, 2003 in CPC, 1: 348 (Japan); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 202.

**Material examined.** 6 ♂, 12 ♀, 17-VII-1994; 2 ♂, 3 ♀, 2-VIII-1994, Yeongsil (850 m), Mt. Hallasan, JJ (SCNAE); 1 ♀, 17-VII-1994, Temple Gwaneumsa, Jeju-si, JJ (SCNAE); 1 ♀, 6-VIII-1984, Mt. Hanlasan, (SCNAE); 1 ♀, 27-VI-2004, Namyang Pasture, Gyora, JJ (JFNHM); 2 ♂, 20-VII-2000, Seogpan-ak, Mt. Hallasan, JJ (JFNHM); 1 ♀, 13-VIII-1994, Gwangneung, GG (SCNAE); 1 ♂, 2 ♀, 16-V-1999, Temple Haeinsa, Hapcheon-gun, GN (SCNAE); 1 ♀, 22-VII-2001, Temple Ssanggyaesa, Hadong-gun, GN (SCNAE); 1 ♂, 22-VI-1995, Is. Biando, Okgu-gun, JB (SCNAE); 1 ♀, 10-VII-1997, Banseon, Namweon-gun, Mt. Jirisan, JB (SCNAE); 1 ♂, 24-VIII-1988, Goheung, Goheung-gun, JN (SCNAE); 1 ♂, 22-VI-1988, Mt. Jirisan, Gurye-gun, JN (SCNAE); 1 ♂, 10-V-2000; 1 ♀, 20-V-2000; 1 ♀, 28-V-2000; 1 ♀, 1-VI-2000; 1 ♂, 23-VI-2000; 2 ♀, 6-X-2000, Is. Dolsan, Yeosu-si, JN (SCNAE); 1 ♂, 9-VII-1991; 1 ♂, 9-VII-1994, Mt. Baekunsan, Jinsang-myeon, Gwangyang-si, JN (SCNAE); 1 ♂, 5-VI-

1996, Gwangyang-eup, Gwangyang-si, JN (SCNAE); 1 ♀, 2-IX-1989, Temple Taecansa, Gokseong-eup, JN (SCNAE); 1 ♂, 20-IX-1987, Suncheon-si, JN (SCNAE).

**Distribution.** Korea (North, Central, South, JJ), Japan (Kyushu), China (FUJ, SCH, ZHE).

**Notes.** Described from Korea by Tschitschérine (1897). Paik (1995) and Lafer (1996) reported *H. pseudophonoides* from South Korea, but this material was a misidentification of *H. aenigma*. Because the armatures of male genitalia fit the Kataev's view. *H. pseudophonoides* Schaubberger (1930, Col. Centralbl., 4: 179-181. Japan: Osaka) is restricted in Japan. For more details, see Mlynář (1974: 112-6) & Kataev (1997: 126-129). Widely distributed including Jejudo. It occurs in meadows, fields, edges of forest. The following simple key rather easily distinguishes from relatives.

- 1(4) Apical spur of fore tibiae well dentate at margins.
- 2(3) Elytra densely pubescent at apical area and intervals from 8 to 10. ....  
..... *Harpalus (Ps.) tridens* (꼬마머리먼지벌레)
- 3(2) Elytra glabrous, microsculpture well developed. ....  
..... *Harpalus (Ps.) suenisoni* (청도머리먼지벌레)
- 4(1) Apical spur of protibiae simple.
- 5(8) Elytra covered hairs throughout.
- 6(7) Hind-angles of pronotum without denticle or very small.  
*Harpalus (Ps.) pseudophonoides* Schaubberger, 1930
- 7(6) Hind-angles of pronotum with large denticle (as in *coreanus*). ....  
..... *Harpalus (Ps.) aenigma* (청둥머리먼지벌레)
- 8(5) Elytra glabrous.
- 9(10) Hind-angles of pronotum with strong denticle. ....  
..... *Harpalus (Ps.) coreanus* (고려머리먼지벌레)
- 10(9) Hind angles without denticle or very faintly visible. ....  
..... *Harpalus (Ps.) pastor* (만주머리먼지벌레)

**(14) *Harpalus (Pseudoophonus) babai* Habu, 1973**

탐라머리먼지벌레

*Harpalus (Pseudoophonus) babai* Habu, 1973, Harpalini, Fauna Japonica, p. 108-110 (Japan, Korea); Habu, 1977, Ent. Rev. Japan, 30(1/2): 10; Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 342; Kataev *et al.*, 2003 in CPC, 1: 384 (Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 258.

**Material examined.** 1 ♀, 4-IX-2004, Seonheul (Light trap), JJ (SCNAE); 1 ♀, 29-VIII-1976, Suweon; 1 ♂, 5-X-1984, Seodun-dong, Suweon, JJ (NIAST).

**Distribution.** Korea (Suweon, Jejudo), Japan (Honshu).

**Notes.** Habu published the monograph of Japanese Harpalini in 1973. He described *H. babai* which was collected from Honshu, Japan and Quelpart Island, Korea. This beetle was not seen again until now, but I rediscovered two specimens of known locality (Jejudo=Quelpart Island) and Suweon (mainland near Seoul). They were collected by light trap, respectively. The above specimens well agree with the original description. The distribution of this species from the mainland confirmed for the first time. For separating key to relatives are as follow (cited from Habu, 1977: 10).

- 1(2) Apical spur of fore tibiae well dentate on both margins; elytral striae not punctate. ....  
..... *Harpalus (Ps.) sinicus* (중국머리먼지벌레)
- 2(1) Apical spur of fore tibiae not dentate on margins; elytral striae faintly to fairly punctate.
- 3(4) Legs brown, faintly reddish; elytra rather densely pubescent at apical area and on interval from 8 to 10. ....  
..... *Harpalus (Ps.) babai* (탐라머리먼지벌레)
- 4(3) Femora and tibiae dark reddish brown or reddish black; elytra not pubescent. ....  
..... *Harpalus (Ps.) davidi* (민들머리먼지벌레)

**(15) *Harpalus (Pseudoophonus) coreanus***

(Tschitschérine, 1895) 고려머리먼지벌레

*Ophonus (Pardileus) coreanus* Tschitschérine, 1895, Horae Soc. Ent. Rossicae, 29: 156-158 (Korea); Tschitschérine, 1897, L'Abéille, 29: 46 (Korea); Tschitschérine, 1905, Horae Soc. ent. Ross., 37: 249.

*Ophonus coreanus* (Tschitschérine): Kano, 1924, Ins. world, (Konchusekai), 28(326): 350 (Korea); Yano, 1941, Nippon no Kôchû, 4(1): 29 (Korea).

*Pardileus coreanus* Tschitschérine: Jedlička, 1960, Annls hist.-nat. Mus. natn. hung., 52: 231 (Korea).

*Harpalus (Pardileus) coreanus* (Tschitschérine): Schaubberger, 1929, Col. centralbl., 3: 192 (spp. key); Schaubberger, 1930, Col. centralbl., 4: 195 (Korea); Schubberger, 1932, Wiener Ent. Zeitung, 49(1): 30; Csiki, 1932, Col. Cat., 121: 1119 (Korea).

*Pseudoophonus (Pseudoophonus) coreanus* (Tschitschérine): Lafer, 1989, Key Id. Ins. Russian Far East, 3, Col., 1: 183 (Korea); Lafer, 1996, Insecta Koreana, 13: 80 (N Korea) (type, distr.).

*Harpalus (Pseudophonus) coreanus* (Tschitschérine): Wu, 1937, Cat. Ins. Sinensium, 3: 153 (Korea).

*Harpalus coreanus* (Tschitschérine): Kataev, 1997, Steenstrupia, 23: 133 (China).



*Harpalus (Pseudoophonus) coreanus* (Tschitschérine): Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 342; Kataev *et al.*, 2003 in CPC, 1: 384 (Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 353.

**Materials examined.** 2 ♀, 29-VIII-1994, Mt. Weolaksan, Jecheon-si, CB (SCNAE); 1 ♂, 13-VIII-1994, Gwangneung, GG (SCNAE); 1 ♀, 26-VI-1997, Chilseon valley, Mt. Jirisan, Hamyang-gun, GN (SCNAE); 1 ex., 30-VIII-1969; 9-VIII-1969, Mt. Seolaksan, GW (NIAS); 1 ♂, 8-VIII-1969, Mt. Seolaksan, GW (SJNAE).

**Distribution.** Korea (North, Central, South), China (BEI, FUJ, GAN, HEB, HEI, LIA, NMO, SCH, SCH, SHA, SHX), Russian Far East.

**Notes.** This species is very similar to *H. (Ps.) tridens* by the body shape and male genitalia, but easily distinguished by the shape of pro-tarsal spur. Also, similar to *H. aenigma*, and *pseudophonoides*, but distinguished by the absence of hairs of elytra. The distribution of this species from southern part of the Korean Peninsula is confirmed. Very rare.

**(16) *Harpalus (Pseudoophonus) suenisoni* Kataev, 1997**

청도머리먼지벌레 (신칭)

*Harpalus suenisoni* Kataev, 1997, Steenstrupia, 23: 131-134 (China, Korea).

**Material examined.** 1 ♀, 16-VII-1994, Yeongsil (850 m), Mt. Hallasan, JJ (SCNAE); 1 ♀, 18-V-1994, Mt. Baekunsan, Gwangyang-si, JN (SCNAE).

**Distribution.** Korea (South), China (JIA, SCH, SHA, ZHE).

**Notes.** Described from China and Korea by Kataev (1997). This species is very similar to *H. tridens*, but distinguishable by the abdominal sternites (in *suenisoni* without ciliae, but *tridens* densely ciliated) and elytral basal edge (in *suenisoni* without hairs, but *tridens* ciliated).

The Kataev's remarks are as follow: The new species is most similar to *H. tridens* Mor. in habitus, shape of pronotum with denticulate hind angles, and in dentate apical spur of fore tibia. However, *H. tridens* is distinguished from *H. suenisoni* by smooth elytral striae, less convex intervals with well developed microsculpture (isodiametric at apex and along lateral margins of elytra, transverse on elytral disc), etc.

**(17) *Harpalus (Loboharpalus) rubefactus* Bates, 1873**

붉은머리먼지벌레 (날개머리먼지벌레)

*Harpalus rubefactus* Bates, 1873, Trans. Ent. Soc. London, p. 264-265 (Japan: Hiogo).

*Harpalus lobipes* Tschitschérine, 1899, Horae Soc. Ent. Rossicae, 32: 323 (Korea). Synonymized by Młynář, 1979, Koleopt. Rundschau, 54: 100.

*Harpalus (Loboharpalus) rubefactus* f. *apiceseriatius* Schaubberger, 1932, Coleopt. Centralbl., 5: 177 (China). Treated as a junior synonym of *H. rubefactus* by Kryzhanovskij *et al.*, 1995: 141.

*Harpalus (Loboharpalus) rubefactus* f. *inseriatius* Schaubberger, 1932, *ibid.*, 5: 177 (China). Treated as a junior synonym of *H. rubefactus* by Kryzhanovskij *et al.*, 1995: 141.

*Harpalus (Loboharpalus) rubefactus* f. *laevistriatus* Schaubberger 1932, *ibid.*, 5: 177 (China), nec Sturm, 1818: 80 (*Harpalus*). Treated as a junior synonym of *H. rubefactus* by Kryzhanovskij *et al.*, 1995: 141.

*Harpalus (Loboharpalus) rubefactus* f. *piceus* Schaubberger, 1932, *ibid.*, 5: 177 (China). Treated as a junior synonym of *H. rubefactus* by Kryzhanovskij *et al.*, 1995: 141.

*Harpalus (Loboharpalus) rubefactus* f. *punctatostriatus* Schaubberger, 1932, *ibid.*, 5: 177 (China), nec Dejean, 1829: 319 (*Harpalus*). Treated as a junior synonym of *H. rubefactus* by Kryzhanovskij *et al.*, 1995: 141.

*Harpalus (Loboharpalus) rubefactus* f. *rufus* Schaubberger, 1932, *ibid.*, 5: 177 (China), nec Brüggemann, 1843: 459 (*Harpalus*). Treated as a junior synonym of *H. rubefactus* by Kryzhanovskij *et al.*, 1995: 141.

*Harpalus (Loboharpalus) lobipes* Tschitschérine: Schaubberger, 1932, Col. centralbl., 5(6): 177-8 (Korea: Seishin); Csiki, 1932, Col. Cat., 121: 1130 (Korea).

*Harpalus rubefactus* Bates: Jedlička, 1930, Ent. Nachr., 5(1): 8 (Korea: Seishin-Olto); Jedlička, 1960, Annl. hist.-nat. Mus. natn. hung., 52: 231 (Korea); Kataev, 1997, Steenstrupia, 23: 136 (NE China).

*Harpalus (Acardystus) rubefactus* Bates: Habu, 1973, Faun. Japonica, Harpalini, p. 142-144 (Korea); Kwon & Lee, 1986, Ins. Koreana, 6: 38 (Korea). Lafer, 1989, Key Id. Ins. Russian Far East, (3), 1: 184 (Korea); Park & Paik, 2001, Ins. Koreana, Suppl., 19: 87 (Korea: Shinjido).

*Harpalus (Loboharpalus) rubefactus* Bates: Schaubberger, 1932, Col. Centralbl., 5: 177, 178 (China); Schaubberger, 1935, Ark. Zool., 27A(4): 4 (China); Wu, 1937, Cat. Ins. Sinensium, 3: 156 (Korea); Jedlička, 1954, Acta Ent. Mus. Nat. Pragae, 30: 219 (China: Fukien); Młynář, 1974, Acta Zool. Cracov., 19(6): 107, 117 (N Korea); Młynář, 1979, Koleopt. Rundschau, 54: 100 (syn.); Kirschenhofer, 1990, Koleopt. Rundsch., 60: 1 (N Korea); Lafer, 1996, Ins. Koreana, 13: 83 (Korea); Lorenz, 1998, Systematic list of ground beetles (1st ed.), p. 344; Kataev *et al.*, 2003 in CPC,

1: 384 (Korea); Lorenz, 2005, Nomina Carabidarum (2nd ed.), p. 815.

**Material examined.** 2 ♂, 29-IX-2000, Is. Namhaedo, GN (SCNAE); 1 ♂, 21-VII-1984, Is. Sinjido, Wando-gun, JN (SJNAE).

**Distribution.** Korea (North, South), Japan (Honshu), China (LIA, SHN, SHX), Russian Far East.

**Notes.** Belongs to subgenus *Loboharpalus* Schaubberger (1932, Coleopt. Centralbl., 5: 174-176). Described from the Korean Peninsula by Tschitschérine (1895) as *H. lobipes*. Later Jedlička (1930) recorded from Seishin (=Cheongjin), now North Korea. Divided into two subspecies, ssp. *bachmayeri* Mlynář (1979: 98) occurs in southern China (FUJ, SCH). For more detail, see Schaubberger (1932) and Habu (1973). This species is extremely rare in South Korea. Occurs in sandy river banks or sandy seashore (Lafer, *in litteris*). The following simple key is rather easily distinguishable for our fauna.

- 1(2) Body reddish brown; pronotum moderately convex, with one or two additional setae in front of one marginal seta on either side, apical angles with short fine setae. ....  
 ..... *rubefactus* Bates (붉은머리먼지벌레)
- 2(1) Body black; pronotum strongly convex, with only one marginal seta on either side, apical angles glabrous. ....  
 ..... *platynotus* Bates (납작머리먼지벌레)

**(18) *Odacantha (Odacantha) puziloi* Solsky, 1875**

목대장먼지벌레

*Odacantha puziloi* Solsky, 1875, Horae Soc. Ent. Rossicae, 21: 264-265 (E. Siberia).

*Colliurus puziloi* Solsky: Jakobson, 1908, Col. Russ., 6: 407.

*Casnonia puziloi* Solsky: Kano, 1930, Kontyû, 4: 128.

*Colliuris (Odacantha) puziloi* Solsky: Csiki, 1933, Col. Cat., 124: 1529; Liebke, 1938, Festschr. E. Strand, 4: 66; Jedlička, 1963, Ent. Abh., 28: 492, 496.

*Odacantha puziloi* Solsky: Habu, 1957, Akitu, 6: 15-16; Habu, 1962, Bull. natl. Inst. Agr. Sci., (C), 13: 102-104, 125; Nakane, 1963, Icon. Ins. jap., Colore natur. edit., 2: 49, pl. 25, fig. 6; Habu, 1967, Fauna Japonica, Truncatipennes, p. 20-23.

*Odacantha (Odacantha) puziloi* Solsky: Habu, 1982, Ent. Rev. Japan, 34(2): 91; Lafer, 1989, Keys Id. Ins. Russian Far East, 3, Col., 1: 209 (Korea).

**Material examined.** 1 ex., 22-IV-2002, Okgye Beach,

Gangneung-si, GW (SCNAE).

**Distribution.** Korea (North, Central), Japan (Hokkaido, Honshu), Northern China, Russian Far East.

**Notes.** Belongs to the subgenus *Odacantha* s. str. This species has been recorded from South Korea by Kwon & Lee (1986), but their materials are misidentification of *O. aegrota* (Bates, 1883). Later it was listed in the Korean Peninsula by Lafer (1989). The distribution of this species from South Korea is confirmed for the first time. For more details of this genus, see Habu (1967, 1982). We thank to Dr. Ahn, Kee-Jeong, Chungnam National University who offered the above specimen.

Two species, *O. aegrota* Bates and *O. puziloi* Solsky, are listed in the Korean Peninsula. The former species is widely distributed including in Jeju (Paik, 1998), and rather common species, but the latter species probably is restricted to central to northern part of the Korean Peninsula. For more details of this genus, see Habu (1967; 1982).

**(19) *Panagaeus japonicus* Chaudoir, 1861**

네눈박이먼지벌레

*Panagaeus japonicus* Chaudoir, 1861, Bull. Soc. Nat. Mosc., 34 (4): 356 (Japan).

*Panagaeus rubripes* Morawitz, 1862, Mém. Biol. Acad. Sci. St.-Petersb., 4: 240 (Japan). Treated as a junior synonym of *P. japonicus* by Bates, 1873: 245.

*Craspedophorus japonicus* Jedlička, 1962, Nipponius, 1(15): 1 (Japan). Synonymized by Habu, 1978: 75.

*Panagaeus japonicus* Chaudoir: Bates, 1873, Trans. R. ent. Soc. London, p. 245 (syn.); Chaudoir, 1878, Ann. Soc. ent. Belg., 31: 175 (Japan); Fairmaire, 1887, Rev. Ent., [Fr.], 6: 313 (China: Pekin); Lutshnik, 1914, Rev. Russe d'Ent., 12[1913]: 448; Cho, 1957, Hum. & Sci., Nat. Sci., Korea Univ., 2: 187 (Korea); Jedlička, 1965, Ann. Zool. Bot., 12: 14 (Korea); Habu, 1978, Ent. Rev. Japan, 32: 75 (syn. n.); Kwon & Lee, 1985, Ins. Koreana, 6: 48 (Korea); Lafer, 1989, Keys Id. Ins. Russian Far East, 3, Col., 1: 208 (Korea); Park & Paik, 2001, Ins. Koreana, Suppl., 19: 124 (Korea).

**Materials examined.** 1 ♀, 23-V-1995, Is. Ulleungdo (Dargelte Island), GB (SCNAE); 1 ♂, 1 ♀, 27-V-1981, Is. Ulleungdo, GB (SJNAE).

**Distribution.** Korea (North, Central, South), Japan (Hokkaido, Honshu, Shikoku, Kyushu), NE China, Russian Far East.

**Notes.** Listed in Korea by Cho (1957), but without any collection data. Later listed by Jedlička (1965). The distribution of this species from South Korea is confirmed.

**(20) *Platymetopus flavilabris* (Fabricius, 1798)**

털머리먼지벌레

*Carabus flavilabris* Fabricius, 1798. Supp. ent. Syst., p. 59 (India)

*Platymetopus flavilabris* Fabricius: Paik, 1988, Korean J. Entomol., 18(4): 247 (Korea).

**Materials examined.** 1 ♂, 1 ♀, 10-VIII-1998, Mt. Gapjangan, Sangju-si, GB (SCNAE); 1 ♀, 22-VI-2001, Mt. Seonunsan, Gochang-gun, JB (SCNAE); 1 ♀, 25-VI-2000, Suncheon-si, JN (SCNAE); 2 ♀, 10-IX-2002, Bonggang, Gwangyang-si, JN (SCNAE); 1 ♀, 23-VIII-1999, Sosari, Yae-ri, Is. Heuksando, JN (SCNAE).

**Distribution.** Korea (incl. Jeju), Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyu), Taiwan, China, Oriental region.

**Notes.** First record for Jeju, South Korea by Paik (1988). This species is confirmed to distribution from mainland of the Korean Peninsula (at present). Widely distributed including in Jeju. Lives in grassy fields. Very seldom. According to Habu (1973), this species shows many geographical variations. For more details, see Habu (1973: 209-212).

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