

## New and interesting records of ground beetles of the tribe Harpalini from China (Coleoptera: Carabidae)

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New data about distribution of 17 species of the tribe Harpalini in China are provided. The following eight species are recorded from China for the first time: *Dicheirotrichus coreanus* Mlynáø, 1974 (Inner Mongolia and Hebei), *Loxoncus nagpurensis* (Bates, 1891) (Yunnan), *Harpalus ussuricus* Mlynáø, 1979 (Hebei), *H. solitarius* Dejean, 1829 (Jilin), *H. servus* (Duftschmid, 1812) (Xinjiang), *H. inexpectatus* Kataev, 1989 (Xinjiang), *H. akinini* Tschitschérine, 1895 (Xinjiang), and *Ophonus laticollis* Mannerheim, 1825 (Xinjiang).

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The present paper is based on examination of the collection of carabids of the tribe Harpalini in the Institute of Zoology, Chinese Academy of Sciences, Beijing, in 2003. All examined specimens listed in the text are kept in this institute.

### **Dicheirotrichus coreanus** Mlynáø, 1974

*Material. China, Inner Mongolia:* 1 ♂, Ulangab Meng, Qahar Youyi Qianqi, 2.VIII.1986, Xing Jie leg.; *Hebei:* 2 ♂, 2 ♀, Tanghai, 10.VI.1989, Liao Subai leg.; 1 ♀, same data but 30.VIII.1983.

*Distribution.* This species was originally described by Mlynáø (1974) from the series collected in one locality of North Korea (Vaudo, District Nampho, Province Phjongan-namdo) and up to date was recorded only from Korean Peninsula (Kirschenhofer, 1990, 1997; Jaeger & Kataev, 2003). In China, *D. coreanus* is found in the north-eastern part of the country, within Inner Mongolia and Hebei Province.

### **Idiomelas nigripes** (Reitter, 1894)

*Material. China, Xinjiang:* 1 ♂, Kashi County, 2.III.1982; 1 ♂, Aksu County, 1100 m, 12.VII.1947, Han Yinheng leg.; *Inner Mongolia:* 2 ♂, 4 ♀, Alxa Meng, Ejin Qi., 17-20.VI.1986, TuHu leg.; 1 ♂, same data but 2.VI.1987; 1 ♀, same data but 2.VII.1987; 1 ♂, same data but 6.VII.1981; 1 ♀, same data but VIII.1969; 1 ♂, Jungar Qi., 30.VI.1978; *Beijing:* 1 ♂, Beijing City, by light trap, 28.VI.1948; 1 ♂, 1 ♀, Summer Palace, by light trap, 30.IV.1952; 1 ♀, same data but 26.VI.1952; *Hebei:* 2 ♂, 4 ♀, Raoyang County, 2.VIII.1979, Yu Peiyu leg.; *Henan:* 1 ♀, Xinyang County, VI.1980; 1 ♀, Xinxiang County, 15.VII.1975.

*Distribution.* This species ranges over arid and semiarid areas of southern Russia, Kazakhstan, Kirghizia, Uzbekistan, Tadjikistan, Turkmenistan, southern Mongolia and northern China (Kataev, 1997a; Jaeger & Kataev, 2003). In China, only three localities were formerly known, each respectively from Xinjiang Uygur Autonomous Region, western part of Inner Mongolia and westernmost corner of Henan Province (Schauberger, 1935; Kataev, 1997a). According to the new material, *I. nigripes* is distributed farther to the east occurring also in Beijing and Hebei provinces.

### **Loxoncus discophorus** (Chaudoir, 1852)

*Material. China, Yunnan:* 1 ♂, Jinghong County, 9-16.IV.1981, He Junhua leg.

*Distribution.* This Oriental species is widely distributed across Southeast Asia from Sri Lanka and India to Vietnam, Thailand and the Philippines. Within China, it was formerly recorded only from Taiwan (Kataev, 2003).

### **Loxoncus nagpurensis** (Bates, 1891)

*Material. China, Yunnan:* 1 ♂, Yuanjiang County, 400 m, 7.IV.1982, Liao Subai leg.

*Distribution.* Like the preceding species, *L. nagpurensis* ranges over Southeast Asia from Sri Lanka and India to Vietnam and Thailand (Kataev, 2003). Formerly, it was not reported from China.

**Selenotichnus olegi** Kataev, 1999

*Material. China, Yunnan:* Weixi County: 2 ♂, 4 ♀, Pantiange, 2500 m, 24.VII.1981, Wang Shuyong & Liao Subai leg.; 3 ♂, same data but 2500 m, 26.VII.1981, Wang Shuyong leg.; Dkqkn County: 3 ♂, 3 ♀, 2700 m, 8.IX.1981, Wang Shuyong leg.; 1 ♂, 1 ♀, same data but 5.IX.1981, Wang Shuyong & Liao Subai leg.; Zhongdian County: 1 ♀, 2100 m, 10.VII.1984, Li Changfang leg.; Gongshan County (all collected by the joint expedition of Institute of Zoology, Beijing, and Kunming Institute of Botany, Chinese Academy of Sciences): 10 ♂, 3 ♀, vill. Bingzhongluo, 28°01'14" N 98°37'12" E, 1700 m, 13.IV.2002, in daytime, Liang H.-B. & Ba Weidong leg.; 5 ♀, same data but 21.IV.2002; 5 ♂, 2 ♀, same data but 26.IV.2002; 4 ♂, 4 ♀, new road to Dulongjiang, 27°45'57" N 98°36'12" E, 2200 m, 12.IV.2002, Liang H.-B. & Ba Weidong leg.; 1 ♂, 2 ♀, Heiwadi, new road to Dulongjiang, 27°47'39" N 98°35'13" E, 2020 m, 15.IV.2002, Liang H.-B. & Ba Weidong leg.; 6 ♂, 6 ♀, same data but 20.IV.2002; 2 ♀, same data but 22.IV.2002; 2 ♂, 1 ♀, Cikai Town, Cikaihe, 27°43'59" N 98°39'32" E, 1730 m, 22.IV.2002, Liang H.-B. & Ba Weidong leg.; 10 ♂, 6 ♀, Bingzhongluo, Gongdangshan Shan, 27°59'51" N 98°37'07" E, 2540 m, Liang H.-B. & Ba Weidong leg.; 1 ♂, Maxidang, along road, 27°52'41" N 98°39'15" E, 1550 m, Liang H.-B. & Ba Weidong leg.

*Distribution.* This taxon was recently described from three specimens collected in Wuliang Shan Mountains, central Yunnan (type locality: environs of Jingdong, 1800-2430 m). Based on the new material, *S. olegi* is rather common in the north-western part of Yunnan Province (Gongshan, Weixi, Dkqkn and Zhongdian counties), where it occurs at elevations of 1700-2700 m.

*Notes.* Specimens examined from the north-western part of Yunnan are rather similar to the type specimens but demonstrate variation in some morphological characters listed in the original description (Kataev, 1999): colour of dorsum often black, without any metallic lustre; pronotum usually with more distinct basal angles (in some specimens even with tiny denticle at apex); pronotal base in some specimens impunctate even in basal foveae; third elytral interval with 3-5 discal pores. No significant differences in the male genitalia are observed between specimens from different localities.

**Harpalus ussuricus** Млынџ 1979

*Material. China, Hebei:* 1 ♂, Xiaowutaishan, 1400 m, 12.VII.1964, Han Yinheng leg.; 2 ♂, Wulingshan Mts., 500 m, 4.VI.1981, Yu Peiyu leg.; 1 ♂, same data but 2.VI.1981; 2 ♀, same data but 1000 m, 4.VI.1981; 1 ♂, same data but 3.IX.1982; 3 ♂, Xinglong County, Wulingshan Mount, 500 m, 4.VI.1981, Yu Peiyu leg.; 2 ♂, same data but 2.VI.1981.

*Distribution.* This taxon was originally described from several localities in Primorsk Territory of Russia (type locality: Vladivostok) as a subspecies of the Transpalaeartic *H. latus* (Linnaeus, 1758). More recently (Kataev, 1989), it was recorded from Amur Province and Khaba-

rovsk Territory of Russia and was treated as a separate species occurring sympatrically with *H. latus*. According to the new data, *H. ussuricus* occurs also in the north-east of China.

**Harpalus solitaris** Dejean, 1829

*Material. China, Jilin:* 1 ♂, Changbaishan Mts., 25.VII.1991, Yu Peiyu leg.

*Distribution.* *H. solitaris* is a Holarctic species scatterly distributed mostly over the boreal coniferous forest zone of Eurasia and North America. In the southern part of its distributional range, the species occurs in the mountain regions: the Alps, the Balkans, mountains of southern Siberia, northern Mongolia, northern Korea and Japan (Kataev et al., 2003). This species was not recorded from China.

**Harpalus serripes** ernsti Kataev, 1995

= *Harpalus affinis* Ballion, 1878 (non Schrank, 1781)

*Material. China, Xinjiang:* 1 ♂, Tacheng County, 16.VI.1955, Wang Zunming leg.

*Distribution.* This is the eastern subspecies of the West-Palaeartic, predominantly steppe species *H. serripes* (Quensel, 1806), ranged mainly over mountain regions of eastern Kazakhstan and northern Kirghizia (Kryzhanovskij et al., 1995). Although it was not recorded for China in the recent Palaeartic catalogue (Kataev et al., 2003), this taxon (as *H. affinis*) was originally described from several localities in the Tien Shan including Gulja (= Yining), the city in the western part of Xinjiang Uygur Autonomous Region not far from the Kazakhstania border (Ballion, 1878). The new record is located to the north of Gulja, also within Xinjiang Uygur Autonomous Region near the Kazakhstania border.

**Harpalus servus** (Duftschmid, 1812)

*Material. China, Xinjiang:* 1 ♂, 1 ♀, Habahe County, 500 m, 2.IX.1960, Zhang Facai leg.

*Distribution.* This West-Palaeartic species extends from the Pyrenees to western Siberia (Altai, Tuva) and eastern Kazakhstan. It was not recorded from China in the literature. The only two specimens from China known to us were collected in the north of Xinjiang Uygur Autonomous Region on the southern slopes of the Altai Shan.

**Harpalus inexpectatus** Kataev, 1989

*Material. China, Xinjiang:* 1 ♂, Urumqi, 20.VI.1974.

*Distribution.* This is a steppe species distributed from Eastern Europe across Kazakhstan to the Tarbagatai and the Tien Shan (Kataev, 1989;

Kataev et al., 2003). Formerly, it was not recorded from China. The present record is based on the specimen collected in the Ili Valley near the Kazakhstani border in the western part of Xinjiang Uygur Autonomous Region.

### **Harpalus tarsalis** Mannerheim, 1825

*Material. China, Heilongjiang:* 1 ♀, Dailing, 19.V.1956; *Hebei:* 2 ♂, 1 ♀, "Eastern Tomb"; 1 ♀, Xinglong, Wulingshan Mts., 2.VI.1981, Yu Peiyu leg.; 1 ♂, same data but 4.VI.1981; *Beijing:* 1 ♂, "Peiping" [= Beijing].

*Distribution.* The species is widely distributed across the East Palaearctic from Eastern Europe in the west to Japan and Korea in the east. Within China, *H. tarsalis* was formerly recorded from Shanxi (Kataev, 1997b). According to the new data, the species is rather widely distributed across the north-eastern part of China.

### **Harpalus lama** Kataev & Wrase, 1997

*Material. China, Tibet:* 7 ♂, 8 ♀, Lhasa, 3700 m, 16.VIII.1988, Cong Shaoguang leg.; 4 ♂, 4 ♀, Lhasa, 3600 m, 23.VIII.1981, Chen Tailu leg.; 1 ♀, same data but 3650 m; 2 ♂, same data but 3600 m, 12.VII.1974, Huang Fusheng leg.; 8 ♂, 3 ♀, same data but 3700 m, 16.VIII.1988, Cong Shaoguang leg.; 1 ♀, same data but 3600 m, 23.VIII.1981, Chen Tailu leg.; 13 ♂, 8 ♀, environs of Lhasa, 3360-3380 m, 23.VIII.2003, Ren Guodong leg.; 1 ♂, Nang Xian, 29°02'N 93°08'E, 3100 m, 13.VII.1981, Chen Tailu leg.; 3 ♂, 2 ♀, Nang Xian County, 3050 m, 21.IX.1974, Huang Fusheng leg.; 1 ♂, Lhunzhub Xian, 30°12'N 91°19'E, 4200 m, 13.VI.1960, Wang Cungvang leg.; 1 ♂, Mainling County; 1 ♂, Nogau County, IX.1984; 1 ♂, Xi'ong Town, 27.X.1984; 1 ♂, 3 ♀, Dagzok County, 3700 m, 17.IV.1966, Wang Shuyong leg.; 1 ♀, Bayizhen, 21.IX.1984, Qu Guo leg.; 1 ♀, Nyingchi Xian, 29°34'N 94°30'E, 3070 m, VI.1960, Wang Chungvang leg.; 1 ♂, 2 ♀, Nyingchi County, 3050 m, 10.V.1966, Wang Shayong leg.

*Distribution.* This species was recently described from the series collected from two localities in Tibet (Basumco and environs of Lhasa). Based on the new material, the geographical range of *H. lama* seems to be restricted to southern Tibet. The species occurs at elevations of 3000-4000 m.

### **Harpalus ascetes** Kataev & Wrase, 1997

*Material. China, Tibet:* 1 ♂, Yangbajain Town, 4300 m, 2.VI.1980, Chen Deniu leg.; 30 ♂, 11 ♀, Damxung County, 4200 m, 20.IX.1975, Zhang Xuezhong & Wang Ziqing leg.; 12 ♂, 9 ♀, same data but 21.IX.1975; 9 ♂, 8 ♀, same data but 4350 m.

*Distribution.* The species was described from the series collected in several localities around Lhasa, Tibet (type locality: Nakaehr-Chueshui, western Kangtissu Shan, 4800-5200 m). Like the preceding species, *H. ascetes* is probably endemic to southern Tibet but occurs at elevations from 3700 to 5200 m.

*Notes.* As stated in the original description (Kataev & Wrase, 1997), *H. ascetes* is closely related to the preceding species, *H. lama*. Examination of the new material revealed variability in some external distinctive characters of these species listed in their original diagnoses. No significant differences in the shape of inner humeral angles are found between the species. The shape of sutural elytral angles is also rather variable in both the species: in *H. lama* sutural angles are often separately rounded at apex in both sexes, but sometimes (for example, in specimens from the two easternmost localities, Nyingchi and Bayizhen) they are sharp both in male and female as in *H. ascetes*. The differences between both the species in the male genitalia are constantly sharp. Morphological variation of *H. lama* and *H. ascetes*, both individual and geographical, invites further investigation.

### **Harpalus akinini** Tschitschérine, 1895

*Material. China, Xinjiang:* 1 ♀, Fuyun County, 1200 m, 12.VII.1960, Wang Shuyong leg.

*Distribution.* *H. akinini* is a steppe species ranged from Eastern Europe across Kazakhstan to the Tarbagatai and northern Tien Shan; it was recorded also from southern Siberia (Kataev, 1993). The species was not recorded from China. In Xinjiang Uygur Autonomous Region, the species is found on southern slopes of the Altay Shan.

### **Harpalus amputatus inschanicus** Breit, 1914

*Material. China, Heilongjiang:* 1 ♂, Tailai Xian, 46°23'N 123°27'E, 10.VI.1970; *Tianjin:* 1 ♀, Liang Wangzhuang T., 14.IV.1959; *Inner Mongolia:* 1 ♀, sent by Plant Protection Station; 1 ♂, Bayannur Meng, Urad Zhongqi, 31.VII.1985, Ma Guishi leg.; *Hebei:* 1 ♂, "Ho-Pei" [= Hebei], Sien-hsien [= Xian Xian], 4.V.1937"; 1 ♂, Weixian County, 960 m, 5.VI.1964, Li Bingqian leg. *Beijing:* 6 ♂, 5 ♀, "Peiping" [= Beijing]; 1 ♂, "Peiping" [= Beijing], 28.III.1936; 1 ♀, Beijing City, 28.IV.1981, Yu Peiyu leg.; 3 ♀, Beijing City, 25.IX.1979, Liao Subai leg.; 1 ♂, 1 ♀, Beijing City, Mairlau, 23.V.1989; 1 ♀, Beijing, Haidian District, 24.IV.1981, Wang Shuyong leg.; 1 ♂, Beijing City, Zhongguangcun, V.1989; *Shanxi:* 1 ♂, Taigu County, 17.VI.1953; 1 ♀, same data but 3.VI.1953; *Shaanxi:* 1 ♀, "Sian, Shensi, 27.V.36"; 1 ♀, "Hwashan, Shensi, 25.VI.36"; 1 ♂, Yan'an County, 10.V.1956, Liang Shenghai leg.; *Gansu:* 1 ♀, Zhengning County, 21.V.1980; 2 ♀, "Gansu, 1979"; *Jiangsu:* 1 ♂, Guanyun Xian, 34°18'N 119°14'E, 18.V.1956, Long Qingcheng leg.

*Distribution.* One of the four subspecies of the Asian-American *H. amputatus* Say, 1830, which was recorded from Inner Mongolia, Gansu, Shaanxi, Hebei and Beijing provinces (Kataev et al., 2003). According to the new data, this subspecies occurs also in Heilongjiang, Tianjin, Shanxi and Jiangsu.

**Harpalus semenowi** Tschitschérine, 1901

*Material.* China, Xinjiang: 1 ♀, Urumqi, 980 m, 5.IV. 1960, Zhang Facai leg.

*Distribution.* Up to date, this species was known only from a single female taken from Hei He and Bodo He rivers (northern Qinghai) by Russian explorer of Central Asia G. Grumm-Grzhimajlo in 1890. The new locality is far removed from the former and situated in the northern part of Xinjiang Uygur Autonomous Region.

*Notes.* The taxonomic position of this remarkable species was discussed by Kataev (1987, 1988). The specimen examined is similar to the holotype in main morphological characteristics: body length about 13.5 mm from apex of mandibles to apex of elytra; head distinctly punctate dorsally; additional abdominal setae forming on each sternite a single transverse row together with obligatory fixed setae; elytra with first interval impunctate in basal two-thirds and third interval only with few scattered punctures in basal half. In these characters, the specimen from Xinjiang differs distinctly from the closely-related *H. kryzhanovskii* Kataev, 1988 described from Turkmenistan.

**Ophonus laticollis** Mannerheim, 1825

= *Ophonus nitidulus* auct. (non Stephens, 1828)

= *Ophonus punctatulus* (Duftschmid, 1812) (non Fabricius, 1792)

*Material.* China, Xinjiang: 1 ♀, Altay, 930 m, 13.VIII.1960, Wang Shuyong leg.

*Distribution.* *O. laticollis* is a West-Palaeartic species reaching western Siberia in the east (Kataev et al., 2003). Up to now, it was not recorded from China. The present record is based on a single specimen collected on southern slopes of the Altay Shan in northern part of Xinjiang Uygur Autonomous Region.

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