

DACNUSINES FROM KOREA: NEW AND KNOWN SPECIES
(HYMENOPTERA: BRACONIDAE: ALYSIINAE: DACNUSINI)

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A total of 60 dacnusine species are reported from Korea: eight species are new to science and 52 are known species, out of them 32 (61%) species proved to be new to the fauna of Korea. The following new species are described: *Chorebus deminens*, *Ch. gavirus*, *Ch. lobulus*, *Ch. longulus*, *Ch. minutus*, *Ch. panilus*, *Ch. ranfus* and *Ch. zeris*. Besides the detailed descriptions the nearest allies of the new species are presented. Faunistic contributions and taxonomic remarks are added to the known species. The descriptions are completed with 140 original line-drawn figures.

Key words: new and known species, faunistics, material examined, types condition, descriptions, nearest allies.

INTRODUCTION

This is the third contribution to the knowledge of the braconid dacnusine fauna of Korea (PAPP 2007, 2009). Sixty dacnusine species are reported: eight species are new to science and 52 are known species. Out of the 52 species 32 (i.e. 61%) are new to the fauna of Korea, in the Faunistic List this is indicated by an asterisk (*) before the generic name. The new species are as follows: *Chorebus (Stiphrocera) deminens* sp. n., *Ch. (St.) gavirus* sp. n., *Ch. (Phaenolexis) lobulus* sp. n., *Ch. (St.) longulus* sp. n., *Ch. (St.) minutus* sp. n., *Ch. (St.) panilus* sp. n., *Ch. (St.) ranfus* sp. n. and *Ch. (Ph.) zeris* sp. n. Seven species were taken in South Korea (Republic of Korea) and one species in North Korea (Democratic People's Republic of Korea). The detailed descriptions are completed with collecting data, present conditions of the type-specimens and comparisons to the nearest allies. The known species are placed in six genera (in brackets the respective species-numbers are given): *Agonia* (1), *Antrusa* (1), *Chorebus* (45), *Dacnusa* (3), *Laotris* (1) and *Orientalix* (1). Furthermore, the known species are listed with their respective faunistic data and, in many cases, with presumable distributional characters.

The braconid dacnusine material has been collected by D.-S. Ku (Sancheong) and is deposited in the Hungarian Natural History Museum, Budapest.

The dacnusine genera and species have been identified with the help of NIXON'S (1944, 1945), GRIFFITHS'S keys (1967, 1968*a–b*) to the (western) European and TOBIAS'S keys (1986: 163–231, 1998: 299–411) to the Russian (virtually

Palaeartic) dacnuses. The distributional picture of the species were adopted after YU *et al.* 2012. – The measurements of the different corporal parts (head, femur, wing, tergites) were taken as are presented in WHARTON (1977: 782–790), GAULD & BOLTON (1988: 58–74) and in YU *et al.* 2012.

Abbreviations and terminologies:

The following abbreviations are applied in the text (after VAN ACHTERBERG 1993: 5, Figs H–K):

Fore wing venation – *cu-a* = nervulus or transverse cubito-anal vein, *m-cu* = nervus recurrens or transverse medio-cubital vein, *r* = transverse or first section of the radial vein, *Cu1b* = second short section of the subdiscoidal vein, *SR1* = third section of the radial vein, *1-2CU1* = first and second sections of the discoidal vein, *1-R1* = first section of the metacarpal vein, *2-1A* = second section of the submedian vein, *2-SR* = first transverse cubital vein, *3-SR* = second section of the radial vein.

Eye – OOL = shortest distance between hind ocellus and compound eye, POL = shortest distance between hind two ocelli.

Surface sculpture terminologies are used after EADY (1968) and HARRIS (1979).

Structure terminologies after GAULD and BOLTON (1988: 58–74).

FAUNISTIC LIST

Agonia adducta (Haliday, 1839) – 1 ♀: Kangwon, Chinju-shi, Kajwadong, 15 V 1993, Ku. – In Europe widely distributed, in East Palaeartics reported from Asiatic Russia (Primorski Krai, Sakhalin) and Korea (YU *et al.* 2012). The taxon *Agonia* is generally considered as subgenus of *Chorebus* (e.g. TOBIAS 1998: 324). I assign it to generic rank viewing its characteristic fore wing venation (Fig. 123: 1 in TOBIAS 1998: 325).

**Antrusa lathyri* (Griffiths, 1984) – 1 ♀: Kyongbuk, Cheongsong, Hyunso Deokgye, 29 V 1993, Ku. – Hitherto known only in Germany. The taxon *Antrusa* is considered here as genus concordant with TOBIAS's (1998: 323) recent evaluation.

**Chorebus (Stiphrocera) albipes* (Haliday, 1839) – 2 ♂: Chungbuk, Chungju Sanchok Yongdong, 23 V 1993, Ku. 2 ♀: Chungbuk, Okohon Iwon, 22 V 1993, Ku. 1 ♀: Chungbuk, Poemun Suan, 22 V 1993, Ku. 1 ♀: Chungnam, Komsan Chubu, Kaedoksa, 22 V 1993, Ku. 1 ♂: Chungbuk, Chungju, Sanrim Hyangsan, 23 V 1993, Ku. 1 ♀: Kangwon, Hoengsong Konggon Hakdam, 24 V 1993, Ku. 3 ♀: Kangwon, Chunchon Shinbuk Chonchon, 25 V 1993, Ku. 1 ♀: Kangwon, Kosong Hyunnae Paebong, 26 V 1993, Ku. 1 ♀ + 1 ♂: Kangwon, Kosong Kansong Konbongsa, 26 V 1993, Ku. 2 ♂: Kangwon, Taebaek Sangjangdong, 28 V 1993, Ku. 1 ♂: Kyongbuk, Kyongsan, University Yongnam, 4 V 1988, Ku. 1 ♀: Kyongbuk, Ponghwa Myongho Kokye, 28 V 1993, Ku. 1 ♀ + 2 ♂: Kyongbuk, Ponghwa Pobjon Oji Novrujae, 28 V 1993, Ku. 2 ♂: Kyongbuk, Ponghwa Sokpo Daehyun, 28 V 1993, Ku. 1 ♂: Kyongbuk, Andong, Bukhoo, Jangki, swept, 9 V 1997, Ku. 1 ♂: Kyongbuk, Andong Imha-Daem, taken with yellow pan-trap, 10 V 1997, Choi. 2 ♀: Kyonggi, Suwon Mt. Yogi, 1 ♀: 29 IV 1994 and 1 ♀: 8–16 VI 1994, Ku. 2 ♀: Kyonggi, Hwasong Pibong, 1 VI 1994, Ku. 4 ♀ + 4 ♂: Kyongnam, Chinju-shi Kajwadong, V–X 1993, Ku. – In the West Palaeartics widely distributed, in the East Palaeartics known only in Asiatic Russia (Primorski Krai). In Europe fairly frequent (YU *et al.* 2005).

Chorebus (Stiphrocera) andizhanicus (Tobias, 1966) – 1 ♂: Kyongbuk, Ponghwa Myongho Kwanchang, 28 V 1993, Ku. 1 ♀: Kyonggi, Suwon Mt. Yogi, 29 IV 1994, Ku. 2 ♀:

Kyongnam, Chinju-shi Kajwadong, V 1993, Ku. 1 ♀: Kyongnam, Chinju Kajwa, 3 XI 1993, Ku. 1 ♀: Kangwon, Kosong Hyunnae Paebong, 26 V 1993, Ku. 1 ♀: Kangwon, Kosong Kansong Konbongsan, 26 V 1993, Ku. – Reported from Uzbekistan and Hungary, Mongolia and Korea (PAPP 2009: 236).

Chorebus (Stiphrocera) avestus (Nixon, 1944) – 2 ♀: Kyongnam, Chinju-shi Kajwadong, 14–18 V 1993, Ku. – Known in Korea (PAPP 2009: 236). In Europe widely distributed.

**Chorebus (Phaenolexis) bathyzonus* (Marshall, 1895) – 1 ♀: Chungbuk, Chungju Sanrim Hyangsan, 23 V 1993, Ku. 1 ♂: Chungnam, Komsan Chubu, Kaedoksa, 22 V 1993, Ku. 1 ♀ + 1 ♂: Kyongnam, Chimu-shi Kajwadong, V 1993, Ku. 3 ♀: Kangwon, Chunchon Shinbuk Chonchon, 25 V 1993, Ku. – In Europe widely distributed, reported from Kazakhstan and Asiatic Russia (Khabarovsk Krai).

**Chorebus (Stiphrocera) buhri* Griffiths, 1967 – 1 ♀: Kyongbuk, Ponghwa Myongho Kokye, 28 V 1993, Ku. – Described from and up to now known only in Germany.

**Chorebus (Stiphrocera) cinctus* (Haliday, 1839) – 1 ♀: Kangwon, Kosong Kansong Kongbongsa, 26 V 1993, Ku. – In Europe reported from 13 countries, with Asiatic Russia (Irkutsk oblast) the record nearest to Korea.

**Chorebus (Stiphrocera) credulus* Tobias, 1998 – 1 ♀: Chugbuk, Ch'ungju Sanrim, Hyangsan, 23 V 1993, Ku. 1 ♀: Kyonggi, Suwon, 15 VI 1994, Ku. – In Asiatic Russia reported from three regions.

**Chorebus (Stiphrocera) crenulatus* (Thomson, 1895) (Figs 1–2) – 2 ♀: Chungbuk, Checheon, Pongyang Pakdaljae, 23 V 1993, Ku. – Head in dorsal view 1.6 times as broad as long, eye somewhat longer than temple (19:16), temple less rounded (Fig. 1). Notaulix faintly distinct. Precoxal suture narrow, long, crenulated (Fig. 2). Antenna with 30–31 antennomeres. Scape, pedicel and flagellomeres 1–2(–3) yellow, rest of flagellum yellowish to light brown. ♀: 2.1–2.2 mm. – Distributed in Europe and Azerbaijan.

Chorebus (Stiphrocera) cubocephalus (Telenga, 1934) – 1 ♂: Chungbuk, Checheon Pongyang Pakdaljae, 23 V 1993, Ku. 1 ♀: Kangwon, Koseong Hyunnae Machajinri, Tongill jeonmangdae, 25 V 1993, Ku. 1 ♀: Kangwon, Taebaek Sangjangdong, 28 V 1993, Ku. 2 ♂: Kyongbuk, Kyongsan, University Yongnam, 4 V 1988 (1 ♂) and 30 V 1989 (1 ♂), Ku. – Reported from Korea (PAPP 2007: 8); in West Palaearctic Region widely distributed and fairly frequent.

Chorebus (Stiphrocera) cybeleius Tobias, 1998, first record of male – 1 ♂: Chonbuk, Chinan Pukwi, 21 V 1993, Ku. – The male deviates from the original description of the female holotype as follows: antenna with 39 antennomeres, temple in dorsal view rounded (and not strongly rounded), fore wing: pterostigma cuneiform, five times as long as wide, legs fully yellow, body 4.5 mm long. – One female specimen reported from Korea (PAPP 2007: 8), described from Asiatic Russia (Primorski Krai) (TOBIAS 1998: 365).

Chorebus (Phaenolexis) cylindratus Tobias, 1998 – 1 ♀: Chungbuk, Koesan Chongchong, Sagimak, 23 V 1993, Ku. 1 ♀: Chungnam, Yesan Sudoksa, 11 VIII 1991, Ku. 1 ♀: Kangwon, Mt. Solak Paekdamsa, 25 V 1993, Ku. 1 ♀: Kangwon, Taebaek Sangjangdong, 28 V 1993, Ku. 2 ♀: Kangwon, Tonghae Pukpyong, 28 V 1993, Ku. 2 ♀: Kyongbuk, Bonghwa Sokpo Sokpo, 28 V 1993, Ku. 1 ♀: Kyongbuk, Ponghwa Pobjon Oji Norujae, 28 V 1993, Ku. 1 ♂: Kyongnam, Chinju-shi Kajwadong, 30 VIII 1993, Ku. – Reported from Korea (PAPP 2007: 8); described from Asiatic Russia (Primorski Krai) (TOBIAS 1998: 364).

Chorebus (Stiphrocera) cylindricus (Telenga, 1934) – 1 ♂: Chungbuk, Chungju Sanchok Yongdong, 23 V 1993, Ku. 1 ♀: Kangwon, Chunchon Shinbuk Chonchon, 25 V 1993, Ku. 2 ♀: Kangwon, Inje Hakang, 27 V 1993, Ku. 1 ♂: Kangwon, Koseong Hyunnae, Machajinri, Tonghill, Jeonmangdae, 25 V 1993, Ku. 17 ♀ + 11 ♂: Kangwon, Mt Solak Paekdamsa,

25 V 1993, Ku. 1 ♂: Kyonbuk, Yongchon Hwabuk, Nokwijae, 29 V 1993, Ku. 1 ♂: Kongwon, Kosong Kansong, Konbongsa, 23 V 1993, Ku. – Distribution: Asiatic Russia (Khabarovsk Territory, Primorski Krai), Japan, Korea (TOBIAS 1998: 365, PAPP 2007: 8). In Europe known in ten countries.

**Chorebus (Phaenolexis) declivis* Tobias, 1998, first record of female (Figs 128–131) – 1 ♀: Kyongbuk, Bonghwa Sokpo Sokpo, 28 V 1993, Ku. – The species was described by the male holotype from Asiatic Russia: Primorski Krai (TOBIAS 1998: 402). The female deviates from the male in a few features: (1) body length 2.5 mm, (2) head less transverse, 1.6 times as broad as long (Fig. 128), (3) mandible as Fig. 129, (4) hind femur 3.8 times as long as broad distally (Fig. 130), (5) ovipositor sheath long, as long as half length of hind tibia (Fig. 131).

Chorebus (Stiphrocera) deminens sp. n.: for its description see the section "Description of the New Species".

**Chorebus (Stiphrocera) diremtus* (Nees, 1834) – 1 ♀: Kangwon, Kosong Kansong Konbongsa, 26 V 1993, Ku. 1 ♀: Kangwon, Mt. Solak Paekdamsa, 25 V 1993, Ku. – In Europe frequent to common, in Asiatic Russia known in Primorski Krai and Sakhalin (TOBIAS 1998: 358).

**Chorebus (Stiphrocera) endymion* Griffiths, 1967 – 1 ♀: Kangwon, Tonghae Pukpyong, 28 V 1993, Ku. – Described from Germany, reported from Asiatic Russia: Primorski Krai, Kamchatka (TOBIAS 1998: 378) and Korea (PAPP 2009: 326). – Scape and pedicel yellow, flagellum dark brown, first tergite moderately broadening posteriorly, densely hairy (albeit not pubescent).

**Chorebus (Stiphrocera) fallaciosae* Griffiths, 1967 – 1 ♀: Kyongnam, Chinju-shi Kajwadong, 18 V 1993, Ku. – Body length 1.9 mm. Antenna with 27 antennomeres. Notaulix very faintly distinct. Mesoscutum medially hairy. Legs fully yellow. – Distribution: England, Denmark, Poland, Hungary in Europe and Kamchatka in Asiatic Russia (TOBIAS 1998: 373).

**Chorebus (Phaenolexis) flagellaris* Tobias, 1998 – 1 ♂: Konggi, Suwon Mt. Yogi, 11–19 V 1994, Ku. – Hitherto known in Asiatic Russia: Primorski Krai, Sakhalin (TOBIAS 1998: 395).

Chorebus (Phaenolexis) fuscipennis (Nixon, 1937) – 1 ♂: Chonbuk, Chinan Pukwi, 21 V 1993, Ku. 1 ♀: Kangwon, Kosong Konbongsa, 26 V 1993, Ku. 1 ♂: Kangwon, Taebaek Sangjangdong, 28 V 1993, Ku. – Known in Korea (PAPP 2007: 8). In Europe widely distributed (Yu *et al.* 2005), with Asiatic Russia (Primorski Krai) the record nearest to Korea (TOBIAS 1998: 394).

Chorebus (Stiphrocera) gavirus sp. n.: for its description see the section "Description of the New Species".

**Chorebus (Phaenolexis) glaber* (Nixon, 1944) – 1 ♂: Kangwon, Yoongwol Nammyon, 24 V 1993, Ku. – In Europe known in 12 countries (Yu *et al.* 2005), in Asiatic Russia: Primorski Krai (TOBIAS 1998: 391).

Chorebus (Stiphrocera) globosus Tobias, 1998 – 1 ♀: Konggi, Suwon Mt. Yogi, 11–19 V 1994, Ku. – Reported from Korea under the name "*veratri* Griffiths, 1968" as a misidentification (PAPP 2009: 237), rectified here. So far known in Asiatic Russia: Primorski Krai, Sakhalin.

Chorebus (Phaenolexis) iridis Griffiths, 1968 – 1 ♀: Kangwon, Pyongchang Mt. Odae, 27 V 1993, Ku. 2 ♀ + 1 ♂: Kangwon, Taebaek Sangjangdong, 28 V 1993, Ku. 1 ♀: Kyongbuk, Kyongsan, University Yongnam, 29 IV 1988, Ku. 1 ♂: Kyongbuk, Ponghwa Pobjon Oji

Norujae, 28 V 1993, Ku. – Reported from Korea (PAPP 2007: 8). In West Palaearctic Region known in five countries, in Asiatic Russia: Primorski Krai.

**Chorebus (Stiphrocera) lateralis* (Haliday, 1839) – 1 ♀: Kangwon, Chunch'on Shibuk Ch'och'on 5-ri, 25 V 1993, Ku. – In West Palaearctic Region frequent to common, in East Palaearctic Region known in Asiatic Russia: Bryansk, Primorski Krai, Kamchatka, Sakhalin.

Chorebus (Phaenolexis) leptogaster (Haliday, 1839) – 1 ♂: Kangwon, Chungchon Shinbuk Chonchon, 25 V 1993, Ku. 1 ♂: Kyongnam, Keojae, Sadung Seongpo, 4 VI 1994, Ku. – Known in Korea (PAPP 2007: 9). In Europe frequent to common, in Asiatic Russia listed in three regions.

Chorebus (Stiphrocera) lissopleuris Tobias, 1998 – 1 ♀: Kyongbuk, Kyongsan, University Yongnam, 4 V 1998, Ku. – The female from Korea deviating from females in the original description (TOBIAS 1998: 357–358, see also PAPP 2005: 227) as follows: (1) antenna with 22–28 antennomeres, (2) notaulix more or less weakly distinct (2 ♀) to almost indistinct, (3) inner margin of eyes convergent ventrally. Reported from Korea (PAPP 2007: 9). Besides Korea known only in Asiatic Russia (Primorski Krai) (TOBIAS l.c.).

Chorebus (Phaenolexis) lobulus sp. n.: for its description see the section "Description of the New Species".

**Chorebus (Stiphrocera) longitarsis* Tobias, 1998 – 1 ♂: Kyongi, Suwon Mt. Yogi, taken with Malaise trap, 3–11 V 1994, Ku. – Described from and hitherto known in Asiatic Russia: Primorski Krai (YU *et al.* 2005).

Chorebus (Stiphrocera) longulus sp. n.: for its description see the section "Description of the New Species".

**Chorebus (Stiphrocera) melanophytobiae* Griffiths, 1968 – 1 ♀: Chungbuk, Ch'ngju Sanrim, Hyangsan, 23 V 1993, Ku. 1 ♀: Chungbuk, Okchon Iwon Iwon, 22 V 1993, Ku. 1 ♀: Chungbuk, Poen Suan, 22 V 1993, Ku. 1 ♂: Kangwon, Chugnchon Shinbuk, 25 V 1993, Ku. 1 ♀: Kangwon, Koseong Hyunnae Machajinri, Tongill, 25 V. 1993, Ku. 1 ♀: Kangwon, Mt Solak Paekdamsa, 25 V 1993, Ku. 1 ♀: Kangwon, Taebaek Sangjangdong, 28 V 1993, Ku. 1 ♀ + 1 ♂: Kangwon, Yoongwol Namyon, 24 V 1993, Ku. 2 ♀: Kyongnam, Chinju-shi Kajwadong, 15 V 1993 (1 ♀) and 9 VI 1993 (1 ♀), Ku. – In the Palaearctic Region known in Spain, Germany, Hungary, Serbia, Azerbaijan and Asiatic Russia (Primorski Krai) (YU *et al.* 2005).

**Chorebus (Stiphrocera) merellus* (Nixon, 1937) – 1 ♂: Chungbuk, Chencheon Pongyang Pakdaljae, 23 V 1993, Ku. – Distribution: in Europe widely distributed albeit sporadically, recorded in Asiatic Russia (Primorski Krai).

Chorebus (Stiphrocera) minutus sp. n.: for its description see the section "Description of the New Species".

**Chorebus (Stiphrocera) misellus* (Marshall, 1895) – 1 ♀: Chungbuk, Poen Suan, 22 V 1993, Ku. 1 ♀: Kangwon, Kosong Kansong, Konbongsa, 26 V 1993, Ku. 1 ♂: Kangwon, Mt. Solak Paekdamsa, 25 V 1993, Ku. – Widely distributed in the Palaearctic Region, nearest to Korea known in Mongolia and Asiatic Russia (Primorski Krai) (PAPP 2007: 227).

**Chorebus (Stiphrocera) mufrius* Tobias, 1998 – 1 ♂: Kangwon, Mt. Solak Paekdamsa, 25 V 1993, Ku. 1 ♀: Kangwon, Yoongwol Nammyon, 24 V 1993, Ku. – Distribution: Asiatic Russia: Primorski Krai (type locality), Mongolia (PAPP 2005: 117, TOBIAS 1998: 356).

Chorebus (Phaenolexis) nigriridis Tobias, 1998 – 1 ♂: Kangwon, Taebaek Sangjangdong, 28 V 1993, Ku. – Known in Korea (PAPP 2007: 9); besides Korea known only in Asiatic Russia: Sakhalin (type locality) (TOBIAS 1998: 399).

**Chorebus (Phaenolexis) nomioides* Tobias, 1997 – 1 ♀: Chungnam, Komsan Chubu Kaedoksa, 22 V 1993, Ku. – In the East Palaearctic Region known in five regions of Asiatic

Russia (Irkutsk, Primorski Krai, Khabarovsk, Sakhalin, Evreyskaya oblast) (BELOKOBYLSKIJ & TOBIAS 1997: 16, TOBIAS 1998: 387).

Chorebus (Stiphrocera) occultus PAPP, 2009 – 1 ♂: Kangwon, Chunchon Shinbuk Chonchon, 25 V 1993, Ku. 1 ♂: Kangwon, Kosong Kansongi Konbongsa, 26 V 1993, Ku. 1 ♂: Kyongbuk, Andong Pobhonggyo, 24 V 1989, Ku. 1 ♂: Kyongbuk, Ponghwa Myongho Kwanchang, 28 V 1993, Ku. – Described from and so far known only in Korea (PAPP 2005: 251).

**Chorebus (Stiphrocera) pachysemoides* Tobias, 1998 – 2 ♀ + 1 ♂: Chungbuk, Chungju Sanchok Yongdong, 23 V 1993, Ku. 1 ♀: Chungbuk, Chungju Sanrim Hyangsan, 23 V 1993, Ku. 2 ♀: Chungbuk, Checheon Pongyang Pakdaljae, 23 V 1993, Ku. 1 ♂: Chungnam, Komsan Chubu, Kaedoksa, 22 V 1993, Ku. 2 ♀ + 2 ♂: Kangwon, Koseong Hyunnae Machajinri, Tongill jeonmangdae, 25 V 1993, Ku. 4 ♀ + 1 ♂: Kangwon, Kosong Kansong Konbongsa, 26 V 1993, Ku. 1 ♀ + 2 ♂: Kangwon, Mt. Solak Paekdamsa, 25 V 1993, Ku. 1 ♀: Kyongbuk, Kyongsan, University Yongnam, 4 V 1988, Ku. 1 ♀: Kyongbuk, Ponghwa Myongho Kokye, 28 V 1993, Ku. 1 ♂: Kyongbuk, Ponghwa Oji Norujae, 28 V 1993, Ku. 1 ♀: Kyonggi, Suwon Mangpo, 21 VI 1997, leg. Sung-Bok Ahn. – Specimens from Korea deviate from the original description (TOBIAS 1998: 364–365) as follows: (1) first tergite 1.5–1.65 times as long as broad posteriorly, (2) antenna with 27–31 (♀) and 32–35 (♂) antennomeres. The Korean specimens were compared to the female and male paratypes of *Ch. pachysemoides*. Described from and otherwise known only in Asiatic Russia: Primorski Krai.

Chorebus (Stiphrocera) panilus sp. n.: for its description see the section "Description of the New Species".

**Chorebus (Stiphrocera) pione* (Nixon, 1944) – 1 ♂: Chungbuk, Chungju Sanrim, Hyangsan, 23 V 1993, Ku. 1 ♂: Kangwon, Kosong, Kansongi, 26 V 1993, Ku. 1 ♂: Kyongbuk, Ponghwa Myongho, Kwanchang, 28 V 1993, Ku. – Distribution: England, Sweden Poland, Asiatic Russia (Primorski Krai).

Chorebus (Stiphrocera) pseudomisellus Griffiths, 1968 – 1 ♀: Kangwon, Taebaek Sangjangdong, 28 V 1993, Ku. 1 ♀: Kyongbuk, Ponghwa Myongho Kokye, 28 V 1993, Ku. 1 ♀ + 1 ♂: Kyongnam, Chinju-shi Kajwadong, 9 VI 1993, Ku. – Known in Korea (PAPP 2009: 237). A rare species: in Europe known in Germany and Spain, in Asiatic Russia known in Kamchatka.

Chorebus (Stiphrocera) ranfus sp. n.: for its description see the section "Description of the New Species".

Chorebus (Stiphrocera) resus (Nixon, 1937) – 1 ♀ + 1 ♂: Kangwon, Chunchon Shinbuk, Chochon 5-ri, 25 V 1993, Ku. 1 ♂: Kangwon, Kosong Kansong, 25 V 1993, Ku. 1 ♀ + 1 ♂: Kangwon, Kosong Kansongi, Konbongsa, 26 V 1993, Ku. 1 ♀: Kyongnam, Chinju Kajwa, 25 X 1993, Ku. 1 ♀ + 1 ♂: Kyongnam, Chinju-shi Kajwadong, V 1993, Ku. 1 ♀: Kyongi, Suwon Mt. Yogi, 11 V 1994, Ku. – Known in Korea (PAPP 2007: 9). In the Palaearctic Region reported from seven countries, a less frequent species.

Chorebus (Phaenolexis) serus (Nixon, 1937) – 1 ♂: Chonnam, Vochon Nammyon, Andori, 4 VIII 1993, Ku. 1 ♀: Gyeongnam GoseongGun, Samsan-myeon Byeongsan-ri, taken with UV-lamp, 19–20 VIII 1993, Ku. 2 ♀ + 1 ♂: Kyongnam, Chinju-shi Kaiwadong, V 1993, Ku. 1 ♀: Kyongi, Hwasong Pibong, 1 VI 1994, Ku. – Known in Korea (PAPP 2007: 9). In the Palaearctic Region reported from England, Denmark, Austria and Asiatic Russia (Primorski Krai).

Chorebus (Stiphrocera) spenceri Griffiths, 1964 – 1 ♀: Kyongbuk, Ponghwa Myongho Kwanchang, 28 V 1993, Ku. – Known in Korea (PAPP 2009: 237). Besides Korea reported from England, Portugal and Hungary.

**Chorebus (Etriptes) subasper* Griffiths, 1968 – 1 ♀: Chungbuk, Chungju Sanrim Hyangsan, 23 V 1993, Ku. 1 ♂: Kangwon, Mt. Taebaek, 13 VIII 1989, Ku. – Described from Poland (GRIFFITHS 1968b: 72), reported from Asiatic Russia (Kuril Islands) (TOBIAS 1998: 354).

**Chorebus (Stiphrocera) varunus* (NIXON, 1945) – 1 ♀: Chungbuk, Checheon Pongyang Pakdaljae, 23 V 1993, Ku. 1 ♀: Kangwon, Kossong Hynnae Machajinri, 25 V 1993, Ku. 7 ♀ + 2 ♂: Kyongbuk, Kyongsan, University Yongnam, 4 V 1988, Ku. 1 ♀: Kyongnam, Chinju-shi Kajwadong, 18 V 1993, Ku. – In the Palaeartic Region known in seven countries: England, Sweden, Poland, Hungary, Azerbaijan, Turkey, European and Asiatic Russia (Primorski Krai, Khabarovsk, Kamchatka).

**Chorebus (Stiphrocera) veratri* Griffiths, 1968 – 1 ♂: Kyongbuk, Kyongsan, University Yongsan, 4 V 1988, Ku. – Distribution: In Europe known in Germany and Hungary, recorded in Asiatic Russia (Primorski Krai, Kamchatka). See also *Ch. (St.) globosus* Tobias, 1998.

Chorebus (Phaenolexis) xiphidius GRIFFITHS, 1967 – 1 ♀: Chungbuk, Danyang, 8 VII 1989, Ku. 2 ♂: Chungbuk, Koesan Chongchong, 23 V 1993, Ku. 1 ♂: GyeongNam, Chinju-City, Chojeon-dong, taken at light with light-trap, 30 VI 1993, Ku. 1 ♂: Kangwon, Koseong Hyunnae Machajinri, Tongil, 25 V 1993, Ku. – Known in Korea (PAPP 2007: 9). In the Palaeartic Region distributed sporadically: Germany, Hungary, Serbia, Asiatic Russia (Chita Krai, Primorski Krai).

**Chorebus (Stiphrocera) xylostellus* Griffiths, 1967 – 1 ♀: Kyonggi, Suwon, Mangpo, 21 VI 1997, Sung-Bok Ahn. – Deviations from the female paratype: (1) upper tooth of mandible somewhat stronger, (2) metasoma entirely brownish yellow, (3) mandible pale yellow, (4) flagellomeres partly pale yellow partly brownish. – Distribution: Germany, Poland, Sweden, Asiatic Russia (Primorski Krai).

Chorebus (Phaenolexis) zeris sp. n.: for its description see the section "Description of the New Species".

**Dacnusa (Pachysema) sibirica* Telenga, 1934 – 4 ♂: Kyongbuk, Ponghwa Myongho Kokyo, 28 V 1993, Ku. 1 ♀: Kyongbuk, Yongchon Pond Osu, 29 V 1993, Ku. 2 ♀: Kyongnam, Chinju Kajwa, 10–23 VI (1 ♀) and 10 XI 1993 (1 ♀), Ku. 1 ♀: Kyongnam, Chinju, Chojeon-dong, taken at night with mercury-vapour lamp, 16–17 VI 1996, Ku. 1 ♂: Kyongnam, Chinju-shi, Kajwadong, 9 VI 1993, Ku. – Deviations from the original description: (1) antenna with 24 (1 ♀), 25 (1 ♀ + 3 ♂) and 26 (1 ♀ + 1 ♂) antennomeres, (2) first tergite 1.8–2 times as long as broad behind, (3) albanic form (3 ♀ + 4 ♂): head, mesosoma and first tergite brown, rest of metasoma yellow to brownish yellow. – Distribution: spread in Europa, nearest to Korea reported from Asiatic Russia (Irkutsk, Primorski Krai) and Mongolia.

**Dacnusa (Pachysema) sublaeta* Tobias, 1998 – 1 ♀: Kyongnam, Koseong, Sangri Munsum, 3 VI 1993, Ku. – Described from and hitherto known in Asiatic Russia (Buryatsk, Primorski Krai, Sakhalin) (TOBIAS 1998: 347).

Dacnusa (Pachysema) sulcipleuris Tobias, 1998 – 1 ♀: Kyongnam, Chinju Kajwa, 25 X 1993, Ku. – Known in Korea (PAPP 2007: 10). Besides Korea known in Asiatic Russia: Primorski Krai (type locality) (TOBIAS 1998: 352).

**Laotris striatula* (Haliday, 1839) – 1 ♂: Kyongbuk, Andong Imha-Daern, taken with yellow pan trap, 10 V 1997, J-Y. Choi. – In Europe widely distributed in twelve countries; Korea is its first report from East Palaeartic Region.

**Orientalix marginalis* Tobias, 1998 (Figs 3–11) – 1 ♀: Kangwon, Taebaek Sangjang-dong, 28 V 1993, Ku. – Taxonomic remark: The female specimen from Korea was compared to the female paratype of this species (the paratype was kindly presented me for examina-

tion by S. A. Belokobylskij, Sankt-Petersburg, taking it personally visiting Budapest Museum). The comparison revealed some deviations between the two specimens as follows:

Female paratype (Asiatic Russia: Primorski Krai): (1) head in dorsal view twice as broad as long, eye and temple of equal length (Fig. 3), (2) third and fourth denticles of mandible indistinct (Fig. 5, see arrow), (3) basal part of hind femur a bit less thick (Fig. 7), (4) first tergite somewhat more broadening posteriorly and somewhat broader behind than long medially (Fig. 9); (5) antenna with 26 antennomeres.

Korean female: (1) head in dorsal less transverse, 1.75 times as broad as long, temple somewhat longer than eye (Fig. 4), (2) third and fourth denticles of mandible faintly distinct (Fig. 6, see arrow), (3) basal part of hind femur slightly thicker (Fig. 8), (4) first tergite somewhat less broadening posteriorly and slightly longer than broad behind (Fig. 10), (5) antenna with 28 antennomeres.

In the original description (TOBIAS 1998: 312–313) the venation of the fore wing was characterized succinctly as "Radial cell short, radial vein strongly S-form." Details of the veins of fore wing are given subsequently: Fore wing as long as body. Pterostigma wide, 3.6 times as long as wide and issuing *r* clearly proximally from its middle; *1-R1* 0.6 times as long as pterostigma. Vein *r* a bit longer than half width of pterostigma (6:11). *2-SR* one-third longer than *r* (9:6); *3-SR + SR1* strongly curved and ending far before tip of wing (Fig. 11, see arrows). – A redescription of the female holotype (of *O. marginalis*) was presented by FISCHER (2001: 40).

Up to now known only in Asiatic Russia: Primorski Krai (TOBIAS l.c.).

DESCRIPTION OF THE NEW SPECIES

Chorebus (Stiphrocera) deminens sp. n.

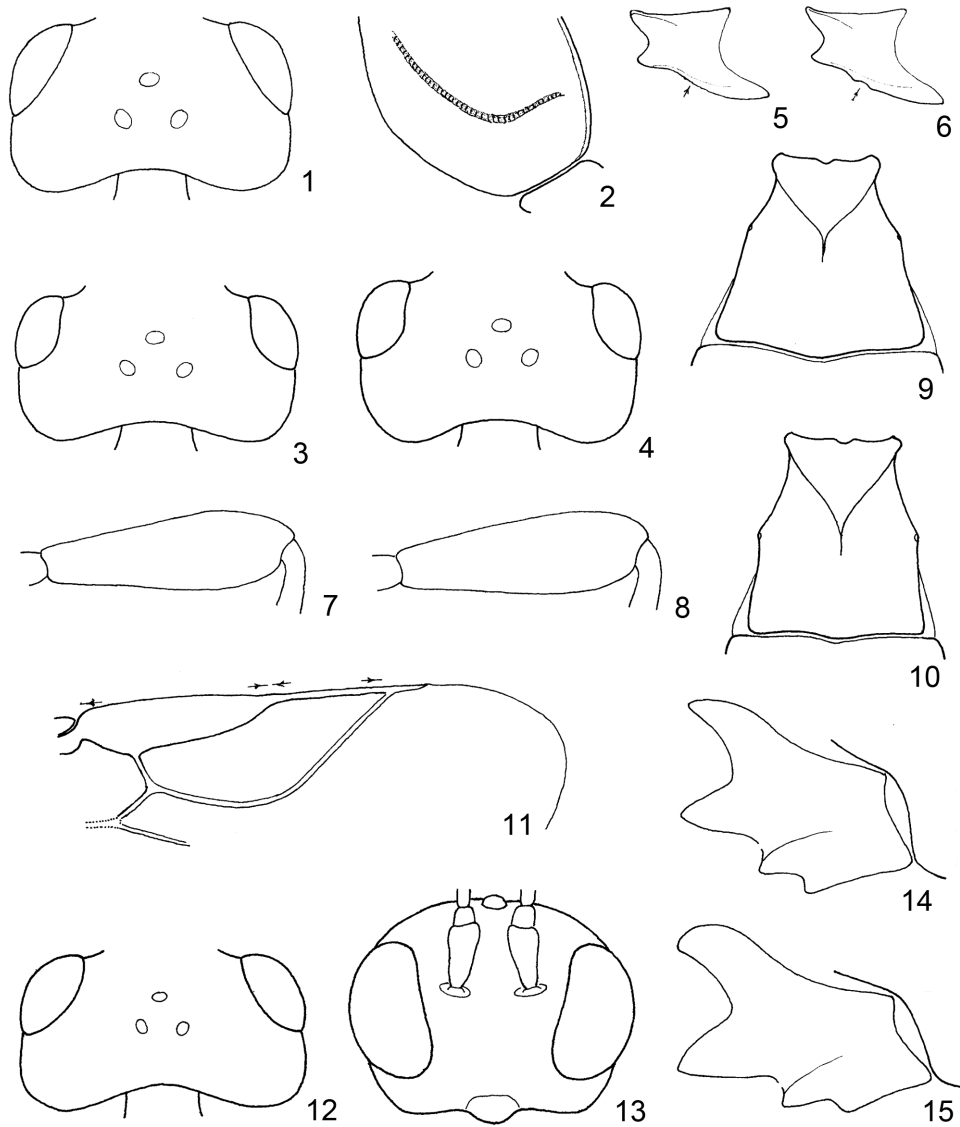
(Figs 12–14, 16–20)

Type material – Male holotype: Korea, Kyonggi Suwon, 15 June 1994, leg. D-S. Ku. Holotype is in good condition: (1) glued on a card point by its right mesosomal side, (2) right side of mesosoma invisible owing to the mounting. Holotype is deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 12122.

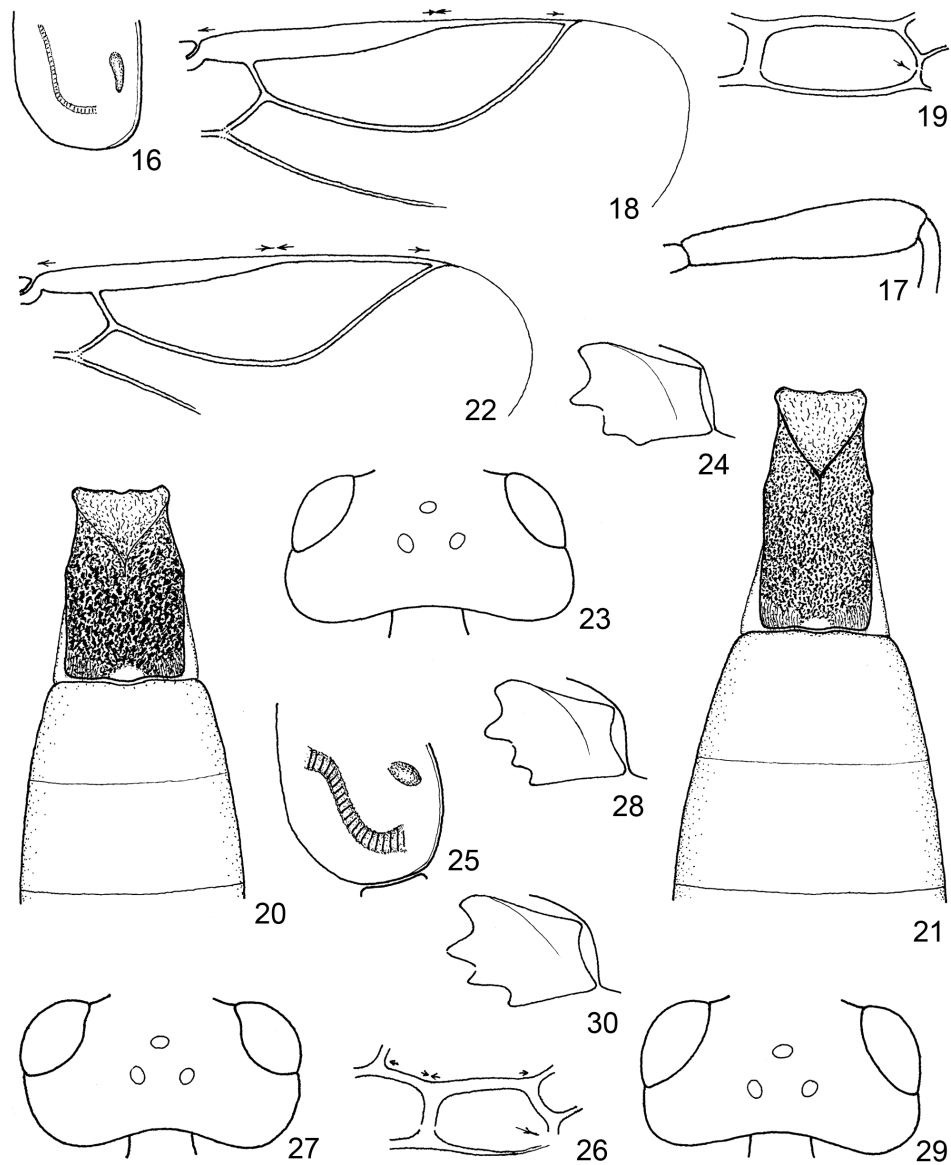
Etymology – The new species received the name "deminens" being an epithet of demin[utus d]ens (less expanded tooth).

Description of the male holotype – Body length 2 mm. Antenna nearly twice as long as body and with 33 antennomeres. First flagellomere 3.1 times and penultimate flagellomere twice as long as broad, flagellomeres distally attenuating. – Head in dorsal view transverse (Fig. 12), 1.8 times as broad as long, eye somewhat longer than temple (17:15), temple very faintly swollen (i.e. head between temples a bit broader than between eyes). Eye in lateral view 1.8 times as high as wide, temple as wide as eye. Mandible as long medially as high between upper and lower teeth, upper tooth highly expanded, teeth 2–4 small (Fig. 14). In frontal view inner margin of eyes feebly converging ventrally (Fig. 13). Maxillar palpomeres long, palp almost as long as height of head. Head polished, face and clypeus hairy, vertex with more widely dispersed hairs.

Mesosoma in lateral view 1.4 times as long as high. Pronotum bare. Notaulix indistinct. Mesoscutum hairy except hind half of lateral lobes, mesoscutal midpit short linear-form; mesoscutum and scutellum polished. Propodeum densely rugose, densely hairy to



Figs 1–15. 1–2: *Chorebus (Stiphrocera) crenulatus* (Thomson), female: 1 = head in dorsal view, 2 = mesopleuron. 3–11: *Orientelix marginalis* Tobias: 3 (female paratype) – 4 (Korean female) = head in dorsal view, 5 (female paratype) – 6 (Korean female) = mandible, 7 (female paratype) – 8 (Korean female) = hind femur, 9 (female paratype) – 10 (Korean female) = first tergite, 11 (Korean female) = distal part of right fore wing. 12–14: *Chorebus (Stiphrocera) deminens* sp. n., male holotype: 12 = head in dorsal view, 13 = head in frontal view, 14 = mandible. 15 = *Chorebus (Stiphrocera) resus* (Nixon), male: mandible.



Figs 16–30. *Chorebus (Stiphrocera)* species. 16–20: *Ch. (S.) deminens* sp. n., male holotype: 16 = mesopleuron, 17 = hind femur, 18 = distal part of right fore wing, 19 = first subdiscal cell, 20 = tergites 1-3. 21–22: *Ch. (S.) resus* (Nixon), male: 21 = tergites 1-3, 22 = distal part of right fore wing. 23–26: *Ch. (S.) gavirus* sp. n., male, holotype: 23 = head in dorsal view, 24 = mandible, 25 = mesopleuron, 26 = first subdiscal cell of fore wing. 27–28: *Ch. (S.) albimarginis* Griffiths, male: 27 = head in dorsal view, 28 = mandible. 29–30: *Ch. (S.) meracus* Tobias, male: 29 = head in dorsal view, 30 = mandible.

pubescence, metapleural rosette distinct. Mesopleuron polished, its precoxal suture narrow and crenulated (Fig. 16). – Hind femur 3.8 times as long as broad distally (Fig. 17). Hind tibia and tarsus equal in length, hind basitarsus as long as tarsomeres 2–3 combined.

Fore wing about one-sixth longer than body. Pterostigma (Fig. 18) fairly wide, cuneiform, eight times as long as wide, *r* somewhat longer than width of pterostigma (7:5); 1–R1 short, half as long as pterostigma, 3–SR + SR1 evenly bent and less approaching tip of wing. First subdiscoidal cell closed distally (Fig. 19, see arrow).

First tergite (Fig. 20) 1.6 times as long as broad behind, up to pair of spiracles weakly broadening, beyond spiracles parallel-sided, pair of basal keels less distinct and meeting anteriorly; tergite itself densely rugose, hairy, hind corner with tuft of hairs. Further tergites polished. Tergites 2–3 somewhat longer than first tergite.

Scape, pedicel and flagellomeres 1–2(–3) yellow, rest of flagellum brown. Head, mesosoma and first tergite black, tergites 2–3 dark brown, rest of tergites blackish. Mandible yellow, palpi pale yellow. Tegula brown. Legs yellow, telotarsi dark. Wings hyaline, pterostigma and veins greyish brownish.

Female and host unknown.

Distribution: Korea.

Taxonomic position – The new species, *Chorebus (Stiphrocera) deminens*, is nearest to *Ch. (St.) resus* (Nixon) (NIXON 1937: 21 description, 1943: 165 in key, 1944: 151 redescription) considering their expanded upper (or first) tooth of mandible, first tergite parallel-sided, transverse head in dorsal view and yellow legs; the distinction of the males of the two species restricting to a few features:

- 1 (2) First (or upper) tooth of mandible less expanded (Fig. 14). First tergite less long, 1.6 times as long as broad behind (Fig. 20). Fore wing: 1–R1 short, half as long as pterostigma, less approaching tip of wing (Fig. 18). Antenna with 33 antennomeres. Metasoma dark brown to blackish, tegula brown. ♂: 2 mm. – Korea ***Chorebus (Stiphrocera) deminens* sp. n.**
- 2 (1) First (or upper) tooth of mandible more expanded (Fig. 15). First tergite longer, 2–2.4 times as long as broad behind (Fig. 21). Fore wing: 1–R1 long, one-third shorter than (or 0.6 times as long as) length of pterostigma, more approaching tip of wing (Fig. 22). Antenna with 42 antennomeres. Metasoma and tegula yellow. ♂: 2.4–3 mm. – Europe, Russia
Chorebus (Stiphrocera) resus (Nixon, 1937)

***Chorebus (Stiphrocera) gavirus* sp. n.**

(Figs 23–26, 31–33)

Type material – Male holotype: Korea, Kyongbuk, Bonghwa Sokpo, 28 May 1993, leg. D.-S. Ku. Holotype is in good condition: glued on a card point by its right mesopleuron. Holotype is deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 12123.

Etymology – The new species received the latinized phantasy name "gavirus".

Description of the male holotype – Body length 2.5 mm. Antenna about two times longer than body and with 36 antennomeres. First flagellomere four times as long as broad apically, penultimate flagellomere 3.5 times as long as broad, flagellomeres distally attenuating. – Head in dorsal view transverse (Fig. 23), twice as broad as long, temple slightly swollen (i.e. head between temples slightly broader than between eyes); eye slightly longer than temple (16:15). Ocelli small, elliptic, forming a nearly equilateral triangle, OOL 1.6 times as long as POL. Eye in lateral view 1.7 times as high as wide, temple somewhat (18:16) broader than eye and ventrally just narrowing. Mandible (Fig. 24) 1.4 times as long as broad between upper and lower teeth, broadening distally, first and second teeth fairly large and pointed, denticles 3–4 faintly distinct. In frontal view inner margin of eyes parallel. Maxillar palpomeres long, palp as long as height of head. Head polished, face and clypeus hairy, vertex with more widely dispersed hairs.

Mesosoma in lateral view stout, 1.2 times as long as high. Pronope small, pronotum bare. Notaulix absent, mesoscutum and scutellum hairy, subshiny. Propodeum densely rugulose, pubescence, metapleural rosette less distinct. Precoxal suture sinuate, fairly wide and deep, crenulated (Fig. 25), mesopleuron otherwise polished. – Hind femur 4.5 times as long as broad distally (Fig. 31). Hind tibia just longer than tarsus (50:45). Hind basitarsus as long as tarsomeres 2–3 combined.

Fore wing slightly longer than body. Pterostigma (Fig. 32) seven times as long as wide, *r* slightly longer than width of pterostigma (9:7), *SR1*-part of 3–*SR* + *SR1* straight and ending rather far from tip of wing, *1-R1* 0.7 times as long as pterostigma (or pterostigma 1.4 times as long as *1-R1*); *m-cu* antefurcal. First subdiscal cell short, veins somewhat thick, *1-CU2* twice as long as *1-CU1*, distally rather open (Fig. 26, see arrows).

First tergite (Fig. 33) long and narrow, 2.6 times as long as broad behind, from base to pair of spiracles faintly broadening, beyond spiracles parallel-sided, pair of basal keels not meeting, pair of small spiracles at middle of tergite; tergite rather longitudinally rugose-rugulose and with dispersed long hairs. Hind corner of first tergite without tuft of hairs. Further tergites polished. Third tergite slightly longer than second tergite (27:24).

Scape yellow, pedicel brownish, flagellum brown. Head, mesosoma and first tergite black. Metasoma light brown (tergites 2–3) to brown. Mandible deep, yellow, Clypeus brown, labrum yellow, palpi pale yellow. Tegula yellow, parategula light brown. Legs yellow, hind tibia distally and tarsus entirely very feebly fumous. Wings subhyaline, pterostigma greyish brown, veins proximo-distally yellow to brownish.

Male and host unknown.

Distribution: Korea.

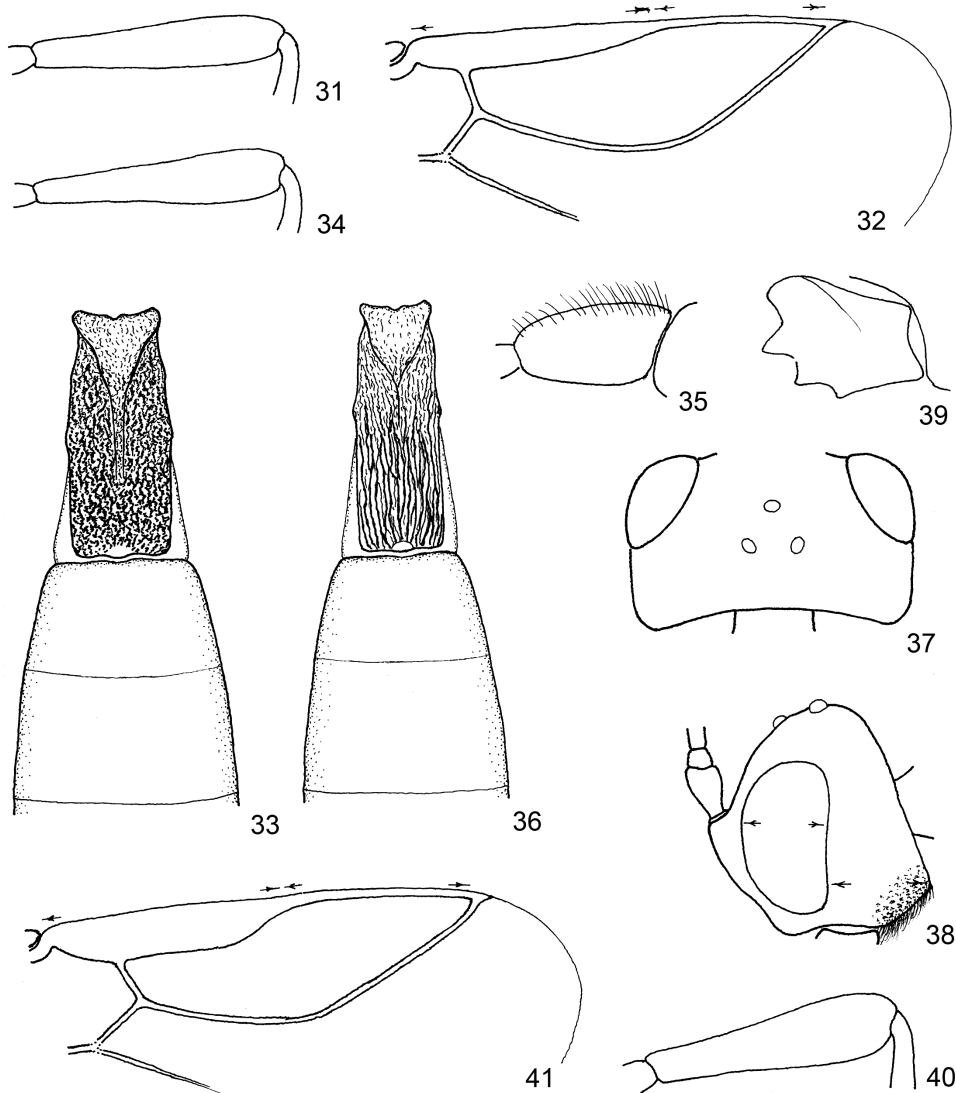
Taxonomic position – The new species, *Chorebus (Stiphrocera) gavirus*, is nearest to *Ch. (S.) albimarginis* Griffiths (GRIFFITHS 1967: 860) and *Ch. (S.) meracus* Tobias (TOBIAS 1998: 362) based on Tobias's identification keys (TOBIAS 1986: 173–208 and 1998: 354–410) to the Russian (or Palaearctic) *Chorebus* species. All three species are characterized by loose tuft hairs of hind coxa (Fig. 35). The three species are distinguished by the following features:

1.) Distinction between *Ch. gavirus* and *Ch. albimarginis*:

- 1 (2) Temple in dorsal view weakly (though distinctly) swollen (Fig. 23). First tergite relatively broad, 2.5 times as long as broad posteriorly, rugose-rugulose, pair of basal keels not meeting; third tergite slightly longer than second tergite (Fig. 33). Mesoscutum entirely hairy, notaulix absent.

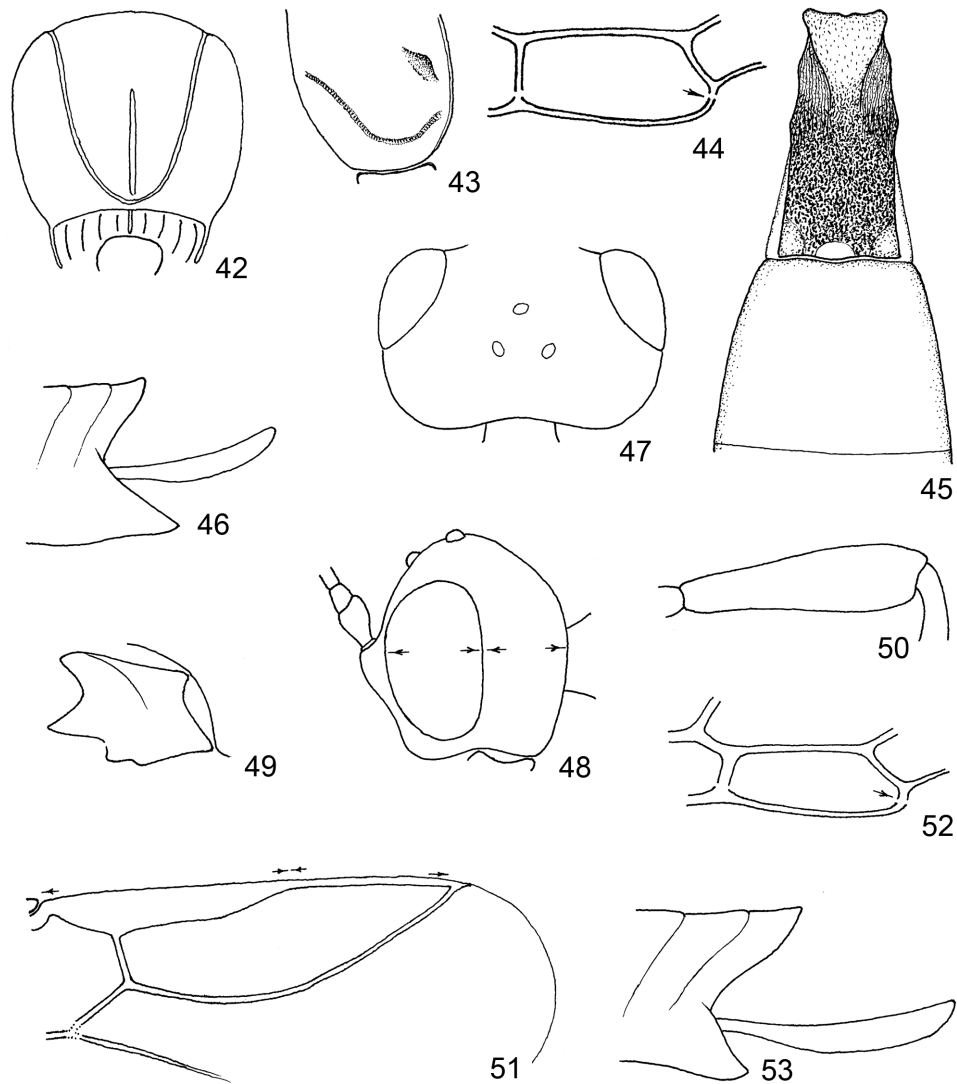
Hind femur 4.5 times as long as broad distally (Fig. 31). Mandible: denticles 3–4 less distinct, teeth 1–2 more pointed (Fig. 24). Metasoma light brown to brown, first tergite black; coxae yellow (legs yellow). ♂: 2.5 mm. – Korea

Chorebus (Stiphrocera) gavirus sp. n.



Figs 31–41. *Chorebus* species. 31–33: *Ch. (Stiphrocera) gavirus* sp. n., male holotype: 31 = hind femur, 32 = distal part of right fore wing, 33 = tergites 1–3. 34–36: *Ch. (Stiphrocera) albimarginis* Griffiths, male: 34 = hind femur, 35 = hind coxa, 36 = tergites 1–3. 37–41: *Ch. (Phaenolexis) lobulus* sp. n., female holotype: 37 = head in dorsal view, 38 = head in lateral view, 39 = mandible, 40 = hind femur, 41 = distal part of right fore wing.

2 (1) Temple in dorsal view rounded (i.e. not swollen) (Fig. 27). First tergite relatively less broad, 2.7–2.8 times as long as broad posteriorly, longitudinally striated, pair of basal keels meeting, third tergite distinctly longer



Figs 42–53. *Chorebus* species. 42–46: *Ch. (Phaenolexis) lobulus* sp. n., female holotype: 42 = mesoscutum and prescutellar furrow, 43 = mesopleuron, 44 = first subdiscal cell of fore wing, 45 = tergites 1–3, 46 = hind half of female metasoma. 47–53: *Ch. (Stiphrocera) longulus* sp. n., female holotype: 47 = head in dorsal view, 48 = head in lateral view, 49 = mandible, 50 = hind femur, 51 = distal part of right fore wing, 52 = first subdiscal cell of fore wing, 53 = hind half of female metasoma.

than second tergite (Fig. 36). Mesoscutum hairy on anterior half, notaulix weak and weakening posteriorly. Hind femur 5–5.5 times as long as broad distally (Fig. 34). Mandible: denticles 3–4 distinct, teeth 1–2 less pointed (Fig. 28). Metasoma dark to blackish brown, tergites 2–3 yellowish to brownish; hind coxae darkening (legs yellow). ♂: 1.9–2 mm. – Germany, Hungary *Chorebus (Stiphrocera) albimarginis* Griffiths, 1967

2.) Distinction between *Ch. gavirus* and *Ch. meracus*:

1 (2) Temple in dorsal view weakly albeit distinctly swollen, eye slightly longer than temple (16:15) (Fig. 23). Mandible: second tooth slightly less pointed, denticles 3–4 faintly distinct (Fig. 24). Notaulix missing, mesoscutum entirely hairy. Antenna with 36 antennomeres. Hind coxa yellow (leg yellow), wings subhyaline. ♂: 2.5 mm. – Korea

***Chorebus (Stiphrocera) gavirus* sp. n.**

2 (1) Temple in dorsal view rounded, eye 1.6 times longer than temple (Fig. 29). Mandible: second tooth slightly more pointed, denticles 3–4 distinct (Fig. 30). Notaulix faintly distinct, mesoscutum between notaulices hairy. Antenna with 43 antennomeres. Hind coxa darkening brownish (legs yellow), wings fumous. ♀: 2.6–2.7 mm. – Asiatic Russia (Primorski Krai), Mongolia

Chorebus (Stiphrocera) meracus Tobias, 1998

The new species seems also near to *Ch. (S.) rubicundulus* Tobias (Tobias 1998: 360) viewing their common features: first tergite very long, i.e. 2.5–3.5 times as long as broad behind and metasoma light coloured beyond black first tergite; the two species are distinguished as follows:

1 (2) Notaulix deep, sculptured. Precoxal suture smooth. Lateral lobe of mesoscutum bare, median lobe hairy. Occiput felt-like hairy. Legs brownish yellow. ♂: 2.2 mm. – Asiatic Russia (Primorski Krai)

Chorebus (Stiphrocera) rubicundulus Tobias, 1998

2 (1) Notaulix indistinct. Precoxal suture crenulated (Fig. 25). Mesoscutum entirely hairy. Occiput bare. Legs yellow. ♂: 2.5 mm. – Korea

***Chorebus (Stiphrocera) gavirus* sp. n.**

***Chorebus (Phaenolexis) lobulus* sp. n.**

(Figs 37–46)

Type material – Female holotype: Korea, Kangwon, Taebaek Cholam Idong, 22 January 1991, leg. D.-S. Ku. Holotype is in good condition: (1) glued on card point by its mesosternum, (2) left flagellum distally deficient, i.e. with 21 antennomeres, (3) wings somewhat creased. Holotype is deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 12124.

Etymology – The species name “lobulus” refers to the anguliform lobule of gena beyond mandible (Fig. 38).

Description of the female holotype – Body length 3.4 mm. Right antenna slightly longer than body and with 31 antennomeres. First flagellomere 2.6 times and penultimate flagellomere 1.5 times as long as broad. – Head in dorsal view transverse (Fig. 37), 1.65 times as broad as long, eye one-fourth (1.25 times) longer than temple, temple straight, i.e. not rounded, occiput less excavated. Ocelli small, elliptic, far from each other, OOL 2.3 times as long as POL. Eye in lateral view 1.7 times as high as wide and slightly less wide than gena (18:20) at lobule, lobule ventrally on gena close to mandible, angular in form and with short pubescence (Fig. 38, see arrows). Inner margin of eyes somewhat converging ventrally. Mandible (Fig. 39): upper (or first) tooth rounded, second tooth spiky, 3rd and 4th teeth small. Head polished; face hairpunctured, vertex with dispersed hairs.

Mesosoma in lateral view 1.6 times as long as high. Notaulix weakly distinct, shallow, smooth; pubescence of mesosoma abundant characteristic to species of *Leptogaster*-group. Mesoscutum hairy anteriorly, mesoscutal midpit long, longer than width of prescutellar furrow (Fig. 42). Precoxal suture linearform, curved, extended from fore to hind margins of mesopleuron, subcrenulated (Fig. 43). Rosette of metapleuron distinct. Propodeum and metapleuron densely rugulose. – Hind femur 3.5 times as long as broad and clearly broadening distally (Fig. 40). Hind tibia somewhat longer than hind tarsus. Hind basitarsus as long as tarsomeres 2–3 + 2/3rd of fourth tarsomere combined.

Fore wing as long as body. Pterostigma wide (Fig. 41), five times as long as wide, issuing *r* proximally from its middle and shorter than width of pterostigma (9:10); 2–SR 1.4 times as long as *r*, 1–R1 0.8 times as long as pterostigma and approaching tip of wing; SR1 straight, 3–SR + SR1 as in Fig. 41. First subdiscal cell closed distally, veins relatively thin (Fig. 44, see arrow).

First tergite (Fig. 45) twice as long as broad behind, parallel-sided, relatively broad, pair of spiracles before middle of tergite, pair of basal keels not meeting; rugo-rugulose, baso-laterally striated, hairless. Tergites 2–3 one-fourth (40:50) shorter than first tergite, border between them indistinct. Tergites beyond first tergite polished. Hypopygium pointed, ovipositor sheath as long as hind basitarsus (Fig. 46).

Scape, pedicel and flagellomeres 1–2(–3) brownish yellow, flagellum rather light brown. Head and mesosoma black with dark brown suffusion, first tergite blackish. Tergites 2–3 yellow, rest of tergites brown. Palpi pale yellow. Tegula and legs yellow. Wings hyaline, pterostigma and veins brown.

Male and host unknown.

Distribution: Korea.

Taxonomic position – The new species, *Chorebus (Phaenolexis) lobulus*, runs to *Ch. (Ph.) petiolaris* Tobias (TOBIAS 1998: 405) in Tobias’s key to the Far East *Chorebus* species of Asiatic Russia (TOBIAS 1998: 354–410; the species in question known by its description). Their common features are: gena ventrally and close to mandible with an angular lobule (Fig. 38), temple in dorsal view straight (Fig. 37), mesosoma 1.5–1.6 times as long as high, first tergite parallel-sided and legs more or less yellow; the two species are differentiated by the following features:

- 1 (2) Temple in dorsal view slightly longer than eye, angular lobule of gena with long pubescence. Hind femur five times as long as broad. Antenna with 40 antennomeres. Occiput pubescence. Mesoscutal midpit shorter than width of prescutellar furrow. First tergite hairy. Legs brownish yellow, hind tibia brownish fumous, tarsus brown. ♀: 3 mm. – Asiatic Russia (Primorski Krai) *Chorebus (Phaenolexis) petiolaris* Tobias, 1998
- 2 (1) Temple in dorsal view one-fourth (or 0.75 times) shorter than eye (Fig. 37), angular lobule of gena with short pubescence (Fig. 38). Hind femur 3.5 times as long as broad (Fig. 40). Antenna with 31 antennomeres. Occiput with disperse hairs. Mesoscutal midpit long, longer than width of prescutellar furrow (Fig. 42). First tergite bare. Legs yellow. ♀: 3.4 mm. – Korea ***Chorebus (Phaenolexis) lobulus* sp. n.**

***Chorebus (Stiphrocera) longulus* sp. n.**
(Figs 47–56, 64)

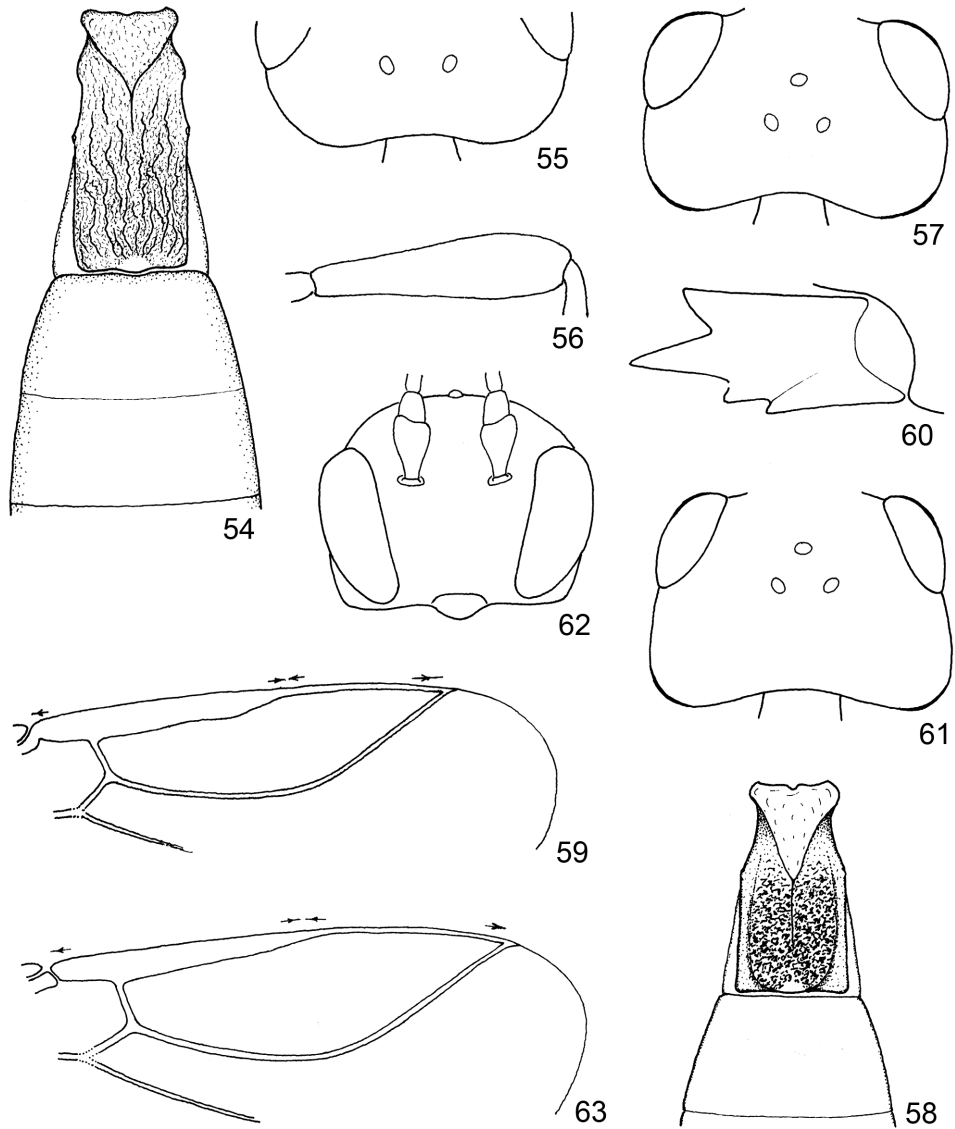
Type material (5 ♀ + 1 ♂) – Female holotype: Korea, Kangwon, Mt. Solak Paekdamsa, 25 May 1993, leg. D.-S. Ku. 2 ♀ paratypes: Korea, Kangwon, Taebaek Sangjangdong, 28 May 1993, leg. D.-S. Ku. 1 ♀ paratype: Korea, Chungnam, Komsan Nami Posoka, 22 May 1993, leg. D.-S. Ku. 1 ♀ paratype: Korea, Kyosongbuk, Bonghwa Sokpo Sokpo, 28 May 1993, leg. D.-S. Ku. 1 ♂ paratype: Korea, Kyongbuk, Andong Peongeon, Kangdong-ri, taken by sweeping, 10 May 1997, leg. D.-S. Ku.

Holotype is in good condition: (1) glued on a card point by right side of its mesosoma, (2) right legs partly merged into glue. – Four female paratypes are also in good condition: (1) glued on card points by their left side (1 ♀) and right side (1 ♀) as well as on mesosternum (2 ♀), (3) metasoma and left hind leg glued separately on the card point (1 ♀: Chungnam). – One male paratype is in good condition: (1) glued on card point by its right mesosoma side, (2) left antenna apically deficient: last two flagellomeres missing, i.e. antenna with 23 antennomeres.

Holotype and five paratypes (4 ♀ + 1 ♂) are deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. Nos 12126 (holotype) and 12127–12131 (paratypes).

Etymology – The species name “longulus” referring to the elongate form of the meso- and metasoma.

Description of the female holotype – Body length 2.7 mm. Antenna somewhat longer than body and with 25 antennomeres. First flagellomere four times and penultimate flagellomere twice as long as broad, flagellomeres distally indistinctly thickening. – Head in dorsal view cubic (Fig. 47), almost 1.6 times as broad as long, temple 0.8 times as long as eye and more rounded, occiput faintly excavated and bare. Ocelli small, elliptic, OOL clearly twice as long as POL. Eye in lateral view 1.6 times as high as wide and slightly wider than temple (20:18), temple beyond eye slightly narrowing ventrally (Fig. 48). Face 1.5 times as wide as high (without clypeus), inner margin of eyes parallel. Mandible about as long medially as broad between upper and lower teeth, upper (or first) and second teeth of equal size (Fig. 49).



Figs 54–63. *Chorebus* (*Stiphrocera*) species. 54–56: *Ch. (S.) longulus* sp. n.: 54 = tergites 1–3 (female holotype), 55 = hind half of head in dorsal view (female paratype), 56 = hind femur (female paratype). 57–60: *Ch. (S.) diremtus* (Nees), female: 57 = head in dorsal view, 58 = tergites 1–2, 59 = distal part of right fore wing, 60 = mandible. 61–63: *Ch. (S.) voltor* Papp, female holotype: 61 = head in dorsal view, 62 = head in frontal view, 63 = distal part of right fore wing.

Mesosoma 2.4 times as long as high, polished. Notaulix very faintly distinct, smooth. Mesoscutum medially hairy, laterally bare. Propodeum rugose, pubescence. Precoxal suture linearform, smooth, extending to almost entire width of mesopleuron. Rosette pubescence of metapleuron less distinct. – Hind femur 3.5 times as long as broad distally (Fig. 50). Hind tibia and tarsus equal in length. Hind basitarsus slightly longer than tarsomeres 2–3 combined.

Fore wing somewhat shorter than body. Pterostigma (Fig. 51) cuneiform, 5.5 times as long as wide, r as long as width of pterostigma; $1-R1$ 0.7 times as long as pterostigma, $2-SR$ 1.5 times as long as r , $3-SR + SR1$ ending before tip of wing, $SR1$ straight. First subdiscal cell: cell itself relatively narrow, $2-CU1$ four times as long as $1-CU1$, distally closed, i.e. $Cu1b$ present as in Fig. 52 (see arrow).

First tergite long (Fig. 54), 2.2 times as long as broad posteriorly, parallel-sided, pair of basal keels meeting anteriorly, pair of spiracles somewhat before middle of tergite, tergite itself with striate elements, interstriates subrugulose. Second tergite somewhat longer than third tergite, tergites 2–3 somewhat shorter than first tergite and together with further tergites polished. Hypopygium pointed, ovipositor sheath as long as hind basitarsus (Fig. 53).

Scape and pedicel light brown, flagellum brown. Head, mesosoma and first tergite dark brown, metasoma brown. Palpi straw yellow. Tegula brown, parategula light brown. Legs yellow, hind tibia + tarsus faintly darkening. Wings subhyaline, pterostigma and veins light opaque brown.

Description of the four female paratypes – Similar to the female holotype. Body 2.2–2.8 mm long (2.2: 1 ♀, 2.4: 1 ♀, 2.7: 1 ♀, 2.8: 1 ♀). Antenna with 24 (2 ♀) and 25 (2 ♀) antennomeres. Head in dorsal view 1.5 times (2 ♀), 1.6 times (1 ♀) to 1.65 times (1 ♀) as broad as long; temple somewhat more rounded (Fig. 55). Hind femur 3.8 times as long as broad distally (4 ♀, Fig. 56). Fore wing: $1-R1$ 0.75 times as long as pterostigma (2 ♀). Head, mesosoma and first tergite brown, metasoma light brown.

Description of the male paratype – Similar to the female types. Body 2.2 mm long. Right antenna about one-third longer than body and with 25 antennomeres. First flagellomere 2.6 times and penultimate flagellomere 3 times as long as broad, flagellomeres attenuating. Head in dorsal view 1.6 times as broad as long. Hind femur 3.8 times as long as broad distally. Fore wing: pterostigma narrow, ten times as long as wide. First tergite 2.5 times as long as broad posteriorly. Head and mesosoma black, metasoma brownish black. Legs yellow.

Taxonomic position – The new species, *Chorebus (Stiphrocera) longulus*, is nearest to *Ch. (S.) diremtus* (Nees) (redescription by Nixon 1937: 27) viewing their elongate meso- and metasoma and subcubic / cubic head in dorsal view (Figs 47, 57), the two species are distinguished as follows:

- 1 (2) Head in dorsal view cubic (Fig. 57), 1.5 times as broad as long, temple as long as eye and rounded. First tergite less long, 1.8 times as long as broad behind, subparallel-sided (Fig. 58). Fore wing: $1-R1$ 0.6 times as long as pterostigma, r 1.4 times as long as width of pterostigma, $2-SR$ and r equal in length, pterostigma 8–10 times as long as wide (Fig. 59, see arrows). Mandible: upper (or first) tooth somewhat smaller than second

tooth, latter tooth pointed as in Fig. 60. Head and mesosoma black, metasoma dark brown. ♀: 1.6–2.2 mm. – Palaearctic Region

Chorebus (Stiphrocera) diremtus (Nees, 1834)

- 2 (1) Head in dorsal view subcubic (Fig. 47), 1.6 times as long as broad, temple short: 0.75 times as long as eye and more rounded. First tergite long, 2.2 times (♀) and 2.5 times (♂) as long as broad behind, parallel-sided (Fig. 54). Fore wing: 1–R1 0.7 times as long as pterostigma, *r* as long as width of pterostigma, 2–SR 1.5 times as long as *r*, pterostigma 5.5 times as long as wide (Fig. 51, see arrows). Mandible: upper (or first) and second teeth equal in size, latter tooth less pointed as in Fig. 49. Body dark brown to brown, metasoma (except first tergite) brown to light brown. ♀: 2.2–2.8 mm. – Korea

***Chorebus (Stiphrocera) longulus* sp. n.**

The new species is also near to *Ch. (S.) voltor* Papp (PAPP 2009: 258) considering their cubic head (Figs 47, 61), elongate form of mesosoma and metasoma and the yellow legs; the two species differ from each other as follows:

- 1 (2) Head in dorsal view less cubic (Fig. 47), 1.6 times as broad as long, temple rounded and 0.75 times as long as eye. Inner margin of eyes parallel (cf. Fig. 86). Antenna somewhat longer than body and with 24–25 antennomeres, flagellomeres less long: penultimate flagellomeres twice as long as broad. Fore wing: pterostigma wide, 5.5 times as long as wide, 1–R1 0.7 times as long as pterostigma, 2–SR 1.5 times as long as *r* (Fig. 51, see arrows). Metasoma (except blackish first tergite) brown to light brown. ♀♂: 2.2–2.8 mm. – Korea

***Chorebus (Stiphrocera) longulus* sp. n.**

- 2 (1) Head in dorsal view cubic (Fig. 61), 1.4 times as broad as long, temple faintly swollen and slightly longer than eye. Inner margin of eyes slightly converging ventrally (Fig. 62). Antenna nearly twice as long as body and with 30 antennomeres, flagellomeres long: penultimate flagellomere 3.6 times as long as broad. Fore wing: pterostigma narrow, 8 times as long as wide, 1–R1 0.8 times as long as pterostigma, 2–SR and *r* equal in length (Fig. 63, see arrows). Metasoma (except black first tergite) yellow. ♀: 1.9 mm. – Korea

Chorebus (Stiphrocera) voltor Papp, 2009

The new species is near to *Ch. (S.) flagellaris* Tobias (TOBIAS 1998: 395) by their elongate meso- and metasoma, loose tuft of hairs above hind coxa of *Ch. longulus* (Fig. 64) reminding wooly tuft of pubescence of coxa of *Ch. flagellaris* (Fig. 65); their separation restricting to a few and well recognizable features:

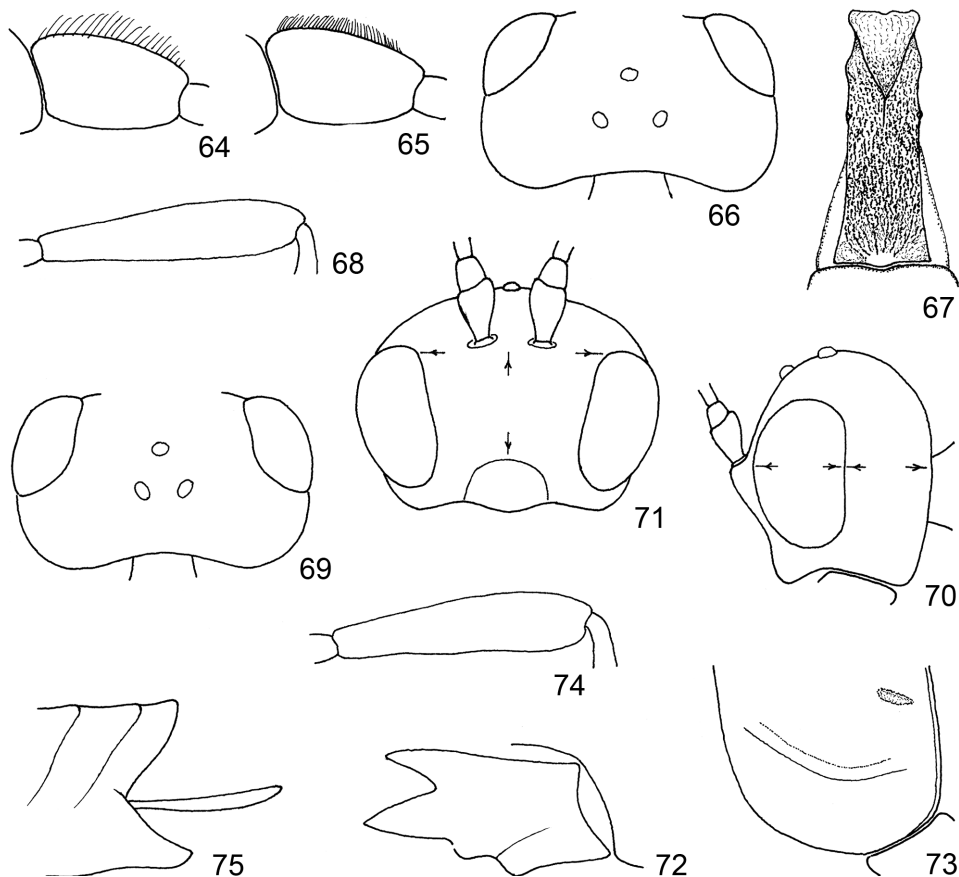
- 1 (2) Temple in dorsal view rounded and somewhat (0.75 times) shorter than eye (Fig. 47). Antenna with 24–25 antennomeres. First tergite 2.2 times (♀) and 2.5 times (♂) as long broad posteriorly (Fig. 54). Hind femur 3.5

times (♀, Fig. 50) and 3.8 times (♂) as long as broad distally. Occiput bare. Metasoma brown to light brown. Body gracile, ♀♂: 2.2–2.8 mm. – Korea

Chorebus (Stiphrocera) longulus sp. n.

2 (1) Temple in dorsal view faintly swollen and one-fourth (i.e. 1.25 times) longer than eye (Fig. 66). Antenna with 32–35 antennomeres. First tergite 2.6–3 times as long as broad posteriorly (Fig. 67). Hind femur 4.1–4.5 times as long as broad distally (Fig. 68). Occiput hairy. Metasoma black, second tergite brown. Body strong, ♀♂: 2.5–3 mm. – Asiatic Russia (Primorski Krai, Sakhalin, Kuril Islands)

Chorebus (Phaenolexis) flagellaris Tobias, 1998



Figs 64–75. *Chorebus* species. 64: *Ch. (Stiphrocera) longulus* sp. n., female holotype: hind coxa. 65–68: *Ch. (Phaenolexis) flagellaris* Tobias, female paratype: 65 = hind coxa, 66 = head in dorsal view, 67 = first tergite, 68 = hind femur. 69–75: *Ch. (Stiphrocera) minuitus* sp. n., female holotype: 69 = head in dorsal view, 70 = head in lateral view, 71 = head in frontal view, 72 = mandible, 73 = mesopleuron, 74 = hind femur, 75 = hind half of female metasoma.

Chorebus (Stiphrocera) minuitus sp. n.
(Figs 69–80)

Type material (2 ♀) – Female holotype: Korea, Chungbuk, Checheon Pongyang Pakdaljae, 23 May 1993, leg. D.-S. Ku. 1 ♀ paratype: Korea, Kyongi Suwon, Mt. Yogi, 11 May 1994, leg. D.-S. Ku. – Holotype and paratype are in good condition: (1) glued on card points by their right mesopleuron, (2) hind tergites somewhat shivelled (holotype). Holotype and paratype are deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 12132 (holotype) and 12133 (paratype).

Etymology – The new species received the name “minuitus” (subtle) owing to the minute differences from its most morphologically similar species.

Description of the female holotype – Body length 2.7 mm. Antenna about one-fourth longer than body and with 31 antennomeres. First flagellomere four times and penultimate flagellomere twice as long as broad. – Head in dorsal view less transverse (Fig. 69), 1.7 times as broad as long, eye 1.5 times as long as temple, temple clearly rounded, occiput weakly excavated. Ocelli small, elliptic, forming an equilateral triangle; OOL twice as long as POL. Eye in lateral view 1.6 times as high as wide, temple beyond eye as wide as eye (Fig. 70, see arrows). Inner margin of eyes converging ventrally, face almost twice as wide as high (Fig. 71, see arrows). Mandible: first (or upper) and second teeth spiky, third and fourth denticles blunt (Fig. 72). Head polished.

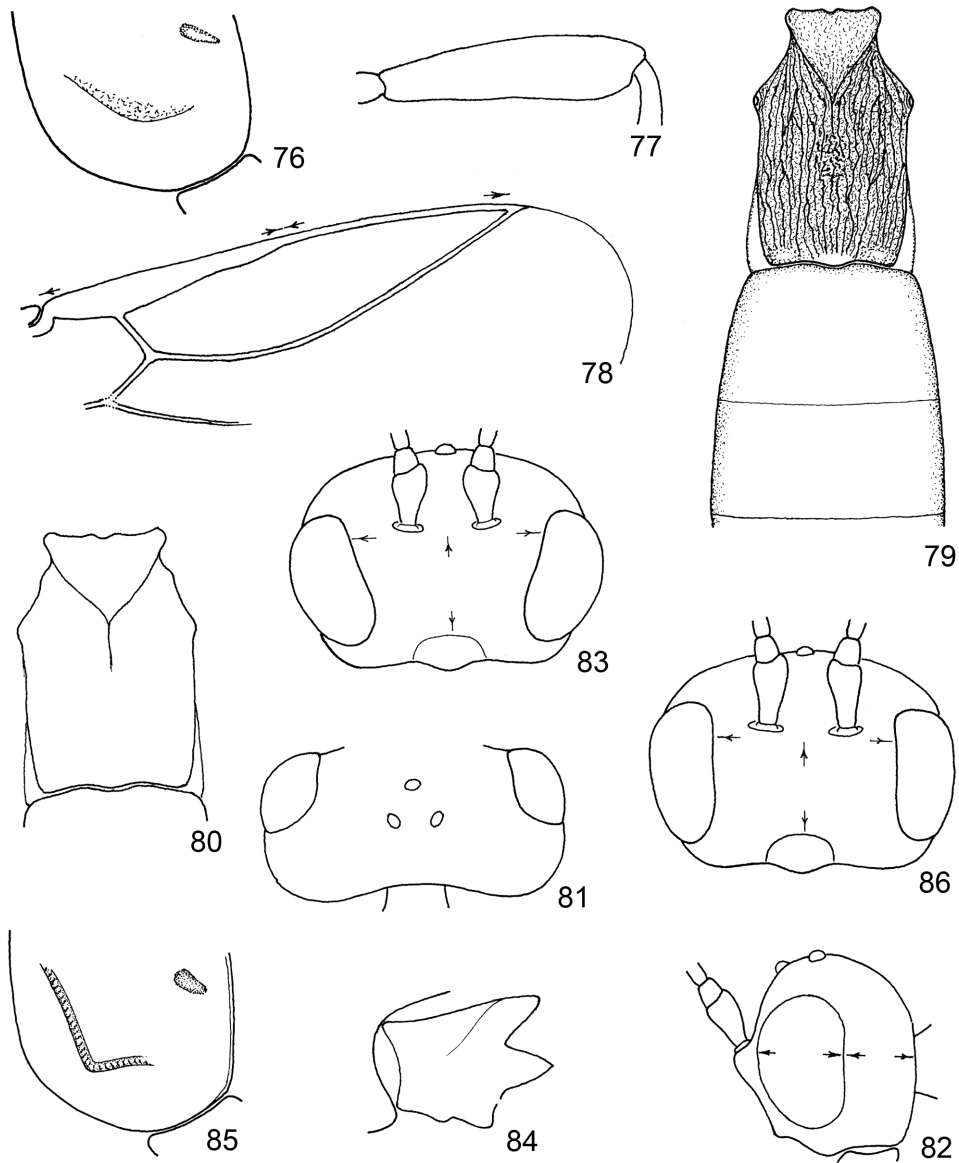
Mesosoma in lateral view 1.6 times as long as high, polished. Pronope present. Notaulix weakly distinct, median lobe of mesoscutum (i.e. between pair of weak notaulices) hair-punctured and hairy, otherwise polished; mesoscutal midpit linearform, fairly deep and long (cf. Fig. 42). Precoxal sulcus linearform, bent and smooth (Fig. 73). Propodeum and metapleuron densely rugulose and pubescent. – Hind femur 4.1 times as long as distally (Fig. 74). Hind basitarsus as long as tarsomeres 2–4 combined.

Fore wing longer than body. Pterostigma (Fig. 78) eight times as long as wide, issuing *r* “oblique” and long: 1.6 times as long as width of pterostigma; 3–SR + SR1 approaching tip of wing, pterostigma somewhat longer than 1–R1 (50:45). First subdiscal cell closed distally (cf. Fig. 44).

First tergite (Fig. 79) slightly narrowing posteriorly, twice as long as broad behind, pair of spiracles faintly protruding and distinctly before middle of tergite, tergite broadest between spiracles: 1.6 times as long as broad here; pair of keels meeting anteriorly; tergite striated with anastomoses, interstriation uneven (Fig. 79). Tergites 2–3 as long as first tergite, second tergite somewhat longer than third tergite, together with further tergites polished. Hypopygium less pointed, ovipositor sheath short: as long as hind tarsomeres 3–4 combined (Fig. 75).

Scape, pedicel and first flagellomere brownish yellow, flagellum brown. Head, mesosoma and first tergite black (head with very faint dark brown tint). Metasoma brown. Oral organs (palpi etc.) straw yellow. Tegula brown, parategula (distally from tegula) light brown. Legs light brownish yellow, hind tarsus feebly fumous. Wings hyaline, pterostigma and veins opaque light brown.

Description of the female paratype – Similar to the female holotype. Body length 2 mm. Antenna with 32 antennomeres. Head in dorsal view somewhat more transverse, 1.8 times as broad as long. Notaulix very weak (i.e. hardly distinct). Precoxal suture less linearform and less long, subrugulose (Fig. 76). Hind femur 3.8 times as long as broad (Fig. 77).



Figs 76–86. *Chorebus* (*Stiphrocera*) species. 76–80: *Ch. (S.) minutus* sp. n., 76–77 and 80: female paratype, 78–79: female holotype: 76 = mesopleuron, 77 = hind femur, 78 = distal part of right fore wing, 79 = tergites 1–3, 80 = first tergite. 81–85: *Ch. (S.) panilus* sp. n., female holotype: 81 = head in dorsal view, 82 = head in lateral view, 83 = head in frontal view, 84 = mandible, 85 = mesopleuron. 86: *Ch. (S.) albimarginis* Griffiths, female: head in frontal view.

Fore wing: r 1.7 times as long as width of pterostigma. First tergite somewhat broader, 1.6 times as long as broad behind, pair of spiracles less protruding (Fig. 80).

Male and host unknown.

Distribution: Korea.

Taxonomic position – The new species, *Chorebus (Stiphrocera) minuitus*, is nearest to *Ch. (S.) albimarginis* Griffiths (GRIFFITHS 1967: 860) based on their bare first tergite, less hairy mesoscutum, loose tuft hairs of hind coxa (Fig. 35) and yellow leg; the two species are distinguished as follows:

- 1 (2) Head in dorsal view transverse, 1.9 times as broad as long, eye as long as temple (Fig. 27). Inner margin of eyes parallel (Fig. 86). First tergite parallel-sided, 2.7–2.8 times as long as broad posteriorly, pair of spiracles not protruding and near to middle of tergite, striated (Fig. 36). Hind femur 5–5.5 times as long as broad (Fig. 34). Tergites 2(–3) yellow to brownish yellow, remaining tergites dark brown to blackish. ♀: 1.9–2.1 mm. – Germany, Hungary *Chorebus (Stiphrocera) albimarginis* Griffiths, 1967
- 2 (1) Head in dorsal view slightly less transverse, 1.7 times as broad as long, eye 1.5 times as long as temple (Fig. 69). Inner margin of eyes converging ventrally (Fig. 71). First tergite broadening up to pair of spiracles, beyond then just narrowing, 1.6–2.0 times as long as broad posteriorly, pair of spiracles faintly protruding and before middle of tergite, finely striated (Figs 79, 80). Hind femur 3.8–4.1 times as long as broad (Figs 74, 77). Metasoma beyond first tergite brown. ♀: 2–2.7 mm. – Korea
***Chorebus (Stiphrocera) minuitus* sp. n.**

***Chorebus (Stiphrocera) panilus* sp. n.**

(Figs 81–85, 87–91)

Type material – Female holotype: Korea, Kyongnam, Chinju-shi Kajwadong, 15 May 1993, leg. D.-S. Ku. Holotype is in good condition: (1) glued on a card point by its left meso- and metapleura, (2) all corporal parts well visible. Holotype is deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 12125.

Etymology – The new species received the latinized phantasy name “panilus”.

Description of the female holotype – Body length 2.8 mm. Antenna long, almost twice longer than body and with 42 antennomeres. First flagellomere four times and penultimate flagellomere twice as long as broad, flagellomeres gradually shortening. – Head in dorsal view transverse (Fig. 81), twice as broad as long, eye somewhat (16:14) longer than temple, temple rounded. Ocelli on an equilateral triangle, OOL almost three times as long as POL. Eye in lateral view nearly 1.5 times as high as wide, and 1.2 times wider than gena (Fig. 82, see arrows). Mandible somewhat longer medially than broad between upper and lower teeth, first and second teeth large (Fig. 84). In frontal view inner margin of eyes converging

ventrally, face almost twice as wide as high (Fig. 83, see arrows). Head polished, face laterally hairpunctured, clypeus hairy.

Mesosoma in lateral view 1.3 times as long as high. Dorsople present, lateral part of pronotum bare. Notaulix absent. Mesoscutum evenly hairy except its hind third, mesoscutal midpit linearform. Scutellum polished, bare. Propodeum densely rugo-rugulose with longitudinal and transverse faint carinate elements, pubescent, rosette less distinct. Precoxal suture anteriorly on mesopleuron broken right-angled, narrow, crenulated, otherwise mesopleuron polished (Fig. 85). – Hind femur 4.1 times as long as broad, distally well broadening (Fig. 87). Hind tibia relatively thick, distally three times broader than basally (Fig. 87, see arrows). Hind tarsus somewhat shorter than hind tibia. Hind basitarsus as long as tarsomeres 2–4 combined.

Fore wing about one-sixth longer than body. Pterostigma narrow and parallel-sided (Fig. 88), twelve times as long as wide, r twice as long as width of pterostigma, $3-SR + SR1$ as in Fig. 88, $1-R1$ long, slightly shorter than pterostigma (45:50) and reaching tip of wing. First subdiscal cell short, $1-2CU1$ and $cu-a$ fairly thick, closed distally albeit $2-1A$ weakly sclerotized (Fig. 89, see arrows).

First tergite (Fig. 90) 2.8 times as long as broad behind, parallel-sided, posteriorly almost 1.2 times broader than basally, pair of spiracles somewhat protruding and at middle of tergite; pair of basal keels rather weak, not meeting and merging into rugo-rugulosity of tergite; hind corner hairy. Further tergites polished. Tergites 2–3 as long as first tergite, second tergite longer than third tergite (28:22). Hypopygium pointed, ovipositor sheath as long as hind basitarsus, thin (Fig. 91).

Flagellum dark brownish to black, scape yellowish. Head, mesosoma and first tergite black, metasoma orange yellow. Palpi pale yellow. Tegula brown. Legs yellow, hind tibia apically and hind tarsus feebly dark fumous. Wings subhyaline, pterostigma blackish brown, veins yellow to light brown.

Male and host unknown.

Distribution: Korea.

Taxonomic position – *Chorebus (Stiphrocera) panilus* sp. n. is nearest to *Ch. (S.) rubicundus* Griffiths (GRIFFITHS 1968b: 78) considering their common features: head in dorsal view transverse, metasoma beyond first tergite yellow or light brownish and precoxal suture (weakly) sculptured; the distinction between the females of the two species is as follows:

- 1 (2) Antenna with 42 antennomeres. Temple in dorsal view not swollen, i.e. rounded and not broader between temples than between eyes (Fig. 81). Fore wing: $1-R1$ 0.9 times as long as pterostigma and reaching tip of wing (Fig. 88). Hind tibia somewhat thick, distally three times broader than basally, hind femur thickening as in Fig. 87 (see arrows). First tergite parallel-sided, rugo-rugulose (Fig. 90). Tegula brown. ♀: 2.8 mm. – Korea ***Chorebus (Stiphrocera) panilus* sp. n.**
- 2 (1) Antenna with 28 antennomeres. Temple in dorsal view slightly swollen, i.e. between temples somewhat broader than between eyes (Fig. 92). Fore

wing: $1-R1$ 0.5–0.6 times as long as pterostigma and ending far before tip of wing (Fig. 93, see arrows). Hind tibia rather thin, distally 1.3 times broader than basally, hind femur thickening as in Fig. 94 (see arrows). First tergite weakly broadening posteriorly, rugulose (Fig. 95). Tegula yellow. ♀: 2.1–2.2 mm. – Europe (Germany, Poland, Hungary, Armenia)
Chorebus (Stiphrocera) rubicundus Griffiths, 1968

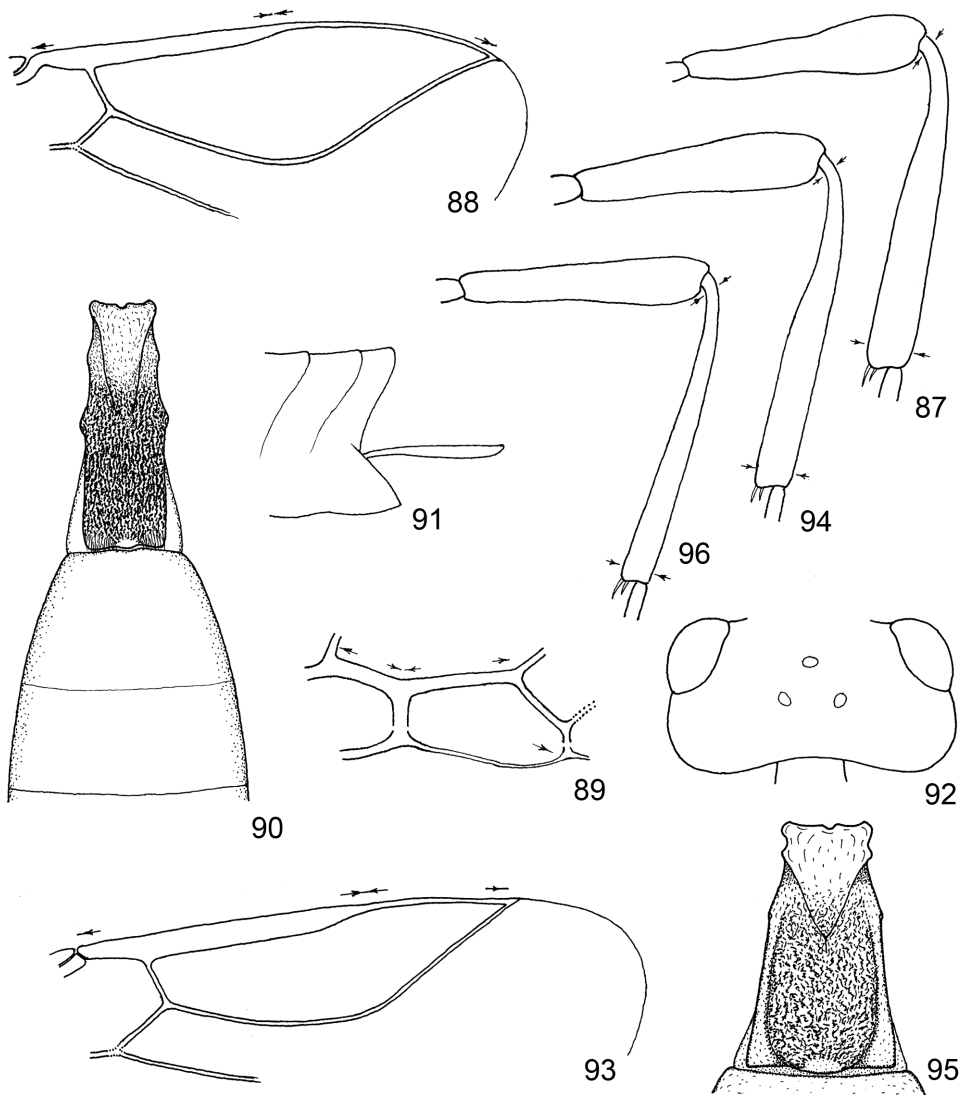
The new species is also near and runs in Tobias's key (TOBIAS 1998: 354–410, couplets 33(32) – 34(33)) to *Ch. (S.) rubicundulus* Tobias (TOBIAS 1998: 360), the distinctive features between the two species are as follows (according to the original description):

- 1 (2) Female: Antenna with 42 antennomeres. Notaulix restricted to anterior declivous part of mesoscutum. Precoxal suture narrow, crenulated (Fig. 85). First tergite 2.8 times as long as broad posteriorly. Anterior half of mesoscutum hairy (posteriorly bare); occiput, pronotum and anterior part of mesopleuron bare. ♀: 2.8 mm. – Korea
***Chorebus (Stiphrocera) panilus* sp. n.**
- 2 (1) Male: Antenna with 27 antennomeres. Notaulix distinct, extending up to mesoscutal midpit, crenulated. Precoxal suture smooth. First tergite 3.5 times as long as broad posteriorly. Median part of mesoscutum (between notauli) hairy, lateral lobe bare; occiput fairly densely hairy, pronotum and anterior part of mesopleuron hairy. ♂: 2.2 mm. – Asiatic Russia (Primorski Krai)
Chorebus (Stiphrocera) rubicundulus Tobias, 1998

Ch. (S.) albimarginis Griffiths (GRIFFITHS 1967: 860) is also near to the new species considering their loose tuft hairs on hind coxa (Fig. 35) and yellow legs; they can be differentiated as follows:

- 1 (2) In frontal view inner margin of eyes converging ventrally (Fig. 83). Mandible: first and second teeth strong (Fig. 84). Fore wing: $1-R1$ long, 0.9 times as long as pterostigma (Fig. 88). Mesosoma in lateral view 1.3 times as long as high. Hind femur more broadening distally, 4.1 times as long as broad (Fig. 87, see arrows). Metasoma orange yellow, first tergite black. ♀: 2.8 mm. – Korea
***Chorebus (Stiphrocera) panilus* sp. n.**
- 2 (1) In frontal view inner margin of eyes parallel (Fig. 86). Mandible: first and second teeth less strong (Fig. 28). Fore wing: $1-R1$ short, 0.6 times as long as pterostigma (cf. Fig. 22). Mesosoma in lateral view stout, just longer than high (50:45). Hind femur less broadening distally, 5–5.5

times as long as broad (Fig. 96). Metasoma dark to blackish brown, tergites 2–3 yellow(ish) to brownish. ♀: 1.9–2 mm. – Germany, Hungary
Chorebus (Stiphrocera) albimarginis Griffiths, 1967



Figs 87–96. *Chorebus (Stiphrocera)* species. 87–91: *Ch. (S.) panilus* sp. n., female holotype: 87 = hind femur + tibia, 88 = distal part of right fore wing, 89 = first subdiscal cell of fore wing, 90 = tergites 1–3, 91 = hind half of female metasoma. 92–95: *Ch. (S.) rubicundus* Griffiths, female: 92 = head in dorsal view, 93 = distal part of right fore wing, 94 = hind femur + tibia, 95 = first tergite. 96: *Ch. (S.) albimarginis* Griffiths, female: hind femur + tibia.

Chorebus (Stiphrocera) ranfus sp. n.
(Figs 97–105, 108)

Type material – Female holotype: Korea, prov. South Pyongan, Pyongan, Nung-ra do (=island), 14 August 1971, leg. S. HORVÁTOVICH et J. PAPP (loc. no. 175). Holotype is in good condition: (1) glued on a card point by mesosternum and hind two pairs of coxae, (2) fore pair of wings faintly creased. Holotype is deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 12134.

Etymology – The new species received the latinized phantasy name "ranfus".

Description of the female holotype – Body length 2.6 mm. Antenna one-sixth longer than body and with 31 antennomeres. First flagellomere 3.3 times, further flagellomeres gradually shortening so that penultimate flagellomere 1.6 times as long as broad. – Head in dorsal view transverse (Fig. 97), 1.85 times as broad as long, eye almost 1.3 times as long as temple, temple rounded. Eye in lateral view almost twice as high as wide, temple just less wide than eye; joint of mandible (i.e. the weakly sclerotized part of mandible base) relatively large (Fig. 98, see arrows). Mandible 1.4 times as long medially as broad between upper and lower teeth, second tooth strong, fourth tooth retracted (Fig. 99, see arrow). Maxillar palp long, last three palpomeres nearly four times as long as broad. Inner margin of eyes converging ventrally: face 1.5 times as wide above between eyes as high medially (Fig. 100, see arrows). Head polished, face and clypeus hairy.

Mesosoma in lateral view stout, 1.2 times as long as high. Pronope present. Mesoscutum polished, its anterior declivous part rugulo-subrugulose, imaginary run of notaulix with row of hairs. Propodeum rugose, pubescent, rosette less distinct. Precoxal suture wide, crenulated (Fig. 101). – Hind femur 3.8 times as long as broad distally (Fig. 102). Hind tibia as long as hind tarsus. Hind basitarsus as long as tarsomeres 2–3 + half of 4th tarsomere.

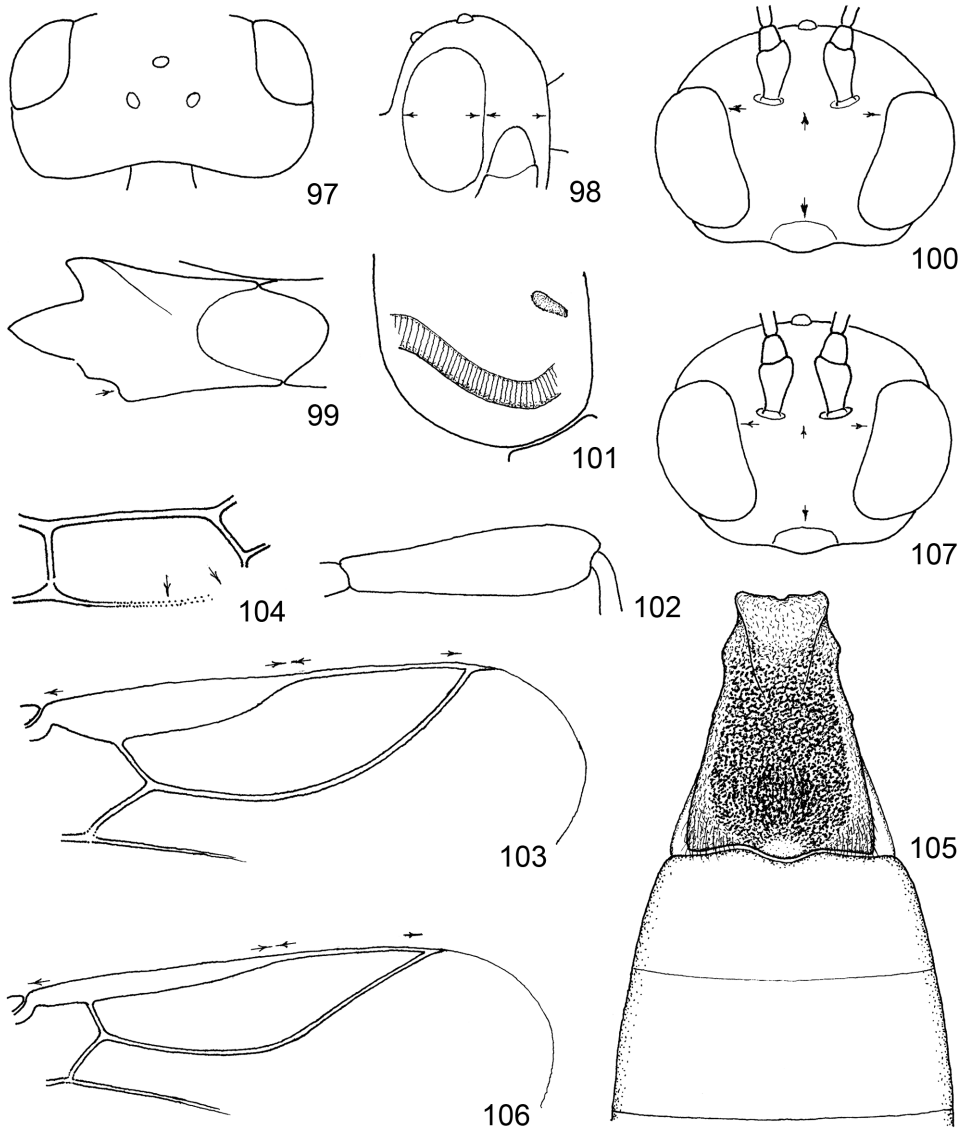
Fore wing as long as body. Pterostigma wide (Fig. 103), five times as long as wide, issuing *r* from its proximal fourth, *r* as long as width of pterostigma. 2–SR 1.3 times as long as *r* and faintly bent, SR1 part of 3–SR + SR1 bent; 1–R1 long: pterostigma 1.4 times as long as 1–R1 (or 1–R1 0.7 times as long as pterostigma) and approaching tip of wing (Fig. 103, see arrows). First subdiscal cell open distally: 2–1A partly desclerotized distally (Fig. 104, see arrows).

First tergite 1.3 times as long as broad behind, clearly broadening posteriorly: twice broader behind than basally, pair of basal keels short and not meeting, pair of spiracles at middle of tergite; tergite densely rugose and dispersely hairy, at its hind corner hairs somewhat tumescent (Fig. 105). Further tergites polished. Tergites 2–3 as long as first tergite, border between them indistinct, third tergite slightly longer than second tergite. Hypopygium pointed, ovipositor sheath short: as long as half basitarsus and upcurved (Fig. 108).

Scape and pedicel brown, flagellum blackish. Head, mesosoma and first tergite black, rest of metasoma dark brown. Labrum yellow, palpi pale yellow. Tegula brown. Legs yellow, hind coxa faintly light brownish, hind tarsus greyish-brownish. Wings hyaline, pterostigma brown, veins proximo-distally yellow, light brown to brown.

Male and host unknown.

Distribution: Korea.



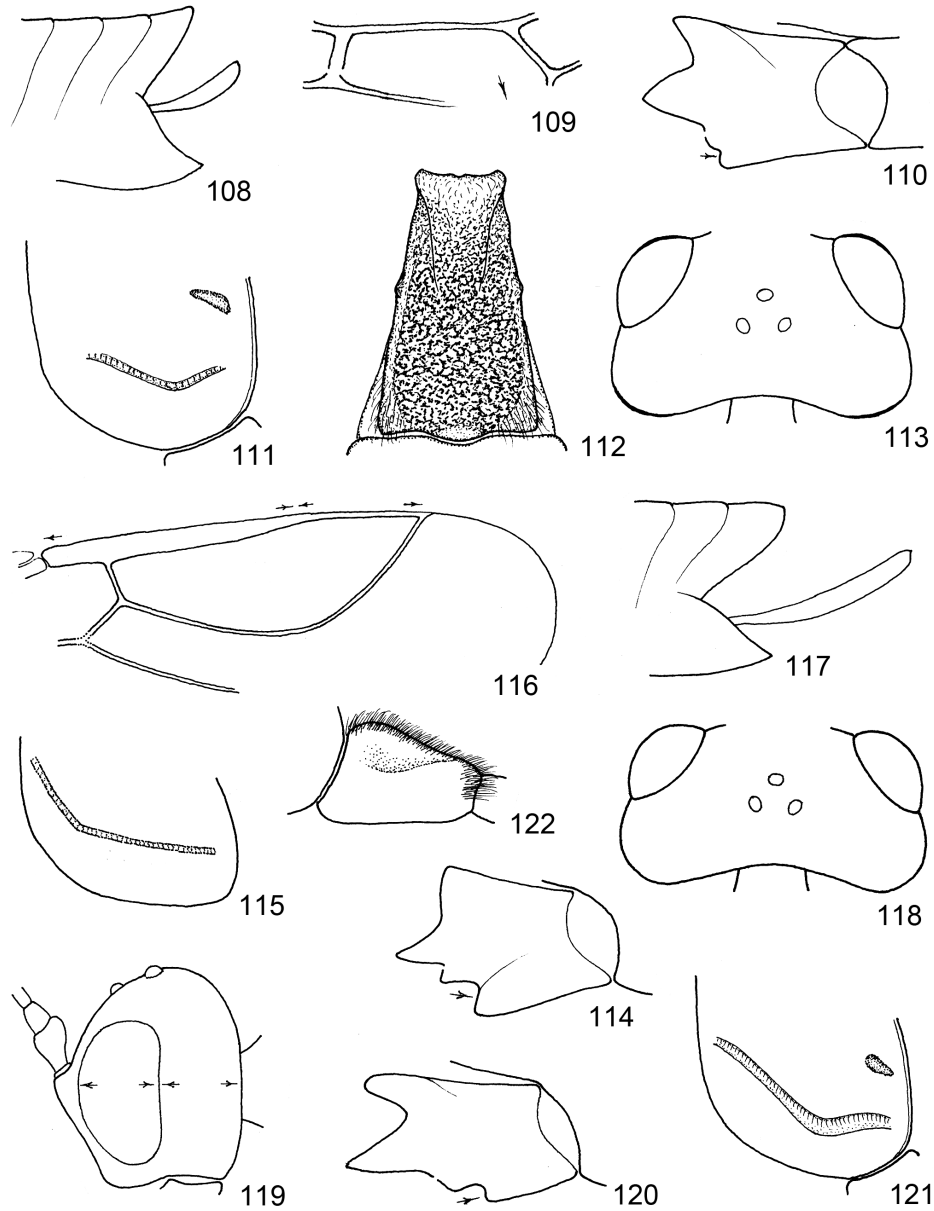
Figs 97–107. *Chorebus (Stiphrocera)* species. 97–105: *Ch. (S.) ranfus* sp. n., female holotype: 97 = head in dorsal view, 98 = head in lateral view, 99 = mandible, 100 = head in frontal view, 101 = mesopleuron, 102 = hind femur, 103 = distal part of right fore wing, 104 = first subdiscal cell of fore wing, 105 = tergites 1–3. 106–107: *Ch. (S.) varunus* (Nixon), female paratype: 106 = distal part of right fore wing, 107 = head in frontal view.

Taxonomic position – The new species, *Chorebus (Stiphrocera) ranfus*, is nearest to *Ch. (S.) varunus* (Nixon) (NIXON 1945: 192 in key, 202 description) considering their shared features as follows: inner margin of eyes converging ventrally (Figs 100, 107), long flagellomeres, posteriorly broadening first tergites (Figs 105, 112), yellow legs; the distinction between the two species is presented as follows:

- 1 (2) Fore wing: $1-R1$ long, pterostigma 1.4 times as long as $1-R1$ (or $1-R1$ 0.7 times as long as pterostigma), pterostigma itself wide: five times as long as wide (Fig. 103, see arrows). First subdiscal cell partly open, i.e. $2-1A$ partly desclerotized (Fig. 104, see arrows). Face 1.5 times as wide above as high medially (Fig. 100, see arrows). Mesoscutum along imaginary notaulix with row of hairs. Mandible: second tooth strong, fourth tooth retracted (Fig. 99, see arrow). Precoxal suture wide, long and crenulated (Fig. 101). First tergite slightly more broadening posteriorly, twice broader apically than basally, 1.3 times as long as broad posteriorly, its rugosity less rough (Fig. 105). Antenna with 31 antennomeres. Pterostigma brown. ♀: 2.6 mm. – Korea ***Chorebus (Stiphrocera) ranfus* sp. n.**
- 2 (1) Fore wing: $1-R1$ short, pterostigma 1.6–1.7 times as long as $1-R1$ (or $1-R1$ 0.6 times as long as pterostigma), pterostigma itself narrow: ten times as long as wide (Fig. 106, see arrows). First subdiscal cell nearly fully open, i.e. $2-1A$ distally desclerotized (Fig. 109, see arrow). Face 1.3–1.35 as wide above as high medially (Fig. 107, see arrows). Mesoscutum entirely hairy. Mandible: second tooth less strong, fourth tooth not retracted (Fig. 110, see arrow). Precoxal suture narrow, short and subcrenulated (Fig. 111). First tergite slightly less broadening posteriorly, 1.7–1.8 times broader apically than basally, 1.6 times as long as broad posteriorly, its rugosity rough (Fig. 112). Antenna with 22–26 antennomeres. Pterostigma yellowish to brownish yellow. ♀: 1.9–2 mm. – Europe, Russia, Turkey, Azerbaijan, Kazakhstan *Chorebus (Stiphrocera) varunus* (Nixon, 1945)

The new species is also near to *Ch. (S.) ilvus* Papp (PAPP 2009: 249) viewing their ventrally more or less converging eyes, posteriorly broadening first tergite, long r of fore wing and yellow legs; the two species are separated by a few though distinct features:

- 1 (2) Head in dorsal view transverse (Fig. 97), 1.85 times as broad as long, temple rounded. Mandible: second tooth large, fourth tooth less distinct (Fig. 99, see arrow). Precoxal suture wide, distinctly crenulated (Fig. 101). Antenna with 31 antennomeres. Fore wing: pterostigma, wide, five times as long as wide, $1-R1$ 0.7 times as long as pterostigma (Fig. 103, see arrows). Ovipositor sheath half as long as hind basitarsus, hypopygium pointed as in Fig. 108. Hind tarsus greyish-brownish. ♀: 2.6 mm. – Korea ***Chorebus (Stiphrocera) ranfus* sp. n.**



Figs 108–122. *Chorebus* species. 108: *Ch. (Stiphrocera) ranfus* sp. n., female holotype: hind half of female metasoma. 109–112: *Ch. (S.) varunus* (Nixon), female paratype: 109 = first subdiscal cell of fore wing, 110 = mandible, 111 = mesopleuron, 112 = first tergite. 113–117: *Ch. (S.) ilvus* Papp, female holotype: 113 = head in dorsal view, 114 = mandible, 115 = mesopleuron, 116 = distal part of right fore wing, 117 = hind half of female metasoma. 118–122: *Ch. (Phaenolexis) zeris* sp. n., female holotype: 118 = head in dorsal view, 119 = head in lateral view, 120 = mandible, 121 = mesopleuron, 122 = hind coxa.

- 2 (1) Head in dorsal view less transverse (Fig. 113), 1.6 times as broad as long, temple slightly swollen. Mandible: second tooth less large, fourth tooth distinct (Fig. 114, see arrow). Precoxal suture narrow, rather finely crenulated (Fig. 115). Antenna with 33–35 antennomeres. Fore wing: pterostigma parallel-sided, narrow, ten times as long wide, $1-R1$ 0.6 times as long as pterostigma (Fig. 116, see arrows). Ovipositor sheath as long as hind basitarsus, hypopygium pointed as in Fig. 117. ♀: 2–2.2 mm. – Korea
Chorebus (Stiphrocera) ilvovus Papp, 2009

Chorebus (Phaenolexis) zeris sp. n.
(Figs 118–127)

Type material – Female holotype: Korea, Kyongnam, Koseong Sangri Munsuam, 3 June 1993, leg. D.-S. Ku. Holotype is in good condition: (1) glued on a card point by its right mesopleuron, (2) left flagellum distally deficient. Holotype is deposited in the Hungarian Natural History Museum, Budapest, Hym. Typ. No. 12135.

Etymology – The new species received the latinized phantasy name “zeris”.

Description of the female holotype – Body length 3.8 mm. Antenna about one-third longer than body and with 39 antennomeres. First flagellum three times and penultimate flagellum 1.6 times as long as broad. – Head in dorsal view transverse (Fig. 118), 1.8 times as broad between temples as long, temple swollen: head between temples somewhat broader than between eyes, eye as long as temple. Ocelli rather small, elliptic, OOL three times as long as POL. Eye in lateral view 1.75 times as high as wide, gena behind eye as wide as eye and ventrally slightly widening (Fig. 119, see arrows). Inner margin of eyes parallel. Mandible: upper (or first) tooth somewhat hook-like, second tooth spiky, third tooth small, fourth tooth small albeit distinct (Fig. 120, see arrow). Head polished.

Mesosoma in lateral view 1.7 times as long as high, polished. Pronope distinct. Notaulix also distinct, shallow, smooth. Mesoscutum with fairly long and less dense hairs, hind part of lateral lobe bare. Precoxal suture linearform, extended from anterior to posterior margins, subcrenulated (Fig. 121). Propodeum and metapleuron densely rugulose. – Hind coxa above with dense tuft of pubescence (Fig. 122). Hind femur 2.9 times as long as broad distally (Fig. 123). Hind tarsus as long as hind tibia. Hind basitarsus somewhat shorter than tarsomeres 2–3 combined.

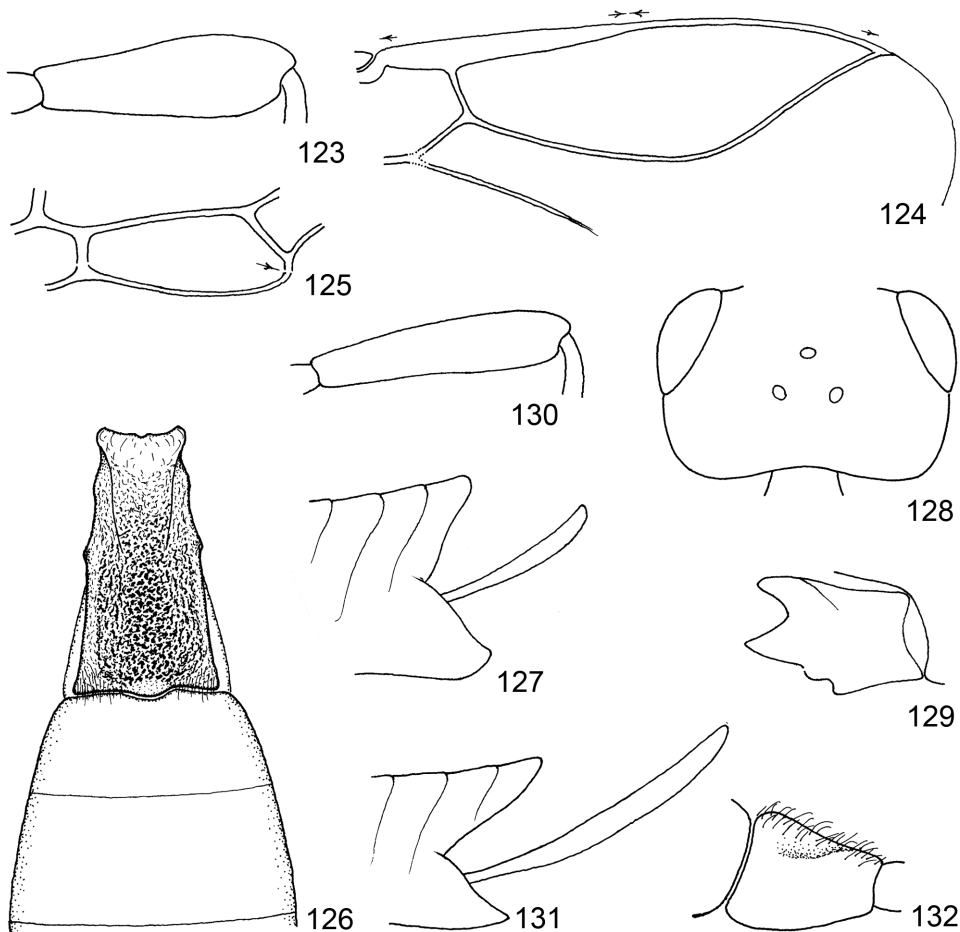
Fore wing as long as body. Pterostigma cuneiform (Fig. 124), eight times as long as wide, r somewhat (8:6) longer than width of pterostigma. Veins: $1-R1$ as long as pterostigma, $3-SR + SR1$ curved, $SR1$ faintly S-form and approaching tip of wing (Fig. 124, see arrows). First subdiscal cell distally closed (Fig. 125, see arrow).

First tergite (Fig. 126) 1.7 times as long as broad behind, weakly broadening posteriorly, pair of spiracles at middle of tergite, pair of basal keels reaching up to spiracles; tergite laterally hairy, its hind corner with tuft of hairs; tergite rugulose laterally with fine longitudinal elements. Further tergites polished. Second tergite 2.5 times as broad behind as long laterally, third tergite 1.2 times as long as second tergite, border between them almost indistinct (Fig. 126). Hypopygium less pointed, ovipositor sheath thin and a bit shorter than hind basitarsus (Fig. 127).

Scape and pedicel yellowish brown, flagellum darkening yellowish brown to brown. Head, mesosoma and first tergite black, rest of metasoma chestnut brown. Palpi pale yellow. Tegula blackish, parategula (distally from tegula) yellowish brown. Legs pale yellow. Hind femur brown, hind coxa brownish, hind tibia + tarsus brownish suffused. Wings subhyaline. Veins yellowish to light brownish.

Male and host unknown.

Distribution: Korea.



Figs 123–132. *Chorebus* species. 123–127: *Ch. (Phaenolexis) zeris* sp. n., female holotype: 123 = hind femur, 124 = distal part of right fore wing, 125 = first subdiscal cell of fore wing, 126 = tergites 1–3, 127 = hind half of female metasoma. 128–131: *Ch. (Phaenolexis) declivis* Tobias, female: 128 = head in dorsal view, 129 = mandible, 130 = hind femur, 131 = hind half of female metasoma. 132: *Ch. (Stiphrocera) talpigo* Papp, female holotype: hind coxa.

Taxonomic position – The new species, *Chorebus (Phaenolexis) zerus*, runs to *Ch. (Ph.) cephalotes* Tobias and *Ch. (Ph.) declivis* Tobias (TOBIAS 1998: 386 and 402, respectively) with the help of Tobias's key to the *Chorebus* species of Asiatic Russia (TOBIAS 1998: 354–410, the two species in question are known to me only by their description). The distinction of the three species is presented as follows:

1.) Distinction between *Ch. cephalotes* and *Ch. zerus*:

- 1 (2) Temple in dorsal view 1.5 times as long as eye. Antenna with 31 antennomeres. Ovipositor sheath long and thick, as long as hind tarsomeres 1–4. Hind tarsus somewhat shorter than hind tibia. First tergite somewhat longer than broad behind. Legs yellowish brown. ♀: 3 mm. – Asiatic Russia (Primorski Krai, Khabarovski Krai)

Chorebus (Phaenolexis) cephalotes Tobias, 1998

- 2 (1) Temple in dorsal view as long as eye, temple swollen (Fig. 118). Antenna with 39 antennomeres. Ovipositor sheath short and thin, slightly shorter than hind basitarsus (Fig. 127). Hind tarsus as long as hind tibia. First tergite 1.7 times as long as broad behind (Fig. 126). Legs pale yellow to yellow, hind femur brown. ♀: 3.8 mm. – Korea

***Chorebus (Phaenolexis) zerus* sp. n.**

2.) Distinction between *Ch. declivis* and *Ch. zerus*:

- 1 (2) Head in dorsal view less transverse: 1.6 times as broad as long, temple not swollen (Fig. 128). Mandible: first and second teeth slightly less strong (Fig. 129). First tergite parallel-sided, 2.2 times as long as broad behind, rugulose with longitudinal elements; third tergite 1.5 times as long as second tergite (Fig. 133). Ovipositor sheath long, as long as half length of hind tibia (Fig. 131). Hind femur thin, 4.1 times as long as broad (Fig. 130). Antenna with 27 (♀) – 31 (♂) antennomeres. Legs brownish yellow. ♀♂: 2.2–2.5 mm. – Asiatic Russia (Primorski Krai), Korea

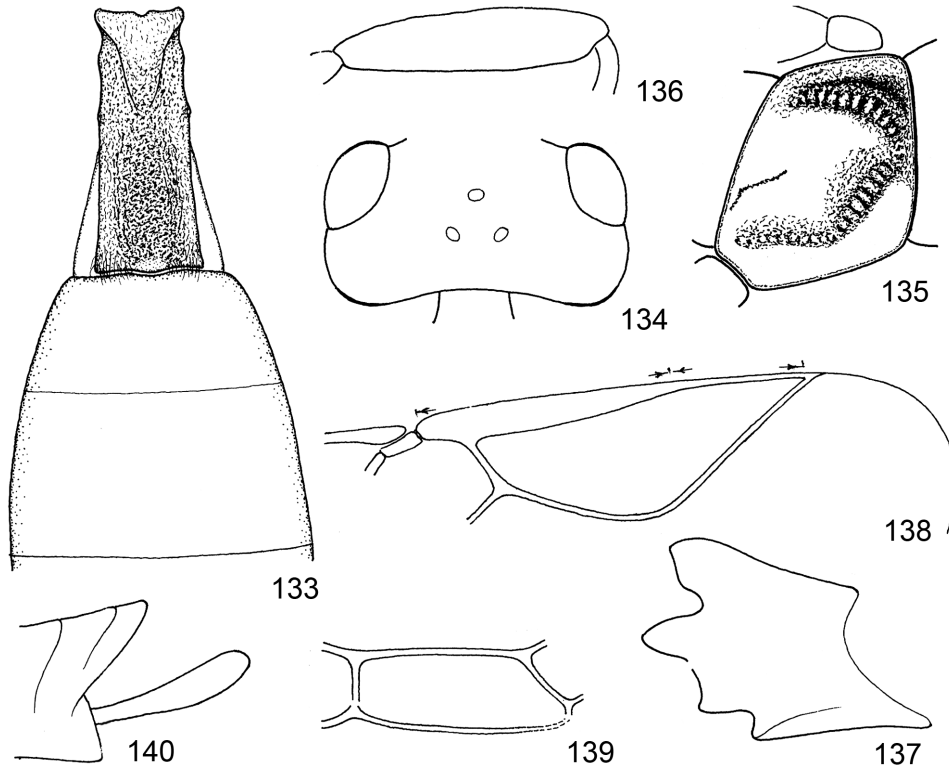
Chorebus (Phaenolexis) declivis Tobias, 1998

- 2 (1) Head in dorsal view transverse: 1.85 times as broad as long, temple swollen (Fig. 118). Mandible: first and second teeth slightly stronger (Fig. 120). First tergite weakly broadening posteriorly, 1.7 times as long as broad behind, rugulose with longitudinal elements laterally, third tergite 1.2 times as long as second tergite (Fig. 126). Ovipositor sheath short, slightly shorter than hind basitarsus (Fig. 127). Hind femur thick, 2.9 times as long as broad (Fig. 123). Antenna with 39 antennomeres. Legs pale yellow to yellow, hind femur brown. ♀: 3.8 mm. – Korea

***Chorebus (Phaenolexis) zerus* sp. n.**

The new species is also near to *Ch. (S.) talpigo* Papp (PAPP 2005: 241) considering their dark coloured body, first tergite less broadening and at most 1.8 times as long as broad behind (Figs 126, 133), head transverse in dorsal view (Fig. 118, 134); the two species are separated by the following features:

- 1 (2) Hind coxa above with loose tuft of hairs (subgeneric trait, Fig. 132). Temple in dorsal view not swollen, i.e. head between temples not broader than between eyes (Fig. 134). Mesopleuron sculptured as in Fig. 135. Mandible strong as in Fig. 137. Hind femur thin, 4.1 times as long as broad medially (Fig. 136). Fore wing: pterostigma twice as long as 1-R1 (Fig. 138, see arrows); first subdiscal cell not widening distally (Fig. 139). Ovipositor sheath thick as in Fig. 140. Legs brown to black with yellow pattern. ♀: 3.8 mm. – Mongolia *Chorebus (Stiphrocera) talpigo* Papp, 2005



Figs 133–140. *Chorebus* species. 133: *Ch. (Phaenolexis) declivis* Tobias, female: tergites 1–3. 134–140: *Ch. (Stiphrocera) talpigo* Papp, female holotype: 134 = head in dorsal view, 135 = mesopleuron, 136 = hind femur, 137 = mandible, 138 = distal part of right fore wing, 139 = first subdiscal cell of fore wing, 140 = hind half of female metasoma.

- 2 (1) Hind coxa above with dense tuft of pubescence (subgeneric trait, Fig. 122). Temple in dorsal view weakly swollen, i.e. head between temples somewhat broader than between eyes (Fig. 118). Mesopleuron less sculptured as in Fig. 121. Mandible less strong as in Fig. 120. Hind femur thick, 2.9 times as long as broad distally (Fig. 123). Fore wing: pterostigma as long as $1-R_1$ (Fig. 124, see arrows); first subdiscal cell widening distally (Fig. 125). Ovipositor sheath thin as in Fig. 127. Legs pale yellow, hind femur brown. ♀: 4.2 mm. – Korea **Chorebus (Phaenolexis) zeris** sp. n.

REFERENCES

- ACHTERBERG, C. VAN (1993) Illustrated key to the subfamilies of the Braconidae (Hymenoptera: Ichneumonoidea). *Zoologische Verhandelingen Leiden* **283**: 1–189.
- BELOKOBYSKIY, S. A. & TOBIAS, V. I. (1997) On the braconid wasps of the subfamily Alysiinae (Hymenoptera, Braconidae) from Kuril Islands. *Far Eastern Entomologist* **47**: 1–17.
- EADY, R. D. (1968) Some illustrations in the Hymenoptera. *Proceedings of the Royal Entomological Society in London (A)* **43**: 66–72.
- FISCHER, M. (2001) Genauere Studien an jüngst beschriebenen Dacnusi aus dem Fernen Osten Russlands und weiteren Formen aus der Paläarkt (Mit einem Anhang über Alysiini) (Hymenoptera, Braconidae, Alysiinae). *Linzer biologische Beiträge* **33**(1): 35–82.
- GAULD, I. D. & BOLTON, B. (eds) (1988) The Hymenoptera. *British Museum (Natural History), Oxford University Press*, p. I–XI + 1–332. (Structure terminologies: pp. 58–76.)
- GRIFFITHS, G. C. D. (1967) The Alysiinae (Hym. Braconidae) parasites of the Agromyzidae (Diptera) III. The parasites of Paraphytomyza Enderlein, Phytomyza Hendel and Phytomyza Fallén. *Beiträge zur Entomologie* **16**(1966): 775–951.
- GRIFFITHS, G. C. D. (1968a) The Alysiinae (Hym. Braconidae) parasites of Agromyzidae (Diptera) V. The parasites of Liriomyza Mik and certain small genera of Phytomyzinae. *Beiträge zur Entomologie* **18**: 5–62.
- GRIFFITHS, G. C. D. (1968b) The Alysiinae (Hym. Braconidae) parasites of the Agromyzidae (Diptera) VI. The parasites of Cerodonta Rondani s. l. *Beiträge zur Entomologie* **18**: 63–152.
- HARIS, R. A. (1979) A glossary of surface sculpturing. *Occasional Papers in Entomology* **28**: 1–31.
- NIXON, G. E. J. (1937) The British species of Dacnusa. *Transactions of the Society of the British Entomologist* **4**: 1–88.
- NIXON, G. E. J. (1943) A revision of the European Dacnusi (Hym., Braconidae, Dacnusiinae). *The Entomologist's monthly Magazine* **79**: 20–34, 159–168.
- NIXON, G. E. J. (1944) A revision of the European Dacnusi (Hym., Braconidae, Dacnusiinae). *The Entomologist's monthly Magazine* **80**: 88–108, 140–151.
- NIXON, G. E. J. (1945) A revision of the European Dacnusi (Hym., Braconidae, Dacnusiinae). *The Entomologist's monthly Magazine* **81**: 189–204, 217–229.
- PAPP, J. (2005) Braconidae (Hymenoptera) from Mongolia, XVI. Subfamilies Gnampodontinae, Brachistinae, Alysiinae. *Acta Zoologica Academiae Scientiarum Hungaricae* **51**(3): 221–251.

- PAPP, J. (2007) Braconidae (Hymenoptera) from Korea XXII. Subfamily Alysiinae. *Acta Zoologica Academiae Scientiarum Hungaricae* **53**(1): 1–38.
- PAPP, J. (2009) Braconidae (Hymenoptera) from Korea XXIII. Subfamilies Agathidinae and Alysiinae. *Acta Zoologica Academiae Scientiarum Hungaricae* **55**(3): 235–261.
- TOBIAS, V. I. (1986) Tribe Dacnusiini. In: *Keys to the Insects of the European Part of the USSR III Hymenoptera* **4**: 163–231. [in Russian]
- TOBIAS, V. I. (1998) Tribe Dacnusiini. In: *Key to the Insects of Russian Far East. Vol. IV. Neuropteroidea, Mecoptera, Hymenoptera*, Pt. 3: 299–411. [in Russian]
- WHARTON, R. A. (1977) New World Aphaereta species (Hymenoptera: Braconidae: Alysiinae), with a discussion of terminology used in the tribe Alysiini. *Annals of the Entomological Society of America* **70**(5): 782–803.
- YU, D. S. K., ACHTERBERG, C. VAN & HORSTMANN, K. (2012) Taxapad 2012. *World Ichneumoidea 2011. Taxonomy, Biology, Morphology and Distribution*. <http://www.taxapad.com>, Ottawa, Ontario, Canada.

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