

Nine new *Chorebus* Haliday species from Central Europe (Hymenoptera, Braconidae, Alysiinae: Dacnusini)

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Abstract – Discussion of the taxonomic position of the genus *Chorebus* HALIDAY, 1833. Nine new *Chorebus* species are described from Central Europe (seven from Hungary and two from Slovakia): *Chorebus* (*Paragyrocampa*) *catron* sp. n., *Ch.* (*Stiphrocera*) *citreus* sp. n., *Ch.* (*Paragyrocampa*) *convergens* sp. n., *Ch.* (*Stiphrocera*) *irriguus* sp. n., *Ch.* (*Phaenolexis*) *pusiculus* sp. n., *Ch.* (*Stiphrocera*) *trapesus* sp. n., *Ch.* (*Stiphrocera*) *unicus* sp. n., *Ch.* (*Stiphrocera*) *vodaron* sp. n. and *Ch.* (*Stiphrocera*) *zuntus* sp. n. With 153 figures.

Key words – *Chorebus*, new species, descriptions.

INTRODUCTION

The genus *Chorebus* was erected by HALIDAY in 1833. Five years later HALIDAY (1838) raised the taxon *Alysia* LATREILLE, 1804 to generic rank and the following six taxa were assigned to it as subgenera: *Aenone* HALIDAY, 1833 (now synonym of *Trachionus* HALIDAY, 1833), *Alysia* LATREILLE, *Chasmodon* HALIDAY, 1838, *Chorebus* HALIDAY, *Coelinus* NEES, 1818 and *Dacnusa* HALIDAY, 1833. FOERSTER (1862), within his "26. Fam. Dacnusoidea", significantly increased the number of the dacnusine genera: besides *Chorebus* he had set up further 19 new genera as well as including the genera *Chaenusa* HALIDAY, 1839, *Coelinus* NEES, 1818, *Copisura* (= *Copidura*) SCHIÖDTE, 1837 and *Dacnusa* HALIDAY, 1833. FOERSTER's generic names were either placed in synonymy or lowered to subgeneric rank in the three genera: *Chaenusa*, *Chorebus* and *Dacnusa*, respectively; only five genera remained valid: *Agonia*, *Coloneura*, *Epimicta*, *Exotela* and *Synelix*.

The species of the genus *Chorebus* are grouped in five subgenera: *Chorebus* s. str., *Etriptes* NIXON, 1943, *Paragyrocampa* TOBIAS, 1962, *Phaenolexis* FOERSTER, 1862 and *Stiphrocera* FOERSTER, 1862. This subgeneric arrangement was adopted by TOBIAS in his key to the European species of the genus *Chorebus* (TOBIAS 1986: 173–208).

DESCRIPTIONS OF THE NEW SPECIES

The following abbreviations of forewing veins are used in the descriptions (after VAN ACHTERBERG 1993: 4–5): *cu-a* = nervulus, *r* = first section of the radial vein, *Cu1b* = second short section of the subdiscoidal vein, *SRI* = third section of the radial vein, *1-R1* = first section of the metacarpal vein, *2-1A* = second section of the submedian vein, *3-SR* = second section of the radial vein.

***Chorebus* (*Paragyrocampa*) *catron* sp. n.**

(Figs 1–10)

Type material – Female holotype: Hungary, Kelebia, halastó [= fish pond], 12 September 1962, leg. E. BAJÁRI. One male paratype: Hungary, Újszentmargita, nature reserve forest, taken with Malaise trap, 15 June 1976, leg. J. PAPP. – Holotype is in good condition: (1) glued on a pointed card by the mesosternum, (2) fore right tarsomeres 2–5 and middle left tarsomeres 4–5 glued separately on the card, (3) costal vein of left fore wing broken medially, (4) palpi glued to prosternum. Male paratype also in good condition: (1) glued on a pointed card by the mesosternum, (2) left hindwing missing. Holotype and paratype are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 11487 (holotype) and 11488 (paratype).

Etymology – “Catron” is a phantasy name.

Description of the female holotype – Body 2.8 mm long. Antenna about as long as body and with 27 antennomeres. First flagellomere 3.3 times, penultimate flagellomere 1.8 times as long as wide. – Head in dorsal view cubic, 1.4 times as wide as long, temple swollen (i.e. head broader at temples than at the eyes) and somewhat longer than eye (Fig. 1, see arrows), occiput excavate. Eye in lateral view 1.8 times as high as wide, temple 1.3 times wider than eye (Fig. 2, see arrows). Eye in frontal view strongly convergent ventrally; i.e. face below clearly narrower than above (Fig. 3). Mandible somewhat longer than wide between upper and lower teeth, first and second teeth very large, other two teeth small (Fig. 4). Head polished.

Mesosoma in lateral view 1.5 times as long as high, polished. Notaulix distinct anteriorly, shallow and smooth. Prescutellar dimple short linearform. Mesoscutum with less dense hairs on its fore declivous part. Precoxal sulcus narrow, evenly deep and finely

crenulate (Fig. 5). Propodeum rugulose, hairy; metapleuron with rosette-shaped hairs. – Hind coxa above with a tuft of pubescence (Fig. 6). Hind femur 3.5 times as long as wide medially (Fig. 7). Hind tibia and tarsus equal in length; hind basitarsus as long as tarso-meres 2–4 combined.

Forewing as long as body. Pterostigma (Fig. 8) cuneiform, seven times as long as wide, issuing *r* somewhat proximally from its middle and *r* as long as width of pterostigma; *1–RI* 0.7 times as long as pterostigma. Vein 3–*SR* + *SR1* bent and approaching tip of wing. First subdiscal cell closed distally, i.e. *Cu1b* missing (Fig. 9, see arrow).

First tergite (Fig. 10) 1.3 times as long as wide behind, evenly widening posteriorly (beyond spiracles), pair of basal keels not meeting and restricted to anterior part of tergite; pair of spiracles clearly before middle of tergite, tergite itself longitudinally striate with anastomoses. Further tergite polished. Hypopygium rounded, ovipositor sheath short and narrow, one-third shorter than hind basitarsus.

Ground colour of body black. Scape, pedicel and flagellomeres 1–2 brownish yellow, rest of flagellum dark brown. Mandible brownish yellow, palpi yellow. Tegula dark brown, parategula brown. Tergites 2–3 with dark brown suffusion. Legs brownish yellow. Wings subhyaline, pterostigma and veins opaque light brownish.

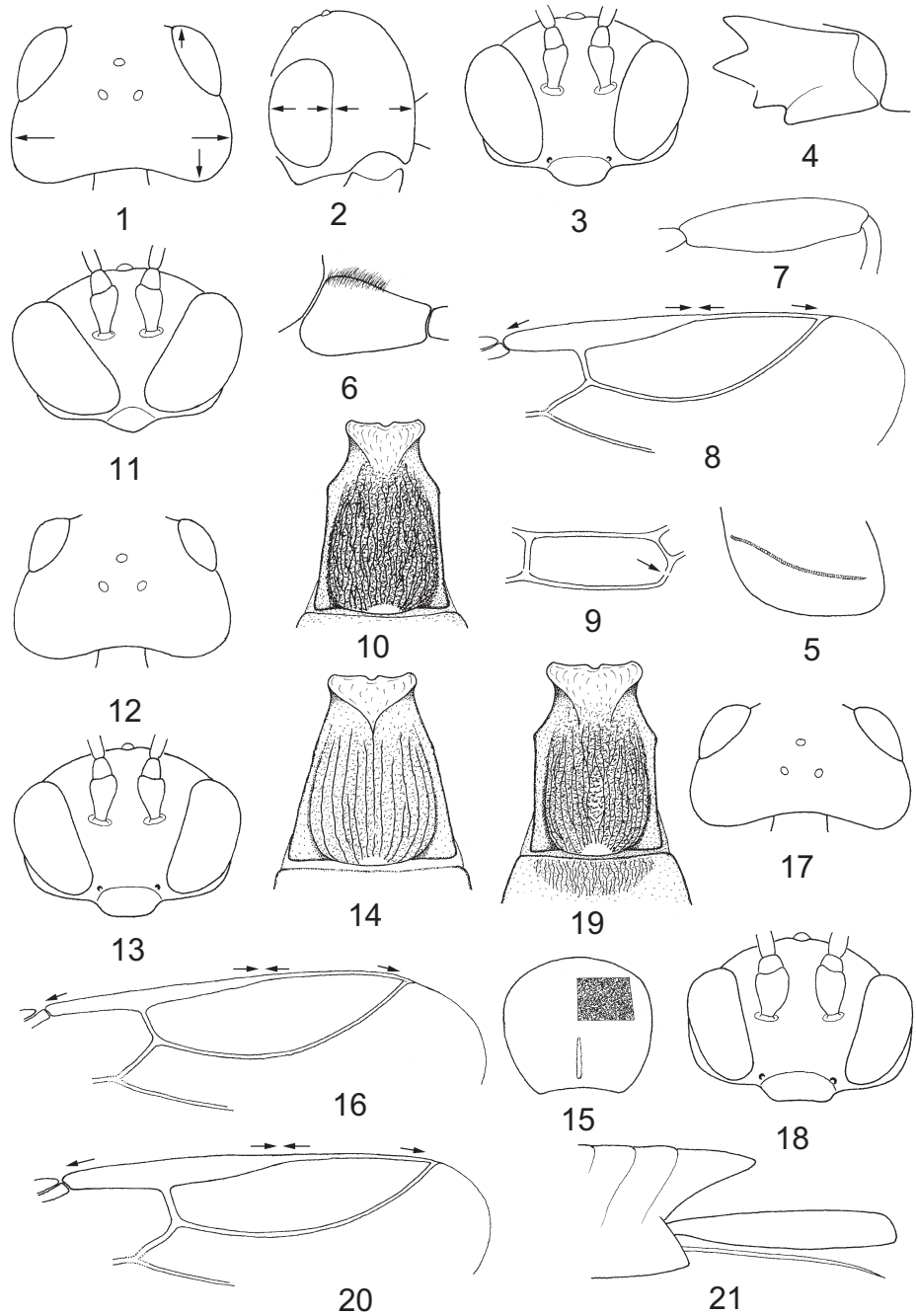
Description of the male paratype – Body 2.8 mm long. Antenna somewhat longer than body and with 32 antennomeres. Head in dorsal less cubic, nearly 1.6 times as wide as long (Fig. 48). Hind femur 3.8 times as long as wide distally (Fig. 49). Forewing: *r* 1.3 times longer than width of pterostigma, *1–RI* 0.6 times as long as pterostigma (Fig. 50). First tergite 1.6 times as long as wide behind. Legs light testaceous.

Host unknown.

Distribution – Hungary.

Remarks – *Chorebus* (*Paragyrocampa*) *catron* sp. n. is near to *Ch. (P.) convergens* sp. n., *Ch. (P.) ophthalmicus* (TOBIAS, 1962), *Ch. (Ch.) subcubicus* PAPP, 2009 (PAPP 2009: in print) and *Ch. (Ch.) foveolus* (HALIDAY, 1833) (NIXON 1949: 292). Their common features are having compound eyes more or less converging ventrally (Figs 3, 11, 13, 18, 40) and hind coxa above with tuft of pubescence (Fig. 6); the five species are separated with the following key:

- 1(6) Head subcubic to cubic in dorsal view (Fig. 1), i.e. 1.5–1.6 times as wide as long. Compound eyes in frontal view more or less strongly convergent (Figs 3, 11).



- 2(3) Temple in dorsal view not swollen, i.e. head equal at eyes and temples. Compound eyes in frontal view strongly convergent (Fig. 11). First tergite parallel-sided (Fig. 42 in TOBIAS 1962: 120). Mesoscutum polished. Mandible with pointed and large second tooth (Fig. 39 in TOBIAS 1962: 120). Female: 2.4 mm. – European Russia: Saint Petersburg district *Ch. (Paragyrocampa) ophthalmicus* (TOBIAS, 1962)
- 3(2) Temple in dorsal view swollen, i.e. head broader between temples than between eyes (Figs 1, 12). Compound eyes in frontal view less convergent (Figs 3, 13). First tergite more or less widening posteriorly (Figs 10, 14).
- 4(5) Mesoscutum (Fig. 15), pronotum and mesopleuron granulose. First tergite somewhat longer than wide behind, longitudinally striate without anastomoses (Fig. 14). Forewing: pterostigma narrow, ten times as long as wide, r slightly longer than width of pterostigma, $3-SR + SRI$ more approaching tip of wing (Fig. 16). Legs yellow. Female: 2 mm. – Korea *Ch. (Paragyrocampa) subcubicus* PAPP, 2009 (in print)
- 5(4) Mesoscutum, pronotum and mesopleuron polished. First tergite 1.4–1.6 times as long as wide behind, longitudinally striate with anastomoses (Fig. 10). Forewing: pterostigma wide, seven times as long as wide, r as long as (female holotype: Fig. 8) or somewhat longer than width of pterostigma (male paratype: Fig. 50), $3-SR + SRI$ less approaching tip of wing. Legs brownish yellow to light testaceous. Female and male: 2.8 mm. – Hungary **Ch. (*Paragyrocampa*) *catron* sp. n.**

Figs 1–21. *Chorebus (Paragyrocampa) catron* sp. n. (female holotype): 1 = head in dorsal view, 2 = head in lateral view, 3 = head in frontal view, 4 = mandible, 5 = precoxal sulcus on mesopleuron, 6 = hind coxa with tuft of short pubescence, 7 = hind femur, 8 = distal part of right forewing, 9 = first subdiscal cell of forewing, 10 = first tergite. – 11 = *Chorebus (Paragyrocampa) ophthalmicus* (TOBIAS, 1962): head in frontal view (after Fig. 38 in TOBIAS 1962: 120). – *Chorebus (Paragyrocampa) subcubicus* PAPP, 2009: 12 = head in dorsal view, 13 = head in frontal view, 14 = first tergite, 15 = mesoscutum with indication of its sculpture, 16 = distal part of right forewing. – *Chorebus (Chorebus) foveolus* (HALIDAY, 1833): 17 = head in dorsal view, 18 = head in frontal view, 19 = first and basal third of second tergites, 20 = distal part of right forewing, 21 = hind end of metasoma

- 6(1) Head in dorsal view (Fig. 17) transverse, 1.6–2 times as wide as long. Compound eyes in frontal view weakly (Fig. 18) to strongly (Fig. 40) convergent ventrally.
- 7(8) Second tergite basally striate; first tergite subparallel-sided and 1.6 times as long as wide behind (Fig. 19). Forewing: pterostigma wide, eight times as long as wide, r 1.3 times longer than width of pterostigma (Fig. 20). Ovipositor sheath in lateral view wide and as long as hind tarsomeres 1–2 combined (Fig. 21). Tegula blackish brown. Female: 2.6–3.4 mm. – Ireland, England, Hungary, Russia (Saint Petersburg district, Kuril Islands), Azerbaijan
Ch. (Chorebus) foveolus (HALIDAY, 1833)
- 8(7) Second tergite polished; first tergite moderately widening posteriorly and 1.3 times as long as wide behind (Fig. 46). Forewing: pterostigma narrow, twelve times as long as wide, r 1.5 times as long as width of pterostigma (Fig. 44). Ovipositor sheath in lateral view narrow and as long as hind basitarsus (Fig. 47). Tegula yellowish brown. Female: 2.1 mm. – Hungary
Ch. (Paragyrocampa) convergens sp. n.

Chorebus (Stiphrocera) citreus sp. n.

(Figs 22–32)

Type material – Female holotype: Slovakia, Bártfa [= Bardejov], rez. Becherovská, 25 June 1977, leg. J. PAPP. – Holotype is in good condition: (1) glued on a pointed card by the hind two pairs of coxae, (2) distal hind part of right hind wings leaned inwards. The holotype is deposited in the Hungarian Natural History Museum, (Department of Zoology), Budapest, Hym. Typ. No. 11489.

Etymology – The specific epithet “citreus” refers to the citrus yellow colour of the metasoma.

Description of the female holotype – Body 2.8 mm long. Antenna nearly twice longer than body and with 40 antennomeres. First flagellomere 3.3 times and penultimate flagellomere twice as long as wide. – Head transverse in dorsal view (Fig. 22), 1.7 times as wide as long, temple a bit swollen and shorter than eye, occiput excavate. Eye in lateral view 1.6 times as high as wide and temple as wide as eye (Fig. 23, see arrows). Eye in frontal view weakly converging (Fig. 24). Mandible somewhat longer than wide between upper and lower teeth, upper tooth clearly expanded, second tooth wide, lower two teeth distinct (Fig. 25). Head polished.

Mesosoma in lateral view 1.4 times as long as high, polished. Notaulix weakly distinct anteriorly. Anterior half of mesoscutum rugulose to granulose, otherwise smooth and shiny. Precoxal sulcus wide and crenulate (Fig. 26). Propodeum rugulose and barely hairy; metapleuron densely hairy (hairs not rosette-shaped). – Hind coxa without hair tuft. Hind femur 4.1 times as long as wide distally (Fig. 27). Hind tibia somewhat longer than hind tarsus, hind basitarsus as long as tarsomeres 2–3 and one-third of tarsomere 4 combined (Fig. 28).

Forewing as long as body. Pterostigma (Fig. 29, see arrows) ten times as long as wide, parallel-sided, *r* slightly longer than width of pterostigma; *1–R1* 0.6 times as long as pterostigma, *3–SR + SR1* reaching tip of wing, *SR1* faintly S-form. First subdiscal cell distally open, i.e. *Cu1b* missing (Fig. 30, see arrow).

First tergite 1.4 times as long as wide behind, subparallel-sided, i.e. slightly widening at hind end, pair of basal keels reaching middle of tergite and not meeting, pair of spiracles at middle of tergite, tergite itself rugulose with rugose elements (Fig. 31). Further tergites polished. Hypopygium truncate, ovipositor sheath short, as long as middle tarsomeres 3–4 combined (Fig. 32).

Scape and pedicel yellow, flagellomeres 1–3(–4) darkening yellow, rest of flagellum greyish brown. Head, mesosoma and first tergite black, metasoma citrus yellow. Mandible deep yellow, clypeus yellow, palpi straw yellow. Tegula and parategula yellow. Legs also yellow. Wings hyaline, pterostigma and veins light brown.

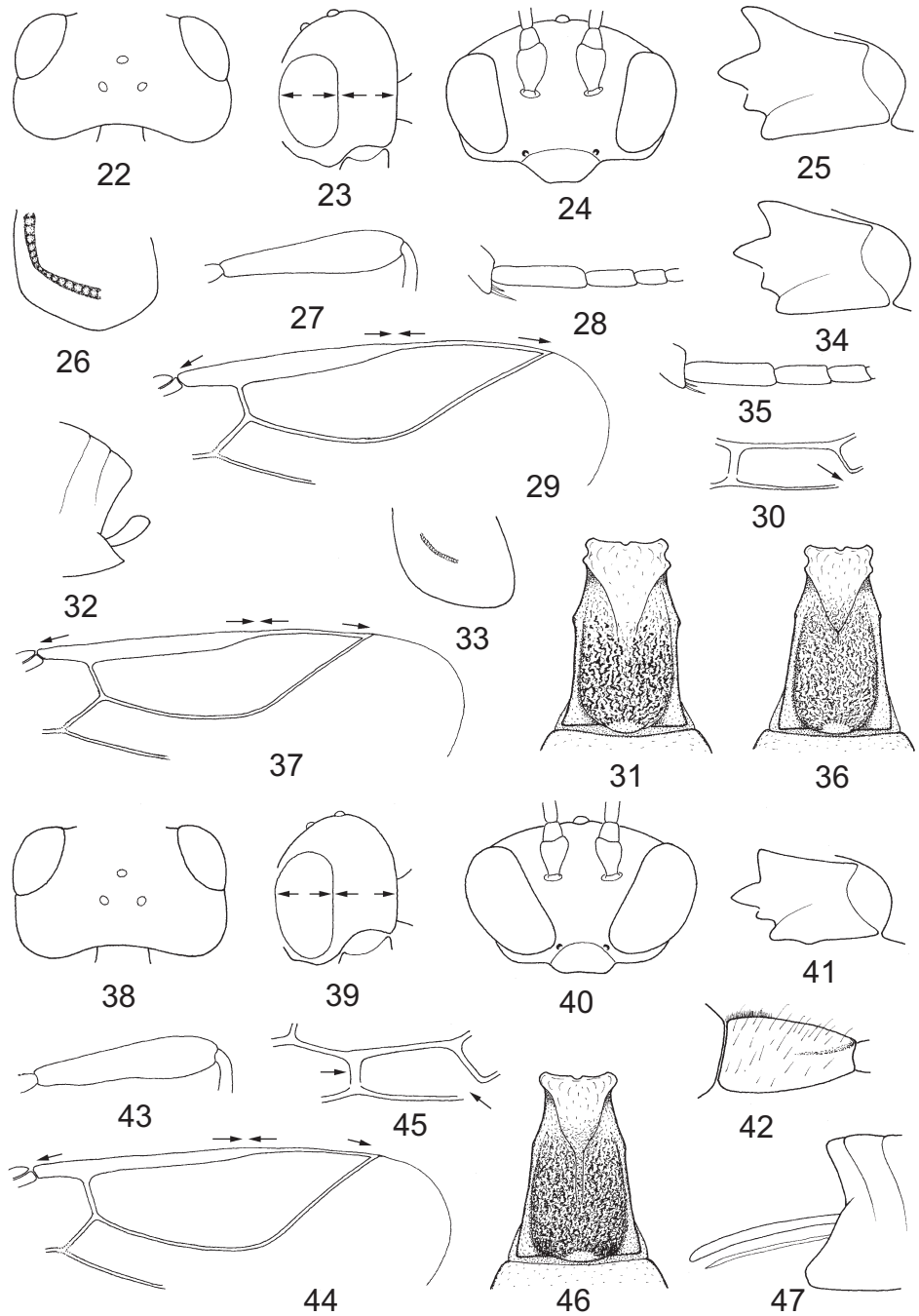
Male and host unknown.

Distribution – Slovakia.

Remarks – *Chorebus* (*Stiphrocera*) *citreus* sp. n. is nearest to *Ch.* (*St.*) *rubicundus* GRIFFITHS (1968b: 78) owing to their citrus or orange yellow metasoma and citrus yellow legs as well as the anteriorly roughened mesoscutum, the bare first tergite and the less hairy propodeum; the two species are distinguished as follows:

1(2) Precoxal sulcus narrow, weakly crenulate (Fig. 33). Upper tooth of mandible less expanded (Fig. 34). Hind tarsus as long as hind tibia, basitarsus as long as tarsomeres 2–3 combined (Fig. 35). First tergite evenly and slightly widening posteriorly (Fig. 36) or subparallel-sided (*cf.* Fig. 129). Face smooth. Forewing: *r* distinctly longer than width of pterostigma, *SR1* ending before tip of wing, pterostigma twice as long as *1–R1* (Fig. 37, see arrows). Antenna with 24–28 antennomeres. Metasoma deep orange yellow to brownish yellow. Female and male: 1.8–2.2 mm. – Germany, Poland, Hungary, Armenia

Ch. (*Stiphrocera*) *rubicundus* GRIFFITHS, 1968



2(1) Precoxal sulcus wide, crenulate (Fig. 26). Upper tooth of mandible expanded (Fig. 25). Hind tarsus shorter than hind tibia, basitarsus as long as tarsomeres 2–3 and one-third of tarsomere 4 combined (Fig. 28). First tergite subparallel-sided, i.e. slightly widening at hind end (Fig. 31). Face rugulose. Forewing: *r* slightly longer than width of pterostigma, *SRI* reaching tip of wing, pterostigma 1.5 times as long as *I–RI* (Fig. 29, see arrows). Antenna with 40 antennomeres. Metasoma citrus yellow. Female: 2.8 mm. – Slovakia **Ch. (*Stiphrocera*) citreus** sp. n.

***Chorebus* (*Paragyrocampa*) *convergens* sp. n.**
(Figs 38–47)

Type material – Female holotype: Hungary, Nagyvisnyó (Mts Bükk), 30 April 1967, leg. L. MÓCZÁR. – Holotype is in good condition: (1) glued on a pointed card by the ventral part of meso- and metasoma, (2) left flagellum distally deficient, (3) hind pair of wings bent medially. Holotype is deposited in the Hungarian Natural History Museum, (Department of Zoology), Budapest, Hym. Typ. No. 11490.

Etymology – The species name “convergens” refers to the compound eyes strongly convergent ventrally (Fig. 40).

Description of the female holotype – Body 2.1 mm. Antenna about one-fifth longer than body and with 31 antennomeres. First flagellomere 2.8 times, further flagellomeres shortening so that penultimate flagellomere twice as long as wide. – Head in dorsal view less transverse (Fig. 38), 1.6 times as wide as long, eye slightly longer than temple, temple rounded, occiput excavate. Eye in lateral view almost twice as high as wide, temple wider than eye (Fig. 39, see arrows). Head in frontal view with strongly convergent eyes (Fig. 40). Mandible longer medially than wide between upper and lower teeth, second tooth pointed (Fig. 41). Head polished.

Figs 22–47. *Chorebus* (*Stiphrocera*) *citreus* sp. n.: 22 = head in dorsal view, 23 = head in lateral view, 24 = head in frontal view, 25 = mandible, 26 = precoxal sulcus on mesopleuron, 27 = hind femur, 28 = hind tarsomeres 1–3 in lateral view, 29 = distal part of right forewing, 30 = first subdiscal cell of forewing, 31 = first tergite, 32 = hind end of female metasoma. – *Chorebus* (*Stiphrocera*) *rubicundus* GRIFFITHS, 1968: 33 = precoxal sulcus on mesopleuron, 34 = mandible, 35 = hind tarsomeres 1–3 in lateral view, 36 = first tergite, 37 = distal part of right forewing. – *Chorebus* (*Paragyrocampa*) *convergens* sp. n.: 38 = head in dorsal view, 39 = head in lateral view, 40 = head in frontal view, 41 = mandible, 42 = hind coxa with short tuft of pubescence, 43 = hind femur, 44 = distal part of right forewing, 45 = first subdiscal cell of fore wing, 46 = first tergite, 47 = hind end of female metasoma

Mesosoma in lateral view 1.3 times as long as high, polished. Mesoscutum entirely hairy, prescutellar dimple long, linear. Propodeum densely hairy, metapleuron with rosette-shaped hairs. – Hind coxa above basally with a crest-like tuft of pubescence (Fig. 42). Hind femur 3.8 times as long as wide distally (Fig. 43). Hind tibia slightly longer than tarsus.

Forewing one-sixth longer than body. Pterostigma (Fig. 44) narrow, parallel-sided, 15 times as long as wide, r 2.5 times longer than width of pterostigma; $1-R1$ short, almost 0.6 times as long as pterostigma; $3-SR + SR1$ approaching tip of wing, $SR1$ S-form. First subdiscal cell open distally, i.e. $Cu1b$ missing (Fig. 45, see oblique arrow), $cu-a$ clearly postfurcal (Fig. 45, see horizontal arrow).

First tergite (Fig. 46) 1.4 times as long as wide behind, evenly widening posteriorly, pair of basal keels not meeting and ending on hind part of tergite, pair of spiracles before middle of tergite, tergite itself rugose and with rather disperse hairs, at its hind corner with denser hairs. Further tergites polished. Hypopygium not pointed, ovipositor sheath short, in lateral view as long as hind basitarsus (Fig. 47).

Scape and pedicel yellow, flagellum yellow, brownish yellow to brownish. Ground colour of body dark brown. Mandible and clypeus yellow, palpi pale yellow. Tegula + parategula yellowish brown. Second tergite brown. Legs yellow. Wings subfumous, pterostigma and veins light brown.

Male and host unknown.

Distribution – Hungary.

Remarks – *Chorebus* (*Paragyrocampa*) *convergens* sp. n. is nearest to *Ch.* (*P.*) *ophthalmicus* (TOBIAS) (1962: 120) considering their common features: convergent eyes in frontal view (Figs 11, 40), less large mandible (Fig. 41), $SR1$ approaching tip of wing (Fig. 44) and yellow coloured legs; the distinction of the two species is as follows:

1(2) Head cubic in dorsal view, 1.5 times as wide as long; head in frontal view with more convergent compound eyes (Fig. 11). First tergite parallel-sided and twice as long as wide behind (Fig. 42 in TOBIAS 1962: 120). Forewing: r as long as width of pterostigma, pterostigma cuneiform, $cu-a$ almost interstitial (Fig. 40 in TOBIAS 1962: 120). Notaulix distinct. Hind tibia and tarsus equal in length (Fig. 41 in TOBIAS 1962: 120). Antenna with 29 antennomeres. Female: 2.4 mm. – European Russia: Saint Petersburg district

Ch. (*Paragyrocampa*) *ophthalmicus* (TOBIAS, 1962)

2(1) Head in dorsal view less transverse, 1.6 times as wide as long (Fig. 38); head in frontal view with less convergent compound eyes (Fig. 40). First tergite widening posteriorly and 1.4 times as long as wide behind (Fig. 46). Forewing: *r* 2.5 times longer than width of pterostigma, pterostigma parallel-sided (Fig. 44), *cu-a* clearly postfurcal (Fig. 45, see horizontal arrow). Notaulix indistinct. Hind tibia slightly longer than tarsus. Antenna with 31 antennomeres. Female: 2.1 mm. – Hungary

***Ch. (Paragyrocampa) convergens* sp. n.**

The new species is also similar to *Ch. (Chorebus) foveolus* (HALIDAY, 1833) and *Ch. (Paragyrocampa) catron* sp. n., their distinction given at *Ch. (P.) catron* sp. n.

***Chorebus (Stiphrocera) irriguus* sp. n.**
(Figs 51–58)

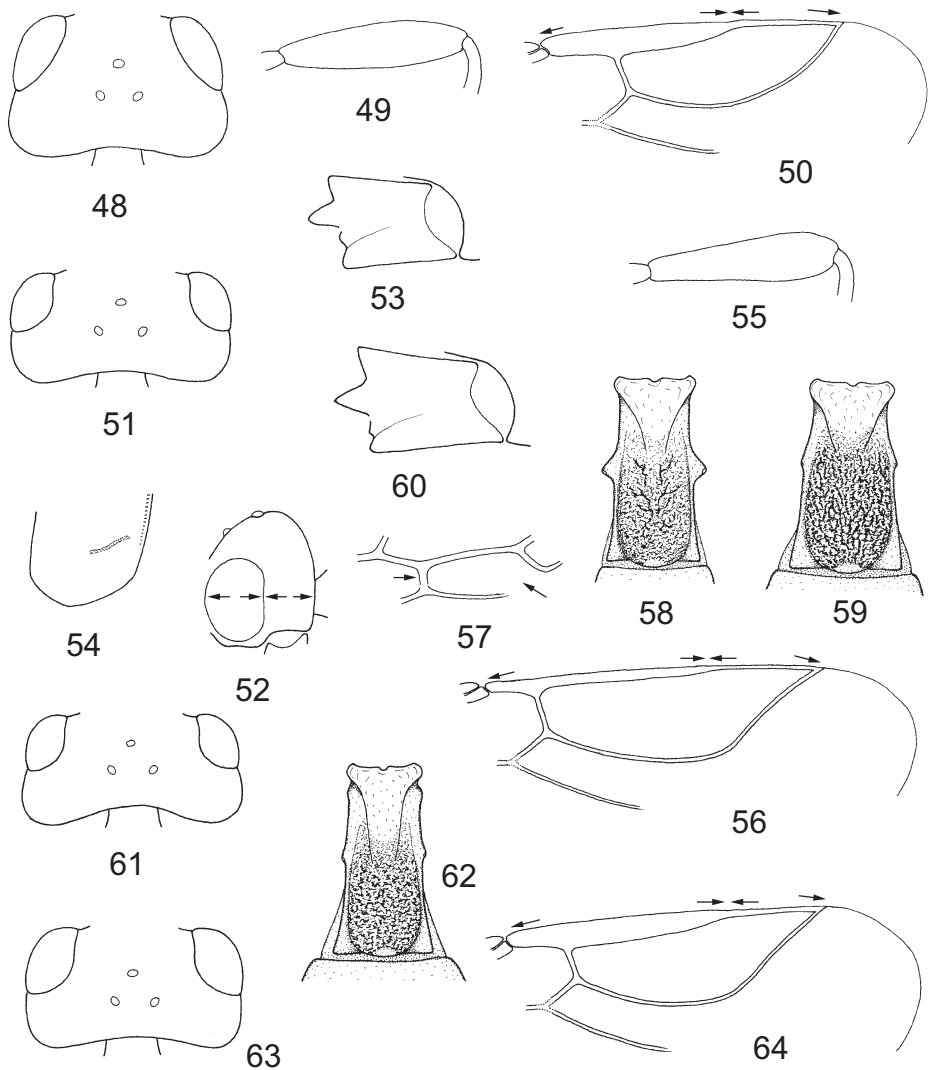
Type material – Female holotype: Hungary, Szilvásvár, Gerennavár (Bükk Mts), 8 September 1981, leg. J. PAPP. – Holotype is in good condition: (1) glued on a pointed card by the mesosternum, (2) tarsomeres 2–5 of right fore leg missing. Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11491.

Etymology – “Irriguus” is a phantasy name.

Description of the female holotype – Body 1.3 mm long. Antenna longer than body and with 26 antennomeres. First flagellomere almost four times and penultimate flagellomere three times as long as wide, flagellum slightly attenuating distally. – Head transverse in dorsal view (Fig. 51), twice as wide as long, eye somewhat longer than temple, occiput weakly excavate. Eye in lateral view 1.75 times as high as wide, temple about 0.9 times as wide as eye (Fig. 52). Mandible 1.2 times as long medially as wide between upper and lower teeth, teeth small (Fig. 53). Head polished.

Mesosoma in lateral view stout, slightly longer than high, polished. Mesoscutum on its declivous fore part hairy, otherwise bare. Prescutellar dimple round, less deep. Precoxal sulcus posteriorly on mesopleuron, short, narrow, subcrenulate (Fig. 54). Propodeum rugose and less densely hairy. Metapleuron rather hairy ventrally. – Hind femur 3.1 times as long as wide distally (Fig. 55). Hind tarsus a bit shorter than hind tibia, hind basitarsus shorter than tarsomeres 2–3 combined.

Forewing longer than body. Pterostigma (Fig. 56) narrow, i.e. only slightly thicker than metacarpal vein or *1-R1*, 14 times as long as wide, *r* twice as long as width of pterostigma; *1-R1* 0.5 times as long as pterostigma. Vein 3–*SR* + *SR1* clearly bent and reaching tip of wing. First subdiscal cell open distally, i.e. *Cu1b* missing (Fig. 57, see oblique arrow), *cu-a* clearly postfurcal (Fig. 57, see horizontal arrow).



Figs 48–64. *Chorebus (Paragyrocampa) catron* sp. n. (male paratype): 48 = head in dorsal view, 49 = hind femur, 50 = distal part of right forewing. – *Chorebus (Stiphrocera) irriguus* sp. n.: 51 = head in dorsal view, 52 = head in lateral view, 53 = mandible, 54 = precoxal sulcus on mesopleuron, 55 = hind femur, 56 = distal part of right forewing, 57 = first subdiscal cell of forewing, 58 = first tergite. – *Chorebus (Stiphrocera) asphodeli* GRIFFITHS, 1968: 59 = first tergite, 60 = mandible, 61 = head in dorsal view. – 62–64. *Chorebus (Stiphrocera) venustus* (TOBIAS, 1962): 62 = first tergite, 63 = head in dorsal view, 64 = distal part of right forewing

First tergite (Fig. 58) long, twice as long as wide behind, parallel-sided, pair of basal keels short and not meeting, pair of spiracles protruding tuberculiform at middle of tergite, rugo-rugulose. Further tergites polished. Hypopygium truncate, ovipositor sheath up-curved, as long as second tarsomere of hind tarsus.

Scape brown, pedicel brownish, flagellum dark brown. Head, mesosoma and first tergite blackish brown, metasoma dark brown, sternites brown. Mandible dark brown, palpi brownish yellow. Tegula dark brown, parategula brownish yellow. Fore leg light brown, middle and hind legs brown. Wings hyaline, pterostigma brown and veins light brown.

Male and host unknown.

Distribution – Hungary.

Remarks – *Chorebus* (*Stiphrocera*) *irriguus* sp. n. runs to *Ch. (St.) asphodeli* GRIFFITHS (1968a: 29) and *Ch. (St.) venustus* (TOBIAS) (1962: 131) with the help of the original descriptions of the latter two species as well as with the help of TOBIAS's (1986: 173–208) key to the *Chorebus* species of Europe. The three species are separated with the following key:

1(2) First tergite evenly though weakly widening posteriorly, 1.6 times as long as wide behind, with disperse hairs (Fig. 59). Mandible strong, its upper tooth large (Fig. 60). Head transverse in dorsal view, twice as wide (between temples) as long, temple slightly swollen (Fig. 61). Antenna with 22–24 antennomeres. Antenna and body blackish brown, legs dark brown to brown. Female: 2–2.2 mm. – Spain, Hungary

Ch. (Stiphrocera) asphodeli GRIFFITHS, 1968

2(1) First tergite subparallel- to parallel-sided, 1.5–2 times as long as wide behind (Figs 58, 62). Mandible less strong, its upper tooth small (Fig. 53). Head in dorsal view 1.8–2 times as wide as long, temple not swollen (Figs 51, 63). Antenna with 24–30 antennomeres.

3(4) First tergite subparallel-sided, i.e. 1.5–1.6 (and not 3.2 times, cf. Fig. 63 in TOBIAS 1962: 131) as long as wide behind and slightly widening posteriorly, pair of spiracles not protruding (Fig. 62). Head in dorsal view 1.8–1.9 times as wide as long, i.e. somewhat less transverse (Fig. 63). Pterostigma clearly wider than *l*–*RI* and *r* as long as (or slightly longer than) width of pterostigma, *l*–*RI* (0.4 times) shorter than half length of pterostigma (Fig. 64, see arrows). Legs yellow, palpi straw yellow. Female: 1.4–2 mm. – Russia, Ukraine, Azebaidjan, Poland, Hungary

Ch. (Stiphrocera) venustus (TOBIAS, 1962)

- 4(3) First tergite parallel-sided, i.e. twice as long as wide behind, pair of spiracles strongly protruding (Fig. 58). Head in dorsal view twice as wide as long, i.e. clearly transverse (Fig. 51). Pterostigma narrow, i.e. hardly wider than $l-Rl$ and r longer than width of pterostigma, $l-Rl$ half length (0.5 times) of pterostigma (Fig. 56, see arrows). Legs brown to light brown, palpi brownish yellow. Female: 1.3 mm. – Hungary

Ch. (*Stiphrocera*) *irriguus* sp. n.

On the basis of the original description of *Ch. (St.) abantis* IVANOV et TOBIAS (2005: 224) the new species seems to be near to this species, too. The following separating features were found between them:

- 1(2) Occiput with sparse hairs. Hind coxa above without tuft of hairs. Temple in dorsal view somewhat shorter than eye (Fig. 51). Pterostigma narrow, slightly thicker than $l-Rl$ (Fig. 56). Lower two teeth of mandible less distinct (Fig. 53). Precoxal sulcus subcrenulate (Fig. 54). Flagellum dark brown, legs light brown to brown. Female: 1.3 mm. – Hungary

Ch. (*St.*) *irriguus* sp. n.

- 2(1) Occiput pubescent. Hind coxa above with tuft of hairs. Temple in dorsal view half as long as eye (in description, contrary to Fig. 5 in IVANOV & TOBIAS 2005: 224). Pterostigma wide, clearly wider than $l-Rl$ (Fig. 7 l.c.). Lower two teeth of mandible distinct (Fig. 6 l.c.). Precoxal sulcus smooth. Flagellum yellowish to light brown, legs yellowish brown. Female: 2 mm. – Azerbaijan

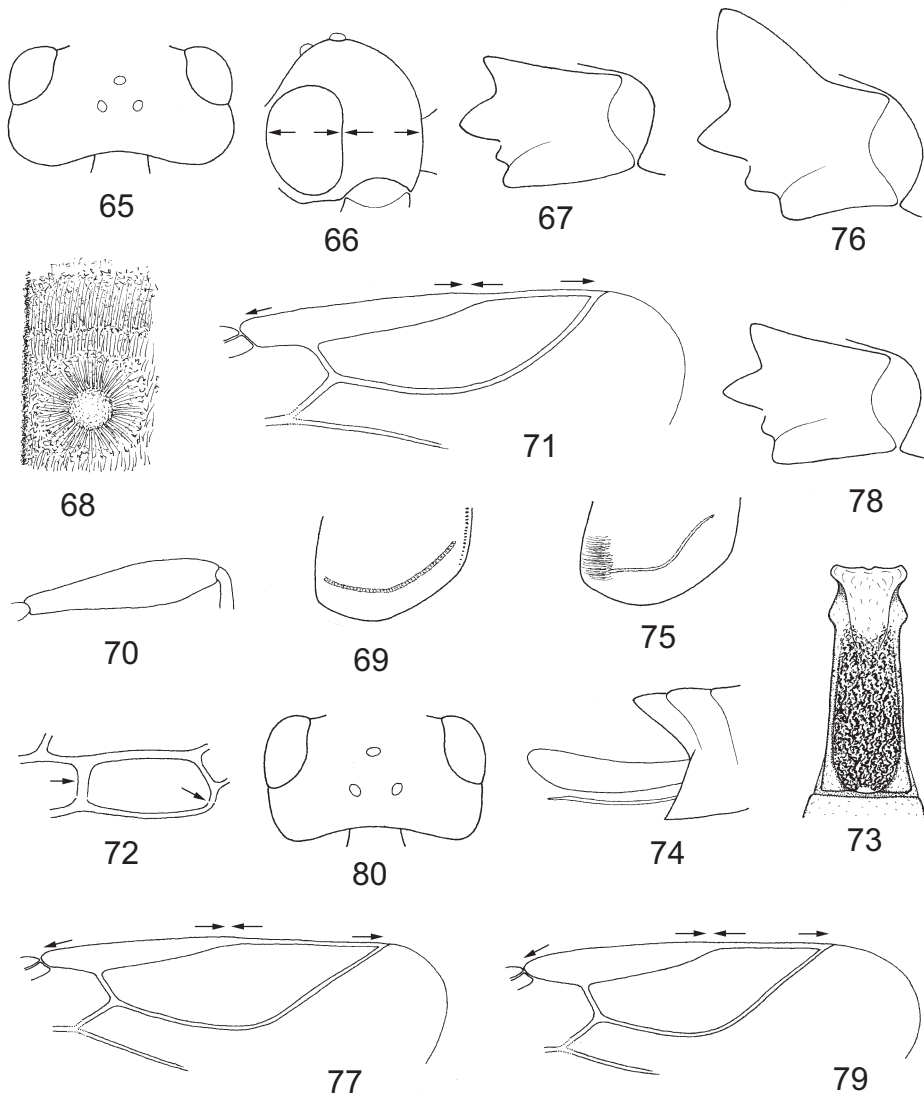
Ch. (St.) abantis IVANOV et TOBIAS, 2005

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

(Figs 65–74)

Type material – Female holotype: Slovakia, Bártfa (=Bardejov), Lamavisko (Mts Csergő), 28 June 1977, leg. J. PAPP. – Holotype is in good condition: (1) glued on a pointed card by the hind half of mesosternum, (2) distal half of fore wing missing. Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11492.

Etymology – The specific epithet “pusiculus” (a reduction of the two Latin words “pusillus” = small and “tuberculus” = protuberance) refers to the pair of tubercles on propodeum (Fig. 68).



Figs 65–80. *Chorebus (Phaenolexis) pusculus* sp. n.: 65 = head in dorsal view, 66 = head in lateral view, 67 = mandible, 68 = rosette-like pubescence on propodeum, 69 = precoxal sulcus on mesopleuron, 70 = hind femur, 71 = distal part of right forewing, 72 = first subdiscal cell of forewing, 73 = first tergite, 74 = hind end of female metasoma. – *Chorebus (Phaenolexis) serus* (NIXON, 1937): 75 = precoxal sulcus on mesopleuron, 76 = mandible, 77 = distal part of right forewing. – *Chorebus (Phaenolexis) xiphidius* GRIFFITHS, 1967: 78 = mandible, 79 = distal part of right forewing, 80 = head in dorsal view

Description of the female holotype – Body 3 mm long. Antenna very long, about 1.5 times longer than body and with 42 antennomeres. First flagellomere 3.5 times and penultimate flagellomere 2.6 times as long as wide. – Head in dorsal view transverse (Fig. 65), 1.9 times as wide as long, eye as long as temple and a bit bulging; occiput moderately excavate. Eye in lateral view 1.6 times as high as wide and as wide as temple, temple evenly wide beyond eye (Fig. 66). Mandible longer medially than wide between upper and lower teeth, upper tooth large and moderately expanded, other three teeth distinct (Fig. 67). Head polished.

Mesosoma in lateral view almost 1.6 times as long as high, its hairs and pubescence similar to that of *Ch. leptogaster*. Mesoscutum and scutellum polished, prescutellar dimple linear and deep. Propodeum with a pair of tubercles (upwards on declivous part of propodeum) surrounded with rosette-shaped pubescence (Fig. 68), propodeum densely hairy. Precoxal sulcus long, narrow, subcrenulate (Fig. 69). Metapleuron with rosette-shaped pubescence. – Hind femur almost 4.2 times as long as wide distally (Fig. 70). Hind tarsus longer than hind tibia.

Forewing as long as body. Pterostigma (Fig. 71) six times as long as wide, cuneiform (or distally slightly narrowing), r 0.9 times as long as width of pterostigma, $1-R1$ almost 0.6 times as long as pterostigma. Vein $3-SR + SRI$ approaching tip of wing, SRI bent (Fig. 71). First subdiscal cell closed distally, i.e. $Cu1b$ present (Fig. 72, see oblique arrow) and $cu-a$ less postfurcal (Fig. 72, see horizontal arrow).

First tergite (Fig. 73) 2.4 times as long as wide behind, parallel-sided, pair of basal keels less distinct and restricted anteriorly, pair of spiracles before middle of tergite, tergite rugose with a few long hairs. Further tergites polished. Hypopygium in lateral view pointed, ovipositor sheath fairly thick and as long as hind basitarsus + half of second tarsomere combined (Fig. 74).

Scape and pedicel brownish yellow, flagellum darkening rusty brown (flagellomeres 1–3) to dark rusty brown. Head, mesosoma and first tergite black, metasoma black with faint dark brown tint, second tergite laterally with a pair of brownish yellow maculae, last tergite deep yellow. Palpi yellow. Tegula black, parategula brown. Legs yellow, hind tibia distally and hind tarsus entirely blackish fumous. Wings hyaline, pterostigma and veins brown.

Male and host unknown.

Distribution – Slovakia.

Remarks – *Chorebus (Phaenolexis) pusculus* sp. n. is nearest to *Ch. (Ph.) serus* (NIXON) (1937: 22, 1944: 89, 94) and to *Ch. (Ph.) xiphidius* GRIFFITHS (1967b: 664, 678) considering their common features such as very long and narrow first tergite (Fig. 73), tuft of pubescence on hind coxa (*cf.* Fig. 6) and yellow legs. The three species are separated with the following key:

1(2) Precoxal suture smooth, narrow, linearform (Fig. 75). Upper (or first) tooth of mandible very long and expanded upwards (Fig. 76). Antenna with 35–37 antennomeres. Pterostigma cuneiform, seven times as long as wide, *I–RI* long (0.8 times as long as pterostigma) and approaching tip of wing (Fig. 77, see arrows). Tegula brown, metasoma reddish brown to brownish yellow. Female: 3–3.1 mm. – England, Germany, Austria, Hungary, Sweden, Asiatic Russia (Primorsky krai)

Ch. (Phaenolexis) serus (NIXON, 1937)

2(1) Precoxal sulcus subcrenulate (Fig. 69). Upper (or first) tooth of mandible less long and at most less expanded (Figs 67, 78). Number of antennomeres different. Tegula black.

3(4) Propodeum without a pair of tubercles. Upper (or first) tooth of mandible not expanded (Fig. 78). Pterostigma short, five times as long as wide, *I–RI* ending before tip of wing (Fig. 79). Antenna with 28–32 antennomeres. Eye in dorsal view not bulging (Fig. 80). Metasoma yellow. Female: (2.1–)2.7–2.9 mm. – Germany, Hungary, Asiatic Russia (Chita Region, Primorsky krai)

Ch. (Phaenolexis) xiphidius GRIFFITHS, 1967

4(3) Propodeum with a pair of tubercles surrounded with rosette-like pubescence (Fig. 68). Upper (or first) tooth of mandible slightly expanded (Fig. 67). Pterostigma long, six times as long as wide, *I–RI* approaching tip of wing (Fig. 71). Antenna with 42 antennomeres. Eye in dorsal view a bit bulging (Fig. 65). Metasoma black. Female: 3 mm. – Slovakia

Ch. (*Phaenolexis*) *pusiculus* sp. n.

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

(Figs 81–89)

Type material – Female holotype: Hungary, Püspökladány, Ágotapuszta, 16–18 June 1975, leg. Z. KASZAB & S. MAHUNKA. – Holotype is in good condition: (1) glued on a pointed card by the mesosternum, (2) tarsomeres 4–5 of hind left leg missing, (3) right hind wing apically slightly creased. Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. no. 11493.

Etymology – “*Trapesus*” is a phantasy name.

Description of the female holotype – Body 2.7 mm long. Antenna longer than body and with 33 antennomeres. First flagellomere 3.6 times and penultimate flagellomere 1.8 times

as long as wide, flagellum slightly attenuating. – Head in dorsal view transverse (Fig. 81), 1.8 times as wide as long, eye 1.5 times longer than temple, temple slightly bulging, occiput excavate. Eye in lateral view almost 1.75 times as high as wide, temple wider than eye, temple ventrally narrowing (Fig. 82, see arrows). Mandible longer medially than wide between upper and lower teeth, upper tooth moderately expanded, second tooth basally widening (Fig. 83). Head polished.

Mesosoma in lateral view elongated, almost 1.5 times as long as high, polished. Declivous part of mesoscutum rugulose-subrugulose. Notaulix weakly distinct on fore half of mesoscutum, otherwise mesoscutum polished. Precoxal sulcus wide and long, subcrenulate (Fig. 84). Propodeum in lateral view with a distinct antero-horizontal and a postero-vertical surfaces (Fig. 85), densely rugo-rugulose and hairy to pubescent. Metapleuron with rosette-shaped hairs. – Hind femur 3.8 times as long as wide distally (Fig. 86). Hind tarsus slightly shorter than hind tibia.

Forewing as long as body. Pterostigma (Fig. 87) eight times as long as wide, parallel-sided, r 1.3 times longer than width of pterostigma; $1-R1$ 0.75 times as long as pterostigma. Vein $3-SR + SRI$ ending before tip of wing, SRI faintly S-form, marginal cell less wide (Fig. 87, see arrows). First subdiscal cell open distally, i.e. $Cu1b$ missing (Fig. 88, see arrow).

First tergite (Fig. 89) strongly widening posteriorly, i.e. somewhat longer than wide behind, pair of basal keels meeting anteriorly, pair of spiracles at middle of tergite, tergite rugose, dispersely hairy, at hind corner with tuft of hairs. Further tergites polished. Hypopygium truncate, ovipositor sheath short, i.e. as long as hind basitarsus (Fig. 120).

Scape and pedicel yellow, flagellomeres 1–2 darkening yellow, rest of flagellum greyish dark brown. Head, mesosoma and first tergite black, metasoma dark brown. Mandible yellow, teeth blackish brown; clypeus yellow, palpi straw yellow. Tegula and parategula brown. Legs vivid yellow, hind tarsus brownish fumous. Wings hyaline, pterostigma and veins light brown.

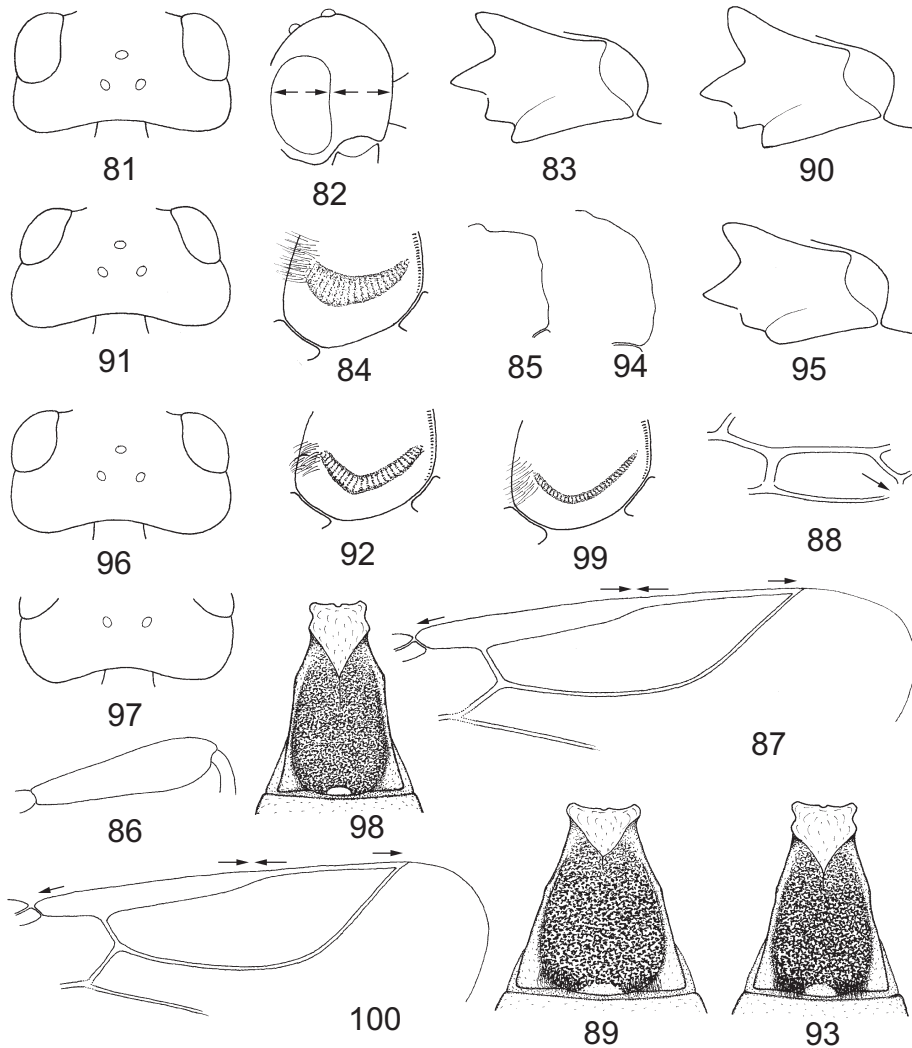
Male and host unknown.

Distribution – Hungary.

Remarks – *Chorebus (St.) trapesus* sp. n. is nearest to *Ch. (St.) andizhanicus* (TOBIAS) (1966: 129) and *Ch. (St.) asramenes* (NIXON) (1945: 192, 195) considering their widening first tergite, tuft of hairs at posterior part of first tergite and entirely yellow legs, however, the three species are distinguished by easily recognizable features:

1(2) Mesosoma in lateral view stout, 1.2–1.25 times as long as high. Upper tooth of mandible strongly expanded (Fig. 90). Temple in dorsal view swollen (Fig. 91). Propodeum in lateral view convex (Fig. 94). First tergite moderately widening, 1.3–1.4 times as long as wide behind, densely rugose (Fig. 93). Precoxal sulcus less wide, subcrenulate (Fig. 92). Female: 2–2.5 mm. – Turkmenia, Uzbekistan, Mongolia, Hungary

Ch. (Stiphrocera) andizhanicus (TOBIAS, 1966)



Figs 81–100. *Chorebus (Stiphrocera) trapezus* sp. n.: 81 = head in dorsal view, 82 = head in lateral view, 83 = mandible, 84 = precoxal sulcus on mesopleuron, 85 = contour-line of propodeum in lateral view, 86 = hind femur, 87 = distal part of right forewing, 88 = first subdiscal cell of forewing, 89 = first tergite. – *Chorebus (Stiphrocera) andizhanicus* (TOBIAS, 1966): 90 = mandible, 91 = head in dorsal view, 92 = precoxal sulcus on mesopleuron, 93 = first tergite, 94 = contour-line of propodeum in lateral view. – *Chorebus (Stiphrocera) asramenes* (NIXON, 1945): 95 = mandible, 96 = head in dorsal view, 97 = temple in dorsal view, 98 = first tergite, 99 = precoxal sulcus on mesopleuron, 100 = distal part of right forewing

- 2(1) Mesosoma in lateral view elongated, 1.4–1.5 times as long as high. Upper tooth of mandible at most moderately expanded (Figs 83, 95). Temple in dorsal view at most slightly bulging (Figs 81, 96, 97). Propodeum in lateral view with antero-horizontal and postero-vertical surfaces (Fig. 85).
- 3(4) Upper tooth of mandible moderately expanded (Fig. 83). First tergite strongly widening posteriorly, i.e. slightly longer than wide behind, slightly less densely rugose (Fig. 89). Precoxal sulcus wide, subcrenulate (Fig. 84). Temple in dorsal view slightly bulging, eye 1.5 times longer than temple (Fig. 81). Marginal cell of fore wing less wide, r somewhat (1.3 times) longer than width of pterostigma (Fig. 87). Legs vivid yellow. Female: 2.7 mm. – Hungary

Ch. (Stiphrocera) trapesus sp. n.

- 4(3) Upper tooth of mandible not expanded (i.e. “generalised form”, Fig. 95). First tergite moderately widening posteriorly, i.e. 1.25–1.5 times as long as wide behind, finely rugose (Fig. 98). Precoxal sulcus linear-form, finely crenulate (Fig. 99). Temple in dorsal view slightly bulging (Fig. 96) or rounded (Fig. 97), eye as long as temple. Marginal cell of fore wing wide, r as long as width of pterostigma (Fig. 100). Legs deep yellow. Female: 2.4–2.8 mm. – Europe, Azerbaidjan, Asiatic Russia (Primorsky Krai) *Ch. (Stiphrocera) asramanes* (NIXON, 1945)

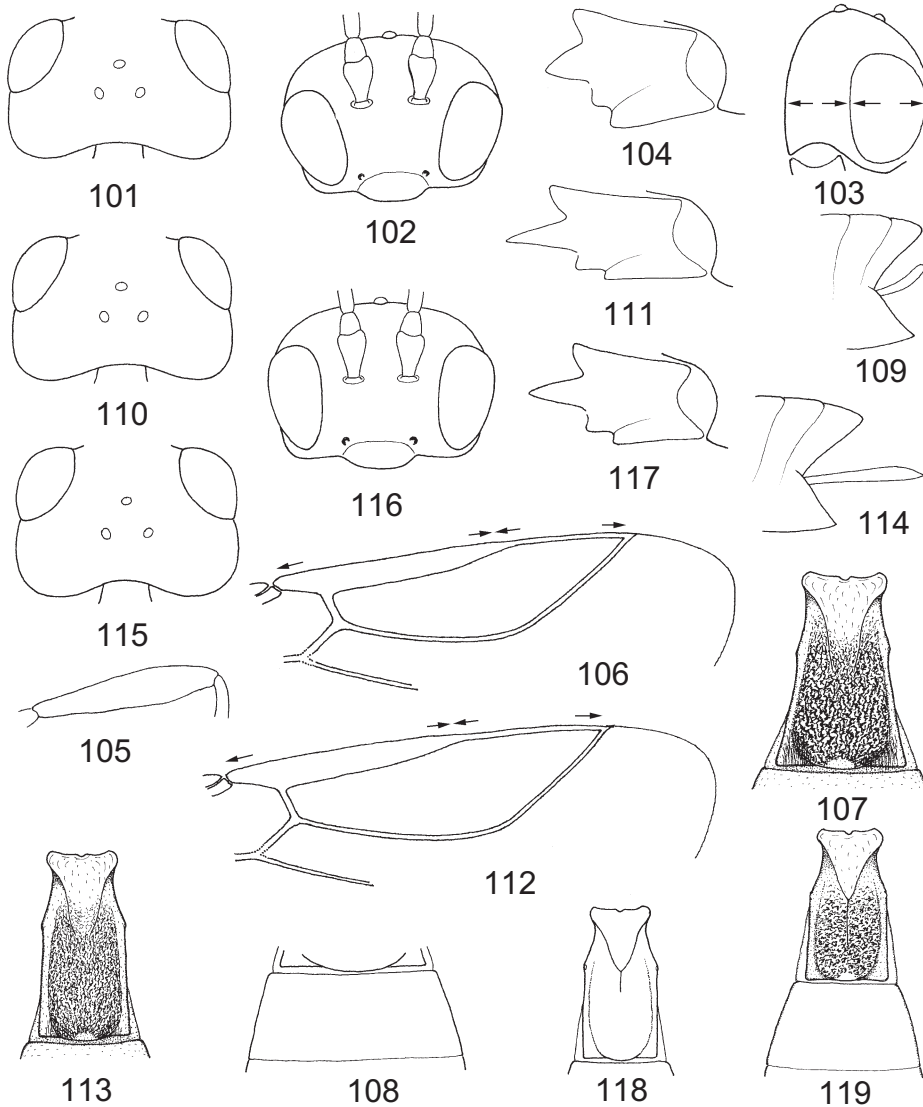
Chorebus (Stiphrocera) unicus sp. n.

(Figs 101–109)

Type material – Female holotype: Hungary, Győrűfű (Baranya county), 20–22 May 2006, leg. A. PODLUSSÁNY, A. OROSZ & I. ROZNER. – Holotype is in good condition: glued on a pointed card by the mesosternum. Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11494.

Etymology – The specific epithet “unicus” refers to the unique specimen serving for the original description.

Description of the female holotype – Body 1.8 mm long. Antenna about 1.6 times longer than body and with 28 antennomeres. First flagellomere 4.5 times and penultimate flagellomere 2.5 times as long as wide. – Head in dorsal view subcubic (Fig. 101), 1.6 times as wide as long, eye somewhat, 1.25 times, longer than temple, occiput excavate. Inner margin of compound eyes in frontal view converging ventrally (Fig. 102). Eye in lateral view 1.5 times as high as wide and slightly wider than temple (Fig. 103, see arrows).



Figs 101–119. *Chorebus (Stiphrocera) unicus* sp. n.: 101 = head in dorsal view, 102 = head in frontal view, 103 = head in lateral view, 104 = mandible, 105 = hind femur, 106 = distal part of right forewing, 107 = first tergite, 108 = second tergite, 109 = hind end of female metasoma. – *Chorebus (Stiphrocera) rostratae* GRIFFITHS, 1984: 110 = head in dorsal view, 111 = mandible, 112 = distal part of right forewing, 113 = first tergite, 114 = hind end of female metasoma. – *Chorebus (Stiphrocera) diremtus* (NEES, 1834): 115 = head in dorsal view, 116 = head in frontal view, 117 = mandible, 118 = first tergite, 119 = first and second tergites

Mandible somewhat longer medially than wide between upper and lower teeth, upper tooth fairly small, second tooth less pointed (Fig. 104). Head polished.

Mesosoma in lateral view 1.4 times as long as high, polished. Declivous part of mesoscutum roughened, otherwise mesoscutum smooth and shiny. Precoxal sulcus narrow, deep, subcrenulate (*cf.* Fig. 99). Propodeum more or less densely hairy and rugulose, in lateral view convex; metapleuron with rosette-form hairs. – Hind femur five times as long as wide distally (Fig. 105). Hind tarsus slightly shorter than hind tibia.

Forewing as long as body. Pterostigma (Fig. 106) nine times as long as wide, paralleled-sided, *r* a bit longer than width of pterostigma; *1-R1* almost 0.6 times as long as pterostigma. Vein *3-SR + SR1* ending before tip of wing, *SR1* straight, marginal cell less wide (Fig. 106). First subdiscal cell open distally, i.e. *Cu1b* missing (*cf.* Fig. 88).

First tergite (Fig. 107) widening posteriorly, 1.4 times longer than wide behind, pair of basal keels not meeting, pair of spiracles before middle of tergite, somewhat longitudinally rugose, sparsely hairy, at hind corner with thin tuft of hairs. Second tergite transverse, twice as wide behind as long medially (Fig. 108). Further tergites polished. Hypopygium truncate, ovipositor sheath short, almost concealed (Fig. 109).

Body black. Scape and pedicel ochre, flagellomeres 1–3 darkening ochre, rest of flagellum blackish brown. Mandible dark reddish yellow, palpi straw yellow. Tegula dark brown, parategula brown. Second tergite with rusty suffusion. Legs yellow. Wings subhyaline, pterostigma and veins yellowish brown.

Male and host unknown.

Distribution – Hungary.

Remarks – *Chorebus (Stiphrocera) unicus* sp. n. is nearest to *Ch. (St.) rostratae* GRIFFITHS (1984: 353). Their common features are the cubic head, elongate mesosoma and light coloured legs; the two species are distinguished by a few characters not easy to recognize:

1(2) Head in dorsal view more cubic: 1.4–1.5 times as wide as long, eye and temple equal in length (minute deviations possible, Fig. 110). Mandible with pointed second tooth (Fig. 111). Forewing: pterostigma 1.3–1.5 times as long as *1-R1* (Fig. 112). First tergite parallel- or subparallel-sided (Fig. 113). Ovipositor sheath slightly projecting (Fig. 114). Mesosoma yellow brown. Female and male: 1.8–2 mm. – Nederland, Germany, Hungary, Romania (Transylvania)

Ch. (Stiphrocera) rostratae GRIFFITHS, 1984

2(1) Head in dorsal view less cubic, 1.66 times as wide as long, eye 1.2 times longer than temple (Fig. 10). Mandible with less pointed second tooth (Fig. 104). Forewing: pterostigma long, almost twice as long as *1-R1* (Fig. 106). First tergite widening posteriorly (Fig. 107). Ovipositor sheath almost concealed (Fig. 109). Metasoma black, second tergite with rusty suffusion. Female: 1.8 mm. – Hungary

Ch. (*Stiphrocera*) unicus sp. n.

The new species is also near to *Ch. (St.) diremtus* (NEES, 1834) (NIXON 1946: 279) considering their cubic head in dorsal view, elongate mesosoma and light coloured legs; the two species are separated as follows:

1(2) Head in dorsal view more cubic, 1.5 times as wide as long, eye and temple equal in length, eye relatively large and temple indistinctly bulging (Fig. 115). Inner margin of compound eyes in frontal view parallel (Fig. 116) or slightly converging ventrally. Second tooth of mandible pointed (Fig. 117). Precoxal sulcus smooth. First tergite (1.8–2) times longer than wide behind, parallel- (Fig. 118) to subparallel-sided (Fig. 119). Second tergite less transverse, less than twice as wide behind as long medially (Fig. 119). Legs light brown to brownish yellow. Female: 1.8–2.2 mm. – Palearctic Region

Ch. (Stiphrocera) diremtus (NEES, 1834)

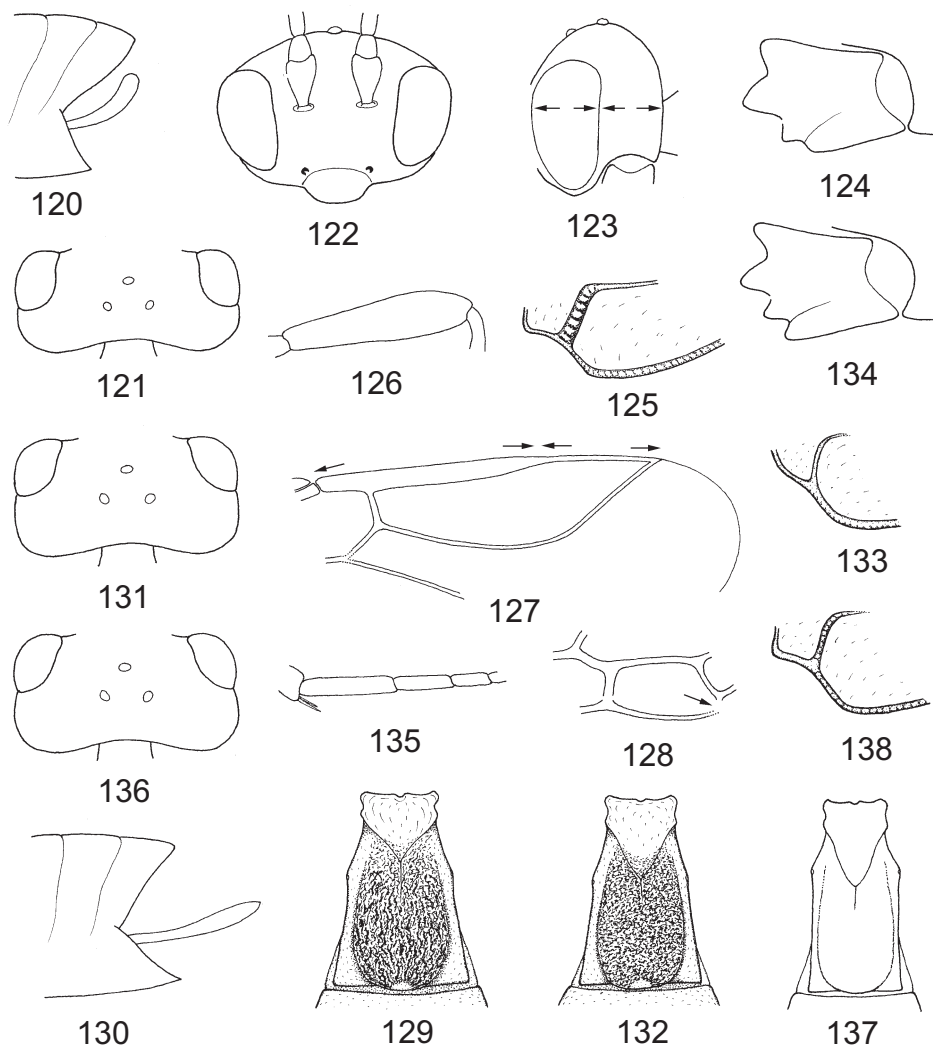
2(1) Head in dorsal view less cubic, 1.66 times as wide as long, eye 1.2 times longer than temple, eye relatively large and temple not bulging (Fig. 101). Inner margin of compound eyes in frontal view converging ventrally (Fig. 102). Second tooth of mandible less pointed (Fig. 104). Precoxal sulcus subcrenulate. First tergite 1.4 times longer than wide behind, widening posteriorly (Fig. 107), second tergite twice as wide behind as long medially (Fig. 108). Legs yellow. Female: 1.8 mm. – Hungary

Ch. (*Stiphrocera*) unicus sp. n.

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

(Figs 121–130)

Type material – Hungary, Kőszeg: Velem (Kőszeg Mts), 24 June 1960, leg. SÓLYMOSNÉ (Mrs). – Holotype is in good condition: (1) glued on a pointed card by its mesosternum, (2) right flagellum apically deficient, i.e. with 17 flagellomeres.



Figs 120–138. 120 = *Chorebus (Stiphrocera) trapesus* sp. n.: hind end of female metasoma. – *Chorebus (Stiphroceera) vodaron* sp. n.: 121 = head in dorsal view, 122 = head in frontal view, 123 = head in lateral view, 124 = mandible, 125 = left notaulix in dorso-lateral view, 126 = hind femur, 127 = distal part of right forewing, 128 = first subdiscal cell of forewing, 129 = first tergite, 130 = hind end of female metasoma. – *Chorebus (Stiphroceera) endymion* GRIFFITHS, 1967: 131 = head in dorsal view, 132 = first tergite, 133 = left notaulix in dorso-lateral view, 134 = mandible, 135 = hind tarsomeres 1–3 in lateral view. – *Chorebus (Stiphrocera) rubicundus* GRIFFITHS, 1968: 136 = head in dorsal view, 137 = first tergite, 138 = left notaulix in dorso-lateral view

Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11495.

Etymology – “Vodaron” is a phantasy name.

Description of the female holotype – Body 2.2 mm long. Antenna 1.5 times longer than body and with 28 antennomeres (left antenna; right flagellum deficient). First flagellomere 3.3 times and penultimate flagellomere 2.2 times as long as wide, flagellum indistinctly attenuating. – Head in dorsal view clearly transverse (Fig. 121), 2.1 times as wide as long, temple receded, eye 1.3 times as long as temple. Inner margin of compound eyes (in frontal view) slightly converging ventrally (Fig. 122). Eye in lateral view 2.1 times as high as wide and as wide as temple (Fig. 123). Mandible longer than wide between upper and lower teeth, teeth less pointed and less distinct (Fig. 124). Head polished.

Mesosoma in lateral view stout, 1.2 times as long as high, polished. Notaulix on declivous anterior part of mesoscutum deep and crenulate, on its horizontal part gradually weakening (Fig. 125). Propodeum less hairy, rugose, Metapleuron with less discrete rosette-shaped hairs. – Hind femur nearly 4.1 times longer than wide distally (Fig. 126). Hind tarsus shorter than hind tibia; hind basitarsus as long as tarsomeres 2–3 combined.

Forewing about one-sixth longer than body. Pterostigma (Fig. 127) long, parallel-sided and fairly narrow, 12 times as long as wide; *r* long, 1.6 times longer than width of pterostigma; *l-R1* half as long as pterostigma. Vein 3–*SR* + *SRI* approaching tip of wing, marginal cell of usual width. First subdiscal cell open distally, i.e. *Cu1b* missing as in Fig. 128, see arrow.

First tergite (Fig. 129) clearly widening posteriorly, 1.35 times as long as wide behind, pair of basal keels merging into rugosity, pair of spiracles before middle of tergite, longitudinally rugose with somewhat rough elements, sparsely hairy (without tuft of hairs at its hind corner). Hypopygium pointed, ovipositor sheath projecting beyond metasoma (Fig. 130).

Scape and pedicel ochre (scape dorsally brownish), flagellomeres 1–4 yellow to darkening yellow, rest of flagellum brown. Oral parts yellow, mandible brownish yellow. Head and mesosoma dark brown, metasoma brown, second tergite rusty. Legs light yellow. Wings hyaline, pterostigma and veins yellowish brownish.

Male and host unknown.

Distribution – Hungary.

Remarks – *Chorebus* (*Stiphrocera*) *vodaron* sp. n. is nearest to *Ch. (St.) endymion* GRIFFITHS (1967a: 864) and *Ch. (St.) rubicundus* GRIFFITHS (1968b: 78), the three species are separated by the following features:

1(2) Head in dorsal view clearly transverse, 2.1 times as wide as long, temple receded (Fig. 121). First tergite clearly widening posteriorly, 1.35 times as long as wide behind (Fig. 129). Notaulix anteriorly (on declivous part of mesoscutum) deep (Fig. 125). Teeth of mandible less distinct (Fig. 124). Ovipositor sheath projecting beyond metasoma (Fig. 130). Second tergite rusty. Female: 2.2 mm. – Hungary

Ch. (St.) vodaron sp. n.

- 2(1) Head in dorsal view transverse, almost 1.9 times as wide as long, temple moderately rounded (Fig. 131) or slightly swelling (Fig. 136). First tergite 1.5–1.7(–2) weakly widening posteriorly (Fig. 132) to (sub)parallel-sided (Figs 36, 137), 1.5–1.7(–2) times as long as wide behind. Notaulix anteriorly (on declivous part of mesoscutum) weak (Fig. 133) or moderately deep (Fig. 138). Teeth of mandible distinct (Figs 34, 134).
- 3(4) First tergite (though clearly) widening posteriorly (Fig. 132). Hind tarsomeres relatively thin, basitarsus five times as long as wide in lateral view (Fig. 135). Temple in dorsal view rounded (Fig. 131). Upper two teeth of mandible less pointed (Fig. 134). Notaulix anteriorly weak (Fig. 133). Second tergite ochre to brown. Female: (1.3–)1.8–2 mm. – Germany, Hungary *Ch. (St.) endymion* GRIFFITHS, 1967
- 4(3) First tergite subparallel- (Fig. 36) to parallel-sided (Fig. 137). Hind tarsomeres relatively thick, basitarsus four times as long as wide in lateral view (Fig. 35). Temple in dorsal view slightly swollen (Fig. 136). Upper two teeth of mandible somewhat more pointed (Fig. 34). Notaulix moderately deep (Fig. 138). Metasoma (except first tergite) deep orange yellow to brownish yellow. Female: 1.8–2.2 mm. – Germany, Poland, Hungary, Armenia *Ch. (St.) rubicundus* GRIFFITHS, 1968

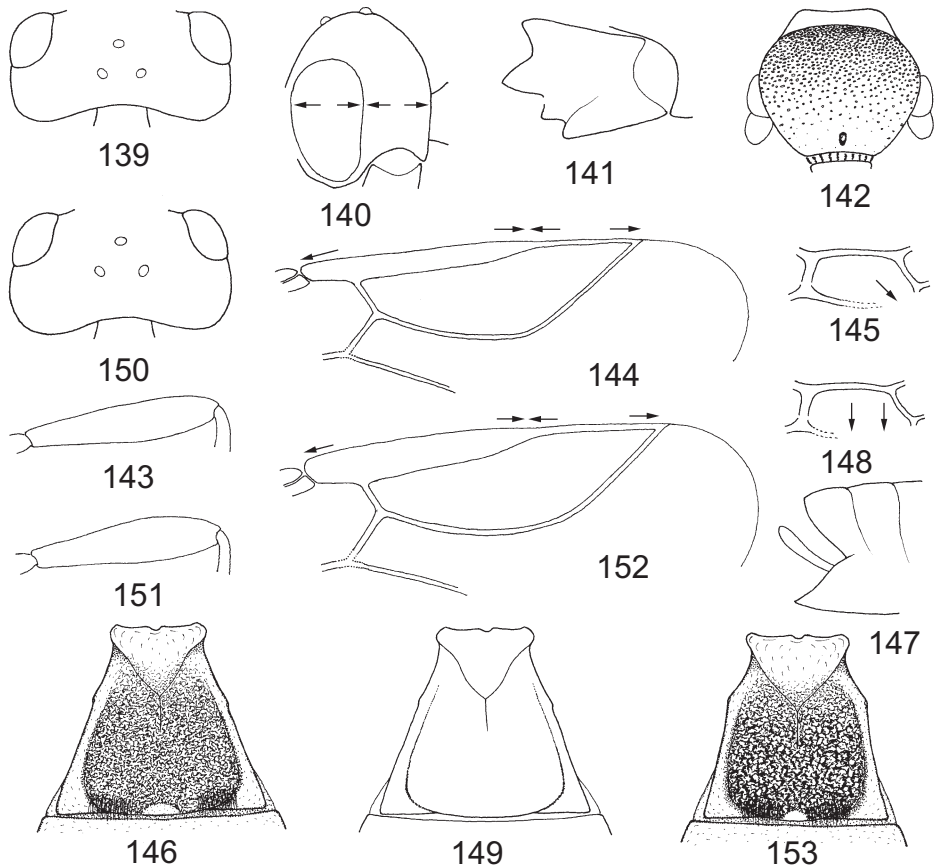
Chorebus (Stiphrocera) zuntus sp. n.
(Figs 139–149)

Type material – Female holotype: Hungary, Kerecsend, védett erdő (=nature reserved forest), 7 July 1971, leg. J. PAPP. One male paratype: Hungary, Komló, Zobákpuszta (Mts Mecsek), 29 April – 2 May 1951, leg. L. & M. MÓCZÁR. – Holotype is in good condition: (1) glued on a pointed card by the hind four coxae, (2) distal half of right pair of wings longitudinally creased, (3) left flagellum deficient distally (with 16 flagellomeres). Paratype is also in good condition: (1) glued on a pointed card by the mesosternum, (2) tarsomeres 3–5 glued separately on the card. Holotype and paratype are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 11496 (holotype) and 11497 (paratype).

Etymology – “Zuntus” is a phantasy name.

Description of the female holotype – Body 1.8 mm long. Right antenna longer than body and with 21 antennomeres (left antenna distally deficient: with 18 antennomeres). First flagellomere four times and penultimate flagellomere 2.2 times as long as wide.

– Head in dorsal view transverse (Fig. 139), twice as wide as long, eye as long as temple, temple moderately rounded, occiput excavate. Eye in lateral view 1.6 times as high as wide and a bit wider than temple, temple beyond eye evenly wide (Fig. 140, see arrows). Mandible longer than wide between upper and lower teeth, second tooth pointed, other three teeth distinct (Fig. 141). Head polished, face pointed: interspaces more or less greater than punctures.



Figs 139–153. *Chorebus (Stiphrocera) zuntus* sp. n.: 139 = head in dorsal view, 140 = head in lateral view, 141 = mandible, 142 = mesoscutum, 143 = hind femur, 144 = distal part of right forewing, 145 = first subdiscal cell of forewing of female holotype, 146 = first tergite of female holotype, 147 = hind end of female metasoma, 148 = first subdiscal cell of male paratype, 149 = first tergite of male paratype. – *Chorebus (Stiphrocera) anasellus* (STELFOX, 1952): 150 = head in dorsal view, 151 = hind femur, 152 = distal part of right forewing, 153 = first tergite

Mesosoma in lateral view 1.35 times as long as high, polished. Pronotum laterally with disperse hairs. Notaulix indistinct, mesoscutum punctate (gradually sparser posteriorly) and evenly hairy, prescutellar dimple present (Fig. 142). Precoxal sulcus linear, subcrenulate. Propodeum densely rugulose, hairy or with little pubescence. Metapleuron with less distinct rosette-shaped pubescence. – Hind femur thin, 4.5 times as long as wide distally (Fig. 143). Hind tibia and tarsus equal in length. Hind basitarsus as long as tarsomeres 2–3 combined.

Forewing as long as body. Pterostigma (Fig. 144) ten times as long as wide, *r* 1.6 times longer than width of pterostigma; *1-R1*

0.5 times as long as pterostigma. Vein 3–*SR* bent, *SRI* straight and ending before tip of wing (Fig. 144). First subdiscal cell open distally, i.e. 2–*1A* partly and *Cu1b* fully absent (Fig. 145, see arrow).

First tergite (Fig. 146) strongly widening posteriorly, broader behind than long, evenly widening posteriorly; pair of basal keels less distinct and meeting before middle of tergite; pair of spiracles before middle of tergite, tergite rugose and hairy, at its hind corner with tuft of pubescence. Further tergites polished. Hypopygium pointed, ovipositor sheath short and upturned, as long as basitarsus of middle leg (Fig. 147).

Scape and pedicel brownish yellow, flagellomeres 1–3(–4) darkening brownish yellow, rest of flagellum dark brown. Head, mesosoma and first tergite black. Mandible deep yellow, palpi pale yellow. Tegula brown, parategula light brown. Metasoma blackish, tergites 2–3 with faint rusty suffusion. Legs yellow. Wings subhyaline, pterostigma and veins greyish brownish.

Description of the male paratype – Similar to the female holotype. Body 2 mm long. Antenna with 22 antennomeres. Vein 2–*1A* of first subdiscal cell almost indistinct (Fig. 148). First tergite as long as wide behind (Fig. 149).

Host unknown.

Distribution – Hungary.

Remarks – *Chorebus (Stiphrocera) zuntus* sp. n. runs unambiguously to *Ch. (St.) anasellus* (STELFOX) (1952: 321) in GRIFFITHS's (1968b: 120–135) and TOBIAS's keys (1986: 173–208) (first tergite strongly widening posteriorly as in Fig. 153, number of antennomeres at most 21–22); the two species are distinguished by the following features:

- 1(2) Mesoscutum smooth, shiny. Head in dorsal view less transverse, 1.7 times as wide as long, temple swollen (Fig. 150). Hind femur thick, 4.1 times as long as wide (Fig. 151). Pterostigma six times as long as wide, *r* a bit shorter than width of pterostigma, *1-R1* 0.6 times as long as pterostigma (Fig. 152, see arrows). Legs blackish to dark brown, palpi light brown. Female: 1.5–2 mm. – Ireland, Turkey, Ukraine, Azerbaijan, Russia
- Ch. (St.) anasellus* (STELFOX, 1952)

- 2(1) Mesoscutum punctate, shiny. Head in dorsal view transverse, twice as wide as long, temple not swollen (Fig. 139). Hind femur thin, 4.5 times as long as wide (Fig. 143). Pterostigma ten times as long as wide, r 1.4 times longer than width of pterostigma, $1-R1$ half as long as pterostigma (Fig. 144, see arrows). Legs yellow, palpi pale yellow. Female: 1.8–2 mm. – Hungary **Ch. (St.) zuntus** sp. n.

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