ISSN 1211-8788 *Acta Musei Moraviae, Scientiae biologicae* (Brno)
91: 61–68, 2006

A revision of the genus *Ascopocoris* Stehlík et Kerzhner, 1999 (Pyrrhocoridae, Heteroptera)

Jaroslav L. Stehlík [1] & Zdeněk Jindra [2]

[1] *Moravian Museum, Department of Entomology, Hviezdoslavova 29a, CZ-627 00 Brno, Czech Republic*
[2] *Czech University of Agriculture, Department of Plant Protection, CZ-165 21 Praha-Suchdol, Czech Republic*

Stehlík J. L. & Jindra Z. 2006: A revision of the genus *Ascopocoris* Stehlík et Kerzhner, 1999 (Pyrrhocoridae, Heteroptera). *Acta Musei Moraviae, Scientiae biologicae* (Brno) **91:** 61–68. – Species of the genus *Ascopocoris* Stehlík & Kerzhner, 1999 are revised. The genus *Brancucciana* Ahmad et Zaidi, 1986 (type species *B. bhutanensis* Ahmad et Zaidi, 1986) is synonymized with the genus *Ascopocoris*. The species *Brancucciana bhutanensis* Ahmad et Zaidi, 1986, *Euscopus gestroi* Distant, 1903 and *Antilochus pygmaeus* Distant, 1903 are transferred to the genus *Ascopocoris*. The subgenus *Rubriascopus* subgen.nov. (type species *Antilochus pygmaeus* Distant, 1903) is established within *Ascopocoris*. The species *Ascoporis* (*Ascoporis*) *constanti* sp.nov. is described from Thailand and Laos.

Key words. Heteroptera, Pentatomomorpha, Pyrrhocoridae, *Ascopocoris*, new species, new subgenus, new combination, distribution

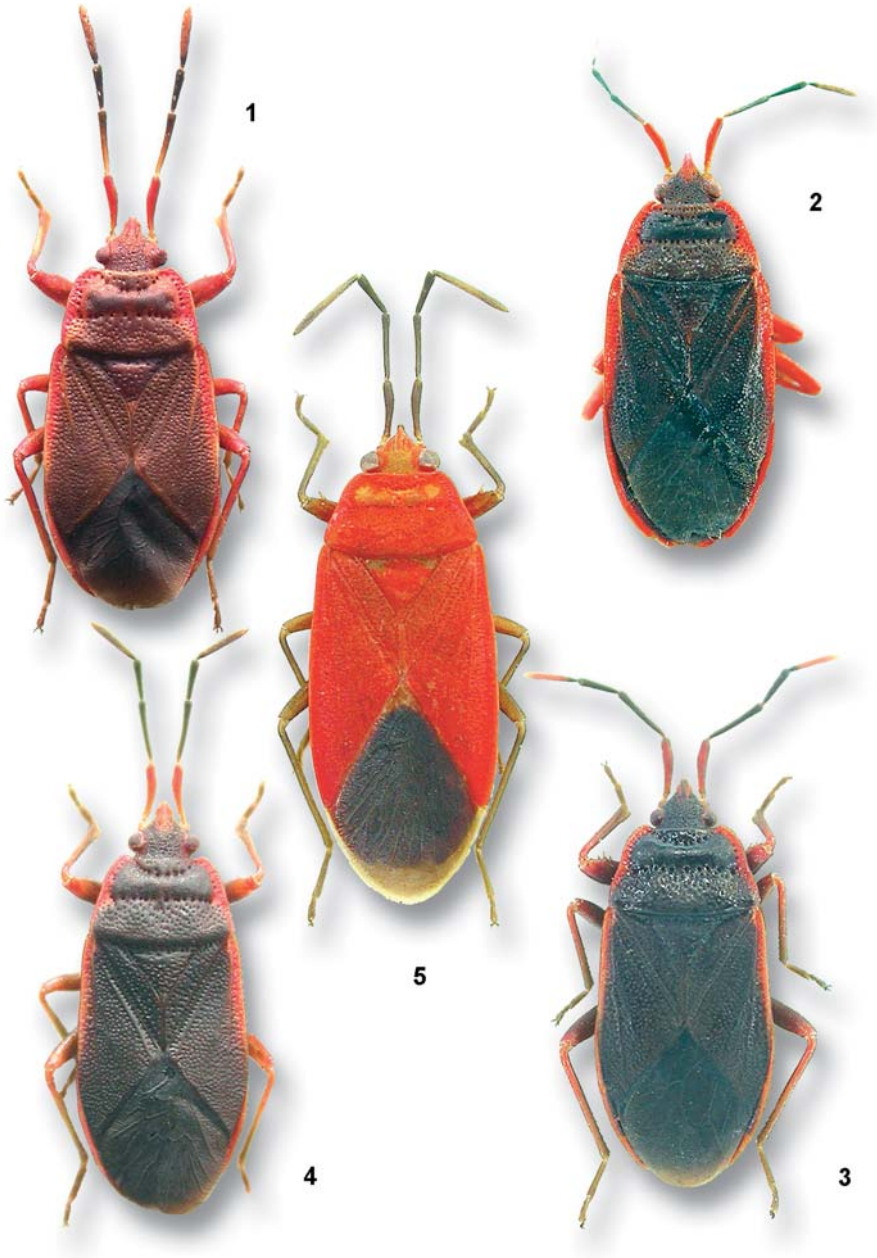
Introduction

The study of some diagnoses of Pyrrhocoridae and subsequently of the corresponding type material (or of specimens comparable to the types) has shown that some species are not congeneric but belong to different genera. Three of these have to be transferred to the genus *Ascopocoris* Stehlík et Kerzhner, 1999 (nomen novum for *Ascopus* Hsiao, 1964, nomen praeoccupatum). Hsiao (1964) listed several important characters in his description of this genus, but some still remained to be added. Further, he stated this genus to be closest to *Euscopus* Stål, 1870; he was, however, in error in this respect. Phylogenetically, the genus is closest to *Damascarga* Stehlík, 1980, *Jourdainana* Distant, 1913 (both from the Malagassy subregion) and *Heissianus* Stehlík, 2006 (from West Malaysia). We present the results of the revision below.

Abbreviations for the institutions holding the materials used:

ISNB . . . . . Institut royal des Sciences Naturelles de Belgique, Bruxelles
MMBC . . . . . Moravian Museum, Brno
ZJPC . . . . . private collection, Z. Jindra, Prague

This work was supported by grant no. MSM 6046070901 from the Ministry of Education, the Czech Republic.



Figs 1–5. 1, *Ascopocoris* (*Ascopocoris*) *bhutanensis* (Ahmad et Zaidi), male; 2, *Ascopocoris* (*Ascopocoris*) *gestroi* (Distant), holotype, female; 3, *Ascopocoris* (*Ascopocoris*) *constanti* sp.nov., female; 4, *Ascopocoris* (*Ascopocoris*) *rufus* (Hsiao), male; 5, *Ascopocoris* (*Rubriascopus*) *pygmaeus* (Distant), male.

Genus *Ascopocoris* Stehlík & Kerzhner, 1999

Ascopus Hsiao, 1964: *Acta Ent. Sinica* **13(3):** 402, 405 (junior homonym of *Ascopus* Marshall, 1951 of Coleoptera).
Ascopocoris Stehlík et Kerzhner, 1999: *Zoosyst. Rossica* **8(1):** 123. (nom.nov. for *Ascopus*)
Brancucciana Ahmad et Zaidi, 1986: *Mitt. Schweiz. Ent. Ges.* **59(3–4):** 424 **syn.nov.** (type species: *Brancucciana bhutanensis* Ahmad et Zaidi, 1986).

Type species: *Ascopus rufus* Hsiao, 1964

Remarks. AHMAD & ZAIDI (1986) described the new genus *Brancucciana* based on one male of *Brancucciana bhutanensis* Ahmad et Zaidi, 1986 from Bhutan (Bhutan, 1972, Phuntsholing leg.) from the collection of the Naturhistorisches Museum, Basel. In the unprocessed material of the same museum we have found another male and a female of the species from the same sampling. The species characters entirely match the nominal subgenus *Ascopocoris*.

Subgenus *Ascopocoris* Stehlík et Kerzhner, 1999

Redescription. Rather small species. Body almost parallel-sided. Head small, horizontal, conspicuously elongate in front of eyes, frons only slightly but evenly convex, without longitudinal furrow medially. Eyes small, very close to anterior margin of pronotum, eye tempus very small. Clypeus long, narrow, keel-like dorsally. Bucculae rather large, distally rounded, in some species diverging to the sides, antennae short, particularly segment I, which is abruptly thicker at centre and tapers feebly towards the apex. It is considerably shorter than segment II. In most species, the labium reaches up to the apex of the hind coxae. Pronotal collar wide, flat; callar lobe short. Lateral margin of pronotum and costal margins slightly elevated, never conspicuously sinuate towards the centre. Prosternal collar and hypocostal lamina wide. Membrane not exceeding end of abdomen. Legs thick but rather short. Metafemora apically rather markedly thinner.

Ventral rim of genital capsule extending into long, apically very hairy point.

In females, valvifer I much chitinized, not bilaterally symmetrical; a point usually extends from its lower right side, reaching under the valvifer on the left side. Anal tube not apparent, laterotergite IX dorsally clinging to valvifer I, positioned horizontally in the shape of an elongate triangle (pointing towards mid-body), medially only very little depressed. Laterotergite VIII reduced.

Subgenus with unique puncturation. Head dorsally and ventrally with fine but rather dense punctures. Punctures also present on pronotal and prosternal collar, pronotal lobe, lateral margin of pronotum, scutellum, clavus, corium including costal margin, posterior pleural flange I, pronotal epipleuron and hypocostal lamina.

Ascopocoris (*Ascopocoris*) *bhutanensis* (Ahmad et Zaidi, 1986) comb.nov.
(Fig. 1)

Brancucciana bhutanensis Ahmad et Zaidi, 1986: *Mitt. Schweiz. Ent*. Ges. **59(3–4):** 424.

Differential diagnosis. *A. bhutanensis* differs from *A. rufus* in its coloration: basal half of antennal segment II red, like segment I; overall colour of pronotum and corium brown rather than black. Also differs from *A. rufus* in having the usual punctures on lower margin of callar lobe [as in *A. sinuaticollis* (Liu, 1987); note: *sinuaticolis* in error], while in *A. rufus* the punctures are deep and large, separated by fine longitudinal keels. *A. sinuaticollis* has been insufficiently described, in Chinese, and requires re-description. It is possible that it is identical with *A. gestroi* (Distant, 1903). In *A. gestroi*, a wider part of costal margin red, corium black.

Ascopocoris (*Ascopocoris*) *gestroi* (Distant, 1903) comb.nov. (Fig. 2)

Euscopus gestroi Distant, 1903: *Rhynch. Brit. Ind.* **II:** 106.
Euscopus gestroi: Ahmad & Abbas 1989: *Proc. Pakistan Congr. Zool*. **9:** 205; Schaefer & Ahmad 2002: *Oriental Insects* **36:** 212.

Redescription. Clypeus, paraclypei, antennifer, bucculae, antennal segment I and narrow band basally on antennal segment II, lateral margin of pronotum, scutellar apex, costal margin up to corial cleft red (this colour fades out at two-thirds of corium), outer half of dorsal laterotergites, and ventrally prosternal collar, pronotal epipleuron, upper part of posterior pleural flange I, hypocostal lamina, ventral laterotergites, legs including trochanters and coxae red. Head dorsally (except parts given above), antennal segments II–IV (except base of II), pronotal lobe (except anterolateral angles), scutellum (except apex), corium (except costal margin), and membrane black. On posterior pleural flange I, the red darkens steadily to black towards the base. Head ventrally red but very dark. Pleurae and zygosterna black with reddish tinge, epicoxal lobes somewhat lighter, dark red. Labium except segment I whitish, segment I somewhat darker.

Distal part of forefemur with three very fine denticles.

Punctures lining callar lobe slightly larger than those on pronotal lobe but not markedly so.

Measurements (mm). Female, holotype. Head: width (including eyes) 1.21, interocular width 0.70; antenna: I 0.65, II 1.08, III 0.73, IV 0.76; pronotum: pronotal collar length 0.27, callar lobe length 0.38, pronotal lobe length 0.76, total length of pronotum 1.46, width 2.48; scutellum: length 1.03, width 2.48; corium: length 3.51, width 1.51; total body length 7.07.

Note: In other respects this species has all the characters of the nominal subgenus, including the unique puncturation.

Differential diagnosis. *Ascopocoris rufus* is similar but the punctures lining the callar lobe are much larger, particularly on the base. *A. bhutanensis* differs from this species in having a brown corium, not a black one, and by the more extensive red coloration on antennal segment II.

Remarks. Until now, this species has been assigned to the genus *Euscopus* Stål, 1870. Although they had studied the holotype, Ahmad & Abbas (1989) did not notice the conspicuous morphological differences in this species (as apparent from its redescription)

compared to species of the genus *Euscopus*. He listed a male as the holotype, although his own description includes only female genitalia. The holotype is a female. He also failed to reproduce correctly the text on the label below the type specimen ("Pogu, L. Fea 8-1889"). The correct wording is: "Palon, Pegù, L. Fea VIII.IX.89" [note: Myanmar].

Ascopocoris (*Ascopocoris*) *constanti* sp.nov. (Fig. 3)

Material examined. Holotype male: Thailand, Loei prov., Na haeo (bio station), 05.–12.v.2001, light trap, Constant & Grootaert leg. (ISBN).
Paratypes: the same data, secondary forest, Constant & Grootaert leg. 1 female (ISBN); the same data, field res. stat., 15.–19.v. 2003, J. Constant, K. Smets & P. Grootaert, 1 female (ISBN); Laos-N, Louang Phrabang prov., Khan river, 19°53'N, 102°09'E, 300 m, 21.vi.1999, Vít Kubáň leg., 1 male (MMBC).
Other material: Thailand, Chantha Buri prov., Khao Soi Dao, 5.–13.V.1998, J. Horák leg., 1 male (ZJPC) [in Stehlík & Jindra (2003) as *A. rufus*]; Thailand, Chumphon prov., Pha To env., 9°48'N 98°47'E, 14.–21.III.1998, K. Majer leg., 1 male (ZJPC) [in Stehlík & Jindra (2003) as *A. rufus*].

Description. Head, antennal segments I, II and III, IV only in narrow band at base, pronotal collar, callar and pronotal lobes, scutellum, clavus, corium, membrane, prosternal collar, all pleura and posterior pleural flange, zygosterna, dorsal and ventral leterotergites except narrow band on outer margin, and genital capsule in males black. Bucculae, first and last antennal segments (the latter except base) red, the same for lateral margin of pronotum and some two-thirds of costal margin. Red coloration on costal margin does not extend to corium. Clypeus (particularly in lateral view) and antennifer may be reddish. Coxae pale, all femora blackish, becoming red close to apex. Tibiae red, tarsi dark.

Head rather narrow, much elongated forward of the eyes. Bucculae prominent. Labial segment I reaches anterior margin of pronotum, which itself reaches further than halfway along ventrite III. Anterior margin of pronotum slightly concave, lateral margin of pronotum well rounded in middle part, diverging substantially towards posterior angles, medially almost not sinuate. Pronotal lobe flat, its posterior angles not rounded. Profemora in distal part with 3–4 denticles, of which the middle ones are the largest. Costal margin runs parallel with wing edge to opposite side.

Genital capsule. Ventral rim extending medially into a markedly hairy point that is slightly bent inwards and medially excavated. Ventral wall elevated in its entire width under ventral rim (almost keel-like and depressed close to ventral rim). Elevated part runs exactly along ventral rim. Lateral and dorsal rim sharp, the former with more hairs. Infolding of lateral rim only slightly concave. Infolding of dorsal rim narrow and bow-shaped.

Female. Upper margin of valvifer I arched towards centre. Sides of valvifer I assymmetrical; right side at base reaching slightly under the left side.

Puncturation. Head with dense and regular punctures dorsally and ventrally, pronotal collar irregularly punctured; pronotal lobe, scutellum, clavus and corium with distinct and even punctures. Punctures on anterior and posterior margin of callar lobe large and deep. Lateral margin of pronotum and costal margin with colourless and less

distinct punctures (i.e. as red as their background). Prosternal collar and posterior pleural flange I with distinct punctures, pronotal epipleuron and hypocostal lamina with less distinct punctures.

Measurements (mm). Males (holotype given first, paratype in parentheses). Head: width (including eyes) 1.27 (1.34), interocular width 0.70 (0.81); antenna: I 1.19 (1.30), II 1.21 (1.35), III 0.84 (0.86), IV 1.13 (1.30); pronotum: collar length 0.38 (0.40), callar lobe length 0.43 (0.43), pronotal lobe length 0.97 (0.92), total pronotum length 1.78 (1.75), width 2.75 (2.81); scutellum: length 1.13 (1.40), width 1.57 (1.62); corium: length 3.78 (3.89), width 1.62 (1.67); total body length 7.61 (7.88)

Females, paratypes (second in parentheses). Head: width (including eyes) 1.28 (1.30), interocular width 0.76 (0.81); antenna: I 1.24 (1.16), II 1.30 (1.24), III 0.86 (0.78), IV 1.30 (1.24); pronotum: collar length 0.43 (0.38), callar lobe length 0.43 (0.38), pronotal lobe length 0.86 (0.81), total pronotum length 1.73 (1.62), width 2.70 (2.59); scutellum: length 1.23 (1.13), width 1.40 (1.46); corium: length 3.89 (4.37), width 1.57 (1.57); total body length 7.78 (8.15).

Derivatio nominis. We take this opportunity to name the species in honour of Dr. Jérôme Constant of the Institute royal des Sciences Naturelles de Belgique in Brussels, who caught this species and also allowed us to study hitherto unidentified material from his institution.

Differential diagnosis. The species has all the characters of the nominal subgenus of *Ascopocoris*. It is easily distinguishable from all the other given species of this subgenus by having – in contrast to them – a light red last antennal segment (except for a small black annulus on its base). From *A. rufus* (Fig. 4) it differs further in its larger body size and black femora (except at the apices). In *A. rufus* the femora are completely red. The labium is somewhat longer than in the species compared. Both species have in common very distinct punctures in front of and behind the callar lobe. *A. bhutanensis* is brown dorsally, not black, as are the other species. The species also differs from *A. gestroi* in its smaller body size and in the much finer punctures lining the callar lobe, while the lateral margin of the pronotum is more rounded.

Subgenus *Rubriascopus* subgen.nov.

Typus subgeneris: *Antilochus pygmaeus* Distant, 1903

Description. Head rather wide, paraclypei short but much elevated, frons with bow-like furrow on base of clypeus, clypeus very narrow, laterally depressed before apex, eyes large, convex, adjacent to pronotum. Antennifer of substantial width. Antenna joined at inner part, outer part elevated, rounded. Hypocostal lamina of substantial width. Head, lateral margin of pronotum, costal margin, pronotal epipleuron and hypocostal lamina devoid of punctures.

Derivatio nominis. The name consists of the Latin adjective *ruber*, *-a*, *-um* (red) and *Ascopus*, the original but pre-occupied name.

Differential diagnosis. The species of the nominal subgenus *Ascopocoris* s.str. differ from the erstwhile monotypic subgenus *Rubriascopus* subgen.nov. in their smaller and narrower head, conspicuously smaller eyes somewhat remote from the anterior margin of the pronotum, a wider clypeus not laterally depressed before its apex, non-elevated paraclypei, the base of clypeus without a bow-like furrow, narrower hypocostal lamina, narrower antennifer from which antennal segement I arises around centre. In contrast to the subgenus *Rubriascopus* subgen.nov. the head, lateral margin of pronotum, costal margin, pronotal epipleuron and hypocostal lamina are punctured.

Ascopocoris (*Rubriascopus*) *pygmaeus* (Distant, 1903) comb.nov. (Fig. 5)

Antilochus pygmaeus Distant, 1903: *Rhynch. Brit. Ind.* **II:** 102.

Material examined. K e r a l a : Cardamon Hills, 15 km SW of Munnar, Kallar valley, 10°02´N, 76°58´E, 6.–18. XII. 1993, Z. Kejval et D. Boukal leg., 1 male (ZJPC); dtto, 29.–31.V. 1994, Z. Kejval et D. Boukal leg., 2 males (ZJPC); 50 km NW of Pathanamthitta near Pambaiyar river, 9°25´N, 77°05´E, 6.–9. V. 1994, Z. Kejval leg., 1 male (ZJPC); Pompa Sabramila, 9°25´N, 77°04´E, 3. V. 2005, M. Halada leg., 2 males et 2 females (ZJPC); Themala env., 8°58´N, 77°04´E, 5. V. 2005, M. Halada leg, 1 female (ZJPC).
T a m i l N a d u : Nilgiri Hills, Singara, 3.400 ft, V. 1948, P. S. Nathan leg., 1 female (MMBC); Nilgiri Hills, 15 km SE of Kotagiri near Kunchappanai, 11°24´N, 76°56´E, 13.–20. V. 1994, Z. Kejval leg., 2 males (ZJPC); Nilgiri Hills, 11 km SE of Kotagiri near Kunchappanai, 11°24´N, 76°56´E, 3.–15. V. 2002, L. Dembický leg., 1 female (MMBC).
A s s a m : Umrongso env., 25°27´N, 92°43´E, 700 m, 3.–8. VI. 2002, M. Trýzna et P. Benda leg., 1 male (ZJPC).

Redescription. Dorsal and ventral side bright red, only membrane black with a narrow pale grey band at base. Antennae black, also legs in males (except extreme base of tibiae) and labium. In females legs red, distally dark. First segment of labium red, others dark.

Body large, particularly female, head dull. Pronotal collar very wide. Anterior margin of pronotum slightly but evenly concave. Callar lobe very narrow, in particular medially (in female even narrower than pronotal collar). Lateral margin of pronotum slightly sinuate in males at level of hind margin of callar lobe, more distinctly so in females. Anterior corner of lateral margin of pronotum not extending. Mesoscutum a little depressed, mesoscutellum evenly and moderately convex. Costal margin of corium only little widened at level of middle of scutellum.

Male. Ventral rim of genital capsule with triangular medial protrusion at centre, its upper part narrowly incised and covered in rather short hairs. Laterally, the ventral rim is slightly keel-like and below it is a feeble depression on the ventral wall for almost the entire width of the genital capsule. Infolding of ventral rim vertical. Infolding of lateral rim horizontal, evenly depressed, distinctly incised close to parameres, widened at centre, lacking denticles.

Female. At base, the right part of valvifer I slightly covers the left one. Upper margin slightly concave, on outer side extending towards dorsal surface of body into a rounded apical point. These points overlap at valvifer apex. Laterotergite VIII rather large, triangular, laterotergite IX large, stigmoid and extending towards anal tube.

Puncturation on surface of pronotal collar not smooth, particularly in males. Pronotal lobe with fine black punctures, area between punctures smooth. Puncturation less distinct distally on pronotal lobe in females. Punctures marking margins of callar lobe only a little larger than on pronotal lobe. Mesoscutum, mesoscutellum (elevated part almost without punctures), clavus and corium (except costal margin) with fine and evenly-distributed black punctures; in females punctures almost colourless in some places. Somewhat more distinct lines of punctures exist along claval suture and along cubitus (narrow area between these lines not punctured). Ventrally the prosternal collar and posterior pleural flange I (in its basal part) bear colourless punctures.

Body size. *A. pygmaeus* was described from Sri Lanka and also occurs in India. Its continental population is of larger body size. While the two males from Sri Lanka measured 6.80 mm and the female 10.15 mm, the size of the males from southern India ranges from 9.02 to 10.42 mm and of females from 10.18 to 11.88 mm.

Differential diagnosis. *A. pygmaeus* differs very much from the other species of this genus in the coloration of its head, pronotum, scutellum, clavus, corium ventral side of the body, as all these body parts are of homogenous bright red colour, and by subgeneric features (see above).

Acknowledgements

For the loan of material, we would like to thank D. Burckhardt and D. Wyniger (Naturhistorisches Museum, Basel), J. Constant (Institute royal des Sciences Naturelles de Belgique, Bruxelles), I. Malenovský (Moravian Museum, Brno) and M. D. Webb (The Natural History Museum, London). Our further thanks are extended to M. D. Webb for the loan of the type material of *Antilochus pygmaeus*, J. Kabíček (Czech University of Agriculture, Prague) for taking the photographs, and P. Stehlík (Brno) for technical assistance.

References

Ahmad I. & Abbas N. 1989: A revision of the genus Euscopus Stål (Hemiptera, Pyrrhocoridae) from Indo-Pakistan Sub-continent with comments on its cladistic relationship. *Proceedings of the Pakistan Congress, Zoology* **9:** 201–210.

Ahmad I. & Zaidi R. H. 1986: A new genus and a new species of Pyrrhocoridae (Hemiptera: Pyrrhocoroidea) from Bhutan and their relationship. *Mitteilungen der Schweitzerischen Entomologischen Gesellshaft* **59(3–4)**: 423–426.

Distant W. L. 1903: The fauna of British India including Ceylon and Burma. Rhynchota. **2(1):** 1–242. Taylor and Francis, London.

Hsiao T. Y. 1964: Results of the Zoological - Botanical Expedition to southwest China 1955–1957 (Hemiptera: Pyrrhocoridae and Largidae). *Acta Entomologica Sinica* **13:** 401–406 (in Chinese, English summary).

Liu S. L. 1987: Pyrrhocoridae. In: Hung F. S. (edit.): Forest insects of Yunnan. Pp. 189–193 (in Chinese).

Schaefer C. W. & Ahmad I. 2002: A review of the Asian genus Euscopus (Hemiptera, Pyrrhocoridae). *Oriental Insects* **36:** 211–220.

Stehlík J. L. & Jindra Z. 2003: Largidae and Pyrrhocoridae of Thailand. *Acta Musei Moraviae, Scientie biologicae* (Brno) **88:** 5–19.

Stehlík J. L. & Kerzhner I. M. 1999: On taxonomy and distribution of some Palaearctic and Oriental Largidae and Pyrrhocoridae (Heteroptera). *Zoosystematica Rossica* **8(1):** 121–128.