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A new genus and a new species of Pyrrhocoridae (Hemiptera: Pyrrhocoroidea) from Bhutan and their relationships[1]

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A new genus to accomodate a new species from Bhutan is described with special reference to their metathoracic scent gland ostioles and male and female genitalia as well as their relationships within Pyrrhocoridae is also briefly discussed.

During a revision of the superfamily Pyrrhocoroidea from the Indo-Pakistan subcontinent the present first author got an opportunity to examine an unique male specimen from Bhutan in the collection of the Natural History Museum, Basel, Switzerland by the courtesy of Dr. M. BRANCUCCI (Fig. 1). It apparently resembled *Scantius* spp. but its broadly ovate body and shorter 2nd antennal segment

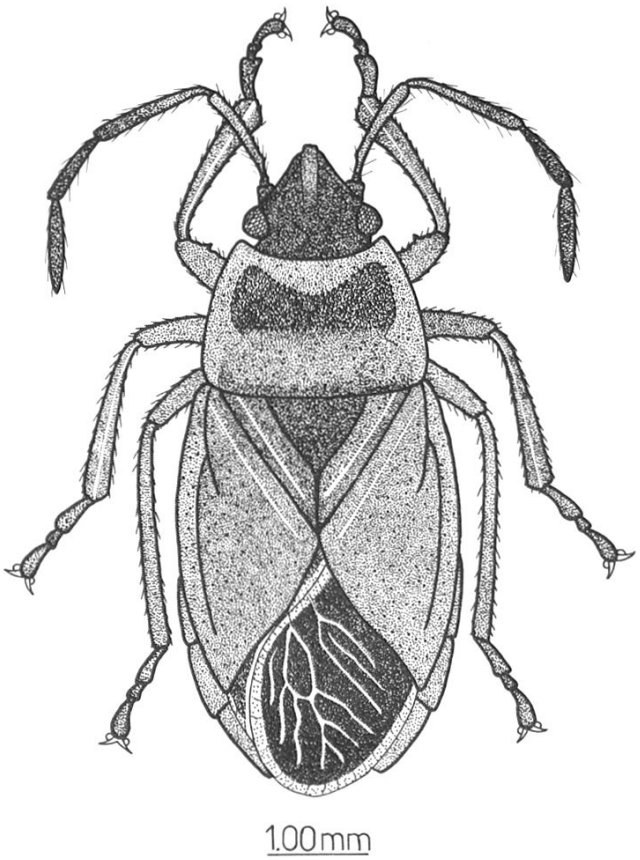

Fig. 1. *Brancucciana bhutanensis* sp. nov., dorsal view.

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distinctly isolated it from all the species of *Scantius* examined up to now. This unique male represents a new genus and is prensently named in the honour of Dr. M. BRANCUCCI as *Brancucciana* in acknowledgement of his valuable contribution to accommodate *bhutanensis* sp.n. The new taxa are described with special reference to their metathoracic scent gland ostiole and the male genitalia. In this light their relationships within the family Pyrrhocoridae is briefly discussed. For measurements, description diagrams and for inflation of aedeagus the methods of the present authors (1985) were generally followed. Keeping the aedeagus overnight in 10% KOH solution helped to inflate it remarkably complete.

Brancucciana gen. nov.

Colour: Body generally sanguineous.

Head: Head as long as broad; eyes bulging; 1st antennal segment shorter than head length; labium reaching to hind coxae.

Thorax and abdomen: Length of pronotum distinctly shorter than its width; metathoracic scent gland ostiole large; membrane of hemelytra just passing beyond the apex of abdomen.

Male genitalia: Pygophore somewhat rounded, ventroposterior margin medially with a knob; paramere f-shaped; aedeagus with both thecal and conjunctival appendages.

Remarks: The genus *Brancucciana* is closely related to *Scantius* STÅL in having anterior margin of pronotum slightly concave but it can easily be separated from the same by its broadly ovate body, 2nd antennal segment longer than basal segment and in having male paramere f-shaped.

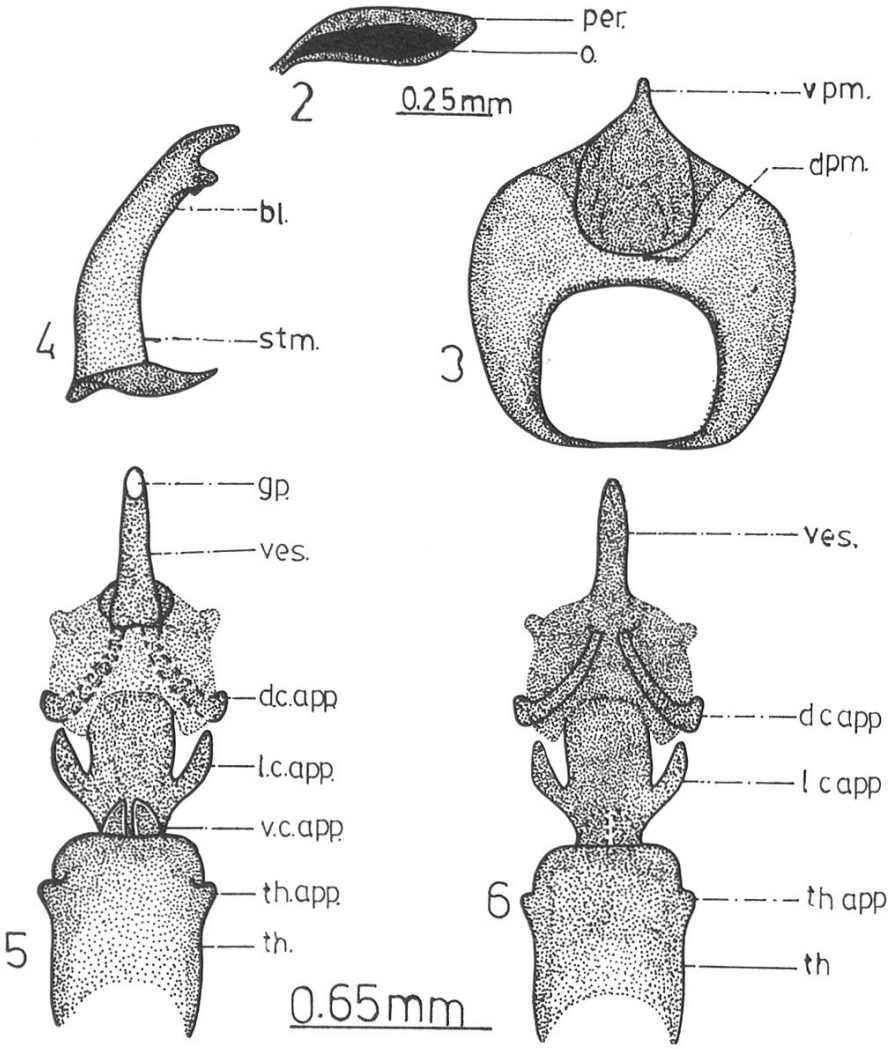
Type species: *Brancucciana bhutanensis* sp. nov. (Figs. 1–6).

Brancucciana bhutanensis sp. nov.

Colour: Body sanguineous, except head, callosities, posterior region of thorax, scutellum, hemelytra, 3rd, 4th and half of the 2nd antennal segments and clavus black.

Head: Shorter than pronotum; paraclypei shorter than clypeus; anteocular distance equal to posterior of head including eyes; antennae with 2nd segment more than 1½× longer than 3rd, length of antennal segments, I 0.65 mm, II 0.7 mm, III 0.45 mm, IV 0.7 mm, antennal formula $3 < 1 < 2 = 4$; labium reaching to hind coxae, bucculae not extending beyond 1st segment, 2nd segment 1½× longer than 3rd, length of labial segments, I 0.5 mm, II 0.6 mm, III 0,4 mm, IV 0.3 mm, labial formula $4 < 3 < 1 < 2$; length anteocular distance 0.4 mm; posterior of head including eyes 0.4 mm; width 1.0 mm; interocular distance 0.6 mm.

Thorax and abdomen: Width of pronotum more than 1½× wider than its length, anterior angles acute, anterior margin concave, lateral margins slightly convex, humeral angles subrounded, callosities raised and black; length of pronotum 0.9 mm, width 1.5 mm; scutellum slightly wider than its length, length of scutellum 0.65 mm, width 0.8 mm; metathoracic scent gland with large ostiole (Fig. 2). Total length ♂ 4.45 mm.



Figs. 2–6. *B. bhutanensis:* scent gland and genitalia. 2. Scent gland, ventral view; 3. Pygophore, dorsal view; 4. Paramere, inner view; 5. Inflated aedeagus, dorsal view; 6. Inflated aedeagus, ventral view. – Per. peritreme; o. ostiole; dpm. dorsoposterior margin; vpm. ventroposterior margin; bl. blade; stm. stem; gp. gonopore; ves. vesica; d.c.app. dorsal conjunctival appendages; l.c.app. lateral conjunctival appendages; v.c.app. ventral conjunctival appendages; th. theca; th. app. thecal appendages.

Male genitalia: Pygophore (Fig. 3) somewhat rounded, ventroposterior margin rounded, medially with a long knob, dorsoposterior margin concave, lateral margins rounded; paramere (Fig. 4) f-shaped, outer margin convex; aedeagus (Fig. 5 & 6) with three pairs of conjunctival appendages, ventral appendage plate-like, anteriorly narrowed, lateral appendages plate-like, dorsal appendage long and sickle-shaped, vesica straight, one pair of nod-like thecal appendages.

Material examined: Holotype ♂, Bhutan 1972, leg. PHUNTSHOLING in Natural History Museum, Basel, Switzerland.

RELATIONSHIPS OF THE INCLUDED TAXA

Brancucciana bhutanensis shares with representatives of other genera of the *Pyrrhocoris* group (AHMAD & ABBAS 1986) viz. *Courtesius, Dermatinus* and *Lodosiana:* shorter basal antennal segment, shorter than the head length, head usually

without an occipital suture, fore femora incrassate and spined beneath, mostly apterous forms (sometimes brachypterous or even macropterous), body short, not more than 10.5 mm, without median sulcus in the head; metathoracic scent gland ostiole with peritreme poorly developed, evaporatoria ill-defined, and the paramere always with a broad base and half of the apical portion narrow. Except for the first character that shows the relationships of the entire group with the ancestral stock, all other characters show the new species as highly developed within the subfamily Pyrrhocorinae. It appears most closely related to *Scantius* STÅL in having the anterior margin of the pronotum slightly concave and a shorter body, i.e. an advanced trait in the *Pyrrhocoris* group. On the other hand, since its 2nd antennal segment being longer than the basal segment shows the species to be closer to the ancestral stock the characters of a broadly ovate body and of f-shaped parameres in the male may be interpreted as convergent development.

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