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Hasanobochrus hasani gen. et sp. n. from India

(Heteroptera, Lygaeidae, Blissinae)

With 14 Figures

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London

Abstract. *Hasanobochrus*, a new genus and *H. hasani* sp. n. as its type species, of the subfamily Blissinae (Lygaeidae) are illustrated and described from bamboo from India. Its relationships with its allies, *Bochrus, Scansidemus, Chelochirus, Ramadademus, Patritius, Riggiella* and *Toonglasa* are discussed. It is interesting to note that the absence of pruinosity, considered as a specialised character (apomorphic), albeit in terms of reduction, could be described as a primitive character (plesiomorphic) and the gradual development of pruinosity as an advanced, specialised or apomorphic feature, if seen in the light of the majority of Lygaeidae which do not possess this character. The new genus belongs to a seemingly relict group of genera, so far, discovered in most of the tropical zoogeographical regions; the notable exception being mainland Africa.

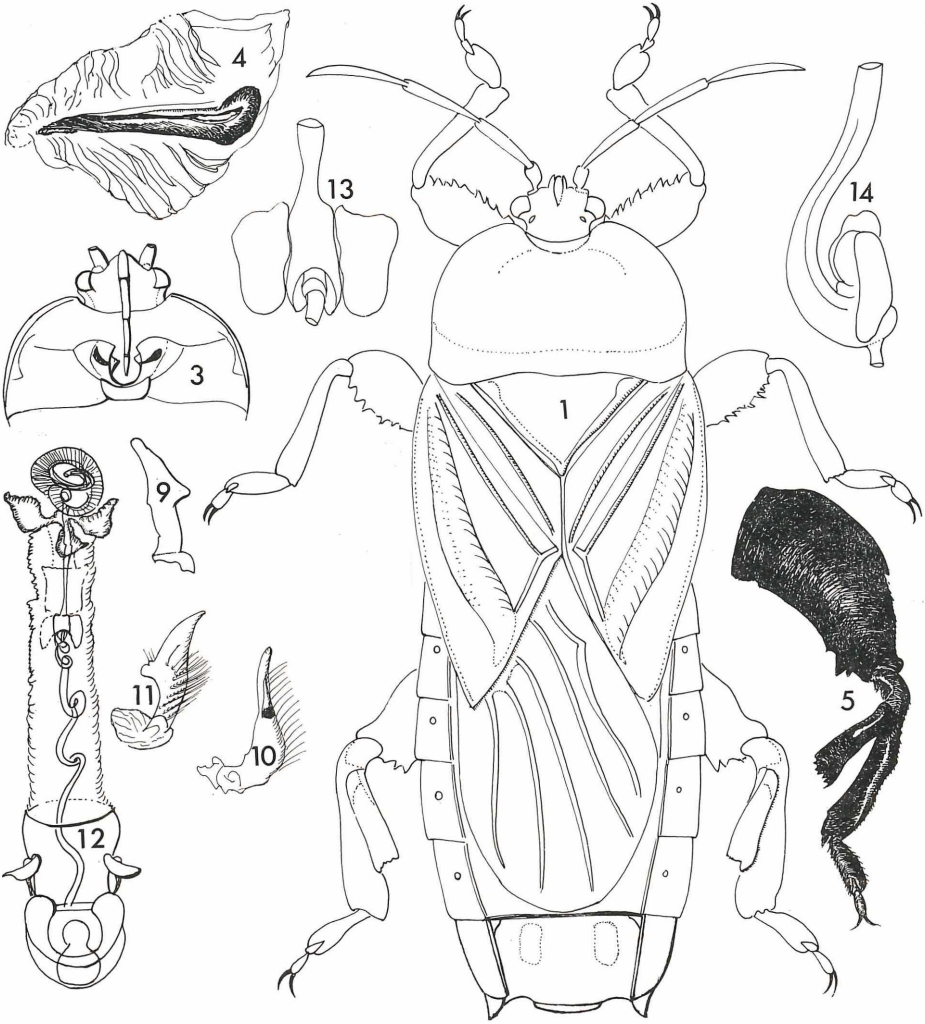
Introduction

Amongst the collection submitted by Dr. K. S. S. NAIR, Forest Entomologist, Kerala Forest Research Institute, India, for identification, was a ♂ belonging to the subfamily Blissinae, Lygaeidae, Heteroptera. This was collected from the bamboo. As it has a somewhat flattened body, it must be living between the stem and the leafsheath, probably feeding upon bamboo mealybugs.

This specimen apparently belongs to the small genus *Bochrus* STÅL, 1861, which was described from Java, as a monotypic genus with the type species *Bochrus poecilopterus* STÅL, 1861. Three more species, *B. foveatus* DISTANT, 1879, from Assam, *B. hoabinhensis* DISTANT, 1918, from Burma and *B. tonkinensis* DISTANT, 1918, from Tonkin, China, were later added to this genus. The last two were synonymised with *B. foveatus* by SLATER & AHMAD (1965) who also illustrated the holotype ♂ of *B. poecilopterus* STÅL.

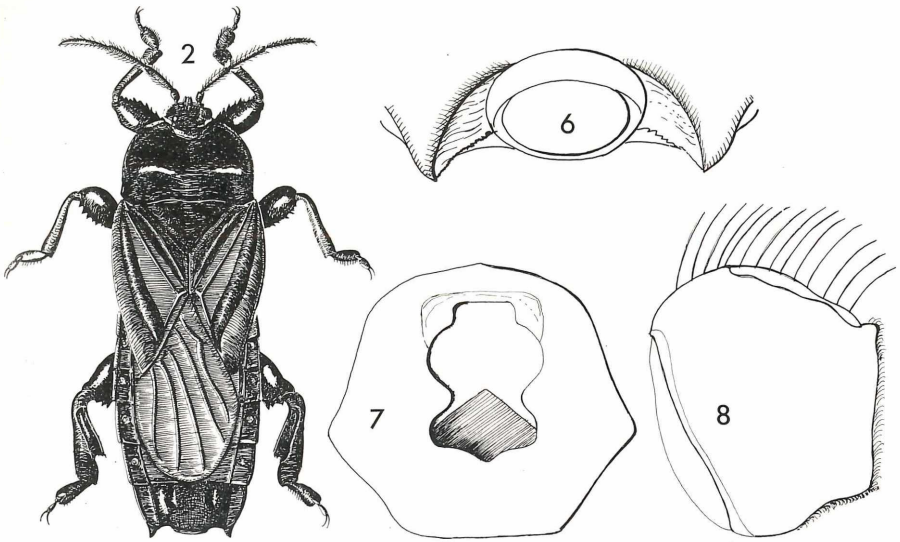
The interesting point to note here is that the Javan species, *B. poecilopterus*, is not sexually dimorphic to the same extent as the mainland species *B. foveatus*, i. e. the ♂ of the former species has not got a large spur on the hind tibia, although the hind femur is much more thick than in the ♀. The ♂ specimen from South India, under investigation, has also a large spur on its hind tibia, although of course, different in shape from that of *B. foveatus* DISTANT. What it simply means is that the two species, *B. foveatus* and the new species represented by the ♂ are not congeneric with the Island (Javan) species and therefore do not belong in the strict sense to *Bochrus*.

SLATER & WILCOX (1969) while describing *Scansidemus* (from Ceylon and Burma) differentiated it from *Bochrus* by its fewer and shorter spines on front femora and because of the fact that its species are sexually dimorphic in hind legs. But this is not true of the type species of *Bochrus, B. poecilopterus* STÅL, as stated earlier, as



Figs. 1–14. *Hasanobochrus hasani* gen. et. sp. n.
1: dorsal view of body of holotype ♂, outline only – 2: the same showing colour and curvatures – 3: underside of head and thorax, showing rostrum – 4: auricle of scent-gland – 5: hind leg, showing tibial spur – 6: apex of abdomen, upside down – 7: pygophore opening and pygophore flap, dorsal view – 8: pygophore, lateral view – 9, 10 + 11: different views of paramere – 12: aedeagus, dorso-ventral view – 13: sperm-reservoir, dorso-ventral view – 14: the same, lateral view.

much as that of *B. foveatus* including *B. tonkinensis* and *B. hoabinhensis*. The separation of *Scansidemus* both from typical *Bochrus* and *B. foveatus* is based on the structure of legs, the position of rostrum (labium) being similar in these genera. The justification of the new genus on the other hand, is based on the difference provided by its short rostrum (labium) although the position of its legs is also different from the type species of *Bochrus*, *B. poecilopterus*, but similar to *B. foveatus*. This requires further



investigation and clarification, but not pursued here because of lack of sufficient material.

Hasanobochrus gen. n.

Tarsi with first segment thick and long, about one and a half times longer than third segment which is much narrower than first, second segment minute, ventral surface of first segment slightly flattened and provided with minute denticles and stiff hairs; claws long, thin and curved; protibia round in cross-section, thicker at apex with a comb of small teeth, mesotibia similar to protibia but apical comb with slightly longer and bigger teeth, metatibia flattened at two-thirds distal length, apex with short blunt teeth and a large sharp tooth, base round in cross-section with a very large spur, more than half length of metatibia, this spur distally flattened, its apex toothed with one large and three very blunt teeth; fore femur moderately incrassate, ventral surface with anterior and posterior rows of spaced spines, mesofemur similar to forefemur but slightly smaller, metafemur much longer and incrassate with similar rows of ventral spines correspondingly longer according to its size; coxae pointed, forecoxae with closed cavities (? an advanced or specialised condition). Rostrum (labium) short, extended a little beyond forecoxae, second segment longest, third a little longer than first almost by about half length of first; prosternal spine flat, prosternum slightly convex with gentle ridges (? for stridulation), mesosternum without a groove; metathoracic scent gland auricle elongate (Fig. 4), similar to that of *Riggiella viani* and *Bochrus poecilopterus* STÅL (a specialised condition according to SLATER, 1979); pronotum shining, „collar" present, posterior margin smooth, depressed area between calli and behind „collar" and along lateral margin obscuredly punctate, prosternum obscuredly pruinose and punctate; scutellum pruinose leaving central triangle; apical corial margin gently curved (unlike that of *Bochrus*, which is straight), corial radiomedial convex area very wide (Fig. 1), membrane thickened, opaque; ocelli moderately large shining, antennae terete. Ventral abdominal tubercles absent (present in *Bochrus*), venter of last abdominal segment triangularly produced laterally, pygophore being located in the centre of this depression.

♂ Genitalia: Paramere similar in shape to that of *Scansidemus taprobanes*, but shorter and stouter (cf. Figs. 9, 10 and 11 with figs. 3 & 4 by SLATER & WILCOX, 1969); aedeagus long and narrow, sperm reservoir well developed.

♀: So far unknown.

Type species *Hasanobochrus hasani* gen. et sp. n.

The new genus and the new species are named in honour of my mentor in Urdu literature and fine art, the Poet Mr. Syed SULTAN-UL-HASAN-FAROOQUI, as a token of my gratitude for his kindness in guiding me through the intricacies of the art of poetry and fine art. Incidentally, he hails, originally, not far from the habitat, South India, of the new species.

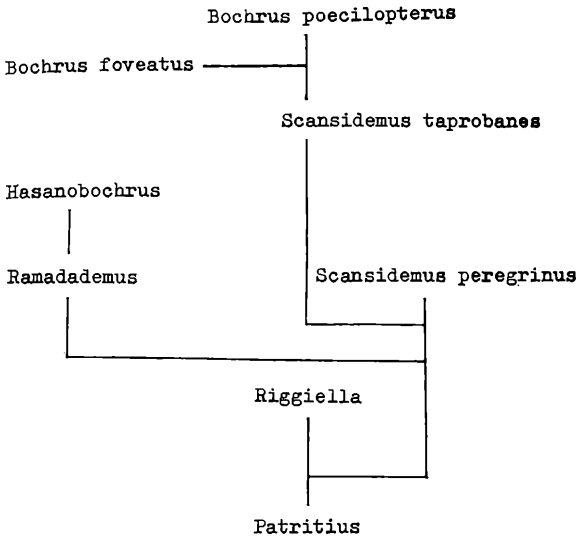
Comments

SLATER & WILCOX (1969) while describing *Scanisdemus* from Ceylon and Burma, discussed the relationships of the genera *Scansidemus*, *Bochrus*, *Chelochirus* (Oriental), *Ramadademus* (Madagascar), *Patritius* and *Riggiella* (South America) and *Toonglasa* (Mexico).

Bochrus, *Chelochirus* and *Scansidemus*, the three oriental genera, and *Toonglasa* DISTANT, the Mexican genus, have a long rostrum (labium) extended to or nearly to the mesocoxae and accommodated in a deep and distinct trough-like median groove on mesosternum, whereas the South American genus *Riggiella* and the Madagascan genus *Ramadademus* SLATER, 1967, have a short rostrum (labium) not or at most slightly exceeding the fore coxae. This character in the new genus *Hasanobochrus* now proposed, is very similar to *Ramadademus* and *Riggiella*, i. e. the rostrum is very short, not extending beyond fore coxae and mesosternum is devoid of a median groove. This is the only main similarity between these three genera. All three femora in *Ramadademus* and *Riggiella* are incrassate, although the forefemur is more strongly so; the hind femur in the new genus (represented only by a ♂, so far) is much more strongly incrassate than either fore- or mesofemur, the hind tibia of ♂ (as well as ♀) of *Riggiella* and of ♂ of *Ramadademus* (♀ unknown) is devoid of a large spur; this is present in the new genus (Fig. 5). In this character the new genus resembles *Bochrus foveatus* DISTANT (♂ holotype). Here it is notable that the ♂ holotype (as illustrated by SLATER & AHMAD, 1965) of *Bochrus poecilopterus* STÅL, the type species of *Bochrus* STÅL is devoid of hind tibial spur, the hind tibia unlike that of the holotype ♂ of *B. foveatus*, is bisinuate, i. e. it is curved inside before straightening at the apex, as against that of *B. foveatus*, which is just curving in but not straightening at its apex, in short the position of fore-, meso- and meta-legs is very similar in *B. foveatus* and in the new genus, while the size of rostrum (labium) and the absence of mesosternal groove is common between *Ramadademus*, *Riggiella* and the new genus *Hasanobochrus*.

SLATER (1979) and SLATER & WILCOX (1969) while discussing relationships of these genera (*Bochrus*, *Scansidemus*, *Chelochirus*, *Ramadademus*, *Patritius*, *Riggiella*, and *Toonglasa)* emphasized pruinosity of prothorax, the shape of prosternal plate, form of scent gland auricle, spines on femora and sexual dimorphism. The length of rostrum (labium) and the consequent presence or absence of pro- and mesosternal groove was not considered an important character for deciding their relationships. Sometimes even sexual dimorphism was not considered a generic character, nor was the presence of hind tibial spur given status of generic character (SLATER & AHMAD, 1965, kept *B. poecilopterus* and *B. foveatus* in the same genus).

Taking the above listed seven genera and the eighth new genus *Hasanobochrus*, it is



Graph: Position of *Hasanobochrus* gen. n. in the scheme of genera by SLATER & WILCOX (1969).

seen that *Ramadademus* (Madagascar), *Riggiella* (South America) and the new genus (South India) have a very short rostrum (labium) which is very different from a condition of long rostrum which may be specifically variable within certain limits. Taking all these points into account the new genus seems closest to *Bochrus foveatus*, from which it mainly differs by its short rostrum, and in the scheme of genera by SLATER & WILCOX (1969) it will be shown as in the graph.

Hasanobochrus hasani sp. n. (Figs. 1–14)

Colour Black; clavus – apical half luteous with a short central black streak, basal half black with a narrow luteous streak at its apex, claval vein black except at apex narrowly luteous, claval suture very finely luteous; corium – basal part widely luteous with cubitus mostly luteous with middle a little dark, costal area widely luteous, convex radiomedial area shining black compared to rest of dull corium; membrane black, veins black, submedian spot and five marginal disjointed areas luteous; ocelli red, eyes, fore- and middle legs and all tarsi castaneous; tip of tylus, base of pronotum, disc of scutellum and central area of venter of abdomen dark castaneous; legs, head, pronotum, scutellum and radiomedial convex area shining.

Size (mm). Head width across eyes 1.33, width of vertex between eyes 0.78, space between ocelli 0.63, length of head 1.07; length of antennal segments I, II, III & IV, 0.31, 1.10, 1.25 and 1.50, respectively; length of rostrum (labium) – segment I, II, III & IV, 0.31, 0.57, 0.63 and 0.31, respectively; maximum width of pronotum, at its middle, 3.77, and at base 3.61, its maximum length 2.22; width of scutellum 2.35, its median length 1.57; maximum width of body at costal margin 4.24, width at tip of abdomen 1.90 and at level of apex of clavus 3.77; length of I, II & III tibia – 1.90, 1.90 & 2.85, femur – 2.22, 2.22 & 3.77, 1st tarsal segment 0.78, 0.78 & 0.95, 2nd tarsal segment 0.15, 0.15 & 0.24, 3rd tarsal segment 0.31, 0.31 and 0.46, respectively; length of hind tibial spur 1.55; total body length 15.00.

Structure. Mostly as described in generic description; body elongate, flattened, head slightly wider than long, juga much shorter than tylus, bucculae short but visible

in dorsal view, spaces between ocellus and eye greater than diameter of ocellus, antennal tubercles prominent, eyes a little bulging laterally, ocellus adjacent to this bulge, antennal segment 1st extended beyond apex of head, segment 2nd slightly shorter than 3rd, 3rd slightly shorter than 4th, 1st rostral segment reaching level of middle of eye, middle of 2nd rostral segment reaching posterior margin of head, 3rd rostral segment reaching level of base of trochanter, 4th rostral segment reaching slightly beyond front coxae – 1st and last segments equal in length, each half in size that of 3rd segment which is slightly longer than 2nd segment; genae slightly swollen, creating a gentle depression in middle of ventre of head; prosternum – pruinosity confined to median and basal area – narrowed laterally and shifting to sub-basal area, extreme basal area laterally and broad lateral area anteriorly shining, pronotum smooth except long fine marginal hairs, similar but fewer hairs on apex of head and near eyes (? these trichobothria), disc of pronotum slightly depressed; abdomen except median narrow area pruinose, spiracles on dorsal of connexivum, last segment with a wide ventral rim, narrowed dorsally forming a ring holding pygophore (Fig. 6), forefemur moderately incrassate, antero-posteriorly depressed, ventral surface with two rows of moderate sized teeth – anterior row with five small and three large teeth, in interdental space, raised tubercles with stiff hairs – reminiscent of some of the Reduviidae (Oncocephalini), posterior row 10–11 moderate sized teeth with their quota of tubercular hairs, remaining surface with short golden stiff hairs, apex of foretibia swollen with stiff short hair and a group of flattened teeth 4–5 in number; middle femur slightly smaller and much narrower near base, 16 moderately sized teeth on anterior and 17–18 on posterior row, middle tibia similar to anterior tibia; hind femur and hind tibia, hind femur with 4 large teeth and one very large tooth near apex with 3–4 smaller teeth near it on anterior margin, on posterior margin 9 large teeth and one very large near apex with 2–3 smaller near it, hind tibia with $^2/_3$rds basal dorsal margin rounded with small scattered teeth, ventral margin antero-posteriorly flattened, spur similarly shaped with 3 small and one large apical tooth.

♂ Genitalia Compared to its body size, the pygophore of *H. hasani* sp. n. is much smaller; in lateral view the postero-dorsal corner is slightly produced, there is a fringe of long fine setae on dorsal margin, posterior margin almost straight with a fringe of short fine setae, ventral margin sinuate with a fringe of similar but slightly thicker setae, dorsal opening (Fig. 7) narrowed in middle, triangular part of flap of pygophore visible; paramere (Figs. 9, 10 + 11) small, with rows of fine setae on its stem, head elongated triangle with apex gradually narrowed and at base with wide process; aedeagus delicate with three conjunctival membranous processes, vesica curled, sperm reservoir well developed, basal plate and theca well developed.

Holotype ♂ (Ly 1, CIE A. 13361), India, Kerala, Velleor, 1. ix. 1981 (MATHEW), on bamboo; left hind leg, right middle tarsus and segments III & IV of left antenna missing; in BM (NH), London.

Acknowledgements

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