

**Two new sibling species of *Gryon* Haliday (Hymenoptera, Scelionidae),  
egg parasites of blood-sucking Reduviidae (Heteroptera)**

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**Abstract**

Two species of *Gryon* Haliday, parasites on eggs of blood-sucking Reduviids, are described, namely *G. triatoma* sp.n. from Singapore and India, reared from eggs of *Triatoma rubrofasciata* (De Geer) and *Linshcosteus* sp., and *G. linshcostei* sp.n. from India from eggs of *Linshcosteus* sp. The species differ in biological attributes but are not separable by morphology; with *G. insularis* (Ashmead) they form the *insularis*-group.

**Introduction**

The purpose of this paper is to provide names for two new sibling species of *Gryon* that might become economically important in biological control of some blood-sucking Reduviidae. A short series of one species reared from eggs of *Triatoma rubrofasciata* (De Geer) was received for identification in 1971 (courtesy of Dr Z. Bouček, Commonwealth Institute of Entomology, London). In subsequent years larger series were received from *T. rubrofasciata* as well as other blood-sucking Reduviids. During this period information has accumulated on the biology and behaviour of these parasites as they became subjects of experiments (Bertram, 1973 and pers. comm.; Rabinovich, pers. comm.). Originally collected in Singapore (Simmonds, 1971) one of the two species was later field-collected and laboratory-propagated in India, and from there eventually shipped to Venezuela and Costa Rica in efforts to control Triatomid bugs, vectors of Chagas disease. During these experiments a sibling species was discovered in India. The two species differ only in biological attributes such as host preferences and behaviour and are reproductively isolated (Sankaran & Nagaraja, 1975).

***Gryon triatoma* sp. n.**

*Female.* (Holotype in British Museum (Natural History), London, labelled: 'SINGAPORE, Tanjong Pagar Road, March 1971, ex eggs of domestic *Triatoma rubrofasciata*, C.I.E. 4443'; well preserved on card point, mounted from alcohol).

Length 1.5 mm; black; antennae and legs mostly brown or reddish brown, the lighter parts are the radicle, base of scape, lower side of antennal club, trochanters, tibiae (particularly the fore pair) and tarsi; mandibles and tegulae reddish brown; wings almost clear.

Head transverse (13:25), wider than mesosoma; frons seen from above deeply excavate, excavation margined with sharp carina forming a horseshoe arc running down almost to lower margin of eyes; area within arc transversely striate, striation tends to change into reticulation in lower half of impression towards inner orbits; frons along inner orbits and between upper edge of arc and edge of vertex scaly reticulate, cheeks

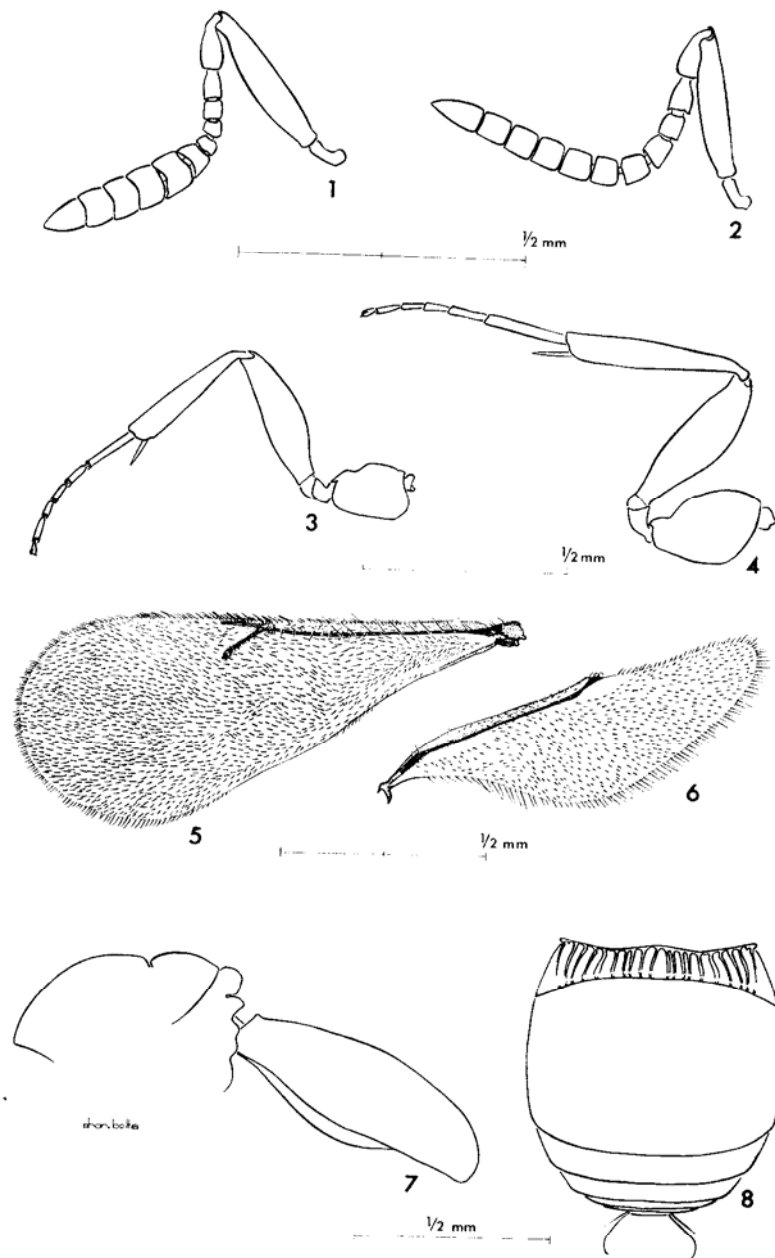


Fig. 1-8.—*Gryon triatoma* sp.n. 1, antenna (female); 2, antenna (male); 3, middle leg; 4, hind leg; 5, forewing; 6, hind wing; 7, mesosoma and metasoma in lateral view (segmentation of metasoma omitted); 8, metasoma.

and temples of very much the same sculpture; genal sulcus margined by strong carina; mandibles short, stout, rather curved and virtually pointed at apices with the lower and middle teeth much reduced; clypeus minute, hardly protruding, with blunt corners; labrum sclerotised, protruding between mandibles; maxillary palpi 2-segmented, segments subequal; labial palpi 2-segmented (!), segment 2 minute, almost wart-like yet clearly separate from large segment 1 by distinct suture; vertex across lateral ocelli with sharp ridge that is shortly broken in between lateral ocellus and postorbital carina; occiput with no distinct reticulation, generally with finer sculpture than upper half of frons; lateral ocelli close to orbits yet not contiguous; eyes large, white, clothed with very dense and rather long hairs; antenna as in Fig. 1.

Mesosoma not greatly arched dorsally; mesoscutum very finely scaly-reticulate with some inconspicuous longitudinal sculpturing just in front of scutellum, covered with dense decumbent hairs; scutoscutellar suture distinct and deep; scutellum with much the same sculpture as mesoscutum, with a row of fosses at posterior margin, in lateral view not projecting over metanotum; metanotum medially with a distinct hump forming a blunt tubercle that projects over median part of propodeum; lower part of propodeum and mesopleura distinctly rugulose longitudinally; forewings slightly surpassing tip of metasoma; submarginal vein straight, with moderately long bristles, bristles not surpassing or very little over front margin of wing; marginalis almost point-like, stigmalis slightly longer than indistinct postmarginalis; spurs on middle and particularly hind tibiae unusually strong, as long as half of corresponding metatarsi.

Metasoma only slightly elongate (28:23); first tergite narrow, broadly transverse (5:22), longitudinally costate; second tergite extremely large, transverse (16:23) with rather rough net-like reticulation, following tergites very narrow and with much finer sculpture; two pairs of bristles on tergite 7 well developed; ovipositor not exerted.

*Male.* (Allotype, British Museum (Natural History), London), same data as holotype.

Differs from female chiefly in shape of antennae (Fig. 2).

*Paratypes.* 24 ♀ ♂, SINGAPORE: same data as holotype and allotype but some individuals reared in November 1970 from feral eggs of *T. rubrofasciata*. INDIA: 60 ♀ ♂ from Indian strain shipped to Caracas laboratory in 1971, reared mainly from the above host but a few specimens also from *T. maculata* (Erichson) and *T. phyllosoma* (Burmeister); 6 ♀ ♂, Neyyattinkera nr Trivandrum (Kerala), January 1972, from eggs of *T. rubrofasciata*.

Paratypes are deposited in the following collections: British Museum (Natural History), London; Biosystematics Research Institute, Ottawa (No. 12825); U.S. National Museum, Washington, D.C.; Commonwealth Institute of Biological Control, Curepe, Trinidad, W.I.; International Organization for Biological Control, Identification Centre, Munich; Istituto di Entomologia, Università Cattolica, Piacenza; Zoological Institute, Leningrad; Division of Entomology, CSIRO, Canberra; Division Entomologia, Universidad Nacional de La Plata.

*Remarks.* Apart from *G. linshcostei* sp.n. which is the sibling species, *G. triatoma* has no relatives among the 14 species described from the Oriental region (all types examined). On the other hand these two siblings are distinctly related to *G. insularis* (Ashmead) from which they could be separated by the following key:

- (A) In dorsal view metanotum medially produced into a small tubercle which is not notched medially; frontal depression deep and large (Fig. 9, 10), keel strong, forming a horseshoe arc running down almost to cheeks; second tergite of metasoma net-like reticulate, without distinct longitudinal sculpture; spur of hind tibia as long as half of metatarsus (Fig. 4); antennal club in female only moderately abrupt (Fig. 1). [Singapore, India] ..... *G. triatoma* and *G. linshcostei*
- (B) In dorsal view the metanotal tubercle is deeply notched medially to appear bidentate; frontal depression relatively shallow and smaller than in preceding species, keel fine, hardly defined as arc; second tergite of metasoma striate-reticulate

particularly in basal part; spur of hind tibia shorter than half of metatarsus; antennal club in female strong and much more abrupt than in preceding species. [Described from St. Vincent (W.I.); specimens were also seen from Mexico (S.L.P.) and the U.S.A. (Fla, La, N.C., Mo, N.Y.)—all new records] ..... *G. insularis* (Ashmead)

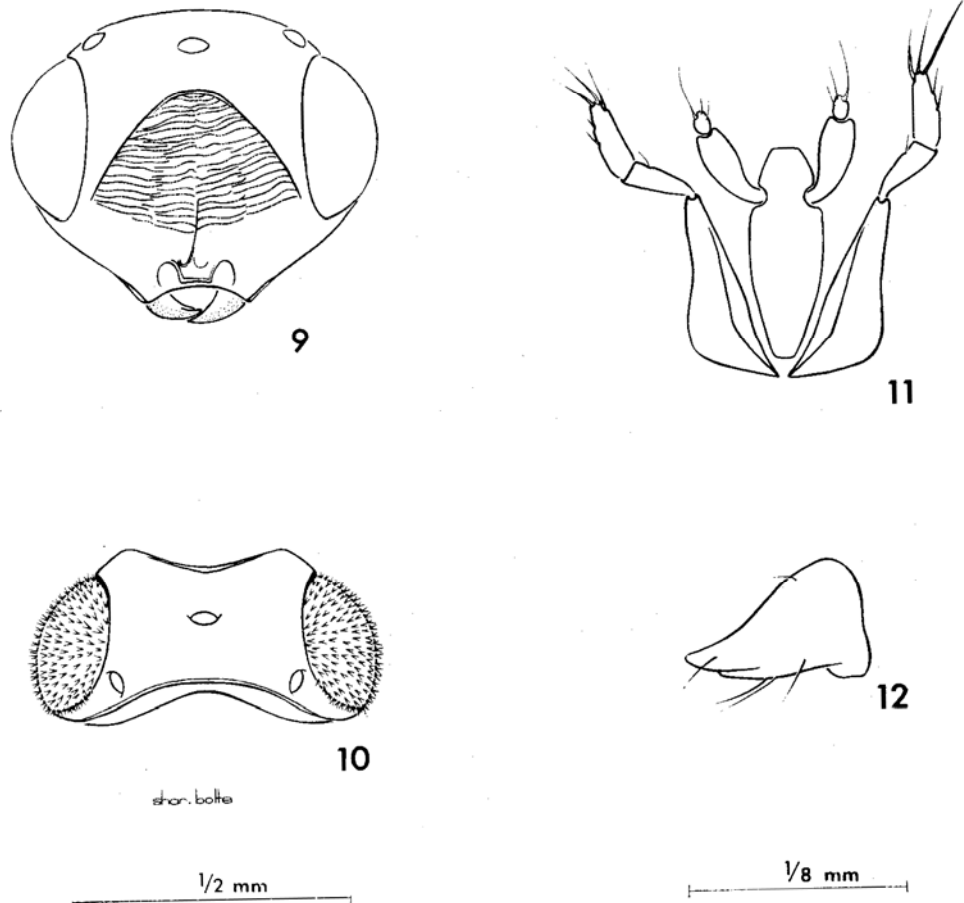


Fig. 9-12.—*Gryon triatoma* sp.n. 9, head in frontal view; 10, head in dorsal view; 11, labium and maxillae; 12, mandible.

These three species form a natural group in *Gryon*, which I prefer to call the *insularis*-group and which may be characterised by the following characters: clypeus small, reduced to a tiny tubercle, its corners not prominent and not pointed; palpal formula 2-2; vertex with sharp ridge; eyes distinctly and very densely hairy; post-marginalis rather short, not longer than stigmalis; spurs on mid and hind tibiae relatively strong and long for the genus; second tergite of metasoma extremely large, covering most of the metasoma (*cf.*, Fig. 8). There are several undescribed species of *Gryon* known to me from the tropics and the temperate zones which belong to this very distinct group.

**Gryon linshcostei sp.n.**

*Female.* (Holotype No. 13469 in Canadian National Collection, Ottawa; S. INDIA: Gundlugurki near Bangalore, April 1973, *ex* eggs of *Linshcosteus* sp. under rocks).

*Male.* (Allotype, same data as holotype).

*Material.* 520 ♀ ♂ (paratypes), same data as holotype.

*Biology.* According to laboratory experiments this species is reproductively isolated from *G. triatomae* (Sankaran & Nagaraja, 1975). Also in behaviour and host preference the two species differ, *G. linshcostei* strongly preferring the eggs of *Linshcosteus* sp. over those of *T. rubrofasciata*. On the contrary *G. triatomae* shows strong preference for eggs of *T. rubrofasciata* but if given no choice will accept *Linshcosteus* sp. instead.

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