

## A NEW SPECIES OF *GRYON* HALIDAY (HYMENOPTERA: PLATYGASTRIDAE) FROM INDIA

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**Abbreviations:** OOL - Ocellular length; OD - Diameter of posterior ocellus; POL - Posterior ocellar length; LOL - Lateral ocellar length [distance between anterior and posterior ocellus]; PM - Postmarginal vein; STG - Stigmal vein; M - Marginal vein; A1–A12 - Antennal segments 1–12; T1–T5 - Tergites 1–5 of metasoma; HL - Head length; HW - Head width; L - Length; W - Width; ML - Mesosoma length; MW - Mesosoma width.

The genus *Gryon* (Hymenoptera: Platygastriidae: Scelioninae) was erected by Haliday (1833), based on the type species *Gryon misellum* Haliday. The genus is cosmopolitan and highly diverse. A total of 57 species are known from the Oriental region (Johnson 1992; Ohio State University 2013), of which 17 species have been recorded from India (Mineo 1991; Mineo & Caleca 1994; Rajmohana 2011). The species of this genus generally attack eggs of Hemiptera belonging to Coreiidae, Pentatomidae, Scutelleridae, Lygaeidae, Reduviidae, Phymatidae (Rajmohana et al. 2011).

This genus can be easily distinguished from the rest of the scelionines by the presence of an unarmed metascutellum and propodeum, absence of skaphion, short and plump; and transverse terminal metasomal segment which is not wedge-shaped (Masner 1976; Rajmohana 2013). In this paper a new species, *Gryon ambericum* sp. nov., is described and illustrated.



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### Material and Methods

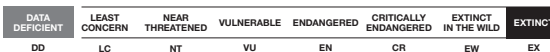
This study is based on specimens collected from a paddy ecosystem as well as from the wild, by the authors. The specimens were studied under a Leica M 205A stereomicroscope. Images were taken with a digital camera Leica DFC 500 and processed using extended focus LAS montage software. The types are deposited at the Western Ghats Regional Centre, Zoological Survey of India, Kozhikode, Kerala (ZSI, WGRC). Morphological terminology follows Masner (1980) and Miko et al. (2007).

### *Gryon ambericum* sp. nov.

(Images 1–8)

urn:lsid:zoobank.org:act:EB03F38D-4A70-4300-9D17-300AE4588E5F

**Material examined:** Holotype. ZSI/WGRS/IR.INV.3008, female, 09.i.2009, 11°39'651N &



*Gryon ambericum*



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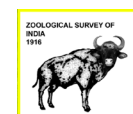
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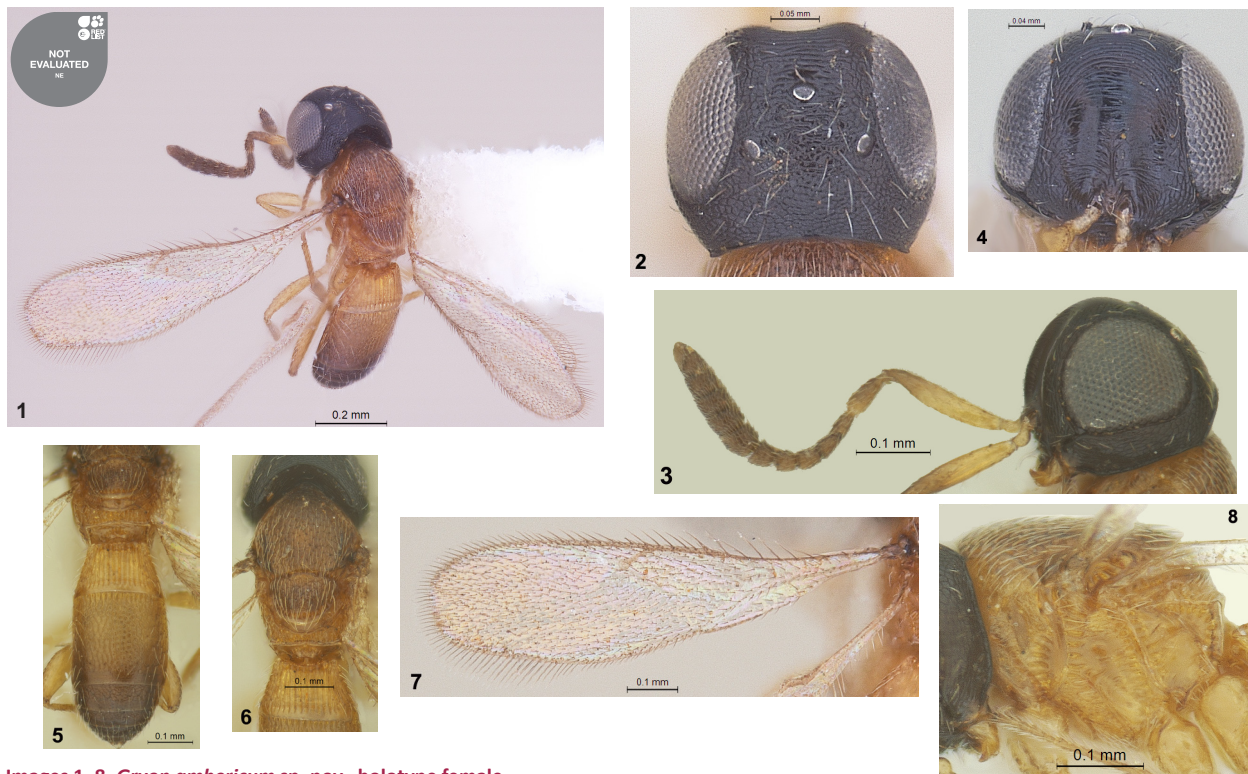
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Images 1–8. *Gryon ambericum* sp. nov., holotype female.

1 - body in profile; 2 - head dorsal view; 3 - antenna; 4 - head frontal view; 5 - metasoma; 6 - mesosoma; 7 - fore wing venation; 8 - mesopleuron, lateral view.

76°05'318E, Madakkimala, Kalpetta, Wayanad District, Kerala, India, coll. Rajmohana; Paratype: ZSI/WGRS/IR.INV.3055, female, 09.i.2009, 11°39'651N & 76°05'318E, Madakkimala, Kalpetta, Wayanad District, Kerala, India, coll. Rajmohana.

Additional material examined: ZSI/WGRS/IR.INV.3167, female, 10.xii.2013, 10°24'920N & 76°44'812E, Anakkalvayal, Parambikulam, Palakkad District, Kerala, India, coll. Abhilash Peter; ZSI/WGRS/IR.INV.3168, female, 12.xii.2013, 10°25'400N & 76°46'226E, Pillackalvayal, Parambikulam, Palakkad District, Kerala, India, coll. Abhilash Peter.

### Description

Female. Holotype. Length, 0.97mm. Head black; eyes and ocelli silvery. Antenna brown with scape pale yellow basally and brown at distal fourth. Mesosoma rusty or yellowish-brown (= amber) except mesoscutum laterally near tegula, brown; mesoscutum and mesoscutellum medially with irregular dark patches. Wings hyaline, veins yellowish-brown. Legs, including coxae, yellow. Metasoma rusty or yellowish-brown; posterior third of T2 and other tergites till tip of liver brown.

Head, in dorsal view (Image 2), roughly quadrate [HL:

HW= 22: 28], slightly transverse; head subtriangular in lateral view; pubescence irregularly scattered on occiput and ocellar triangle, but arranged equidistant along a line near inner orbits, much sparse towards clypeal area and outer orbits near gena; frontal depression deep, with distinct transverse striae extending throughout on upper reaches, followed by concentric arched striations reaching upto inner eye margin and gradually merging with leathery sculpture; striations not margined by inverted U-shaped carina; vertex anterior to front ocellus transversely striate, but with leathery sculpture towards extreme sides near orbits; rest of head towards gena, occiput and ocellar triangle with distinct leathery reticulate sculpture; hairs absent in frontal depression; submedian carina not indicated; a short stumpy central keel present, hardly reaching one-fourth the level of eyes on frons; eyes large, without pilosity, inner margins sub parallel; inner orbital distance less than eye height, in front view (14:17); in lateral view eye height 3× as long as gena; clypeus arched, convex with lateral pointed corners; malar sulcus narrow and distinct; genal carina distinct, continuing posteriorly along occiput; ocellar triangle, wide; POL: LOL: OOL: OD= 10:5:2:2; lateral ocelli close to eye margins than to front ocellus, separated from margin by almost its own diameter.

Mandibles bidentate; Antenna slender, 12-segmented (Image 3); relative L: W=19:3; 6:2; 3:2; 3:2; 2:2; 3:2; 3:3; 3:4; 3:4; 3:4; 3:4; 5:3; radicle small, not reaching one-fourth length of scape.

Mesosoma, in dorsal view, ML: MW = 36:25, not as wide as head (25:28); densely hairy, with setigerous pits and leathery sculpture (Image 6); mesoscutellum overlapping metascutellum, carinate and foveolate posteriorly; metascutellum smooth, overhanging median propodeum anteriorly, unarmed; metanotum foveolate laterally; propodeum with vague and short longitudinal striae; posterior propodeal carina distinct; lateral pronotal area reticulo-foveolate, but with a median smooth patch; netrion narrow and smooth with elongate striae bordering anteriorly; mesopleural carina distinct (Image 8); sternaulus prominent; speculum smooth; mesepimeral and metapleural epicoxal sulci distinct; acetabular patch distinct, finely hairy; lower mesepisternum foveolate; metapleural carina distinct; metapleuron near hind coxae sparsely hairy. Forewing exceptionally narrow (Image 7), L:W= 95:24; M and PM elongate; M 2.1× shorter than PM; PM 3× longer than STG; PM:STG:M = 19:6:9.

Metasoma, in dorsal view, L: W= 50:22, unusually elongate (2.27×), 1.38× longer than mesosoma and 1.16× shorter than head and mesosoma combined, hairy towards sides; T1 anteriorly foveolate, followed by longitudinal striae and with a posterior smooth band as long as anterior striae (Image 5); T2 largest of all tergites, 2.6× longer than T1 and 3× longer than T3; T2 anteriorly with short costae, followed by large reticulate sculpture extending upto 0.8 of T2 length, bordered posteriorly by a smooth band, as long as its anterior costae; T2 sparsely hairy posteriorly; T3, T4, T5 anteriorly with same sculpture as that on dorsal mesoscutum and mesoscutellum, and with a posterior narrow smooth band; T4 onwards densely hairy; last metasomal segment with two pairs of unequal anal cerci on either side; relative length to width proportion of metasomal segments T1 to T3 being (8: 18); (21: 22); (7: 19).

**Etymology:** The species name *ambericum* based on the amber (= yellowish-brown) colour of the mesosoma and metasoma.

## Discussion

The new species, *Gryon ambericum* sp. nov., belongs to the *leptocorisae* species-group of *Gryon*. As defined by Mineo (1990), members of this group share the following characters: slender clava; incomplete occipital carina, almost surpassing the foramen magnum and

without the horizontal branch; epomia strongly reduced; clypeus with anterolateral corners almost acute; M about as long as STG and an elongate PM (more than twice STG).

In the key to the Indian species given by Sharma (1982), *G. ambericum* runs out at couplet number 2, and as no recent keys are available to the Oriental species or Indian region, this new species is compared with the descriptions of all species of *Gryon* so far reported from India and the Oriental region. The following unique characters serve as diagnostic characters of this species: a unique dorsally quadrate (Image 2), laterally subtriangular black coloured head and a quite contrasting amber coloured mesosoma; head width only 1.2x head length; frontal depression deep, not margined by a carina (Image 4); eyes without pilosity; mandibles bidentate; metasoma unusually elongate, more than 2x as long as wide, unlike the short and plumpy stature commonly met with in the genus; and T2 largest of all tergites, 2.6× longer than T1 and 3× longer than T3.

All *Gryon* species known so far from India have a much wider head, with dorsal width to length ratio usually equal to or greater than two and metasoma length to width ratio has never exceeded 1.5× and hence cannot be confused with *G. ambericum* sp. nov.

Three Vietnamese species of *Gryon* (Lê 2000) show a slight resemblance to *G. ambericum* sp. nov. as regards the shape of head and metasoma. However, *G. ambericum* can be distinguished from *G. longus* Kozlov et Lê, *G. varius* Kozlov et Lê and *G. narus* Kozlov et Lê by the following characters: (i) In *G. ambericum* sp. nov., head width is 1.3× its length and metasoma length 2.3× its width (in *G. longus* head width is 1.5× its length, metasoma length 1.5× its width), and (ii) In *G. ambericum* sp. nov., scape length is 6.3× length of radicle, forewing length is 3.95× its width and PM 3.1× STG (in *G. varius* scape length is 5× that of radicle, forewing length 2.5× its width, PM 2.5× STG whereas in *G. narus* scape length is only 4.2× that of radicle; forewing length is only 2.8× its width).

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