

# Revision of the Eurybrachidae (IX). The new Oriental genus *Nilgiribrachys* (Hemiptera: Fulgoromorpha)

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**Abstract.** The genus *Nilgiribrachys* Constant **n. g.** is described for a species from Southern India, *Nilgiribrachys rubroviridis* Constant **n. sp.** Illustrations, photos of habitus and a distribution map are provided with the description of the species. The suprageneric placement is discussed and the new genus is provisionally placed in the tribe Loxocephalini Schmidt 1908.

**Résumé. Révision des Eurybrachidae (IX). Le nouveau genre oriental *Nilgiribrachys* (Hemiptera : Fulgoromorpha).** Le genre *Nilgiribrachys* Constant **n. g.** est décrit pour une espèce du sud de l'Inde, *Nilgiribrachys rubroviridis* Constant **n. sp.** Des illustrations, des photos d'habitus et une carte de répartition sont données avec la description de l'espèce. Le placement supragénérique est discuté et le nouveau genre est provisoirement rangé dans la tribu des Loxocephalini Schmidt 1908.

**Keywords:** Oriental region, Eurybrachidae, revision, *Nilgiribrachys*, India.

This paper is the ninth one of a series intended to revise the family Eurybrachidae Stål 1862 (Constant 2004, 2005a, b, c, 2006a, b, c, d). The study is aimed to propose a more natural classification in the family and a tentative understanding of its phylogeny and zoogeography. It starts with the one-by-one revision and redefinition of the genera because many of them are poorly defined and preliminary study of the material has revealed several synonymies as well as heterogenous genera that will need to be split.

According to present classification of the family (Metcalf 1956), 4 tribes are represented in the Oriental region: Eurybrachini Schmidt 1908 [main distinctive features: (1) clavus open, (2) claval veins not fused in clavus, (3) infra-ocular spine present], Loxocephalini Schmidt 1908 [(1) clavus open, (2) claval veins fused in clavus, (3) infra-ocular spine present], Frutini Schmidt 1908 [(1) clavus open, (2) claval veins fused in clavus, (3) infra-ocular spine absent] and Ancyryni Schmidt 1908 [(1) clavus closed, (2) infra-ocular spine present, (3) tegmina convex with apical ribbon-like process]. Twelve genera are presently reported from the Oriental region (Metcalf 1956, Constant 2006d) but the existing keys (e.g.: Distant 1906, Fennah 1964) do not allow sure identification of them.

The present paper describes a peculiar new species from India that is included in a newly described genus

## Materials and methods

The description of the female genitalia follows Bourgoin (1993) with some additions from the studies of Soulier-Perkins (1997) and Soulier-Perkins & Bourgoin (1998) on the family Lophopidae.

Photos of habitus and a distribution map produced by the software *CFF* (Barbier & Rasmont, 2000) are also provided.

For the labels of the type, each single label is limited by square brackets.

The following acronyms are used for the measurements (measurements are taken as in Constant 2004): BF, breadth of the frons; BT, breadth of the thorax; BTg, breadth of the tegmen; BV, breadth of the vertex; LF, length of the frons; LM, length of the mesonotum; LP, length of the pronotum; LT, total length; LTg, length of the tegmen; LV, length of the vertex.

Acronym used for the collection (name of the curator in parentheses): RSME, National Museum of Scotland, Edinburgh, United Kingdom (A. Whittington)

## Results

### Description of the taxa

#### Genus *Nilgiribrachys* Constant 2007 **n. g.**

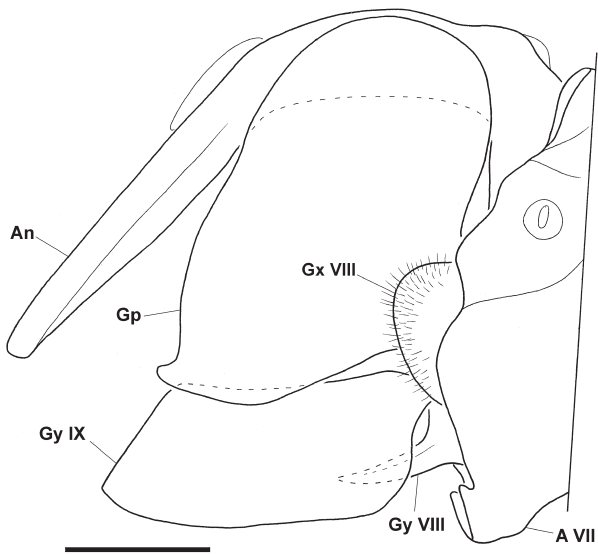
**Type-species.** *Nilgiribrachys rubroviridis* Constant 2007 **n. sp.** (by original designation and monotypy).

**Etymology.** *Nilgiribrachys* is formed from the juxtaposition of the name of the region where the only known specimen has been collected, the Nilgiri Hills in SW India, and *brachys* (Greek word meaning "short") which is a common ending of the generic names among the family Eurybrachidae. Gender arbitrarily feminine, following the use in the family.

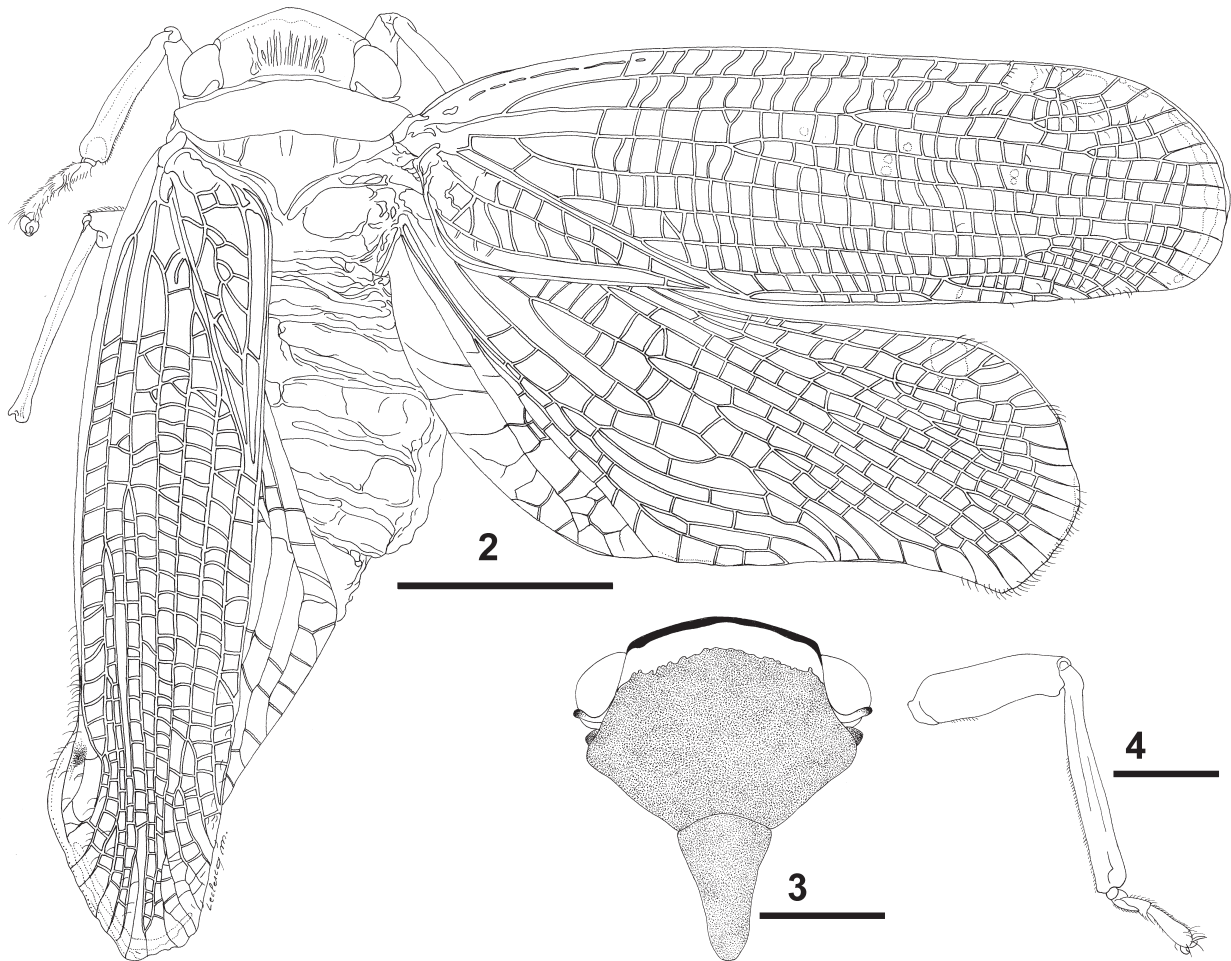
**Diagnosis.** Large sized, brightly coloured. Immediately recognized by the following combination of features: (1) clavus

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**Figure 1**  
*Nilgibrachys rubroviridis* Constant. Genitalia ♀, right lateral view (A VII - abdominal segment VII; An - anal tube; Gp - gonoplac; Gx VIII - gonocoxa VIII; Gy VIII - gonapophysis VIII; Gy IX - gonapophysis IX). Scale 1 mm.



**Figure 2-4**  
*Nilgibrachys rubroviridis* Constant. 2, habitus, dorsal view. Scale 5 mm. 3, head, frontal view. Scale 1 mm. 4, left fore leg, ventral view. Scale 1 mm.

closed, (2) veins A1 and A2 fused, (3) infra-ocular spine present, (4) vertex more than 2 times broader than long, (5) hind wings not broader than tegmina, (6) tegmina without apical ribbon-like process. Oriental region.

**Description. General coloration:** green and red (for the single known specimen).

**Head** slightly narrower than thorax; vertex about 2.3 times broader than long, with fore and hind margins curved and carinate; disc flat with 2 slight impressions near hind margin; frons about 1.4 times broader than long, convex; disc longitudinally wrinkled; clypeus reaching anterior trochanter; labium shorter than clypeus, surpassing median trochanter; last segment of labium slightly longer than broad, shorter and narrower than penultimate, cut straight apically; infra-ocular spine present, short, not visible from above; ocelli absent; antennae short, barely reaching level of lateral projection of frons; scape very short, pedicel subglobular.

**Thorax** about 1.8 times broader than length of pro- and mesonotum together; pronotum with middle of fore margin carinate; little transverse impression behind carina and 2 impressed points on disc, behind impression; 2 small transverse carinae on each side of disc; mesonotum with 3 longitudinal carinae.

**Tegmina** flat, elongate, more than 3 times longer than broad; costal and sutural margins subparallel; apex round; clavus closed, representing about  $3/8$  of length of tegmen.

**Venation.** Vein C slightly marked on first  $1/3$ ; veins Sc and R with short common stem; first fork of vein M beyond Sc-R separation; veins A1 and A2 fused before apex of clavus; longitudinal veins parallel, not numerous (9–10 at  $2/3$  of length of tegmen); cross veins marking square-shaped cells.

**Hind wings** well developed, as broad as tegmina; anal area well developed; sutural margin sinuate; apex round; reaching apex of tegmina at rest.

**Legs.** Fore and median legs slender, elongate, dorso-ventrally flattened. Hind legs are missing on the only known specimen.

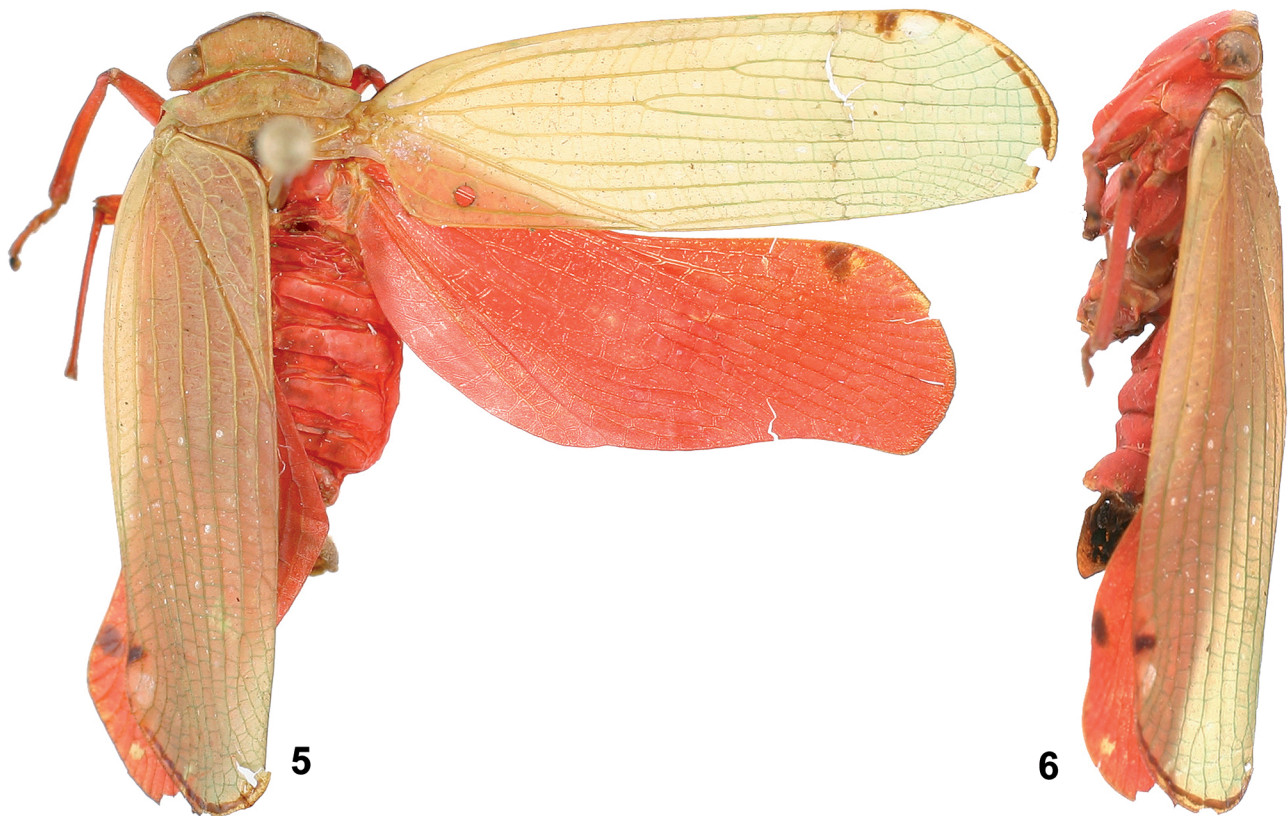
**Distribution.** Oriental region, known from Southern India.

***Nilgiribrachys rubroviridis* Constant 2007 n. sp.**

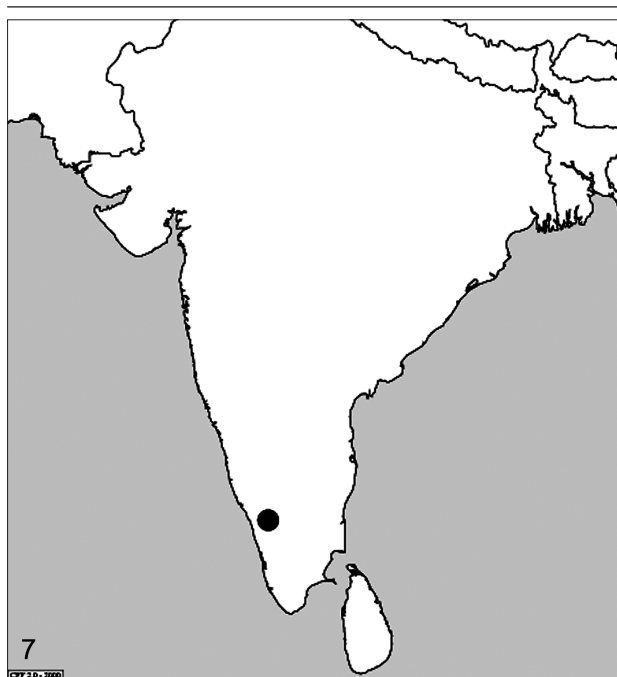
**Figs 1–7.**

**Etymology.** The name is formed by the juxtaposition of *ruber*, *bra*, *brum* (adj., Latin) = red and *viridis*, *e* (adj., Latin) = green. It refers to the unmistakable colouration of the species.

**Material examined. Holotype** ♀ labeled [India, Nilgiris, 1931 - 26] [Holotype ♀ *Nilgiribrachys* n.g. *rubroviridis* n. sp. J. CONSTANT, 2007] - hind legs missing, left median tarsus missing, right median tarsus broken, left side of genitalia damaged (RSME). Coordinates of the Nilgiris:  $11^{\circ}25'N$   $76^{\circ}30'E$ .



**Figures 5–6**  
*Nilgiribrachys rubroviridis* Constant. **5**, holotype, dorsal view. **6**, holotype, lateral view.



**Figure 7**  
*Nilgiribrachys rubroviridis* Constant. Distribution map.

**Diagnosis.** Only species of the genus, immediately recognized among all Eurybrachidae by its green tegmina and dorsal face of thorax and head, and its bright red hind wings, abdomen and ventral part of frons.

**Description.** LT: ♀ (n = 1): 22.0 mm.

**Head.** Vertex and dorsal 1/6 of frons green; blackish brown line between frons and vertex; ventral 5/6 of frons and clypeus red; scape red, pedicel blackish; infra-ocular spine greenish with apex infuscate; ratio BV/LV = 2.32; BF/LF = 1.36.

**Thorax.** Tegulae, pro- and mesonotum green, rest of thorax red; narrow blackish line on each side of pronotum between dorsal green and ventral red zones; ratio LP+LM/BT = 0.56.

**Tegmina** green with narrow, basal line on costal margin, ante apical spot on costal margin and ante-apical line parallel to apical margin, blackish brown; white waxy patch along costal margin beyond blackish spot; small white waxy spots distributed over tegmina; apical margin brownish yellow; ratio LTg/BTg = 3.38.

**Hind wings** bright red with ante-apical, blackish brown patch on costal margin.

**Legs** [legs III missing on examined specimen] I and II bright red with apex of femora slightly infuscate; apex of tarsi blackish.

**Abdomen** bright red.

**Genitalia.** ♀ [based only on external characters: full dissection has not been done as the species is known by one single specimen]: gonoplocs large, unilobous and concave internally; anal tube curved potero-ventrad, dorso-ventrally flattened after anus, truncate apically; anus at about 1/2 of anal tube; gonapophysis IX large, broad, obliquely cut straight apically; gonocoxae VIII like small pilose hump; gonapophysis VIII elongate and pointed

at apex, concave ventrally, much shorter than gonapophysis IX.

**Biology.** Nothing is known of the biology of this species that is only reported from the Nilgiri Hills.

## Discussion

The new genus *Nilgiribrachys* is one of the “fulgorid-shaped” genera of Eurybrachidae from the Oriental region. Despite its fulgorid aspect (large size, bright colour, slender legs), the examination of the female genitalia with large gonoplocs, and of the frons and vertex that bear no carina and are broader than long, leaves no doubt on the family placement in the Eurybrachidae.

Following the classification and key proposed by Schmidt (1908) and followed by Metcalf (1956), the genus should be placed in the Dardini Schmidt 1908 [main distinctive features: (1) clavus of tegmina closed, (2) presence of a knob under the eye, (3) tegmina without apical, ribbon-like process]. The Dardini have been included by Jacobi (1928) and Fennah (1964) in the Platybrachyini, a tribe containing genera without infra-ocular spine from Australia and Africa. *Nilgiribrachys* should thus be placed in the Platybrachyini but this view is not followed here as it bears an infra-ocular spine that is absent in the tribe.

*Nilgiribrachys* shares the following peculiar combination of characters with the Afrotropical genus *Parancyra* Synave 1968: (1) infra-ocular spine present, (2) veins A1 and A2 fused before apex of clavus, (3) clavus closed. The genus *Parancyra* was regarded as a member of the Loxocephalini Schmidt 1908 by Fennah (1964) (under *Harmosma* Fennah 1964, see also Constant 2005a) despite the fact that all other Loxocephalini have narrowly open clavus.

This view is followed here and the genus is provisionally attributed to the Loxocephalini while suprageneric divisions of the Eurybrachidae will have to be more acutely defined.

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