

A new species of *Calisiopsis* Champion, 1898, from French Guiana (Hemiptera, Heteroptera, Aradidae)

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Abstract. – A new species of the neotropical genus *Calisiopsis* Champion, 1898, *C. bruleana* n. sp., is described from French Guiana and its distinguishing characters to related congeners are discussed.

Résumé. – Une nouvelle espèce de *Calisiopsis* Champion, 1898, de Guyane française (Hemiptera, Heteroptera, Aradidae). Une nouvelle espèce du genre néotropical *Calisiopsis* Champion, 1898, *C. bruleana* n. sp., est décrite de Guyane française ; les caractères distinctifs avec les espèces proches sont discutés.

Keywords. – Calisiinae, taxonomy, morphology, Neotropical region.

The flat bug subfamily Calisiinae Stål, 1873, comprises to date six genera, of which *Calisius* Stål, 1860, and *Calisiopsis* Champion, 1898, are recorded from the Neotropical region (KORMILEV & FROESCHNER, 1987; COSCARON & CONTRERAS, 2012). The genus *Calisius* is supposed to have a worldwide distribution of which the type species *C. pallipes* Stål, 1860, was described from Brazil. However, HEISS (2015) has shown that there are different genera involved and described *Caribocalisius* Heiss, 2015, for Caribbean, *Afrocalisius* Heiss, 2015, for African “*Calisius*” species and reinstated *Aradosyrtyx* Costa, 1864, for European taxa.

The type species of *Calisiopsis* is *C. ampliceps* Champion, 1898, from Panama. Five extant species have been described since (*C. brasiliensis* Kormilev, 1959, *C. minuta* Kormilev, 1959, *C. planiceps* Kormilev, 1976, *C. kormilevi* Froeschner, 1992, and *C. nigrotuberculata* Froeschner, 1992). The fossil taxa *C. brodzinskyorum* Froeschner, 1992, and *C. azteca* Heiss, 2016, were described from Dominican amber (FROESCHNER, 1992) and Mexican amber (HEISS, 2016) respectively.

The last comprehensive key for *Calisiopsis* species was provided by FROESCHNER (1992). He recognized and distinguished two main groups: without distinct elevated tubercles on scutellar disc or with such tubercles, the latter comprising *C. kormilevi* from Peru and *C. nigrotuberculata* from Mexico.

The new species *Calisiopsis bruleana* n. sp. belongs to this group with distinct tubercles but differs in some characters from both taxa, a reason for assigning it to a new species.

MATERIAL AND METHODS

The specimens were collected for the prestigious Entomological Inventory Programme of French Guiana performed and organized by the *Société entomologique Antilles-Guyane* (SEAG) operating since several years. Material of the family Aradidae was mounted and identified by the author, of which two faunal lists were published to date (HEISS & MORAGUES, 2009, 2015) confirming 44 species of 22 genera recorded from French Guiana.

As the collecting methods used primarily various traps, only a portion of flying species could be attracted. Therefore, those wingless taxa frequently associated with leaf litter and fungal hyphen of decaying wood were not represented.

This new species was found in light traps at the collecting site “Montagne des Chevaux (MCV), commune de Roura, 4°44’56”N - 52°26’28”W, altitude 75 m”. The collecting activities started there in 2008 and are still in progress, where several members of SEAG are involved in collecting, sorting and distributing material for identification, namely Pierre-Henri Dalens, Stéphane Brûlé, Eddy Poirier, Serge Fernandez, Julien Touroult and Frédéric Robin.

The holotype will be deposited at the Muséum national d’Histoire naturelle, Paris (MNHN), paratypes in the collections of the author and MNHN.

Photos were taken using an Olympus SZX 10 binocular microscope with an attached Olympus E 3 digital camera and processed with Helicon Focus 4.3 software, using Adobe Photoshop and Lightroom 2.3.

Measurements were taken with a micrometer eyepiece and are given in millimetres.

Abbreviations used. – **deltg**, dorsal external laterotergite (connexivum). When citing the text on the labels attached to the specimen “/” separates the lines and “//” separates different labels; **FIT**, flight interception trap; **PVP**, interception Polytrap with pink light.

TAXONOMY

Family **Aradidae** Brullé, 1836

Subfamily **Calisiinae** Stål, 1873

Genus **Calisiopsis** Champion, 1898

Calisiopsis bruleana n. sp. (fig. 1-4)

<http://zoobank.org/04AB7ECC-5DB2-4C74-8706-0265AFDBF83D>

HOLOTYPE: ♂, macropterous, labelled “Guyane Française / MCV – PVP / 27.IX.2014 SEAG // Holotype male / *Calisiopsis / bruleana n. sp.* / des. E. Heiss 2017 // (red label)” (MNHN).

PARATYPES: All from same locality and PVP trap as holotype but different data in 2014: 1 ♀, 7.VI.2014; 2 ♂ and 5 ♀, 5.VII.2014; 3 ♂ and 6 ♀, 12.VII.2014; 3 ♂, 19.VII.2014; 5 ♂ and 10 ♀, 26.VII.2014; 2 ♂ and 2 ♀, 2.VIII.2014; 2 ♂, 27.IX.2014 (collected with holotype); 1 ♀, 8.XI.2014; 2 ♀, 24.V.2014 by FIT- trap.

Description. – Colour brown with darker spots on scutellum and abdomen, and whitish tubercles and markings throughout (fig. 1-2).

Measurements. Holotype: length 2.75; width of abdomen across tergite IV 1.3. Variation of size in paratypes: males length 2.65-2.80; females 2.85-3.10.

Head. Wider than long (0.675 / 0.55); clypeus dorsally roundly elevated, without distinct tubercles, lateral margins expanded and beset with blunt projections; antenniferous lobes large with acute apex bent downward; antennae about as long as with of head (0.7 / 0.675), segments I-III small, moniliform, together nearly twice as long as cylindrical segment IV (0.25 / 0.45), the latter with distinct whitish plaques; eyes globose inserted in head; postocular tubercles dentiform, laterally exceeding outer margin of eyes; vertex with a median double row of low tubercles, depressed laterally then raised and tuberculate along the inner margin of eyes; rostrum arising from a closed atrium, shorter than head.

Pronotum. Twice as wide as long (1.15 / 0.55), lateral margins converging anteriorly and dentate; disc elevated posteriorly with four distinct longitudinal granulate carinae, the lateral ones not reaching anterior margin; few dispersed tubercles are present between median carinae near posterior margin.

Scutellum. Longer than wide (1.35 / 1.05), basal triangular elevation with four larger tubercles along anterior margin and 4-6 tubercles posteriorly, the elevated median carina beset with a row of dispersed tubercles: disc lateral of median carina with irregular larger whitish tubercles; lateral margins beset with distinct tubercles on anterior half, which are lower and partly vanishing on posterior half and rounded apex.

Abdomen. Lateral portion of tergal plate exposed and raised; lateral margins of deltg II-VII with a dorsal and a ventral row of tubercles, which vary in number (4-5) and coloration (2-4 darker).

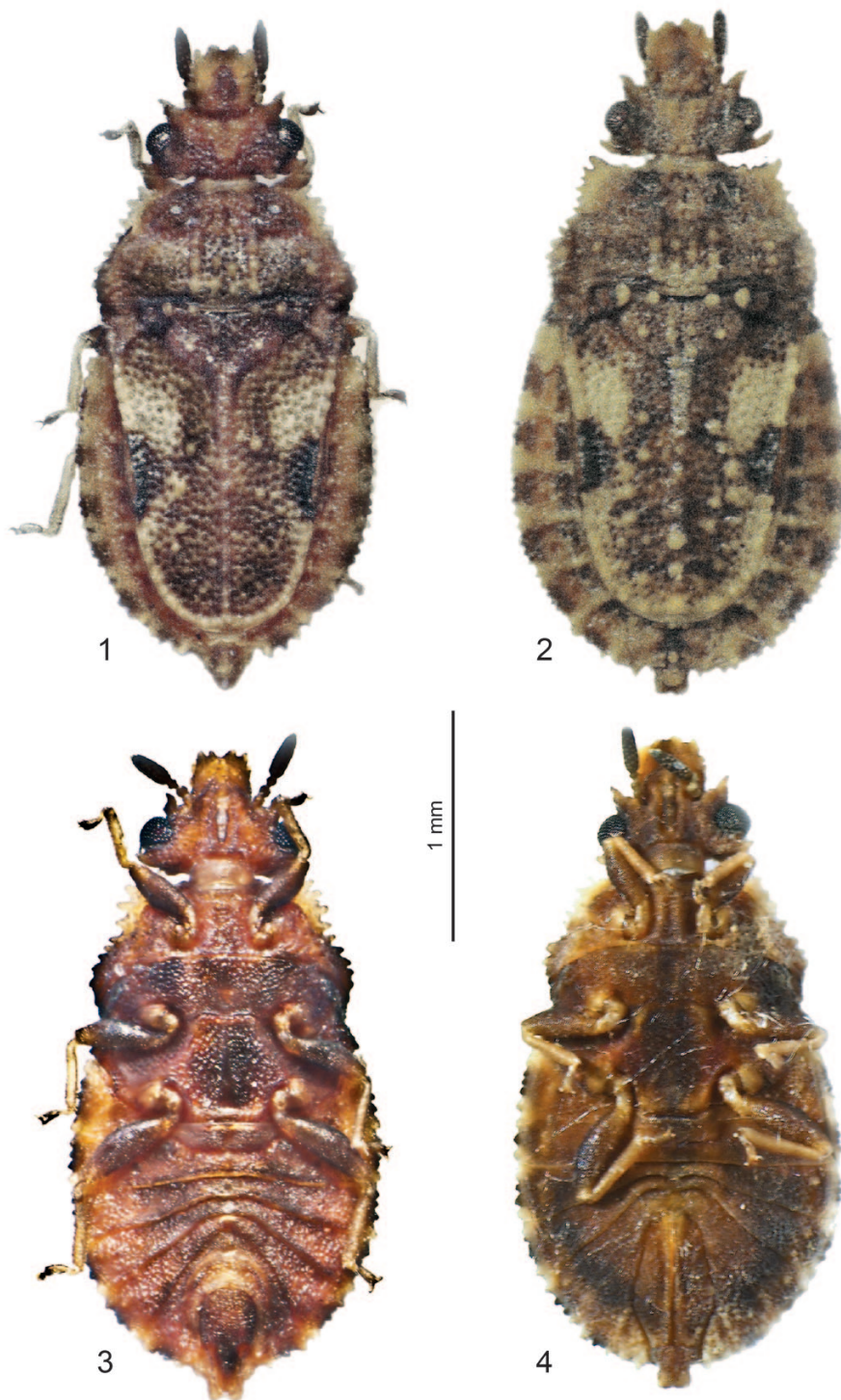


Fig. 1-4. – *Calisiopsis bruleana* n. sp., paratypes. – 1-2, Dorsal view: 1, ♂; 2, ♀. – 3-4, Ventral view: 3, ♂; 4, ♀.

Venter: Surface punctate, pro-, meso- and metasternum flat; spiracles II-VI ventral, VII-VIII lateral and visible from above.

Legs. Femora incrassate, tibiae cylindrical and straight, tarsi two-segmented, claws with distinct parempodia.

Etymology. – Named after Stéphane Brûlé (SEAG), collector of several interesting Aradidae, recognizing his continuous activities, efforts and successful collection of insects for the “Mission Inventaire entomologique Guyane française”.

Discussion. – *Calisiopsis bruleana* n. sp. is the third species with distinct elevated tubercles on scutellar disc between median carina and lateral margins. It differs however from both other taxa of this group, *C. kormilevi* and *C. nigrotuberculata* by the clypeus without dorsal rows of tubercles, present in both other species, further from *C. kormilevi* by the vertex slightly lower than dorsal margin of eyes (deeply depressed in *C. kormilevi*) and from *C. nigrotuberculata* by whitish not black tubercles on scutellar disc.

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