

NEW SYNONYMY AND NEW SPECIES IN NEOTROPICAL CHLOROPIDAE (DIPTERA)

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An ephydrid, Hyadina porteri Brèthes, 1919, is found to be a senior synonym of Hippelates australis Sabrosky, 1955. New combination: Liohippелates porteri (Brèthes). Two new species, Pseudogaurax souzalopesi from Peru and P. silbergliedi from Panama are described and placed in the synopsis by Sabrosky (1966).

Key words: Chloropidae – Ephydridae – *Hyadina porteri* – *Liohippелates porteri* – *Hippelates australis* – *Pseudogaurax* – *Pseudogaurax souzalopesi* – *Pseudogaurax silbergliedi* – spiders – *Nephila* – *Tetragnatha*

The opportunity to join in paying homage and best wishes to my good friend and correspondent of many years, Dr. Hugo de Souza Lopes, makes it possible to record an unexpected new synonymy and to describe some new species of *Pseudogaurax* that have been found since my revision of that genus for the Western Hemisphere.

Liohippелates porteri (Brèthes), new combination

Hyadina porteri Brèthes, 1919, Rev. Chil. Hist. Nat. 23: 43 (Chile: Río Blanco, tributary of the Río Aconcagua, a little north of Santiago).

Hippelates australis Sabrosky, 1955, Rev. Chil. Entomol. 4: 45 (Argentina: Bariloche, Río Negro; paratypes from many localities in Chile, plus some from Juan Fernandez, Peru, and Ecuador). New synonymy.

This common south temperate species is related to the pestiferous *L. flavipes* (Loew) of neotropical regions and *L. pallipes* (Loew) of North America. It was long identified as *pallipes* (e. g., Malloch, 1934). Sabrosky (1955) first distinguished it from the nearctic *pallipes* and the neotropical *flavipes*, with a detailed key to the three species. The south temperate species *porteri* (*pallipes* of authors) is common in Chile and Argentina. Its northern outliers in Peru, Ecuador and Colombia are at high elevations compared with *flavipes*.

Recently a specimen believed to be the type of an ephydrid, *Hyadina porteri* Brèthes, was

loaned to Philip J. Clausen of the University of Minnesota by Axel O. Bachmann of the Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”. Recognizing that it was a chloropid and not an ephydrid, Dr. Clausen, with Dr. Bachmann’s permission, referred the specimen to me. I recognized at once that it was my *Hippelates australis*, now referred to *Liohippелates*. Sincere thanks to Drs. Bachmann and Clausen for the fine cooperation in clearing one more of Brèthes’ uncertain species.

The specimen was not labeled type, although Brèthes is said to have customarily written type on the locality label of his new species, though without mentioning type specimens in his published descriptions. However, the specimen, which is labeled “*Hyadina porteri* Brèthes”, “is the only one so identified in the box, which contains almost only types of Diptera of Brèthes”, and “I am almost sure it is the type” (Bachmann to Clausen, May 8, 1989). The locality and collector on the label agree with the publication, and the specimen agrees with the published description in all respects. The description does state “Long. 1,5-2 mm”, which indicates that Brèthes had more than one specimen, indeed to be expected for common species of *Liohippелates*. Thus this topotypic specimen might well have been a syntype or a paratype, and in either case not labeled type by Brèthes, or the labeled type may have been lost. At any rate, I feel justified in concluding that it is an original specimen, and in the absence of a known type I designate it as lectotype or neotype, whichever is appropriate.

Oddly, Brèthes was involved in a reverse

confusion of Chloropidae and Ephydriidae. *Hippelates porteri* Brèthes from San José de Maipo, Chile, proved from its type to be an ephydrid, *Discocerina obscurella* (Fallén), as recorded by Sabrosky & Paganelli (1984). The same specific name *porteri* was involved in both cases of family confusion but luckily without homonymy, either primary or secondary.

The genus *Pseudogaurax* Malloch

The chloropid genus *Pseudogaurax* contains numerous species with larvae that are egg predators, reared from spider egg sacs, mantid oothecae, and similar masses of eggs. Sabrosky (1966) reviewed the 28 species then known from the Western Hemisphere, including 3 new species from Brazil. Available material before me indicates that there are over two dozen undescribed neotropical species. However, the limited number of specimens, too often teneral, makes it difficult to judge variation and these species are held for some future time when a completely revised key can be prepared. The two species described here are abundantly distinct in any case.

Pseudogaurax souzalopesi, new species

Yellow species with 4 narrow black mesoscutal stripes, a narrow median yellow stripe on the abdomen, and black tibiae and fore tarsus.

Male, female. Yellow, sharply marked with black as follows: circular spot enclosing entire ocellar tubercle, arista except base, 4 narrow mesoscutal stripes as figured for *P. interruptus* (Becker) (Sabrosky, 1966, fig. 24), large oval mesopleural spot, large semiquadrate spot on each side of tergites 2-5 (thus a black abdomen with median yellow stripe), all tibiae, and the fore tarsus. All bristles and hairs yellow to brownish yellow. Wing hyaline, veins brown.

Frons barely longer than broad, as 14: 13, and approximately equal to width of an eye as viewed from above; frontal triangle shining, almost 2/3 length of frons; 3rd antennal segment large, not subreniform as usual in the genus but length and width approximately equal; arista slender, sparsely short pubescent. Mesoscutum longer than broad; scutellum elongate, longer than broad at base, as 22: 17, straight sided and strongly narrowed distally, apical scutellar bristles narrowly separated. Wing with the usual broad marginal cell (cell r_1),

the second vein ($R_2 + 3$) deeply concave anteriorly as it curves into costa, 3rd and 4th veins straight and parallel to margin of wing; r-m crossvein opposite middle of discal cell.

Length, 2.5 mm.

Holotype, male, Peru: Madre de Dios, Manu, Río Manu, 250 m, Pakitza, 12°07'S, 70°58'W, 9-23 Sept. 1988 (Amnon Freidberg). Type in the U. S. National Museum of Natural History. Allotype, female, Panama: Cerro Galera, Jan. 25, 1984, on web of *Nephila* spider, and paratype female, Panama: Gamboa, June 12, 1983 (both, Wolfgang Nentwig) [Museum für Naturkunde, Berlin]. Paratype: female, Brazil: Para, Río Xingu Camp (52°22'W, 3°39'S), ca 60 km S. Altamira, 8-16 Oct. 1986 (P. Spangler, O. Flint) [USNMNH].

The species is named in honor of my good friend Dr. Hugo de Souza Lopes on the occasion of his 80th birthday and in recognition of his lifetime achievement, notably in the taxonomy of the Sarcophagidae.

This species is close to *P. interruptus* (Becker) from Brazil, having the same mesoscutal pattern of 4 black stripes, the outer stripes interrupted at the transverse suture, and it will key easily to *interruptus* in Sabrosky (1966). There are two striking differences:

Abdomen with a median yellow stripe on tergites 2-5; all tibiae and the fore tarsus black.	<i>P. souzalopesi</i> n. sp.
Abdominal tergites 2-5 chiefly black with a V-shaped yellow area mesally on tergite 2 and part of 3; fore and mid tibiae and fore tarsus black, hind tarsus black on distal 4 segments	<i>P. interruptus</i> (Becker)

The distribution indicates a widespread species, compared with most neotropical species that have been described. However, the scattered and limited material that has been available may contribute to a pattern of narrow or restricted distribution that is more apparent than real.

Pseudogaurax silbergliedi, new species

Yellow with a single narrow black mesoscutal stripe, sublinear anteriorly, wider in prescutellar area.

Male, female. Predominantly yellow, marked with black or black-brown as follows: ocellar

tubercle, arista, narrow median mesoscutal stripe that is sublinear anteriorly and abruptly broadened posteriorly (similar to fig. 17 for *P. lancifer* in Sabrosky, 1966), elongate-oval spot on mesopleuron, abdominal pattern of black on extreme sides of tergite 2, all of 3 and 4, and broad mesal third of 5, fore and mid tibiae in part, and fore and hind tarsi entirely.

Frons longer than broad at vertex, as 30: 25, width at vertex approximately equal to width of an eye as viewed from above; frontal triangle polished, 2/3 length of frons; 3rd antennal segment large, subreniform; arista long pubescent. Mesoscutum slightly longer than broad, as 25: 23; scutellum subconical, appearing somewhat elongate but length and breadth at base almost equal, or the basal width a trifle greater, apex narrowly rounded; apical scutellar bristles well separated, by over 3 times width of a tubercle at base of a bristle. Wing venation usual for the genus, with broad marginal cell (r_1); 2nd and 3rd veins curving forward into costa, the 3rd vein thus diverging from 4th vein which passes straight to apex of wing; r-m crossvein at or barely beyond opposite middle of discal cell.

Length, 2.5 mm.

Holotype, male, allotype, and 10 paratypes (3 males, 7 females), Panama: Canal Zone, Madden Lake, reared from *Tetragnatha* egg sac, March-April 1978 (R. Silberglied). Type series in the U. S. National Museum of Natural History. Other paratypes, same museum: 2 females, Mexico: Vera Cruz, Fortin de las Flores, June 1964, light trap (F. S. Blanton).

The species is dedicated to the memory of Robert Silberglied, young insect biologist whose tragic death in the crash of an airliner at Washington, D. C. cut short a promising career.

In addition to the type series, which includes apparently fully colored individuals with mature coloration, there are 29 specimens showing great variability in color pattern, apparently chiefly or perhaps entirely from their teneral condition. They vary from no black at all on the mesoscutum to a small prescutellar spot to slight indications of a median stripe. Likewise the abdomen varies greatly, with the palest specimens almost entirely yellow with only a median black spot posteriorly on tergite 4 and a narrow median

spot on the 5th. Such differences would have to be considered in constructing or using a key. One series of 9 specimens was reared at Changuinola, Panama from an old egg sac of a spider. One female from Brazil: Rio de Janeiro, Federal District, February [USNMNH] is discolored but may be the same species.

Univittate species with yellow scutellum key directly to couplets 19-21 in my key (Sabrosky 1966, note figs. 14-17). The new species is especially close to *P. lancifer* (Coquillett) from Puerto Rico, and shows a similar mesoscutal pattern (fig. 17), but *lancifer* has entirely bright lemon-yellow legs with no infuscation at all on tibiae and tarsi as found in *silbergliedi*. The other univittate species differ in various ways. The key can be modified as follows:

- 19. Median mesoscutal stripe sublinear anteriorly, abruptly and quadrately broadened as a prescutellar spot 20
 - Median stripe narrow throughout 21
- 20. Legs entirely lemon yellow (Puerto Rico, Virgin Is.) *P. lancifer* (Coq.)
 - Legs with infuscation on fore and mid tibiae (in part) and tarsi (entirely). *P. silbergliedi*, n. sp.
- 21. Legs entirely lemon yellow (Brazil). *P. nigrolineatus* (End.)
 - At least fore and mid tibiae with some infuscation 21a
- 21a. Scutellum conical, rounded apex, length and basal width approximately equal (Brazil) *P. cingulatus* Sabr.
 - Scutellum elongate to narrower apex, length: width at base as 20: 14 (Panama) *P. unilineatus* Hall

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