

collected on 26 July 1966, 5 by P. Rude and 3 by J. Powell at Jackson Co., Mt. Ashland 65–7100 ft., Oregon; 2, Mt. Barcroft, 13,000 ft., California (J. Powell); 1, Sagehen Crk., Nevada Co., California, 15 July 1966 (P. Rude); 3, Blue Canyon, Sonora Pass, Tuolumne Co., California, collected on 18 August 1960, 20 August 1959 and 30 August 1960 by J. W. MacSwain, D. D. Linsdale and P. D. Hurd respectively; 1, Mono Co., California, 25 August 1954 (H. F. Madsen); 1, Lily Lake, Modoc Co., California, 11 July 1957 (J. Powell); 1, Saddlebag Lake, Mono Co., California, 27 July 1954 (J. Powell); 1, McKay Creek, Sonora Pass, Mono Co., California, 78 August 1966 (E. Jessen).

*Allotype female*, Tioga Lake, Mono Co., California, 3 August 1956 (C. D. MacNeill); 2 paratype females; 1, Lincoln Cr., Sierra Co., California, 24 August 1955 (H. F. Madsen); 1, Mt. Ashland, Jackson Co., Oregon, 65–7100 ft. (J. Powell).

#### LITERATURE CITED

- NAYAR, J. L. 1968. Male genitalia of Eristalinae from California. (Syrphidae : Diptera). Pan-Pac. Entomol., 44 (2): 153–167.

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### The Genus *Brachygrammatella* Girault (Hymenoptera : Trichogrammatidae)

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For years the sole representative of *Brachygrammatella* was a single, crushed and fragmented female specimen mounted under a fractured piece of a coverslip on a slide with other chalcids. This individual, collected in 1914 in north Queensland, was described by Girault as *Brachygrammatella nebulosa*. (Girault, A. A., 1915, Mem. Queensland Mus., 3 : 147). In 1958 a female of a new species of *Brachygrammatella* was caught in a suction trap in Pretoria, South Africa, by D. P. Annecke. Six years later additional specimens of this same new species were reared from eggs of *Batrachomorpha capeneri* Linnavuori (Hemip.) by A. L. Capener and D. P. Annecke at Warmbaths, Transvaal, South Africa. In their classification of Trichogrammatidae, Douth and Viggiani (1968) recognized *Brachygrammatella* but combined with it, as a subgenus, all of the species described in *Pseudbrachygramma* Girault.

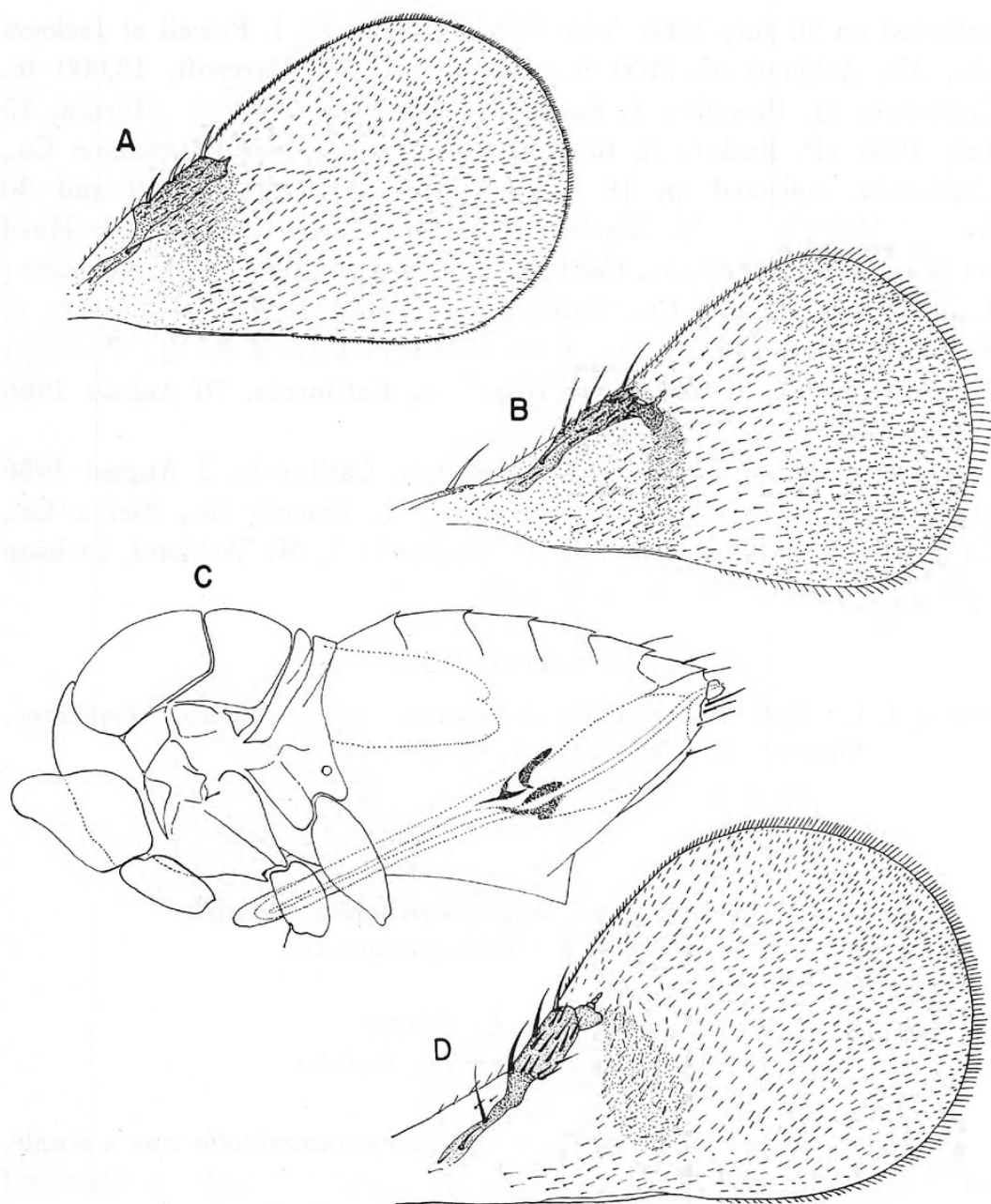


FIG. A. Forewing of *Brachygrammatella nebulosa* Girault. FIG. B. Forewing of *B. ventralis* Doutt. FIG. C. Sketch showing anterior projection of ovipositor, *B. ventralis* Doutt. FIG. D. Forewing of *B. perplexa* (Girault).

The genus *Brachygrammatella* Girault is now defined as follows: Forewing rounded apically, disc densely covered with short cilia, vein tracks *r-m*, Cu, and R partially complete becoming indistinct apically. Costal cell well developed; marginal vein broad, somewhat convex on dorsal surface, heavily setaceous; stigmal vein short, broad. Forewings clouded beneath venation, darkest under stigmal vein. Hindwings moderately broad for family. Female antenna with two annelli, two short and wide funicle segments; club broad at base tapering to point apically, consisting of one or two segments. Antenna inserted above

level of lower margin of eyes. Maxillary palp of single segment. Middle femur with two apical spurs, the inner spur large and projecting forward; middle tibia with spur that is spinose or branched; midtarsus with basal segment elongate, longest tarsal segment. Ovipositor not exerted.

#### KEY TO SUBGENERA AND SPECIES

1. Forewing with setae immediately beneath marginal vein, middle tibia without large spines on outer surface, hindwing with abundant setae, club two-segmented in both sexes. .... (Subgenus *Brachygrammatella*) 2
- Forewing with bare area immediately beneath marginal vein, middle tibia with large spine or spines on outer surface, female club of single segment, hindwing with setae in two or more distinct lines converging apically. .... (Subgenus *Pseudbrachygramma*) 3
2. Marginal vein four times as long as wide; setae on marginal vein rather fine and numerous (about 20), continuing on to wing blade in a triangular cluster beneath marginal vein. .... *nebulosa* Girault. (Fig. A)
- Marginal vein about three times as long as wide; about eight large, coarse setae on marginal vein, approximately the same number underneath stigmal and apex of marginal vein. ....
- ..... *salutaris* Doutt, new species. (Figs. E, F)
3. Ovipositor extended anteriorly in membranous pouch beneath thorax and forward of midcoxae bases. .... *ventralis* Doutt, new species. (Figs. B, C)
- Ovipositor not extended forward beneath thorax. .... 4
4. Forewings dusky with contrasting transverse hyaline band across wing blade just distad of venation; body colored yellow and black with silver band on dorsum of abdomen near apex; abdomen long, ovipositor well developed. .... *speciosissima* (Girault). (Figs. G, H)
- Forewings not so patterned. ....
- ..... *perplexa* (Girault) = *dubia* (Girault) ♂ (Fig. D). (*New synonymy*)

When Girault described the genus *Pseudbrachygramma* (Girault, A. A., 1915, Mem. Queensland Mus., 3 : 148) he recorded the male as unknown yet on the same page he proceeded to describe *P. dubia* from a single male specimen. The male club of *P. dubia* is described as consisting of two segments but the club is missing from the type specimen. No other authentic male specimen of the subgenus *Pseudbrachygramma* has been seen. Although the type specimens are poorly mounted, there are apparently only primary sexual differences between the two individuals and nothing to justify their separation as two species. It is likely that *P. dubia* is the male of *P. perplexa* and they are herein synonymized.

#### ***Brachygrammatella ventralis* Doutt, new species.**

In the Girault collection at the Queensland Museum there is a single female specimen labeled in Girault's handwriting "*Pseudbrachygramma speciosissima* Gir. ♀. Indooroopilly, window, January 1930," and in



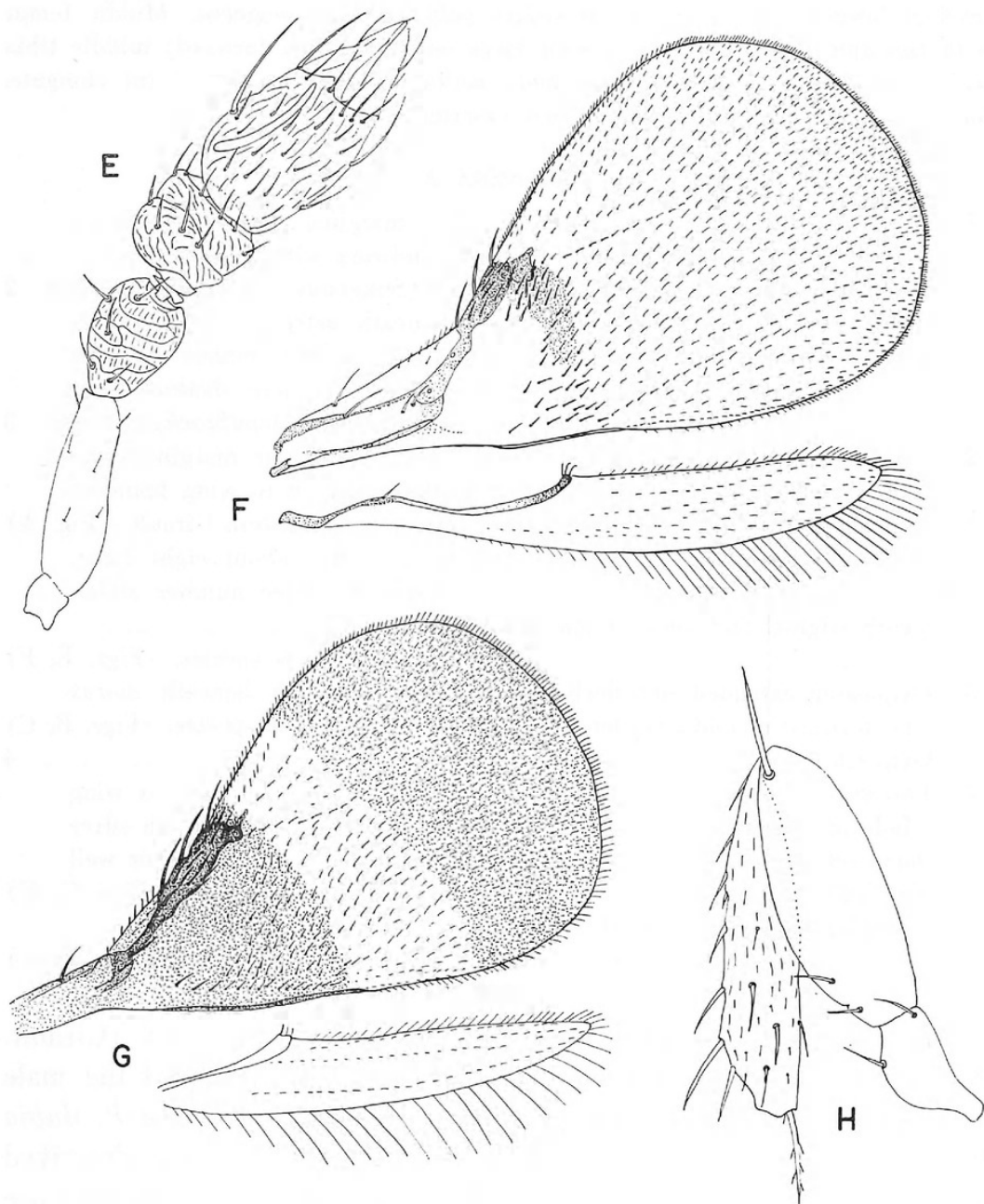


FIG. E. Antenna of female *B. salutaris* Doult. FIG. F. Wings of *B. salutaris* Doult. FIG. G. Wings of *B. speciosissima* (Girault). FIG. H. Midfemur, tibia and tibial spur, *B. speciosissima* (Girault).

an unpublished manuscript Girault noted that in addition to the type specimen of *P. speciosissima* he had collected "a female, Indooroopilly (Brisbane) on a window in my home, January, 1930." This is undoubtedly the same individual, but the Indooroopilly specimen is misidentified for it is not *P. speciosissima* and is quite distinct from all other *Brachygrammatella* because of the anterior projection of the valvifers. It is therefore described as follows:

FEMALE.—Body length 0.56 mm, abdomen 0.32 mm, ovipositor length along venter from tip of abdomen to forward extension of valvifers 0.44 mm. Thorax and base of abdomen orange dorsally, ventral areas dark brown; apical third of abdomen with small orange band dorsally and large orange spot laterally; legs brown with each segment somewhat lighter apically; head orange shading into light brown on lower face and cheeks; eyes and ocelli crimson. Wings fumated with light band across disc beyond venation. (Figure B). Antennal club typically of single segment, funicle two-segmented. Ovipositor originates near middle of abdomen but valvifers extend in a membranous pouch anteriorly beneath thorax and forward of midcoxal bases.

The structure of the ovipositor sets this species apart from all others in the genus. The color and wing pattern superficially resemble *speciosissima* and this may have caused the misidentification by Girault.

The *type* is in the Queensland Museum, Brisbane. It is under a coverslip with an undetermined mymarid and male trichogrammatid. The locality is INDOOROOPIILLY (BRISBANE), QUEENSLAND, January 1930, on a window, A. A. Girault.

### ***Brachygrammatella salutaris* Douth, new species.**

FEMALE.—Body length from 0.56 to 0.71 mm. Body mostly yellow with about five dark brown cross-bands on abdomen dorsally; the pleural and ventral areas of abdomen and thorax tinged with brown. Coxae, femora and tibiae brown but apices of these segments and the tarsi are pale. Antennae golden; head yellow shading to brown on face and cheeks. Wings hyaline except for dark band across wing at apex of venation. Subcostal and premarginal veins yellow; marginal and stigmal veins brown.

Ovipositor originates near middle of abdomen, beneath apex of mesophragma. Club two-segmented and typical of subgenus *Brachygrammatella* (Figure E). Marginal vein with about eight stout, coarse setae and a similar number clustered in area immediately beneath junction of marginal and stigmal veins. (Fig. F).

MALE.—Similar to female.

The species is related to *B. nebulosa* Girault, but that species has much finer and more numerous setae both on the marginal vein and clustered in a triangle on the wingblade immediately beneath it. The marginal vein of *B. nebulosa* is proportionately longer and its stigmal vein is smaller.

Described from two females and one male. The *holotype female* and the *allotype male* are probably from eggs of *Batrachomorpha capeneri* Linnavuori on *Combretum* species with *Terminalia sericea*, WARM-BATHS, TRANSVAAL, SOUTH AFRICA, February 1964, collectors A. L. Capener and D. P. Annecke. A paratype female collected in a suction trap, Pretoria, South Africa, March 1958, D. P. Annecke. Type and allotype in collection of Plant Protection Research Institute, Pretoria.

Paratype at Division of Biological Control, University of California, Berkeley.

#### SUMMARY

As presently constituted, the genus *Brachygrammatella* consists of five species. Four are from Queensland without host records and one is from South Africa associated with the eggs of the hemipteron, *Batrachomorpha capeneri*. Two new species are described, namely *Brachygrammatella ventralis* Doutt and *B. salutaris* Doutt. The species *B. dubia* (Girault) is a synonym of *B. perplexa* (Girault).

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#### LITERATURE CITED

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### Two New Species of *Eristalis* Latreille from Western North America

(Diptera : Syrphidae)

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This paper deals with two new species of *Eristalis* Latreille from Western North America. The types will be deposited in the California Academy of Sciences.

#### *Eristalis californicus* Nayar and Cole, new species

(Figs. 1, 2)

FEMALE.—Length, 11.54 mm. Wing length, 9.54 mm. Eyes dark-brown with a longitudinal stripe of dense yellow hair along inner border. Vertex and ocellar triangle brownish-yellow; sparsely pubescent. Occipital pile shining yellow. Frons with sides parallel up to about half way from vertex to antennae, widening gradually about one-third width of head at level of antennae; facial stripe broad, brownish and bare. Face produced into a rounded, shining low tubercle. Frons and face covered with long, whitish-yellow pile. Antennae short; first and second segments brownish; third dark-brown with basal grayish margin; arista orange; bare.

Thorax shining with brownish hue, without stripe, sides yellowish with blackish tinge from humeral calli to scutellum; yellowish pollinose. Pleurae brownish-yellow; yellow pile. Legs orange-yellow; coxae and trochanters brownish-yellow; femora at base with long, oval patch of short, black bristles imparting black



Doutt, R L. 1968. "The genus *Brachygrammatella* Girault (Hymenoptera: Trichogrammatidae)." *The Pan-Pacific entomologist* 44, 289–294.

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