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NOTE ON NEOTROPICAL OEDEMATOCERINI, WITH A NEW GENUS AND SPECIES FROM BRAZIL (DIPTERA, TACHINIDAE)

J. H. GUIMARÃES

ABSTRACT

Tettigoniophaga vanini, gen. et sp. n. (Diptera, Tachinidae), from Salesópolis, São Paulo, parasite of *Cycloptera aurantifolia* (Stal), is described. *Phasmovora Cortés* is a synonym of *Gilvella Mesnil*.

According to Guimarães (1977) four tribes of tachinid flies are known as parasites of Orthoptera in the Neotropical Region; (i) Acemyini (Goniinae), apparently confined to acridid grasshoppers; (ii) Masiphyini (Goniinae) restricted as parasites of Mantodea; (iii) Ormiini (Proseninae), reported as parasites of crickets (Grylloidea); and (iv) Oedematocerini (Goniinae), known as parasites of walking sticks and acridid grasshoppers.

Townsend (1936:162) lumped the Old World genus *Hyperecteina* Schiner with the New World genera *Oedematocera* Townsend and *Schistocercophaga* Townsend and several other forms now belonging to the tribes Eryciini and Sturmiini, so that together these forms constitute his tribe Hyperecteini. As stated by Guimarães (1971) the tribe Hyperecteini, as recognized by Townsend, is a somewhat disharmonious aggregation of genera of polyphyletic origin. Undoubtedly the external similarity between *Hyperecteina* and some New World Hyperecteini *sensu* Townsend are convergent. *Hyperecteina* Schiner, occurring in the Old World, is referred as parasites of adults scarabaeids (Herting, 1960). The host relations, so far as regarded as contribal with *Oedematocera* (and immediate allies). I treat the former as Blondeliini and the latter as constituting the New World Oedematocerini, within the Goniinae.

In the present paper *Tettigoniophaga vanini*, gen. et sp. n. (Oedematocerini) reared from a tettigoniid in São Paulo, is described.

The writer is indebted to Dr. Curtis W. Sabrosky, Systematic Entomology Laboratory, U.S. Department of Agriculture, Washington, D.C. for his notes on Oedematocerini of the U.S. National

Museum; to Dr. Salvador Toledo Piza, Jr., Departamento de Zoologia, Escola Superior de Agricultura "Luís de Queiroz", Piracicaba, São Paulo to identifying the host. I also wish to thank Dr. Sergio Vanin, Instituto de Biociências, USP who collected and reared the material.

Tettigoniophaga, gen. n.

Oedematocerini with the following combination of characters.

Medium sized species (7-8 mm). Front at vertex narrowed in males (0.21 of head width). Parafrontalia without proclinate orbitals in male; inner verticals strong and parallel in both sexes; outer verticals not differentiated from postocular row in male, strong in females; ocellars present and proclinate. Parafacialia narrow. Eyes bare. Antennae with the 3rd segment elongate; arista long, microbubescens. Clypeus rather markedly concave, as long as epistoma. Occiput flat. Facialia sharp, with few bristles above vibrissae. Vibrissae strong and decussate. Proboscis short and stout. Labella large; palpi moderately clavate. Prosternum bristled. Propleura, mediotergite and postalar wall bare. Acrostichals, 2-3:3; dorsocentrals, 3:3; humerals, 3 in line; intraalars, 1:3; intrapostalar present. Scutellum with three pairs of strong laterals; discals and apicals small. Wings hyaline; R_1 bare; bend of vein usually rounded, without stump. Legs normal; claws and pulvilli short in both sexes. Abdomen short, ovoconic; T_{1-2} with a pair of median marginals; T_3 with a pair of discals and marginals; T_4 with a strong pair of discals and a row of marginals; T_5 with an irregular row of marginals and discals.

Tettigoniophaga, gen. n. is close to *Gilvella* and *Schsitocercophaga* differing mainly by the absence of proclinate orbitals and the narrowed front in males. From *Oedematocera* it differs by presenting well developed prosternal bristles (the holotype of *Oedematocera striata* from Panama, according to Dr. Sabrosky *in litt.* has the prosternum bare, but a male specimen in the USNM collection from same locality presents a few hairs).

There are significant differences in the shape of the stigmal plate of the puparium of several Oedematocerini genera; however, I am loath to draw any firm conclusions about the importance of these differences based on relatively limited material.

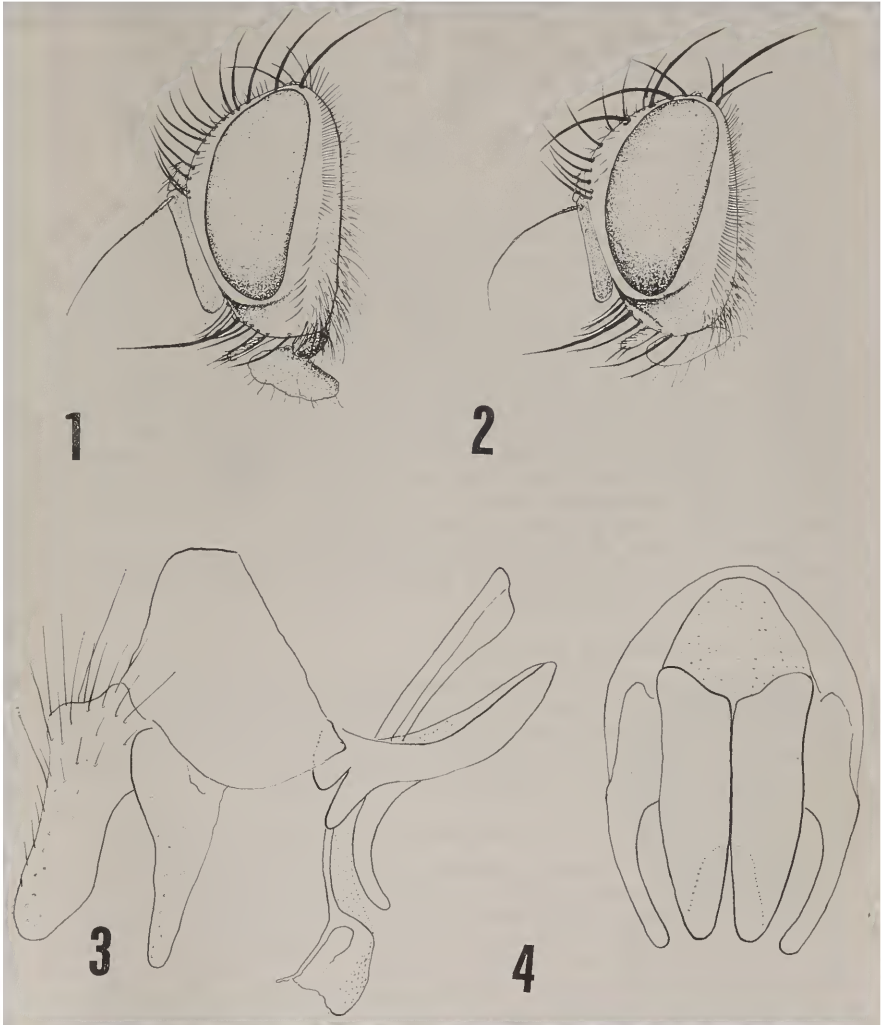
Type-species, *Tettigoniophaga vanini*, gen. et sp. n.

Tettigoniophaga vanini, sp. n.

(Figs. 1-9)

Male. Total length, 7-8 mm.

Head (fig. 1) black, silvery white pollinose. Front at vertex 0.21 of head width. Frontalia black, reddish above basis of antennae, at middle about as wide as one parafrontal; antennae dull reddish, as long as face; third segment dull black on apical two-thirds, about 4 to 5 times longer than second; aristae black, thickened on the basal



Tettigoniophaga vanini, gen. et sp. n. Fig. 1. Male head, lateral view; fig. 2, idem, female; fig. 3, male genitalia, lateral view; fig. 4, inner and outer forceps, posterior view.

one-fifth, a little longer than antennae. Epistoma nearly in line with clypeus and in the same plane. Ocellars well developed, parallel, inserted opposite the posterior edge of anterior ocellus; frontals about 14, the four anterior bristles below the base of antennae, the two posterior ones stout and reclinate. Parafacialia and cheeks bare. Cheeks about 0.10 of eye height. Facialia with four to five short bristles above the strong decussate vibrissae. Occiput flat, yellow pilose, with a few black cilia on upper half on disc. Peristoma with usual row of recurved bristles. Palpi yellow, moderately clavate, with short black bristles dorsally.

Thorax black. Mesonotum pale white pollinose, with four black vittae between the acrostichals and dorsocentrals, a narrow black vitta extending across the suture to the level of second dorsocentrals; between the dorsocentrals and intraalar, in front of the suture, a triangular vitta; behind it, a moderately broad vitta fading out near the scutellum. Scutellum black, white pollinose, with three laterals, the anterior and posterior ones strong; apicals rather stout; discals present; hairs rather stiff, suberect. Legs yellow; tarsi black; anterior tibiae with one or two posterior bristles; mid tibiae with one strong anterodorsal and two posterior bristles; hind tibiae rather irregularly and coarsely ciliate, with one longer bristle on middle, and two posterior bristles; claws and pulvilli short. Wings clear; epaulet dark brown; subepaulet yellow; costal spine very inconspicuous; third vein with two or three bristles at base.

Abdomen black, white pollinose. T_{1,2} excavate to posterior border. Genitalia (figs. 3-4) with curved inner forceps; outer forceps broad, about as long as inner forceps.

Female. Total length, 7.5-9.0 mm

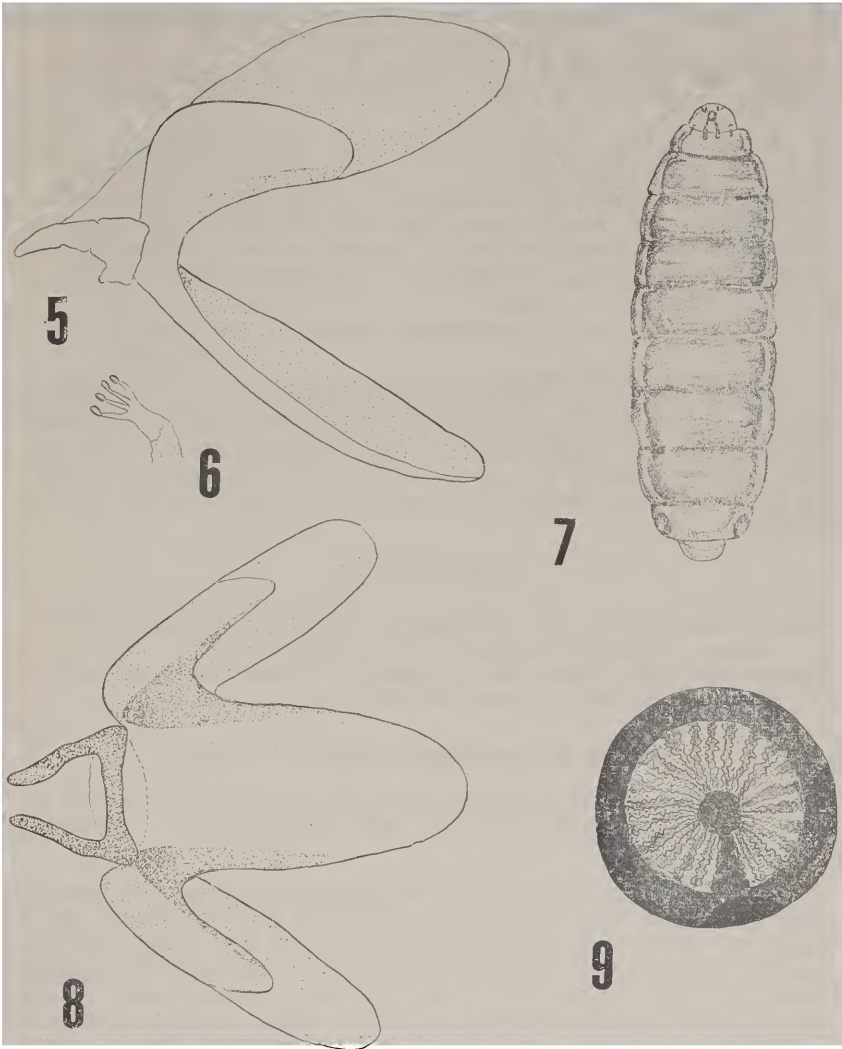
Front at vertex 0.25 of head width; parafrontalia with two pairs of strong proclinate orbitals (fig. 2); frontals with about 8-9 bristles; the upper pair strong and reclinate; outer verticals short, about one-half length of inner verticals, the upper pair strong and reclinate; claws and pulvilli short; otherwise as in the male.

Larva. Stage III (figs. 5-9). Length, 13.0 mm; width, 4.0 mm.

Amphipneustic. Cuticle colorless and smooth, without bands of spines on either side. Anterior spiracle (fig. 6) with four to five respiratory papillae arranged as shown in the figure; buccopharyngeal armature as in figs. 5 and 8. Posterior spiracle large, rounded and virtually flush with lateral surface of 11th segment; button round, located in the center of the plate; peritrema circular, sclerotized. Numerous elongate ridges radiate from the button towards peritrema; between each ridge there are numerous small circlets (fig. 9).

Pupa. Length 5-6.5 mm; diameter 2.5-3.5 mm.

Large, smooth, subcylindrical, round on both ends; anterior spiracles yellow, not very conspicuous, located just below the horizontal axis. Posterior spiracles rounded, very far apart, located below but touching the horizontal axis.



Tettigoniophaga vanini, gen. et sp. n. Fig. 5, Third instar larva buccopharyngeal apparatus; fig. 6, idem, protoracic spiracle; fig. 7, Third instar larva, dorsal view; fig. 8, idem, buccopharyngeal apparatus, dorsal view; fig. 9, idem, stigmatal plate.

Holotype ♂, Brazil, São Paulo, Salesópolis, Estação Biológica de Boracéia, 3.IV.1977, Sergio Vanin. Ex adult female of *Cycloptera aurantifolia* (Stal), Tettigoniidae, Pseudophyllinae (In the Museu de Zoologia, USP, São Paulo). Paratypes, 5 ♂ and 9 ♀, same data as holotype (Museu de Zoologia, USP and U.S. National Museum, Washington, D.C.).

Tettigoniophaga vanini, named after Dr. Sergio Vanin, who collected and reared this fly, is close to *Gilvella phasmophagae* (Cortés), differing from this species by the following characters: (alternatives for *phasmophagae* in parentheses): third antennal segment 4 to 5 times as long as second (8 to 10 times); aristae thickened in the basal 1/5 (basal 1/4); prosternum bare (pilose).

Biological notes

This species was reared in laboratory from an adult female of *Cycloptera aurantifolia* (Stal), Tettigoniidae, Pseudophyllinae (identified by Dr. Salvador Toledo Piza, Jr. ESALQ, Piracicaba, São Paulo) collected by Dr. Sergio Vanin at Salesópolis, S. Paulo. From the host specimen, issued 19 larvae on 5.IV, 1977, the adults emerged on 28-29/IV. Three larvae were preserved in alcohol for anatomical studies.

Gilvella Mesnil

Gilvella Mesnil, 1965: 654. Type-species, *Hypostena gilvipes* Coquillett (mon.); Sabrosky & Arnaud, Jr., 1965: 1069 (cat.).
Phasmovora Cortés, 1968: 102. Type-species, *Phasmovora phasmophagae* Cortés (orig. des.); Guimarães, 1971: 172. N. SYN.

Gilvella phasmophagae (Cortés). N. comb.

Phasmovora phasmophagae Cortés, 1968: 105. Type-locality, Chile, 15 km E of Los Quimes, Cajón del Rio Claro (Curico); Guimarães, 1971: 172.

Sabrosky (1968, pers. comm.), discussing the position of *Phasmovora* states that this genus is a synonym of *Gilvella* Mesnil, and I agree the differences between the two genera are merely specific, usually differences in degree, such as length of 3rd antennal segment, shape of arista, and number of frontals below antennal level. *Gilvella* Mesnil was originally proposed in the subfamily Goniinae, subtribe Blondeliinae. Sabrosky & Arnaud, (1965 placed this genus in the tribe Hyperecteinini (Goniinae) in the Nearctic catalogue.

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