

**EUGENIAMYIA DISPAR GEN.N. AND SP.N.
(DIPTERA, CECIDOMYIIDAE, LASIOPTERIDI) ASSOCIATED WITH
EUGENIA UNIFLORA L. (MYRTACEAE) IN BRAZIL**

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ABSTRACT. A new genus and species *Eugeniomyia dispar* (Diptera, Cecidomyiidae, Lasiopteridi) that cause leaf galls on *Eugenia uniflora* L. (Myrtaceae) in Brazil, is described.

KEY WORDS. Diptera, Cecidomyiidae, *Eugeniomyia dispar*, Myrtaceae, *Eugenia uniflora*, taxonomy

Leaf galls on *Eugenia uniflora* L. (Myrtaceae) were collected in southern Brazil. Branches bearing mature galls were cut off the plants and maintained in small pots with wet soil, covered by transparent plastic cilinder about 30cm high, to obtain the adults.

The material was prepared following the methods described in GAGNÉ (1989), except for the immersion in acetic carmim for five minutes after the acetic acid. This procedure was adopted to have better observation of the specimens. After the acetic carmim the material returned to acetic acid for another five minutes.

Eugeniomyia belongs to the tribe Oligotrophini based on GAGNÉ (1994) key. The Oligotrophini are represented by 43 genera in the neotropical region, including *Eugeniomyia*. This genus seems to be close to *Promikiola* Kieffer & Herbst, 1911 on the basis of the combination of the following female characters: four palp segments, toothed tarsal claws, ovipositor barely protrusible and cerci separated. It differs from *Promikiola* by the lowest number of antennal flagellomeres (17 in *Promikiola*; 14 in *Eugeniomyia*) and the length of R₅ (as long as the wing in *Promikiola*; shorter than the wing in *Eugeniomyia*). Larvae and males could not be compared because those of *Promikiola* are still unknown.

***Eugeniomyia* gen.n.**

Figs 1, 4-10

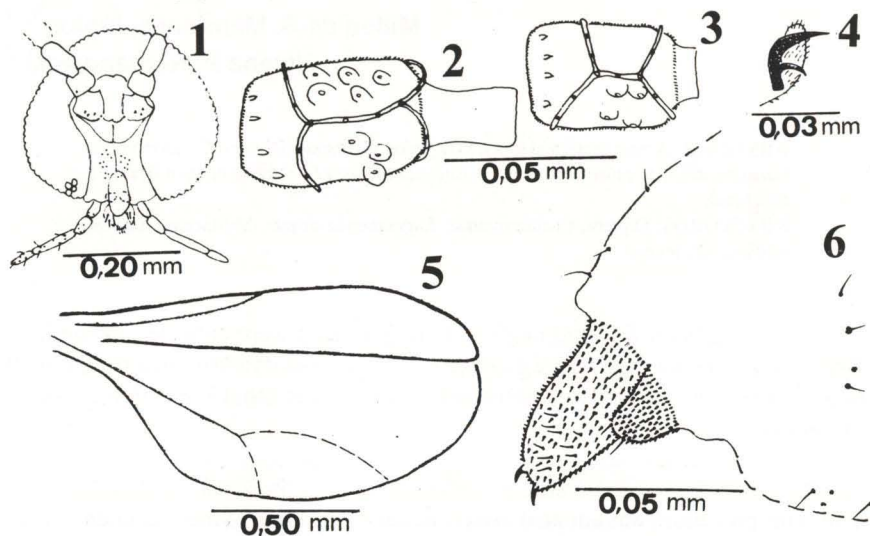
Diagnosis. antenna with 14-18 cylindrical flagellomeres, necks longer in male than in female (male: neck of flagellomere 5 approximately 1/3 as long as the

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total length of flagellomere; female: neck of flagellomere 5 approximately 1/7 as long as the total length of flagellomere); circumfila anastomosing. Palpus four-segmented. Tarsal claws toothed, longer than empodium. Ovipositor barely protrusible, cerci separated. Gonocoxite and gonostylus short, parameres separated and well-developed, aedeagus short. Larva: spatula developed, apical teeth absent; eight terminal setose papillae (seta of uniform length).



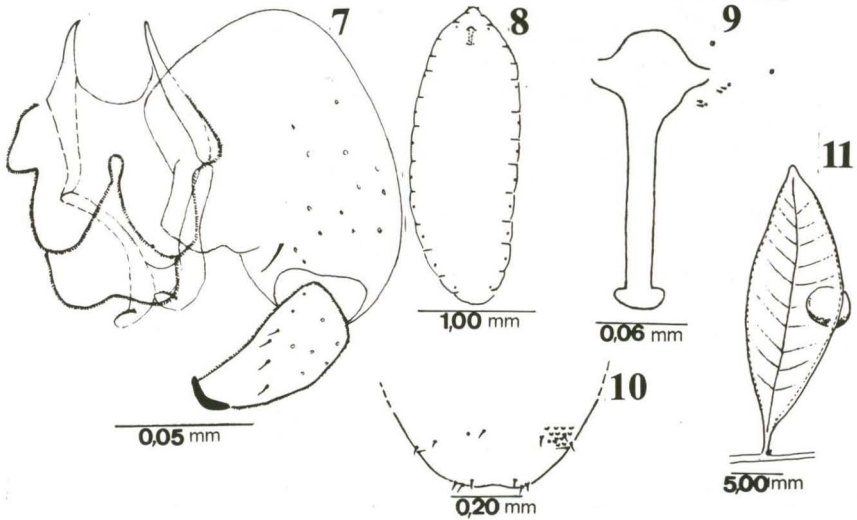
Figs 1-6. *Eugeniomyia dispar* sp.n.. (1) Male, head (frontal); (2) male, flagellomere 5; (3) female, flagellomere 5; (4) male, wing; (5) male, tarsal claw and empodium; (6) ovipositor (lateral).

Adults. Head (Fig. 1): palpus 4-segmented, segment 1 the shortest, segment 2 the widest, 3 and 4 subequal in length, all with setae. Labellae hemispherical, setose. Wing (Fig. 4): C with a break just after insertion of R₅; R₅ straight, shorter than wing; Sc, Rs, M₃ and CuP absent; Cu forked. Legs: tibial spurs absent; tarsal claws toothed and bent beyond basal third; empodium shorter than claws (Fig. 5). Abdomen: tergites 1-7 in male and 1-6 in female rectangular, sclerotized, with a caudal row of setae, no lateral setae and covered elsewhere with scales; male tergite 8 shorter than preceding tergites, sclerotized, with one trichoid sensilla; female tergite 6 shorter than preceding tergites, rectangular, with 3-4 caudal rows of setae. Sternites 2-8 in male, 2-7 in female rectangular, with 1-4 caudal rows of setae and a band of setae across midlength, more numerous laterally, scattered setae elsewhere. Female sternite 8 unsclerotized. Ovipositor (Fig. 6) barely protrusible; female cerci well-developed, separated and setose, each lobe with one pair of setae stronger than the remaining. Male terminalia (Fig. 7): gonocoxite stout; gonostylus triangular and completely setulose; cerci deeply bilobed, hypoproct slightly bilobed, both setose. Parameres longer than hypoproct and cerci. Aedeagus wide, rounded apically.

Larva (last instar). Integument rough; spatula with apex roundish without teeth (Fig. 9), stalk developed. Terminal segment with eight papillae, four per side, each with seta of uniform length (Fig. 10).

Type-species. *Eugeniomyia dispar* sp.n..

Etymology. The name *Eugeniomyia* is a reference to the host-plant *Eugenia*.



Figs 7-11. *Eugeniomyia dispar* sp.n.. (7) Male terminalia (dorsal); (8) larva, general aspect (ventral); (9) larva, sternal spatula and lateral papillae (ventral); (10) larva, terminal segment (dorsal); (11) gall, general aspect.

Eugeniomyia dispar sp.n.

Figs 2-9, 11

Adults. Body length: 1.8-2.0mm; wing length: 2.5-2.9mm. Head: eyes with circular facets. Antenna: flagellomeres 1 and 2 fused, circumfila as in figures 2 and 3; flagellomere 12 without apical process. Thorax: mesonotum with 4 longitudinal setal rows; anepimeron with a longitudinal setal row; anepisternum bare. Wing: venation as in figure 4. All legs with tarsal claws toothed longer than empodium (Fig. 5). Ovipositor as in figure 6, female hypoproct setulose, each lobe with 2 apical setae. Male terminalia (Fig. 7): gonocoxite stout and short, about 1.5 times as long as large; gonostylus short (about 2.0 times shorter than gonocoxite and 2.0 times as long as wide); hypoproct longer than cerci; parameres as in figure 7.

Larva. Colour: white. Body length: 3.0-3.2mm. General aspect as in figure 8. Thorax: spatula with length of 0.20-0.23mm, general aspect as in figure 9; thoracic and abdominal segments with the basic papillar pattern. Abdomen: segments 1-7 with lateral spiracles; abdominal segment 8 with pre-apical spiracles. The third instar larva leaves its gall and pupate in the soil.

Material examined. Holotype male: BRASIL, *Rio Grande do Sul*: Porto Alegre (urban area), 10-X-1995, M. Mendonça Júnior *leg.*. Paratypes: Same data as holotype: 14 male, 2 female, 3 larvae. Other specimens examined: 18 male, 10-X-1995 and 1 female, I-II-1995. This material was obtained from leaf galls on *Eugenia uniflora* L. (Myrtaceae) and all specimens are deposited in the Diptera collection of "Museu Nacional/UFRJ".

Etiology. *dispar* (different) refers to the peculiar aspect of male terminalia.

Galls (Fig. 11). The galls of *Eugeniomyia dispar* are induced on young leaves and shoots of its host by first instar larvae. The number of galls per leaf varies from one to thirty. The galls are spherical, 3.5 to 4.5mm in diameter and white in colour by lack of pigments. The galls are spongy, with a high content of water, and each have only one central chamber, with one larva. So far these galls have only been found in Porto Alegre, Ijuí and "Parque Florestal Estadual de Nonoai", all in Rio Grande do Sul, and in Florianópolis, Santa Catarina, Brazil.

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