NOTES ON THE GENUS MACROPEZA MEIGEN AND
DESCRIPTION OF A NEW SPECIES FROM FLORIDA
(DIPTERA: CERATOPOGONIDAE)

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ABSTRACT

Notes are given for the separation of Macropeza Meigen from closely related genera. A generic diagnosis, synonymy, and a check list of included species are presented. M. blantoni n. sp. is described from Florida, the first record of this genus from North America.

The genus Macropeza Meigen has been poorly understood, in spite of the fact that its species are among the largest and most strikingly developed of all biting midges. Since the early work of Johanssen (1927) and Macfie (1939) the species of Macropeza have been confused with Jenkinshelen Macfie, Peltucidomyia Macfie, Calyptopogon Kieffer, and Macroptilum Becker in the tribe Sphaeromiini, and Paryphcoenus Enderlein in the Stenoxenini. Mayer (1953) first called attention to the fact that the eggs of Paryphcoenus are remarkably similar to those of Stenozenus Coquillett in possessing a peculiar frilled cap at one end, but he was unable (on the basis of pupal characters) satisfactorily to distinguish the Macropeza and Palpomyia-Bezzi groups (Mayer 1955, 1957). Wirth (1962) re-examined the adult characters of these groups of genera and proposed a new tribal realignment in which the tribe Stenoxenini was restricted to Stenozenus and Paryphcoenus, and Macropeza and its allies were placed in the tribe Sphaeromiini.

We have recently completed a further study of the genera of the Sphaeromiini and can offer a revised diagnosis and restriction of the genus Macropeza. In this genus the female tarsal claws are equal on all legs, with an external basal tooth; the female fifth tarsomeres bear stout, ventral, black spines or batonnetes; the costa is long, extending nearly to wing tip; the wing is not unusually broad, the anal lobe is not angularly developed, and the female abdomen lacks internal sclerotized gland rods. The 3 genera of Sphaeromiini sharing these characters can further be separated as follows:

1. Thorax sharply pointed in front, produced markedly over head; fifth tarsomere swollen on fore leg; radial cell extremely narrow ................................................................. Calyptopogon Kieffer
   1'. Thorax bluntly rounded or bluntly conical in front, not produced markedly over head; fifth tarsomeres not swollen .................................................. 2

1Acknowledgment is gratefully made to the Southeast Asia Treaty Organization of Bangkok for financial assistance for study at the U. S. National Museum.
2(1'). Female claws short and curved, sharp-pointed, each with inconspicuous external basal tooth; mesonotum without strong erect bristles .............................................. Macropeza Meigen

2'. Female claws longer, straighter, and somewhat flattened distally, each with strong, external, basal tooth; mesonotum with strong erect bristles .............................................. Prochezzia Kieffer

The 3 known valid species of Calyptopogon are all Oriental, while the 25 known species of Prochezzia are mainly Holarctic, mostly North American, with the exception of 3 Brazilian species. We are listing 17 species of Macropeza, mostly from the Old World Tropics, but including 2 from Europe and 1 from the Western Hemisphere.

Genus Macropeza Meigen

Macropeza Meigen, 1818:87. Type-species, Macropeza albipennis Meigen (monotypy).
Macrolabium Becker, 1903:76. Type-species, Macrolabium nudum Becker (monotypy).
Haasiella Kieffer, 1913:190. Type-species, Haasiella semiflava Kieffer (orig. desig.).

REFERENCES: Johannsen, 1927:423 (key, revision); Seguy, 1934:1 (key; Ethiopian spp.); Macfie, 1939:1 (revision; key).

Diagnosis: Large slender species with narrow wings. Eyes separated; bare. Antenna elongate, proximal segments cylindrical; 5 distal segments longer, proximal segments sometimes with dense hastate hairs. Palpus slender, without sensory pit. Mandible with coarse teeth in female. Mesonotum convex, sometimes somewhat produced conically over head but not sharply pointed, without anterior spine or tubercle. Legs slender, elongate; femora unarmed ventrally, not or very little thickened distally; fourth tarsomere cordiform; fifth tarsomere armed ventrally with short, stout, blunt, black spines or batonnet; fifth tarsomere of fore leg not fusiform. Female claws short and curved, stout at base, pointed apically, equal on all legs, each talon with a short, blunt, external, basal tooth. Wing long and narrow, anal angle usually well developed, often rectangular; 1 radial cell present, costa usually attaining apex of wing; radial cell usually at least moderately broad; r-m crossvein elongate, often perpendicular to costa, usually located near midlength of wing, sometimes distinctly distad of midlength. Female abdomen tapered distally, with pair of conspicuous lateral hair tufts on eighth sternum; often with a ventral sclerotization near gonopore; 2 large epermathaceae present. Male genitalia long and slender; basistyle elongate, dististyle short; ninth tergum narrow and tapering; aedeagus short with broad base and blunt tip; paratermes separate, each with strongly sclerotized, ventrally recurved, hooklike process.

Immature Stages: Larva rather stout, with slender, anteriorly tapering head; body without visible hairs or setae. Pupa with anterior respiratory horns short with bluntly rounded tip bearing 4-20 terminal papillae; abdominal segments with short, semi-erect spines; apicoheteral processes moderately long and pointed, slightly divergent.

Distribution: Worldwide except Australasian and Neotropical Regions.
Fig. 1. *Macropeda blantoni*, female. a, antenna; b, palpus; c, wing; d, femora and tibiae, top to bottom, of hind, mid, and fore legs; e, mandible; f, anterior view of head; g, spermathecae; h, tarsii, left to right, of hind, mid, and fore legs; i, fifth tarsomere and claws, same order; j, abdomen.

CHECK LIST OF MACROPEZA OF THE WORLD

*aethiopicum* (Ingram and Macfie), 1923:45 (*Macroptilum*). Zululand.

*aethiopicum* affinis Macfie, 1939:10. South Africa.


*bayeri* (de Meillon), 1937:351 (*Macroptilum*). Zululand.

*blantoni* Wirth and Ratanaworabhan, n. sp. Florida.

*calcipennis* (Macfie), 1939:11 (*Macroptilum*). Sierra Leone.

*capensis* Macfie, 1939:10. South Africa

*fluviatilis* (de Meillon), 1940:463 (*Macroptilum*). Zululand.

*insignipennis* (Macfie), 1939:11 (*Macroptilum*). Sierra Leone.

*longipes* (Seguy), 1930:645 (*Macroptilum [sic]*). Mozambique.

*[meeseri* (de Meillon), 1936:204 (*Macroptilum*). Zululand. Syn. of *aethiopicum* (Ingram and Macfie).]
Macropæza blantoni Wirth and Ratanaworabhan, new species

(Fig. 1)

Female.—Wing length 3.11 mm.

Head: Dark brown, including antenna and palpus. Eyes (Fig. 1f) narrowly separated above antenna bases. Antennæ (Fig. 1a) with flagellar segments cylindrical, distal five much elongated; flagellar segments with lengths in proportion of 40-24-24-24-24-25-25-50-55-55-65-80; antennal ratio 1.45. Palpal segments (Fig. 1h) slender, lengths in proportion of 10-15-25-16-18; third segment slender, length to breadth ratio 4.3, with slender sensilla scattered on surface. Mandible with 12 coarse teeth.

Thorax: Dark brown; mesonotum rounded mesally in front, with sparse vestiture of moderately long, erect, bristly hairs. Legs (Fig. 1d) dark brown, tarsomeres 1-3 of fore leg whitish. Tarsæ (Fig. 1h) slender; much elongated on hind leg, hind basitarsus as long as hind tibia, proportions of segments of hind tarsus as 115-46-15-6-15; fourth tarsomeres cordiform; fifth tarsomere (Fig. 1i) with 6 ventral batonets on fore leg, 2 on mid leg, and 5 on hind leg. Claws (Fig. 1i) of female short and stout, distally pointed, each with short, pointed, external, basal tooth. Wing (Fig. 1c) relatively slender with moderately pointed tip; uniformly and lightly brownish infuscated, anterior veins heavy and dark brown; costa extending to 0.97 of wing length. Halter dark brown.

Abdomen: Dark brown; moderately stout, apex tapering, genital opening flanked by dense tuft of long pale hairs (Fig. 1j). Spermatotheca (Fig. 1g) 2 plus small rudimentary third; ovoid with slender necks, subequal, each measuring 0.143 by 0.104 mm.

Distribution: Florida.

Type: Holotype, female, Florida Caverns State Park, Jackson Co., Florida, 4 May 1970, W. W. Wirth, light trap (Type no. 71473, USNM).

Discussion: We take great pleasure in naming this species for our colleague and advisor, Professor Franklin S. Blanton of the University of Florida, in recognition of his valuable contributions to our knowledge of Florida ceratopogonids.

Macropæza blantoni is the only species of Macropæza known from North America. The widespread North European species M. albitarsis (Meigen) differs in having tarsomeres 1-3 whitish on all legs, the wing hyaline, only the anterior veins brownish, and the mesonotum grayish polinose with 3 longitudinal black vittae.
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LITERATURE CITED


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