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A new Species of *Zethus* (Hymenoptera, Vespidae, Eumeninae)

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A b s t r a c t : A new species of the genus *Zethus* is described from Ecuador.

K e y w o r d s : Hymenoptera, Vespidae, Eumeninae, *Zethus*, new species.

Introduction

Zethus FABRICIUS is the largest genus in the Vespidae, presently with 248 described species. It is primarily neotropical, with more than two hundred of the species in the mainland tropics and West Indies. The species are mostly solitary, with a few being subsocial; they are predators on caterpillars, with most species nesting in pre-existing cavities, but a few burrowing in soil or wood, and some constructing free, exposed nests of plant material.

The new species described herein was sent to me by Josef Gusenleitner for identification. It belongs to the subgenus *Zethus* s.str., but does not closely resemble any described species. The broadly emarginate clypeus and broad labrum are reminiscent of the *Z. coeruleopennis* species-group (see fig. 12 in BOHART & STANGE 1965), while a prominence on the second metasomal sternum is characteristic of *Zethus stangei* PORTER (the clypeus and mandibles of which are even more extremely modified; see fig. 3 in PORTER, 2008, and fig. 17 in BOHART & STANGE 1965, where *Z. stangei* was misidentified as *Z. magretti* ZAVATTARI). The new species differs from *Z. stangei* in having two midtibial spurs, not one.

Zethus josefi nov.sp.

D i a g n o s i s : A species of the subgenus *Zethus* s.str., distinguished from other species of *Zethus* by the lateral alate processes or winglets on the first metasomal tergum (Fig. 2).

D e s c r i p t i o n : Male: forewing length approximately 13 mm (wings partly crumpled). Structure - antennae hooked apically; clypeus short, broadly emarginate ventrally, emargination nearly as wide as distance between antennal insertions (Fig. 1); labrum broad; mandible tridentate, with deep, U-shaped emargination between second and third teeth, third tooth elongate; vertex long; pronotum with anterior face punctate, lacking humeral carina but humeri bluntly angled, with subhumeral area broader than two ocellar diameters; notauli developed as shallow, posterior furrows; scuto-scutellar suture cre-

nate; tegula narrowed and pointed posteriorly; metanotum not strongly ridged laterally; metapleuron ecarinate; propodeal concavity a narrow, deep channel bordered by carinae, strongly transversely ribbed; propodeal orifice narrowly rounded dorsally; propodeal valvula well developed, produced as rectangular lobe; forewing with second submarginal cell sessile; midtibia with two spurs; metasoma petiolate; first and second metasomal terga with stem scarcely distinguishable from rest of tergum; tergum I ecarinate, with large, lateral flaps apically, and short, pointed processes anteriorly, with shallow longitudinal furrow apically; sternum I ecarinate; tergum II with apical lamella not bent; sternum II with prominent, flattened medial bulge, with apical lamella not abbreviated laterally; tergum III with apical lamella continuous, not incised laterally; sternum VII rounded, not notched; punctuation on head and mesosoma generally coarse, not dense, clypeus ventrally, labrum and mandible smooth, scutum smooth anterior to parategula, propodeum dorsally rugose, terga II-VII only micropunctate.



Fig. 1: *Zethus josefi*, head in frontal view.

Color - yellow; black are the antennae dorsally, fronto-clypeal suture between the antenna, short lines above antennal insertions, a broad, campanulate mark above antennae, which encloses the ocelli and is very narrow towards the occiput, where it joins with two broad stripes running posteriorly from tops of eyes, teeth and insertions of mandibles, poorly developed spots along occipital carina, back of head, scutum except for curving, longitudinal stripes, mesepisternum ventrally, metapleuron and metasternum, mesal longitudinal stripe and anterior and posterior borders of scutum, metanotum except for disc, most of axillary region, dorsal campanulate spots and small basal spots on propodeum, propodeal posterior concavity; blackish stripes along posterior face of coxae, tro



Fig. 2: *Zethus josefi*, first metasomal segment in dorsal view.

chanters and femora, apical mid- and hindtarsomeres, dorsal surface of tergum I except for lateral spots medially, disc of tergum II except for medial transverse spots that almost meet, bases of remaining terga, apex of tergum VII, sterna anteriorly and medial spots on sternum II; most of hindtibia brownish; tegula with brown spot; brown line where sides of tergum I meet ventrally; wings hyaline, tinged amber apically, anterior veins and pterostigma yellowish, posterior veins brown.

Vestiture: dense, short, brownish pubescence on head and mesosoma; yellower and longer on metasomal sterna III-VII; dense, brownish tomentum on disc of metasomal tergum II and in depression on tergum I; tergum II lacking flattened setae.

Female: unknown.

Distribution: Ecuador: Orellana.

Type material: male holotype Ecuador: Coca, March 1982 (leg. Dr. Onore) [deposited in the Museum of Upper Austria, Linz].

Etymology: It is a pleasure to name this species in honor of Josef Gusenleitner, distinguished student of Vespidae.

Remarks: There is nothing like the alate processes on the first metasomal tergum in any other *Zethus*, and the closest thing I have seen are the short flaps in *Protopolybia scutellaris*. The processes on this new species are much more spectacular.

Acknowledgements

I thank Josef Gusenleitner for sending me the specimen, and urging me to describe the species.

Zusammenfassung

Eine neue Art der Gattung *Zethus* (Hymenoptera, Vespidae) wird aus Ekuador beschrieben.

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