A new species of *Zamischus* (Hymenoptera, Cynipoidea, Figitidae) from Brazil

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ABSTRACT. A new species of *Zamischus* (Hymenoptera, Cynipoidea, Figitidae) from Brazil. A new species of *Zamischus* from Brazil is described and diagnosed. The species is closely related to *Z. brasiliensis* but differs in the morphology of antennae and scutellum. *Z. aquilesi* **sp. nov.** was collected via Malaise trapping in a tobacco field in Santa Cruz do Sul, Rio Grande do Sul.

KEYWORDS. Brazil; Cynipoidea; Eucoilinae; Figitidae.

RESUMO. Uma nova espécie de *Zamischus* (Hymenoptera, Cynipoidea, Figitidae) do Brasil. Uma nova espécie de *Zamischus* do Brasil é descrita e diagnosticada. A espécie é intimamente relacionada a *Z. brasiliensis,* mas difere na morfologia da antena e do escutelo. *Z. aquilesi* **sp. nov.** foi coletada com armadilha de Malaise em uma lavoura de tabaco em Santa Cruz do Sul, Rio Grande do Sul.

PALAVRAS-CHAVE: Brasil; Cynipoidea; Eucoilinae; Figitidae.

Species of *Zamischus* Ashmead are minute, stick-like wasps, which belong to the parasitic Eucoilinae, the richest and most diverse subfamily of Figitidae in the Neotropical Region (Díaz *et al.* 2008). This genus was proposed by Ashmead (1903a) with the type-species, *Z. brasiliensis* Ashmead, 1903, designated, but not described. Weld (1921) described and illustrated the type-species, which he later added to his key to the world genera of Cynipoidea (Weld 1952). Yoshimoto (1971) described *Z. elongatus* Yoshimoto, 1971 and the male of *Z. brasiliensis*. Later Díaz (1974) recorded *Z. brasiliensis* from Argentina. The two known species of *Zamischus* are from South America. The purpose of this study is to describe a new species of this genus collected in a tobacco field in Santa Cruz do Sul, RS, Brazil, with Malaise trap.

MATERIAL AND METHODS

One specimen (female) was studied. It is housed at Coleção Zoológica do Departamento de Biologia, Universidade de Santa Cruz do Sul, Rio Grande do Sul, Brazil. Terminology used in descriptions follows Fontal-Cazalla *et al.* (2002). The photographs were taken with a Canon Powershot A 520 adapted to a Leica stereomicroscope (S8APO).

RESULTS

Zamischus Ashmead

Zamischus Ashmead 1903a: 221, 1903b: 60, 68; Dalla Torre & Kieffer 1910: 101; Rohwer & Fagan 1917: 378; Weld 1921: 437, 1952: 103, 189; Yoshimoto 1971: 979; Díaz 1974: 18.

Type species. *Zamischus brasiliensis* Ashmead.

Diagnosis. Species of *Zamischus,* as well as *Perischus* Weld, 1931 possess a propodeum that is produced posteriorly into a long tapering neck and the metasoma is attached to the propodeum via an elongate slender petiole; the result is an overall long and slender body. In *Zamischus,* the pronotal plate has two teeth on posterior margin; mesoscutum is smooth, marginal cell of fore wing is open at base as well as on margin, and the petiole is sulcate. In *Perischus* the posterior margin of the pronotal plate is shallowly emarginate, mesoscutum is transversely striate, marginal cell is closed, and the petiole dull and striate.

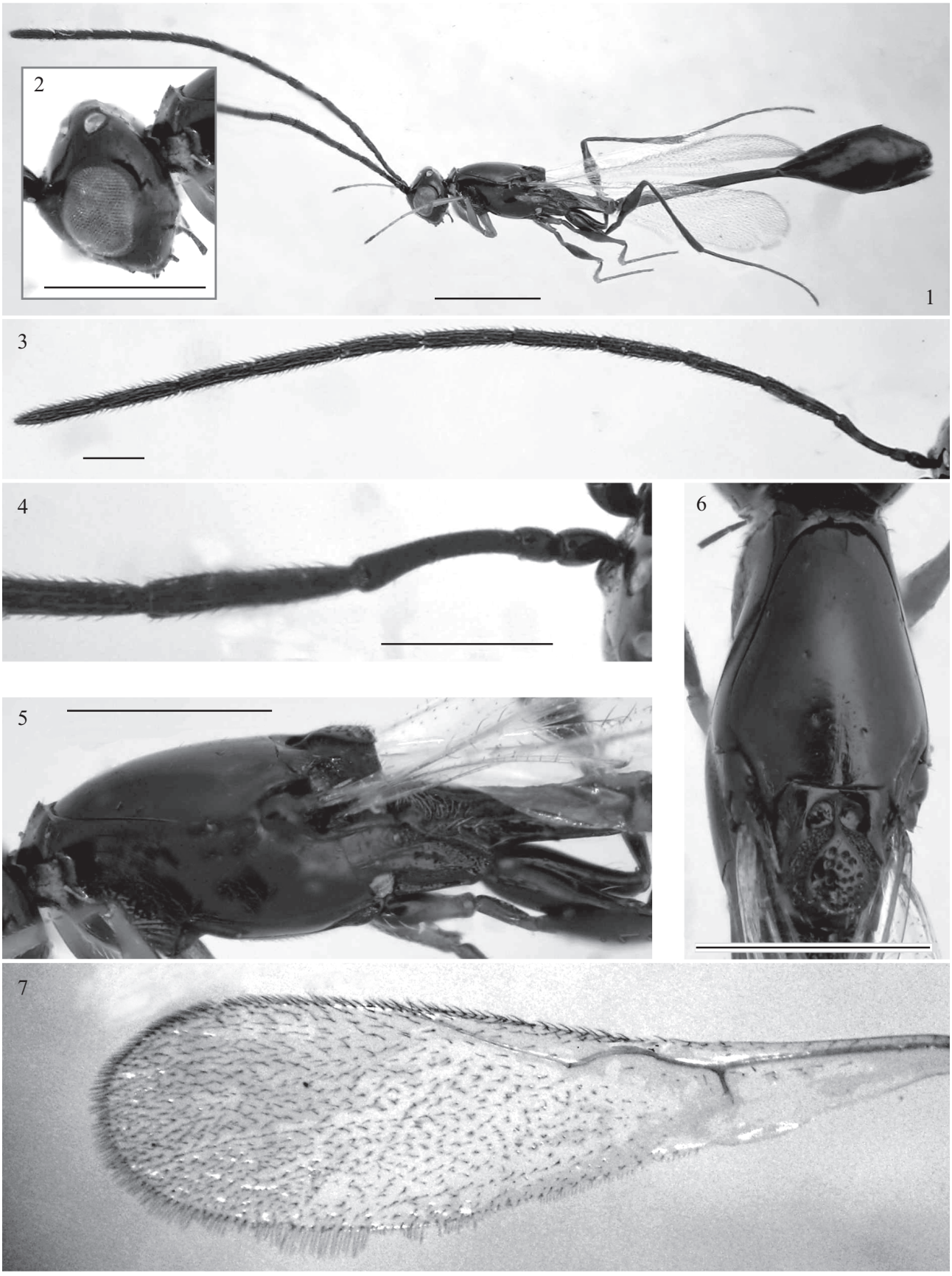
Remarks. *Zamischus* + *Perischus* lineage which is characterized by a series of striking autapomorphies have few characters providing reliable indications of their affinities to other eucoilines and is possible that many of the Neotropical grade taxa, such as these, represent relictual, morphologically isolated South American linages and that many of the intermediate taxa are now extint, making it difficult to resolve relationships correctly (Fontal-Cazalla *et al.* 2002; Buffington *et al.* 2007)

Distribution. Brazil and Argentina.

Zamischus aquilesi Díaz & Gallardo sp. nov.

(Figs. 1–7)

Female (Fig. 1). Total length 5 mm. General coloration black; mandible reddish brown; fore leg yellowish brown, base of femur and apical tarsal segment darker; mid leg yellowish brown, base of coxa, trocanter, femur and apical tarsal segment darker; tarsal segments of hind leg, except last,



Figs. 1–7. *Zamischus aquilesi* Díaz & Gallardo **sp. nov.** Female: 1, habitus (lateral view) (scale bar, 1mm); 2, head (lateral view); 3, antenna; 4, flagellomeres 1 and 2; 5, mesosoma (lateral view); 6, mesoscutum and scutellum (dorsal view); 7, fore wing. (scale bar, 0.5 mm).

yellowish brown; veins of wing yellow; base of syntergum and hypopygium reddish brown.

Head (Figs. 2–4). Smooth and polished with scattered setiferous punctures on face and genae, broader than thorax, slightly tilted forward and ovate in profile. Gena not margined; malar groove present. Antennae with 11 flagellomeres, filiform, inserted on prominence about middle of face; first flagellomere longer than scape plus pedicel, shorter than second flagellomere, slightly curved, distally swollen, smooth; flagellomeres 2–11 subequal in length, cylindrical, ridged longitudinally, with rhinaria.

Mesosoma (Figs. 5–7). In lateral view longer than high. Pronotal plate smooth, posterior margin with two triangular teeth, slanting anteriorly in diagonal plane (as seen in profile). Sides of pronotum smooth and polished, depression of anterodorsal corner finely striate; highly setose behind genae. Mesoscutum (Fig. 6) smooth, in dorsal view longer than wide; notauli absent; with two pairs of setiferous punctures and a longitudinal depression in the posterior half; parascutal impressions present. Scutellum (Fig. 6) rounded behind; disk minutely punctuate; scutellar plate large, dorsal surface slightly convex, densely punctate, each puncture with single short seta, tapering anteriorly into septum between scutellar fovea, glandular release pit on posterior-facing slope; lateral bars longitudinally striate, length half of scutellum. Mesopleuron smooth, mesopleural carina present. Metapleuron longer than high, with two longitudinal carinae, area between carinae concave, anteroventral cavity conspicuous, setose. Hind coxa cylindrical. Fore wing (Fig. 7) with a single longitudinal vein and basal cross vein; marginal cell long, narrow, open at base and margin; surface sparsely pubescent, margin ciliate. Propodeum as long as the half of petiole; propodeal carinae running along dorsal margin, auxiliary propodeal carinae present; area between propodeal carinae minutely punctate.

Metasoma (Fig. 1). Petiole very long (more than twice the length of the propodeum, 23:10), longitudinally ridged, with two dorsal longitudinal carinae, lesser prominent carinae laterally; gaster short, ovate, laterally compressed, glabrous at base; syntergum present.

Male. Unknown.

Material examined. Holotype. 1 female, UNISC, Brazil: Rio Grande do Sul, Santa Cruz do Sul, 14XII-2009, Malaise trap, Dorfey Coll.

Etymology. Dedicated to Dr. Carlos Aquiles Darrieu (Facultad de Ciencias Naturales y Museo, Universidad Nacional de La Plata, Buenos Aires, Argentina)

Distribution. Brazil: Rio Grande do Sul.

Biology. Host unknown.

Remarks. Female of *Z. aquilesi* **sp. nov.** is more similar to *Z. brasiliensis* than to *Z. elongatus*. In both species, the petiole is very long and the gaster is short, but the species can be separated from one another by the antennae and scutellar morphology; *Z. aquilesi* **sp. nov.** possesses antenna filiform and large densely punctate scutellar plate (antenna widened toward apex and small scutellar plate with peripheral row of setiferous punctures in *Z. brasiliensis*). The female of *Z. elongatus* is separated from *Z. brasiliensis* and *Z. aquilesi* by the presence of a short petiole and elongate gaster.

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