

First report of *Illidops* Mason (Hymenoptera: Braconidae: Microgastrinae) from the Neotropical region

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Three new species of the genus *Illidops* Mason, 1981 (Hymenoptera: Braconidae: Microgastrinae) from Brazil are described. This is the first report of the genus from the Neotropical region.

Introduction

The genus *Illidops* Mason, 1981, has mainly a Holarctic distribution and includes species especially well adapted to arid regions. About half of the species occur in desert and arid regions in the southwestern part of the U.S.A., the Mediterranean area and Central Asia (Mason, 1981). Mason separated the genus *Illidops* from related genera by two major character-states: the eyes converging ventrad and the medio-apical portion of the third-seventh tergites weakly sclerotized, glabrous and translucent. Mason (1981) and Wharton (1983) did not included any described species from the neotropics. According to Mason (1981) *Illidops* does not have a median carina or areolet at the propodeum, which makes the systematical placement of this genus difficult.

The material was collected in the cerrado as well in the humid atlantic forests using both Malaise traps and light traps. Three species new to science were discovered. This is the first record of the genus from Brazil and the Neotropical region. For the morphological terms, see Mason (1981).

The following key includes all described New World species of the genus *Illidops* and includes only females:

1. Antennae as long as the body, and its basal seven segments brown or testaceous; mesosternum with two parallel longitudinal testaceous stripes; flagellomeres without two ranks of regularly arranged placodes (fig. 1); propodeum sub-rugose with only two median parallel carinae on its posterior half; median part of first notum nearly 4.5 times wider than its apical width, weakly sculptured and tergite sides strongly converging (fig. 3) *I. paranaensis* spec. nov.
- Antennae shorter than body and basally completely dark brown, mesosternum uniformly dark brown, flagellomeres with two ranks of regularly arranged placodes; propodeum and notum of first tergite variable 2
2. Notauli distinct, but its posterior half weakly impressed; propodeum without areola or median carina; metacarpus shorter than length of pterostigma
..... *I. terrestris* Wharton, 1993
- Notauli absent (figs 4, 10); propodeum with closed areola (figs 5, 11); metacarpus

- longer than length of pterostigma (fig. 8) 3
 3. Pterostigma of fore wing completely dark brown *I. uvidus* spec. nov.
 - Pterostigma of fore wing with hyaline spot basally (fig. 8)..... *I. aridus* spec. nov.

Illidops paranaensis spec. nov. Penteado-Dias & Scatolini
 (figs 1-3)

Material.— Holotype, ♀ (UFPR), Brazil, Antonina, PR, 2.xii.1986. at light.

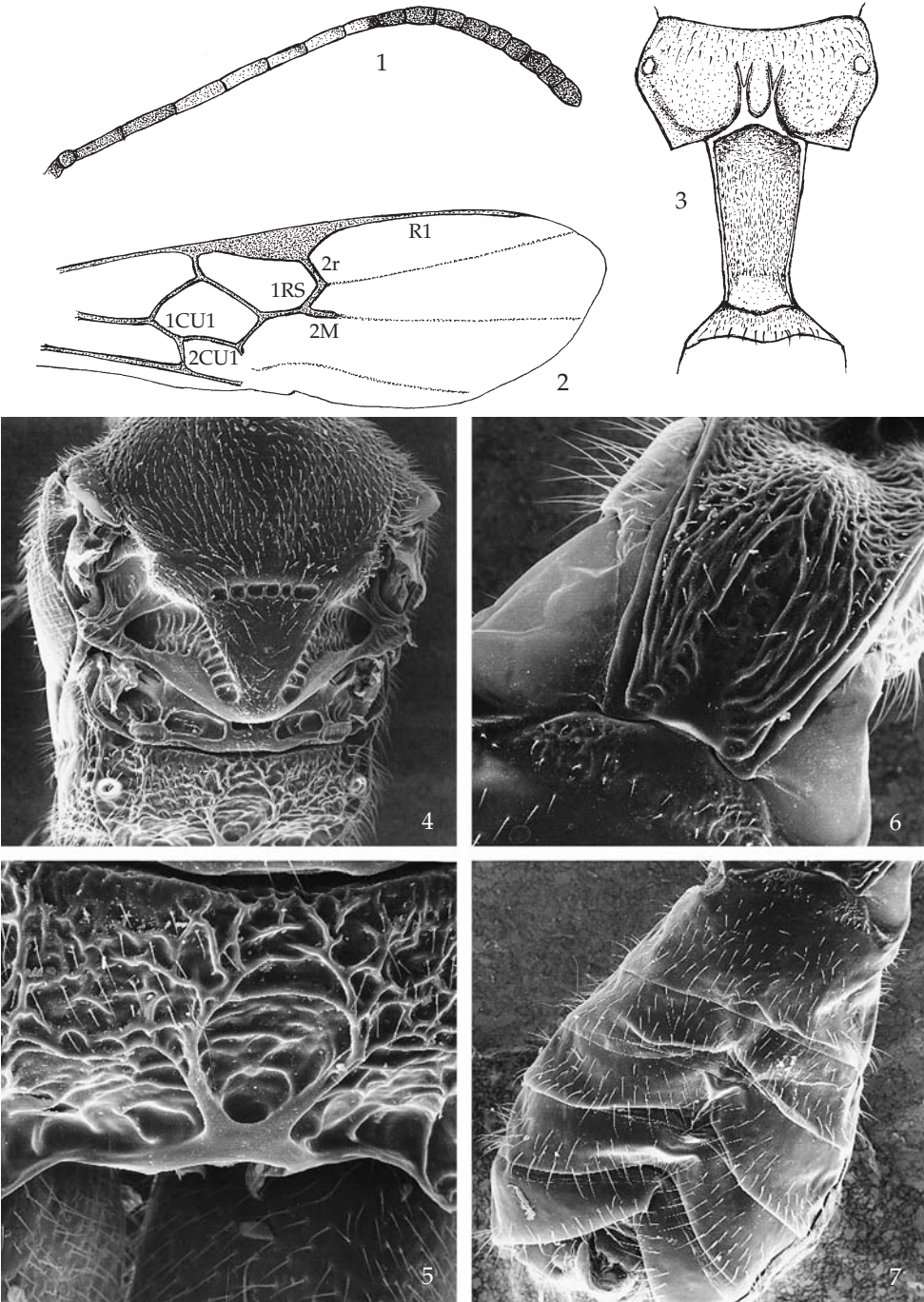
Head.— Frons punctate, occiput smooth, vertex behind ocelli, face and clypeus punctate; malar space short and punctate, as long as basal width of mandible; antennae (fig. 1) as long as the body; flagellomeres with irregularly arranged placodes.

Mesosoma.— Mesosoma punctate; precoxal sulcus, anterior and medio-posterior parts of mesopleuron mat, mesonotum and scutellum densely punctate, setose; notauli not impressed; polished posterior lunula of scutellum wide; propodeum medially rugose, punctate laterally, with two median carinae on its posterior half (fig. 3); flat and declivous at about 45 degrees; hind coxa 1.2 times longer than first tergite; hind femur 3.4 times longer than wide; hind tibial spurs subequal, about 0.3 times length of hind basitarsus; metacarpus (fig. 2, = R1) 1.3 times as long as pterostigma; veins 2r and 1RS equal, with sharp angle between them; sclerotized stub of vein 2M about as long as 1RS; vein 2r weakly curved, a little shorter than width of pterostigma; vein 2Cu1 1.8 times longer than 1Cu1; vein 2r-m of hind wing less than half length of vein 2M; margin of vannal lobe straight subapically, and straight part without marginal setae.

Metasoma.— Tergites weakly setose; notum of first tergite (fig. 3) 4.5 times as long as its apical width, basally 2.6 times wider than apically; mat, weakly sculptured but its extreme apex smooth and polished, sides strongly converging medially and diverging again apicad, with deep lateral grooves, and basal half with a broad shallow depression; notum of second tergite (fig. 3) short, triangular, its apex nearly 3.0 times wider than its base, median length about 0.3 times median length of third tergite; mat; suture sinuate between second and third tergites; following tergites mat laterally and smooth medially with apical desclerotized portion typical for the genus; hypopygium large with attenuate portion extending beyond apex of abdomen; near midline strongly striate. Ovipositor sheath straight, enlarged apically, but not wider than hind basitarsus; ovipositor sheath shorter than mesosoma and 0.3 times fore wing.

Colour.— Black; metasoma and more than apical half of antenna dark brown; scapus, pedicellus, first and second flagellomeres brown, third-sixth testaceous, and seventh flagellomere testaceous with apex dark brown, apical nine flagellomeres dark brown; legs vary from yellow to dark brown: fore coxa brown; other coxae, all trochanters and trochantelli yellow; middle femur, tibia and tarsomeres brown; hind femur dark brown, basal half of hind tibia light brown, posterior half and first tarsomere (tarsus broken) dark brown; mesosternum with two longitudinal testaceous stripes; wings hyaline, pterostigma completely dark brown; hypopygium brown laterally and yellowish-brown along midline.

Etymology.— The name refers to the Brazilian state of Parana where the species was collected.



Figs 1-3, *Illidops paranaensis* spec. nov.; figs 4-7, *Illidops uvidus* spec. nov. 1, antenna; 2, fore wing; 3, propodeum, first and second metasomal tergites; 4, mesosoma; 5, propodeum; 6, first and second metasomal tergites; 7, metasoma.

Illidops uvidus spec. nov. Penteado-Dias & Scatolini
(figs 4-7)

Material.— Holotype, ♀ (DCBU), Brasil, Antonina, PR, 31.x.1986, at light. Paratypes (4 ♀♀): 1 ♀ (DCBU), Brasil, Fazenda Canchim, São Carlos, SP., 19.v.1999, Malaise trap; 2 ♀♀ (UFPR), Brasil, Antonina, PR, 3.xii.1986 & 25.ii.1987, at light; 1 ♀ (RMNH), Brasil, São José dos Pinhais, PR, 29.iii.1987, at light.

The holotype agrees with the description of *I. paranaensis* spec. nov., except for the following: scapus, pedicel and all flagellomeres brown and with two ranks of regularly arranged placodes; mesosternum black, without testaceous stripes; veins 1Cu1 and 2Cu1 equal; propodeum rugose with a distinct areola (figs 4, 5), which is usually margined by strong carinae; notum of first tergite about 3.5 times longer than its apical width; first tergite with a more or less distinct medio-longitudinal depression on its apical half, its base 1.2 times wider than its apex, and its sides subparallel (fig. 6); apical desclerotized parts of metasoma (fig. 7) occur in different positions; all coxae dark brown, fore and middle femur and tibiae yellow; most of hind femur yellow; apex of hind femur and all tarsomeres brown. Most of metasoma dark brown. The paratypes have the femur variably coloured.

Etymology.— The name *uvidus* refers to the humid climate of Atlantic forest where the specimens were collected.

Illidops aridus spec. nov. Penteado-Dias & Scatolini
(figs 8-12)

Material.— Holotype, ♀ (DCBU) Brasil, Universidade Federal de São Carlos, São Carlos, SP, 9.vi.1998, Malaise trap. Paratypes (5 ♀♀): 3 ♀♀ (DCBU), 2 ♀♀ (RMNH) same data.

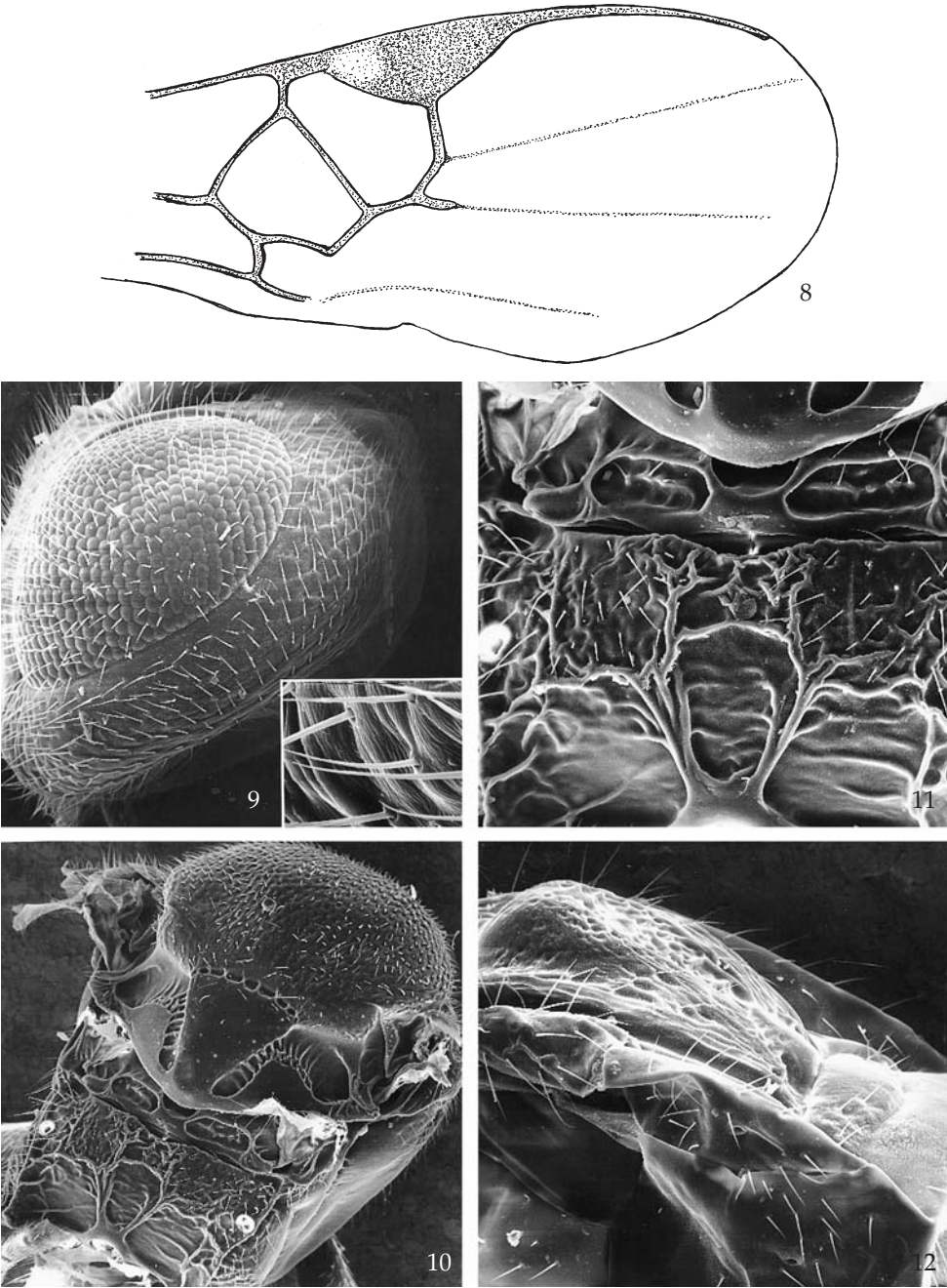
The holotype agrees with the description of *I. uvidus* except for the following: the pterostigma is dark brown with a hyaline spot basally (fig. 8; best seen by stereomicroscopy with limited light).

Etymology.— The name *aridus* refers to arid and dry climate of the cerrado where the specimens were collected.

Acknowledgements and abbreviations

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DCBU stands for the Universidade Federal de São Carlos, Departamento de Ecologia e Biologia Evolutiva, São Carlos, SP, Brasil; RMNH for the National Museum of Natural History, Leiden, The Netherlands; and UFPR for Universidade Federal do Paraná, Curitiba, PR, Brasil.



Figs 8-12, *Illidops aridus* spec. nov. 8, fore wing; 9, head sculpture; 10, mesosoma; 11, propodeum; 12, first and second metasomal tergites.

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