

## First register of *Helorus brethesi* Oglobin, 1928 (Insecta, Hymenoptera, Heloridae) in Palmeira, PR, Brazil

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### Resumo

**Primeiro registro de *Helorus brethesi* Oglobin, 1928 (Insecta, Hymenoptera, Heloridae) em Palmeira – PR, Brasil.** A ocorrência de *Helorus brethesi* Oglobin, 1928 (Hymenoptera: Heloridae) é registrada no município de Palmeira, Estado do Paraná, Brasil, com base em um espécime coletado em lavoura convencional de tabaco (*Nicotiana tabacum* L.) com armadilha de Malaise.

**Palavras-chave:** Novo registro, Proctotrupoidea, Tabaco

### Abstract

The occurrence of *Helorus brethesi* Oglobin, 1928 (Hymenoptera: Heloridae) is reported in the town of Palmeira, Parana, Brazil, based on a specimen collected in a conventional tobacco (*Nicotiana tabacum* L.) field with a Malaise trap.

**Key words:** New record, Proctotrupoidea, Tobacco

Within the Proctotrupoidea (Insecta, Hymenoptera), the Heloridae family is a small group with a single recognized genus, *Helorus* Latreille, 1802. All species are very similar and possess a characteristic venation of the forewing (VAN ACHTERBERG, 2006) with five closed cells, including the subtriangular first medial cell (MASNER, 1993).

The genus *Helorus* is composed of twelve known valid species (VAN ACHTERBERG, 2006), all of them parasitoids of Chrysopidae (Insecta, Neuroptera). The

genus is characterized by the antennae not inserted on a frontal shelf, with 15 segments; antennal socket located at the middle of face. Forewing 2.5-5.2mm in length, with a pterostigma; venation of wings characteristic – forewing with medial cell defined, subtriangular, vein Rs+M present as tubular vein, and vein 1/Rs absent (KUSIGEMATI, 1987; MASNER, 1993).

Townes (1977) recognized seven species around the world, *H. anomalipes* (Panzer, 1798) from the Holarctic Region; *H. ruficornis* Foerster, 1956 from

the Holarctic and Ethiopian Regions; *H. striolatus* Cameron, 1906 from the Palearctic Region; *H. nigripes* Foerster, 1856 from Europe; *H. elgoni* Risbec, 1950 from Kenya; *H. brethesi* Oglobin, 1928 from the Neotropical Region; *H. australiensis* New, 1975 from the Australian Region. Naumann (1983) described a new species of *Helorus* from New Guinea, *H. niuginiae*; and Kusigemati (1987) described *H. suwai* and *H. yezoensis* from Japan. Van Achterberg (2006) lists in his work, besides the ten species already mentioned, *H. chinensis* He, 1992 (from East Palearctic Region), and describes a new species, *H. celebensis*, from the Indo-Australian Region.

Outside the Holarctic Region the species of *Helorus* have a limited distribution, most being known only due to the type locality (VAN ACHTERBERG, 2006). Therefore, the aim of this paper is to report the occurrence of *Helorus brethesi* in the State of Parana, Brazil. This discovery is related to a research developed in tobacco (*Nicotiana tabacum* L.) fields in the town of Palmeira, PR, Brazil. In this research, six tobacco fields were used, three under an organic management and three under a conventional management. Malaise and Pit-fall traps were set and remained in the fields from November 2007 to February 2008. The material was biweekly collected and the individuals belonging to Hymenoptera were identified to family level, according to Goulet and Huber (1993). Afterwards, all insects collected were deposited in alcohol 70%.

From the samplings carried out in one of the conventional tobacco fields with Malaise trap, on 25 January 2008, one specimen belonging to the Heloridae family was reported. This individual was properly identified as *Helorus brethesi* (Figure 1), becoming the first register of this species in the State of Parana, Brazil and also associated with the tobacco culture. It is deposited at the Entomological Collection of Santa Cruz (CESC), from the University of Santa Cruz do Sul, under registration number 12843/1.

The species *Helorus brethesi* ranges from southern Mexico to northern Argentina, where most of the records have been published, and it was also registered in Brazil in 1972, in the state of Goias (TOWNES, 1977). There



FIGURE 1: Specimen of *Helorus brethesi* collected in Palmeira, PR, Brazil.

are no further reports on the occurrence of this genus and species in Brazil since then.

According to Townes (1977), the species *H. brethesi* has as main characteristics the black body with a ferruginous mesoscutum; the frontwing 2.6-3.0mm long; first flagellar segment about 5.7 as long as wide in male, about 6.0 as long as wide in female. Second flagellar segment about 3.5 as long as wide in male, about 4.7 as long as wide in female. Face and mesoscutum polished, with very fine faint pictures. Concave part of side of thorax smooth or with a few irregular wrinkles. Mesopleurum with a single row of moderately small foveae behind prepectal carina. Scutellum smooth, polished, with sparse hairs that arise from almost invisible punctures. Stigma about 3.1 as long as deep. Nervulus basad of basal vein by about 0.3 its length (Figure 2). First tergite about 3.6 as long as wide, tapered to apex from widest point at basal 0.3, its baso-dorsal slope an almost vertical truncation and surrounded by a rim. Basal  $0.3 \pm$  and apical  $0.2 \pm$  of surface of first tergite with longitudinal wrinkling and sparse shallow punctures, the rest of its surface is almost smooth. Mouth parts yellowish white, the apical part of mandible dark. Antenna fulvous or stramineous at base, gradually darkening to dark brown at apex. Hind margin and hind corner or pronotum, usually upper part of pronotum, much or all of mesoscutum, and axillary areas ferruginous, sometimes the thorax more extensively ferruginous with only the under side and most of propodeum blackish. Tegula whitish, wings

hyaline. Legs stramineous or pale fulvous, the hind coxa and hind femur except its base and apex medium brown. Basal 0.25 of hind tibia whitish.

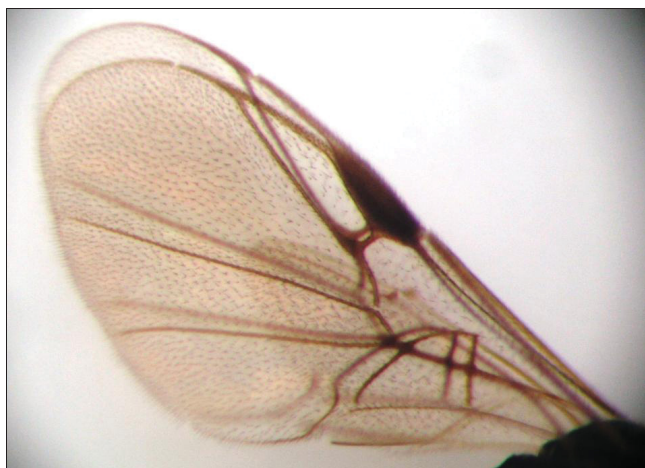


FIGURE 2: Detail on the forewing venation of *Helorus brethesi*.

The individual of *H. brethesi* deposited at CESC fits into the description above mentioned.

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