

FIRST DESCRIPTION OF THE FEMALE OF *OTIOTHOPS INFLATUS* PLATNICK, 1975 (ARANEAE: PALPIMANIDAE)

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Abstract: The female of *Otiotrops inflatus* Platnick, 1975 is described for the first time. The species is rediagnosed based on new material from Paraguay. A possible synonymy, with *O. inflatus* having priority over *O. payak* Grismado & Ramírez 2002, is discussed.

Key words: Araneae, Palpimanidae, Otiotropsinae, redescription, taxonomy, Paraguay, Humid Chaco.

Descripción de la hembra de *Otiotrops inflatus* Platnick, 1975 (Araneae: Palpimanidae)

Resumen: Se describe por primera vez a la hembra de *Otiotrops inflatus* Platnick, 1975. La especie se vuelve a diagnosticar con base en material nuevo de Paraguay. Se discute una posible sinonimia y la posibilidad de que *O. inflatus* tenga prioridad sobre *O. payak* Grismado & Ramírez, 2002.

Palabras clave: Araneae, Palpimanidae, Otiotropsinae, redescrípción, taxonomía, Paraguay, Chaco Húmedo.

Introduction

Platnick (1975) described the palpimanid spider *Otiotrops inflatus* from a single male specimen from “Paraguay” without further locality. The specimen was collected by Fiebrig but is without date. Fiebrig collected extensively in Paraguay primarily between 1904- 1909 (although he lived in Paraguay for much longer). In the same paper, Platnick described the closely related *Otiotrops typicus* from Mato Grosso do Sul, Brazil, also from a single male. Since the description of *Otiotrops inflatus*, a few species of *Otiotrops* have been described from the region. Namely, Grismado (1996) described *Otiotrops goloboffi* from Salta Province in Argentina on the basis of a single male specimen, and Grismado & Ramírez (2002) described *Otiotrops payak* from females in Santa Fe, Santiago del Estero and Corrientes Provinces in Argentina.

According to Platnick (1975), *O. inflatus* can be separated from *O. typicus* by the undivided embolus. In Grismado (1996), *O. inflatus* differs from *O. goloboffi* by the absence of a longitudinal translucent area in the center of embolus (present in *O. goloboffi*) as well as the embolus being sinuous in *O. goloboffi*.

Between December 2019 and March 2020, a pitfall trapping project in southwestern Paraguay (for other results see: Pett, 2019; Pett & Wyer, 2020) collected both male and female specimens identified preliminarily as *O. inflatus*. Herein I provide the first description of the female, as well as an emended diagnosis of the males, as Platnick does not mention or image the translucent area of the embolus, present in the holotype specimen (C. Grismado, *pers. comm.*) and the Paraguayan specimens treated here.

Materials and Methods

Material is stored in 70% ethanol and deposited at the Colección Científica Para La Tierra (CCPLT), in Pilar, Paraguay. Descriptions and terminology follow Platnick *et al.* (1999). Female genitalia were prepared following Platnick *et al.* (1999) with minor modification, the digestion was carried out

with lactic acid bought to boiling temperature for around fifteen minutes for clarification. Specimens were examined using an AmScope SZM-T4 stereo microscope. Images were taken using either an Olympus BX61 with a DP74 camera or an MU1003 18mp camera attached to the AmScope, Between 5-50 images were then stacked using Helicon Focus (version 6.7). Drawings were made with a Wacom One graphics tablet with stacked images underlaid as a reference with opacity set at 60%.

Specimens were collected during an epigeal invertebrate community study, focussing on spiders, in the Ñeembucú Wetland complex, Paraguay.

Results

Palpimanidae Thorell, 1870

Otiotropsinae Platnick, 1975

Otiotrops MacLeay, 1839

Otiotrops inflatus Platnick, 1975

MATERIAL EXAMINED: PARAGUAY; Ñeembucú department, Estancia Santa Ana, -26.851, -58.043 (decimal degrees, taken using a Garmin 64 GPS unit), 1♂ 1♀ 17-23.i.2020, (CIPLT-Ar 382); 1♂, 24-29.i.2020, (CIPLT-Ar 383); 1♀, 3-9.xii.2019, (CIPLT-Ar 384); 1♀, 24-29.i.2020 (CIPLT-Ar 385); 1♂, 7-13.ii.2020, (CIPLT-Ar 386); 1♂, 16-26.xii.2019, (CIPLT-Ar 387). Rufus Wyer & Brogan L. Pett leg, pitfall traps.

EMENDED DIAGNOSIS: Males (Fig. 1A) may be distinguished from most other *Otiotrops* species by the inflated bulb of the pedipalp and undivided, sinuous embolus with a thin translucent area in the middle (Figs. 1B–E). Among the species with a highly inflated bulb, *Otiotrops inflatus* males can be separated from that of *O. goloboffi* by the longer, thinner embolus that is directed prolaterally (vs. shorter, stouter embolus that is directed medially in *O. goloboffi* see Grismado 1996, Figs

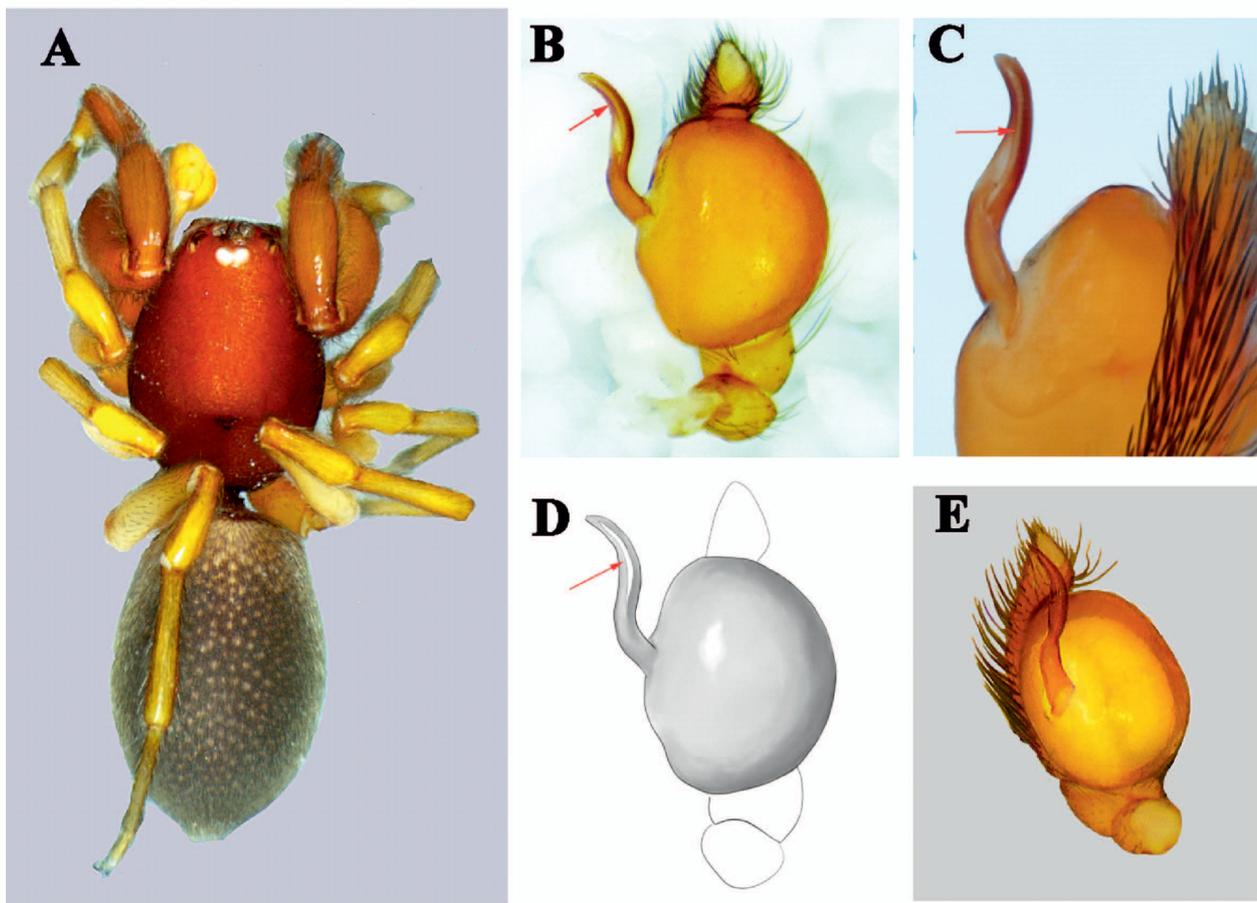


Fig. 1. *Otiothops inflatus* male. **A** = habitus in dorsal view, **B** = pedipalp in ventral view, **C** = detail of embolus in ventral view, **D** = drawing of pedipalp in ventral, **E** = pedipalp in prolateral. Red arrows indicate the translucent area of the embolus.

1, 2), and from *O. typicus* by the undivided embolus. Females (Fig. 2A) may be recognised by a posterior ridge of the epigastric scutum that is narrower and more squared (Figs. 2B-C) than the wider and rounder in *O. payak*. Median receptacles also appear smaller and more rounded in *O. inflatus* (Figs. 2D, 3) (vs. longer than height of, in *O. payak*).

DESCRIPTION:

Female (Figs 2A-E, 3A-B).

Total length 6.09. Carapace 2.76 long, 1.87 wide. Femur I 1.77 long, 0.94 high. Sternum with shallow punctures. Posterior median eyes touching, pale, posterior lateral and anterior lateral eyes spaced by about their radius. Abdominal pattern dorsally and laterally dark brown with yellowish mottling and spots interspersed throughout. Abdomen covered with short straight black setae. Heavily sclerotized abdominal scutum small, entire, with relatively wide “U” shaped sclerite directly anterior to epigastric groove (Fig. 2B). Unsclerotized region of venter cream coloured.

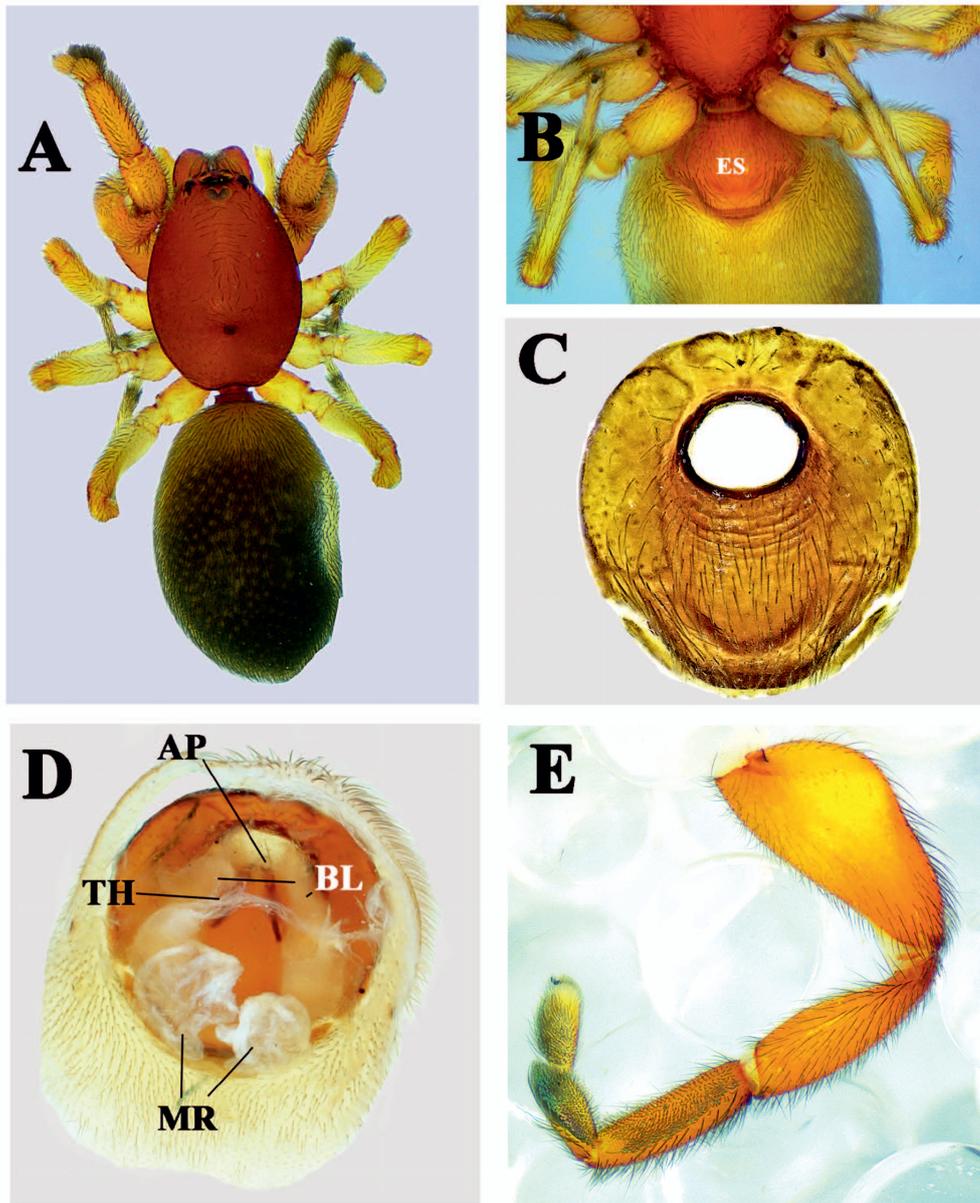
Female internal genitalia (Figs 2C-E, 3) with large paired posterodorsally directed median receptacles, strongly folded, relatively broad arising from short stalks on the epigastric scutum. Numerous fine threads (potentially associated with the tracheal system) present arising anterodorsally on the book lungs, these collapsed rapidly under KOH digestion for clarification. Poreplate not seen despite extensive examination.

DISTRIBUTION: Known from northeastern Argentina and southwestern Paraguay (Fig 4).

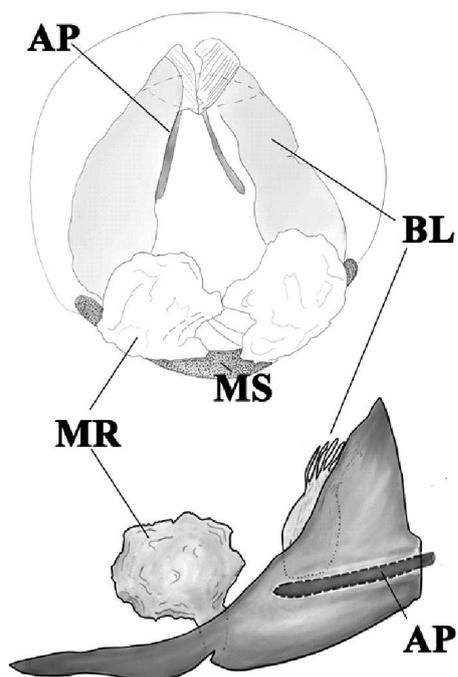
HABITAT: Paraguayan specimens were collected from the Humid Chaco ecoregion associated with hygrophilous forest patches, either in the forest or forest edges. The species was not found in grassland sites.

Discussion

Otiothopinae are under-represented in collections, and knowledge on the group is rather superficial and based on relatively little morphological data. There are differences between *O. inflatus* and *O. payak* females, namely: shape of the posterior ridge of the epigastric scutum, the size of the median receptacles, and the book lungs appear smaller in the females described here. However, the possibility that the observed differences correspond to intraspecific variation based on geographical distribution (and thus that *O. payak* is a junior synonym of *O. inflatus*) is plausible. Some diagnostic characters such as the shape and size of receptacles and booklungs, as well as the detection of poreplates, may depend on dissection and preparation conditions. Indeed, Avalos et al. (2007) collected a male of *O. inflatus* from Corrientes, close to the type locality of *O. payak* (Fig.4). Thus, it is possible at least that specimens from Corrientes and Paraguay that are presented here, may be conspecific. Collection of new material of *Otiothops* from Santa Fe and Santiago del Estero provinces may provide morphological evidence to resolve the issue, otherwise molecular evidence would be needed to confirm or refute the potential synonym.



▲ Fig. 2. *Otiotrops inflatus* female. **A** = habitus in dorsal view, **B** = epigastric region in ventral view, **C** = epigastric scutum in ventral, **D** = partially digested internal genitalia in dorsolateral view, **E** = dense claw tufts of leg I. Abbreviations: AP = apodeme, BL = booklungs, ES = epigastric scutum, MR = median receptacles, TH = thread like structures (possibly associated with the tracheae).



◀ Fig. 3. *Otiotrops inflatus* female, cleared genitalia drawings. Top = posterior view, bottom = lateral. Abbreviations: AP = apodeme, BL = booklungs, MS = median sclerite, MR = median receptacles.



Fig. 4. Map of regional *Otiotrops*. Note that the type locality of *O. inflatus* also sits within Paraguay, although the precise location is unknown.

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