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Paratropis tortue sp. nov., a new species of mud spider from French Guiana (Araneae: Paratropididae)

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Araneae; biogeography;
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Paratropis; description;
taxonomy; French Guiana.
morphology;

Abstract. – A new species of *Paratropis* Simon, 1889, *P. tortue* sp. nov., based on the holotype male, is described from Petites Montagnes Tortue Biological Reserve, French Guiana.

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Introduction

The genus *Paratropis* Simon, 1889 was established by Simon (1889) for *Paratropis scruposa* Simon, 1889 and is the type genus of the family Paratropididae Simon, 1889. *Paratropis* currently contains 10 species (World Spider Catalog 2023), the history of nine of which was discussed in the introduction of Sherwood, Lucas & Brescovit (2022). During the proof stages of that article, another new species was described: *Paratropis minuscula* Almeida & de Morais, 2022 based on both sexes from Guyana (Almeida & de Morais 2022). This species is unique in the presence of six eyes and was the fifth species to be known from both sexes. Five species, including the type species, still remain known from only the female sex, namely: *P. florezi* Peráfan, Galvis & Pérez-Miles, 2019 from Colombia, *P. otonga* Dupérré & Tapia, 2020 from Ecuador, *P. sanguinea* Mello-Leitão, 1923 from Brazil, *P. scruposa* Simon, 1889 from Peru, and *P. seminermis* Caporiacco, 1955 from Venezuela. In this work, we describe a new species of *Paratropis* from French Guiana, based on a holotype male with a distinctly elongate and sinuous palpal bulb, similar only to *Paratropis papilligera* F. O. Pickard-Cambridge, 1896 but with a clear difference in the morphology of the tip of the embolus.

Materials and methods

Specimens were examined under a Leica MZ12.5 binocular stereomicroscope, photographs of spermathecae, leg segments and palpal bulbs were made using a Leica M125C auto-montage with images stacked using Helicon Focus software. Description style follows Sherwood, Lucas & Brescovit (2022).

Abbreviations

Institutions

IBSP = Instituto Butantan, São Paulo, Brazil.

Morphology

ALE = anterior lateral eyes;

AME = anterior median eyes;

d = dorsal;

imm. = immature;

ITC = inferior tarsal claw;

PLE = posterior lateral eyes;

PLS = posterior lateral spinnerets;

PME = posterior median eyes;

PMS = posterior median spinnerets;

v = ventral.

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Other

coll. = collector;
colln. = collection.

- Spines are considered as emerging from a dark base and are counted regardless of whether their apex is light or dark. Thorn-like setae (*sensu* Perafán, Galvis & Pérez-Miles, 2019) are considered to be all stout setae not emergent from circular bases.

- Leg formulae starts with the longest leg to the shortest in order of decreasing size, e.g. 4,1,2,3.

- All measurements are in mm.

- In accordance with Article 8 of the International Code of Zoological Nomenclature (ICZN, 1999), this work was registered in ZooBank prior to publication.

Taxonomic treatment*Paratropis tortue* sp. nov.

(Fig. 1-8)

ZooBank: <http://zoobank.org/B1C3271E-3CA7-41EB-8DD2-80BB32C536D1>

Holotype, ♂ (IBSP 276617), Montagnes Tortue Biological Reserve (04°19'14.1"N 52°14'27.5"W), 6 km from Régina, French Guiana, XI/2010, coll. G. Lmarre.

Paratype, ♂ (IBSP 290140), [same data].

Diagnosis. – The male of *Paratropis tortue* sp. nov. resembles that of *P. papilligera* F. O. Pickard-Cambridge, 1896 (type material examined by DS in 2018) by the palpal bulb with a very thin and elongate embolus (see Perafán *et al.*, 2019: Fig. 4F, G), but differs by the more elongated and sinuous embolus tip (Fig. 7-8) and the absence of a baso-retrolateral conical process on tibia I (present in *P. papilligera*).

Etymology. – The specific epithet “tortue” is a noun in apposition from the French word for turtle, as this is the name given to the small mountainous reliefs of the biological reserve where the types were found.

Description of holotype (IBSP 276617)

– **Total length** including chelicerae: 11.2. – **Carapace**: length 4.8, width 4.5. – **Caput**: raised. – **Eye tubercle**: raised, length 0.7, width 0.8, AME<ALE, ALE>PLE, PLE<PME (Fig. 1). – **Fovea**: shallow, almost straight. – **Opisthosoma**: length 4.5, width 3.3. – **Chelicera**: length 1.5, width 0.9. Cheliceral furrow with eight prolateral and twelve retrolateral teeth, arranged in two parallel diagonal rows (Fig. 2-3). – **Maxilla**: with 25–27 cuspules, distributed in the median area (Fig. 3). – **Labium**: length 0.6, width 1.1, with 20–24 cuspules, grouped in the distal area (Fig. 3). – **Labio-sternal mounds**: joined to sternum. – **Sternum**: length 2.1, width 2.5, with two pairs of circular sigilla (Fig. 2). – **Tarsi** and **metatarsi** I–IV ascopulate. Tarsus II not club-shaped. Lengths of legs and palpal segments see table 1, leg formula 1423. Thorn-like setae and clubbed setae covering dorsal and lateral surfaces of palpal femora, femora, tibiae, and metatarsi I–IV. A single pair of tarsal claws present on tarsi I–IV and the palpal tarsus, each claw with a pointed tooth near its base, ITC present on tarsi I–II. Leg I stouter than all other legs, femur, patella, and tibia noticeably incrassate. – **Trichobothria**: [clavate] tibia I d3, II d3, III d6, IV d4, palp d4, metatarsus I d3, II d5, III d5, IV d6. – **Spination**: tibia III v5, IV v3, metatarsus I v30, II v40, III v38, IV v33, tarsus I d12, II d6, III d14, IV d10, palp d8. PLS with 3 segments, basal 0.6, median 0.4, digitiform apical 0.8, basal and median segments incrassate, apical segment cylindrical, PMS present, 0.4. – **Palp**: cymbium with two unequal lobes separated by a sclerotized groove; tibia with shallow distoventral groove (Fig. 4-5). Palpal bulb as long as tibia, embolus very thin and elongate, embolus tip sinuous (Fig. 4-8).

Affinities. – Mud encrusted (Fig. 1-2) on carapace, opisthosoma, dorsum of chelicerae, dorsal surface of legs, palp, and spinnerets. Ventral surface of legs and labium devoid of mud. Sternum covered with a thick layer of encrusted mud, making it difficult to see the sigilla. Opisthosoma with two horizontal rows of tubercles on the dorsal surface and three additional rows of tubercles, irregular in size, arranged in rows on the dorso-retrolateral and dorso-prolateral surfaces.

Distribution. – Known only from the type locality, Montagnes Tortue Biological Reserve, French Guiana.

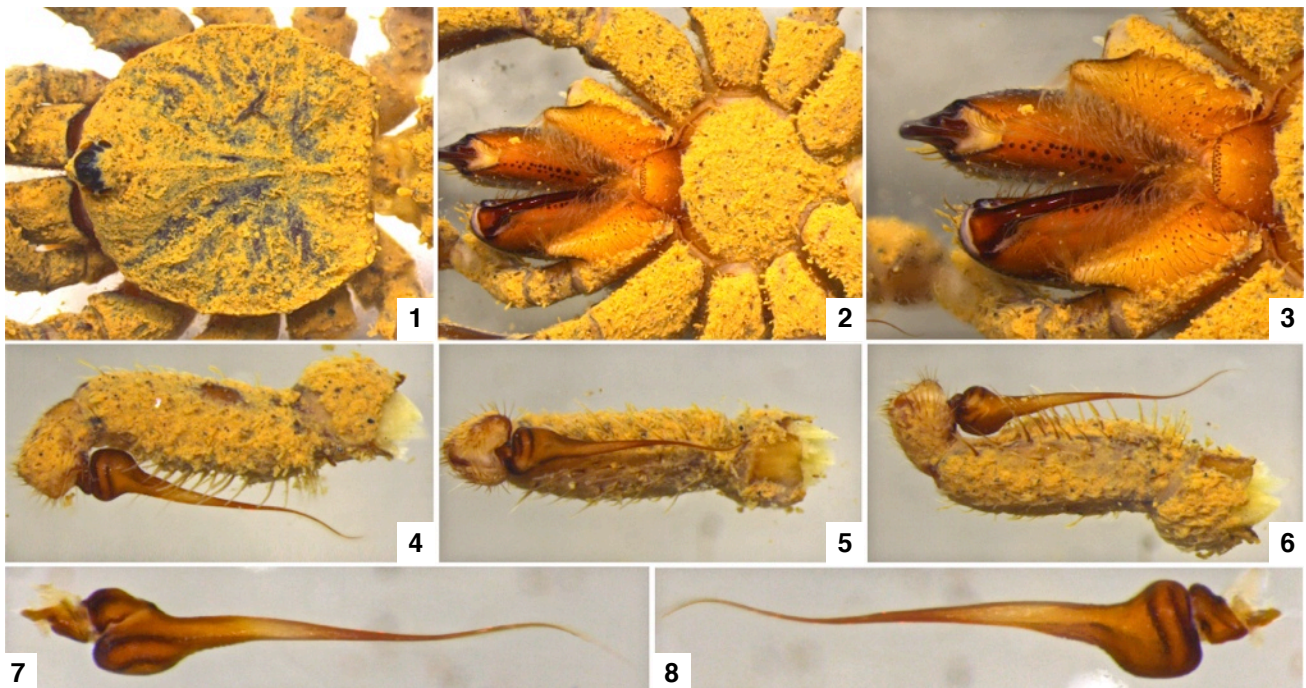


Fig. 1-8. *Paratropis tortue* sp. nov. holotype ♂ (IBSP 276617).

1. Carapace, dorsal view. 2. Cephalothorax, ventral view. 3. Chelicerae and labium, ventral view. 4. Palp, retrolateral view. 5. Palp, ventral view. 6. Palp, prolateral view. 7. Palpal bulb, prolateral view. 8. Palpal bulb, retrolateral view.

	I	II	III	IV	Palp
Femur	4.0	3.1	2.8	7.2	2.1
Patella	2.1	1.7	1.4	1.6	1.2
Tibia	3.3	2.2	2.0	2.1	1.8
Metatarsus	3.0	2.5	2.3	3.3	–
Tarsus	2.6	1.7	1.4	1.8	1.0
Total	15.0	11.2	9.9	13.6	6.1

Table 1. *Paratropis tortue* sp. nov. holotype ♂ (IBSP 276617) podomere lengths.

Discussion

The family Paratropididae remains one of the most enigmatic spider families and much more research is needed to understand the taxonomy of the group, including the description of the unknown sexes of more than half of its currently valid species. Fortunately, the geographical separation of these species means the current existence of synonyms is likely low, given the reduced ranges and microhabitat niches exhibited by most paratropidids (Dupérré & Tapia 2020). During the completion of this work, we were made aware of a paratropidid record from French Guiana in the grey literature, identified as “*Paratropis papilligera*” and accompanied by a photograph of the specimen in life (see Lalagüe, 2021). It cannot be determined from the habitus photograph alone whether the specimen in the report corresponds to the new species described herein, *P. papilligera sensu stricto*, or another taxon.

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Résumé

Sherwood D., Lucas S.M. & Brescovit A. D., 2023. – *Paratropis tortue* n. sp., une nouvelle espèce de Guyane (Araneae: Paratropididae). *Faunitaxys*, 11(10): 1–3.

Une nouvelle espèce du genre *Paratropis* Simon, 1889, *P. tortue* n. sp., est décrite de la Réserve biologique des Petites Montagnes Tortue en Guyane, basée sur un holotype mâle.

Mots-clés. – Araneae, Paratropididae, *Paratropis*, taxonomie, morphologie, biogéographie, nouvelle espèce, description, Guyane.

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Illustration de la couverture :

La **Tortue luth** (*Dermochelys coriacea*), unique représentant du genre *Dermochelys*, est la plus grande espèce répertoriée. On la trouve en haute mer dans les différents océans du globe. Son déclin en Guyane est observé depuis maintenant plus de 10 ans. On compte seulement cinq sites de ponte majeurs répartis sur 1 145 km de côtes du Guyana à la Guyane.

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