

A new species of *Otiothops* MacLeay (Araneae: Palpimanidae: Otiothiopinae) from Cuba

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Summary

We describe a new species of the genus *Otiothops* MacLeay, 1839 (Palpimanidae), *O. alayoni* n. sp., from the Sierra Maestra mountain range in eastern Cuba, representing only the second species of the genus from the Greater Antilles. The new species is diagnosed from other species of the genus, and compared in detail with the Cuban *O. walckenaeri* MacLeay, 1839. All specimens of the new species were collected by sifting leaf litter in montane rainforest.

Introduction

With 40 species known, *Otiothops* MacLeay, 1839 is a rare Neotropical genus found in Panama, Venezuela, Peru, Bolivia, Paraguay, Brazil, Argentina, Colombia, Guyana, and the West Indies (Bryant 1940; Chickering 1966; Platnick 2014). Only a single species, *Otiothops walckenaeri* MacLeay, 1839, has been reported from Cuba (Bryant 1940; Platnick 1975, 2014), and none are known from other Greater Antilles islands. *Otiothops walckenaeri* occurs in pasture, semi-deciduous forest, and secondary forest of low altitude in eastern Cuba. Recent field work focused on the invertebrate fauna of the rainforest leaf litter in Cuba, initiated by the Cuban-Canadian-Czech team and continued by the CarBio team (<http://www.islandbiogeography.org/>), has resulted in the discovery of new species of various families, including a new species of this genus. Here we describe this species and its habitat.

Methods

Specimens used for this study were collected by sifting rainforest leaf litter in eastern Cuba. Spiders were extracted from the samples using Winkler traps, and preserved in 95% ethanol. Photographs of the morphological structure and genitalia were taken using a Visionary Digital BK lab system, with a Canon EOS 5D Mark II digital camera and a Canon MP-E 65 mm f/2.8 1–5× macro lens; multiple photographs were subsequently compiled in Helicon Focus software and adapted in Adobe Photoshop CS6. General morphological terminology follows Chickering (1966) and Platnick (1975). All measurements are in mm.

Otiothops alayoni n. sp. (Figs. 1–2)

Diagnosis. *Otiothops alayoni* is closest to *O. macleayi* and *O. walckenaeri*, the only other *Otiothops* species known in Cuba, but may be distinguished by a greater body size than *O. walckenaeri* (male between 3.35–4.32 long, female 4.72–5.90 long) and a smaller body size than *O. macleayi* (male 5.50–0.51 long, female 6.64–0.57 long), posterior median eyes separated by their diameter in contrast with the contiguous posterior eyes of *O. walckenaeri*, and the straighter embolus with a curved embolus tip in contrast with the tip of embolus with lateral branch of *O. macleayi* and the strongly curved embolus of *O. walckenaeri*. Females differ in the form of the epigynum, with that of *O. walckenaeri* described as ‘a curved slit at the posterior margin of the basal shield that extends from the pedicel to fold’ (Bryant 1940: 276). *Otiothops macleayi* may be distinguished by the narrow spermathecae (see Platnick 1975). The shape of the spermathecae differ, with those of *O. alayoni* being wider, and the external margins of the scutum in *O. alayoni* are more strongly sclerotized.

Etymology. The species epithet honours Dr Giraldo Alayon Garcias, a researcher of Caribbean spiders and Curator of Arachnids in the Museo Nacional de Historia Natural of Cuba.

Type material. Holotype ♂ (CarBio 00000874A) Cuba: Granma Province, Pico Caracas, Ecological Reserve “Pico Caracas”, 19°50'19.92"N 77°2'25.08"W, 1106 m a.s.l., 7 March 2013; Cala-Riquelme, F. and Deler-Hernández, rainforest litter, deposited in the Smithsonian National Museum of Natural History, together with 1♂, 1♀ paratypes and 2 juveniles (BSC-Ar 901), deposited in the arachnology collection of Centro Oriental de Ecosistemas y Biodiversidad, Santiago de Cuba, Cuba (F. Cala-Riquelme)

Description. Holotype male: Total length 5.0. Carapace dark brown, 2.3 long, 1.6 wide (at second leg), 1.1 high (at second leg), clypeus 0.4 high. Legs yellowish brown, first legs darker distally. First leg robust: coxa 0.85 long, 0.45 wide, 0.6 high; trochanter 0.25 long, 0.3 wide, 0.3 high; femur 1.55 long, 0.4 wide, 0.7 high; patella 1.25 long, 0.4 high; tibia 0.95 long, 0.3 high; tarsus 0.35 long, 0.2 high, metatarsus 0.35 long. Abdomen dark grey: 2.4 long, with apical scutum surrounding pedicel to epigastric furrow. Cephalic area elevated posteriorly. Posterior median eyes separated by their diameter. Palpal bulb distally wider than proximally, embolus long, relatively straight with hooked tip (Fig. 1G–J).

Paratype female: Total length 6.3. Carapace dark brown, 2.8 long, 1.9 wide (at second leg), 1.3 high (at second leg), clypeus 0.4 high. Legs yellowish brown, first legs reddish. First leg robust: coxa 0.95 long, 0.55 wide, 0.9 high; trochanter 0.35 long, 0.35 wide, 0.4 high; femur 1.8 long, 0.55 wide, 0.85 high; patella 1.5 long, 0.5 high; tibia 1.2 long, 0.35 high; tarsus 0.5 long, 0.2 high, metatarsus 0.45 long. Abdomen dark grey: 3.50 long, with apical scutum surrounding pedicel and covering epigynal plate. Carapace and eyes as in male. Epigynum as in Fig. 1K–L.

Distribution. *Otiothops alayoni* n. sp. is a Cuban endemic known only from the type locality, the Sierra Maestra mountain range which is considered one of the main centres of diversity in Cuba and the Caribbean as a whole (CENAP, 2004).

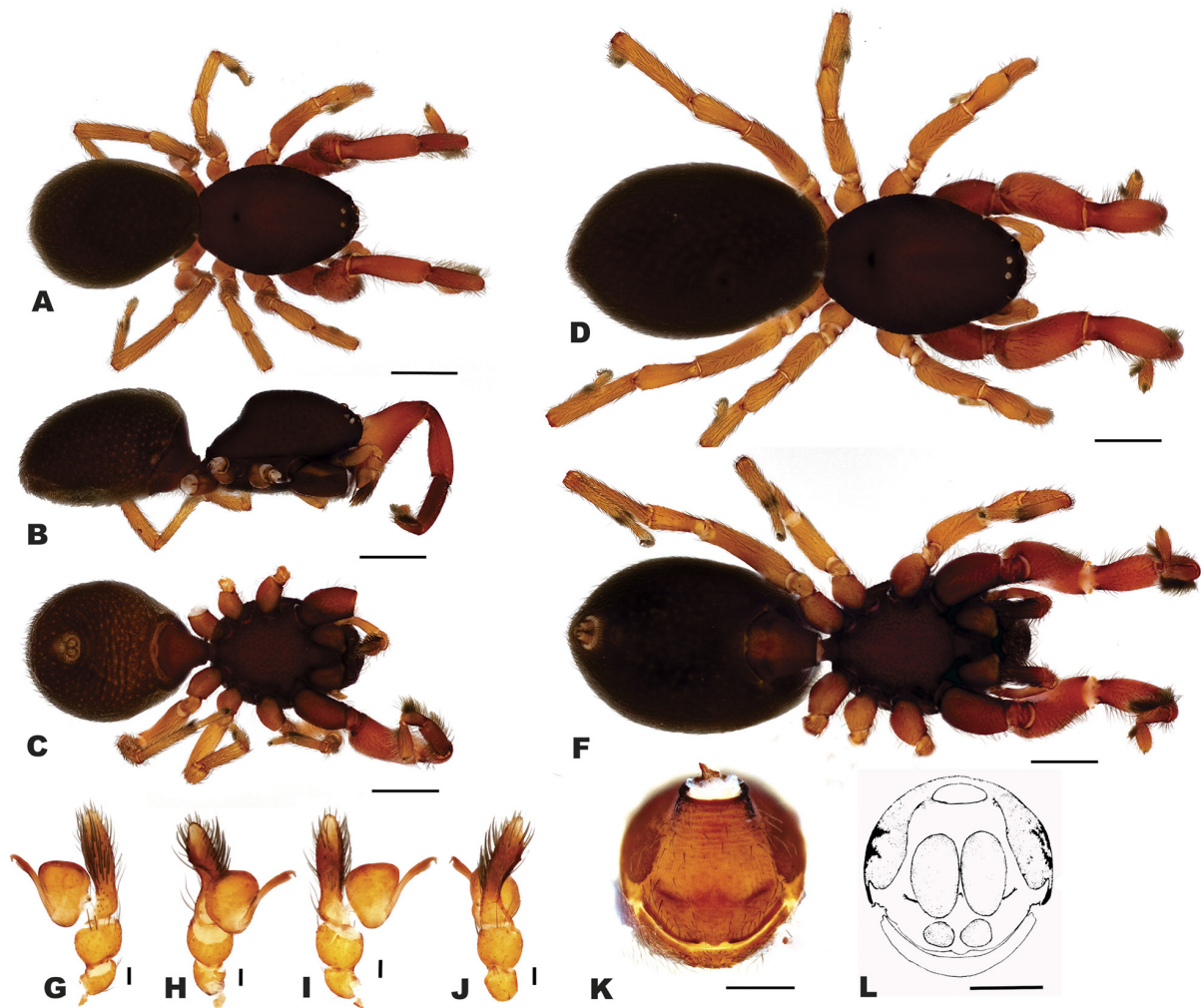


Fig. 1: *Otiiothops alayoni* n. sp. **A** male habitus, dorsal; **B** ditto, lateral; **C** ditto, ventral; **D** female habitus, dorsal; **E** ditto, ventral; **G** male palp, retrolateral; **H** ditto, ventral; **I** ditto, prolateral; **J** ditto, dorsal; **K** female epigynum and scutum, ventral; **L** epigynum cleared, ventral. Scale bars: habitus = 1 mm, genitalia and scutum = 0.5 mm.

Biology. The holotype was found in leaf litter between the roots of trees in the montane rainforest (Fig. 2).

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Fig. 2: Habitat and type locality of *O. alayoni* n. sp., Subida a Pico Caracas, Ecological Reserve “Pico Caracas”, Bartolome Maso, Granma Province (photo by L. O. Casanella, 6th March 2013).