

FIRST RECORD OF ONE FAMILY AND TWO GENERA OF PSEUDOSCORPIONS  
(ARACHNIDA: PSEUDOSCORPIONES) FROM HISPANIOLA**Primer registro de una familia y dos géneros de pseudoscorpiones  
(Arachnida: Pseudoscorpiones) para la Hispaniola**Solánlly Carrero Jiménez<sup>1a\*</sup> and Gabriel de los Santos<sup>1b</sup>

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## ABSTRACT

The Family Neobisiidae, the genera *Microbisium* Chamberlin, 1930 and *Ideoblothrus* Balzan, 1891 (Family Syarinidae), as well as the species *M. parvulum* (Banks, 1895) and *I. pygmaeus* (Hoff, 1964), are recorded for the first time in Hispaniola. These records are based on three males, four females and two deutonymphs collected in the Provinces La Vega and Barahona, and the National District, Dominican Republic. With these findings, the list of pseudoscorpions known from Hispaniola is increased to 14 families, 32 genera, and 39 species.

**Keywords:** Greater Antilles; Dominican Republic; Haiti; Neobisiidae; Syarinidae.

## RESUMEN

Se registran por primera vez para la Hispaniola la Familia Neobisiidae, los géneros *Microbisium* Chamberlin, 1930 e *Ideoblothrus* Balzan, 1891 (Familia Syarinidae), así como las especies *Microbisium parvulum* (Banks, 1895) e *Ideoblothrus pygmaeus* (Hoff, 1964). Estos registros se basan en tres machos, cuatro hembras y dos deutoninfas recolectados en las provincias La Vega y Barahona, y el Distrito Nacional, República Dominicana. Con este aporte, la lista de pseudoscorpiones conocidos de la Hispaniola se incrementa a 14 familias, 32 géneros y 39 especies.

**Palabras clave:** Antillas Mayores; República Dominicana; Haití, Neobisiidae; Syarinidae.

Pseudoscorpions are small sized arachnids (typically less than 4 mm) characterized by the possession of chelates pedipalps with venom glands on its tips, their bodies divided in two tagmas (prosoma and opisthosoma) united without intermediate narrowing, the absence of a



telson or tail, and external reproduction by means of spermatophores (Zaragoza, 2015). They are predators, feeding on small invertebrates like mites, collembola, flies, and insect larvae (Turienzo et al., 2010). More than 4 000 species distributed across 27 families are recognized from around the world (World Pseudoscorpiones Catalog, 2022).

Within pseudoscorpions, the family Neobisiidae contains 580 species described from 32 genera which are mostly distributed in the northern temperate regions of the world, although some species of the genus *Microbisium* Chamberlin, 1930 occur in tropical areas as far south as Zimbabwe and the Caribbean (Harvey, 2013). Following Muchmore (1982), this family can be separated from Syarinidae by the form of the apex of palpal coxae, being triangular and with two setae in Syarinidae, and rounded with three or more setae in Neobisiidae. In the case of the genus *Microbisium*, it is characterized by the number of trichobothria in its chelal fingers (Nassirkhani et al., 2019): seven in the fixed, and three in the movable. Regarding the family Syarinidae, there are 119 described species in 18 genera (Amieva Mau et al., 2022), which can be found in moist leaf-litter and subterranean habitats such as caves. The genus *Ideoblothrus* Balzan, 1891, with 42 described species, have a pantropical distribution, being found in Northern South America, Central America, Mexico, Greater Antilles, Florida, Central and South Africa, New Guinea, and the islands of Seychelles, Solomon and Caroline. It can be distinguished from the similar genus *Ideobisium* Balzan, 1891, by the absence of eyes, and the entirely smooth, longitudinally striate abdominal pleural membranes, among other morphological features (Harvey & Edward, 2007; Muchmore, 1982). The species *M. parvulum* has been recorded from Canada, Costa Rica, El Salvador, Mexico, and United States, while the species *I. pygmaeus* is known from Jamaica and Martinica (Harvey, 2013).

Regarding the island of Hispaniola (Dominican Republic and Haiti), a total of 37 species and 13 families of pseudoscorpions have been recorded, with the family Syarinidae being represented only by the species *Ideobisium puertoricense* Muchmore, 1982, and the family Neobisiidae being excluded from the fossil or modern record entirely (Carrero-Jiménez & Santos, 2020; Dunlop et al., 2020; Perez-Gelabert, 2020). The present contribution records the family Neobisiidae, the genera *Microbisium* and *Ideoblothrus*, as well as the species *M. parvulum* and *I. pygmaeus* for the first time from Hispaniola. With this contribution, the number of families, genera and species known from this island is increased to 14, 32, and 39, respectively.

These new records originate from material deposited at the Arachnological Collection of the Museo Nacional de Historia Natural “Prof. Eugenio de Jesús Marcano”, Santo Domingo, Dominican Republic (MNHNSD). Several authors were consulted for species identification of the neobisiids specimens (Banks, 1895; Chamberlin, 1931; Lawson, 1969; Nelson, 1982; 1984), while syarinids’ specimens were identified by consulting the works of Heurtault & Rebière (1983), Hoff (1945; 1964), Muchmore (1982), and Wagenaar-Hummelinck (1940).

The specimens were examined with an EMZ-5TRD zoom stereo with SWF20X eyepieces and a Leitz HM-LUX binocular microscope with Periplan GF 12.5X M eyepieces. Photographs were taken with a Canon EOS 7D camera using a 65 mm f/2.8 macro lens and with an iPhone models 6s plus and 12 pro max. The altitudes from the collecting sites were measured in meters above sea level.

### Taxonomy

Family Neobisiidae Chamberlin, 1930

Genus *Microbisium* Chamberlin, 1930

*Microbisium parvulum* (Banks, 1895)

*Obisium parvulum* Banks, 1895: 12 (in part; see *Microbisium brunneum* (Hagen, 1869);  
Banks, 1904: 141; Coolidge, 1908: 113; Ellingsen, 1909: 220.

*Microbisium parvulum* (Banks): Chamberlin, 1930: 21–22.

**Remarks:** *Microbisium parvulum* has the cephalothorax and mandibles pale yellowish brown, paler palpi except fingers, abdomen sprinkled with silvery dots, and an average body length of 1.6 mm.

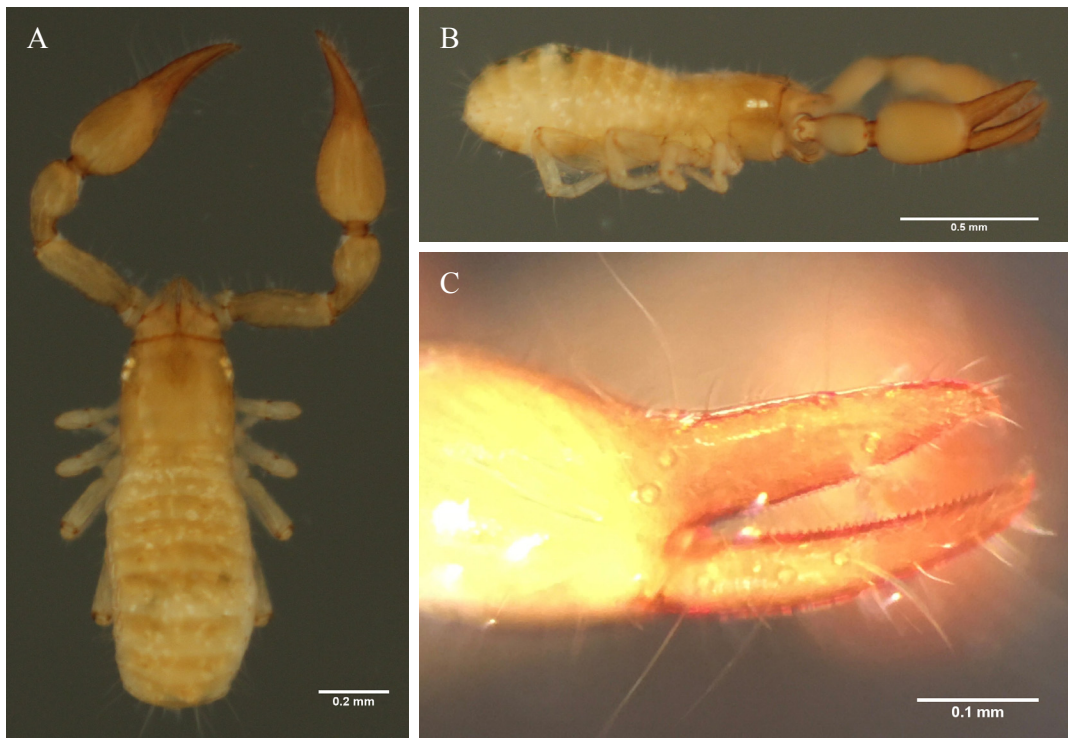


Figure 1. Female specimen of *Microbisium parvulum* from Dominican Republic (MNHNSD 08.367). **A)** dorsal view; **B)** lateral view; **C)** right pedipalp.

**Material examined.** MNHNSD 08.367 (1♀, Figs. 1, 3). Dominican Republic. Santiago Province, La Compartición. Armando Bermúdez National Park, 19.0385009 -70.9981247, 2486 m; 12.VII.2015. G. de los Santos. MNHNSD 08.355 (1♀, Fig. 3). Dominican Republic. La Vega Province, Constanza. Sabana Quéliz, Valle Nuevo National Park, 18.7664099 -70.6586966, 2228 m; 15.I.2011. S. Carrero, G. de los Santos. Collected on *Danthonia domingensis* grass. MNHNSD 08.356 (1 deutonymph, Fig. 3). Dominican Republic. La Vega Province. Constanza, Sabana Quéliz. Valle Nuevo National Park, 18.7664099 -70.6586966, 2290 m; 14.I.2011.

S. Carrero, G. de los Santos. Collected on *Danthonia domingensis* grass. MNHNSD 08.357 (1 deutonymph, Fig. 3). Dominican Republic. Barahona Province. Loma El Curro, Sierra Martín García National Park, 18.3729428 -71.0810909, 1323 m; 1.VIII.2013. C. Suriel, P. Torres, G. de los Santos. Collected in leaf litter.

Family Syarinidae Chamberlin, 1930

Genus *Ideoblothrus* Balzan, 1891

*Ideoblothrus pygmaeus* (Hoff, 1964)

*Pachychitira pygmaea* Hoff, 1964a: 9-11, figs 1-2.

*Ideoblothrus pygmaeus* (Hoff): Muchmore, 1982c: 214; Heurtault and Rebière, 1983: 596-598, figs 11-15; Harvey, 1991a: 425.

**Remarks:** Females of *Ideoblothrus pygmaeus* have a carapace with dorsal surface smooth, lateral surfaces with netlike markings; of a moderately deep golden colour, except for the very weakly sclerotic and poorly pigmented posterior sixth or less, with a body length range of 1.25–1.65 mm. The male is virtually identical with the female except that on the average the male is a little smaller.

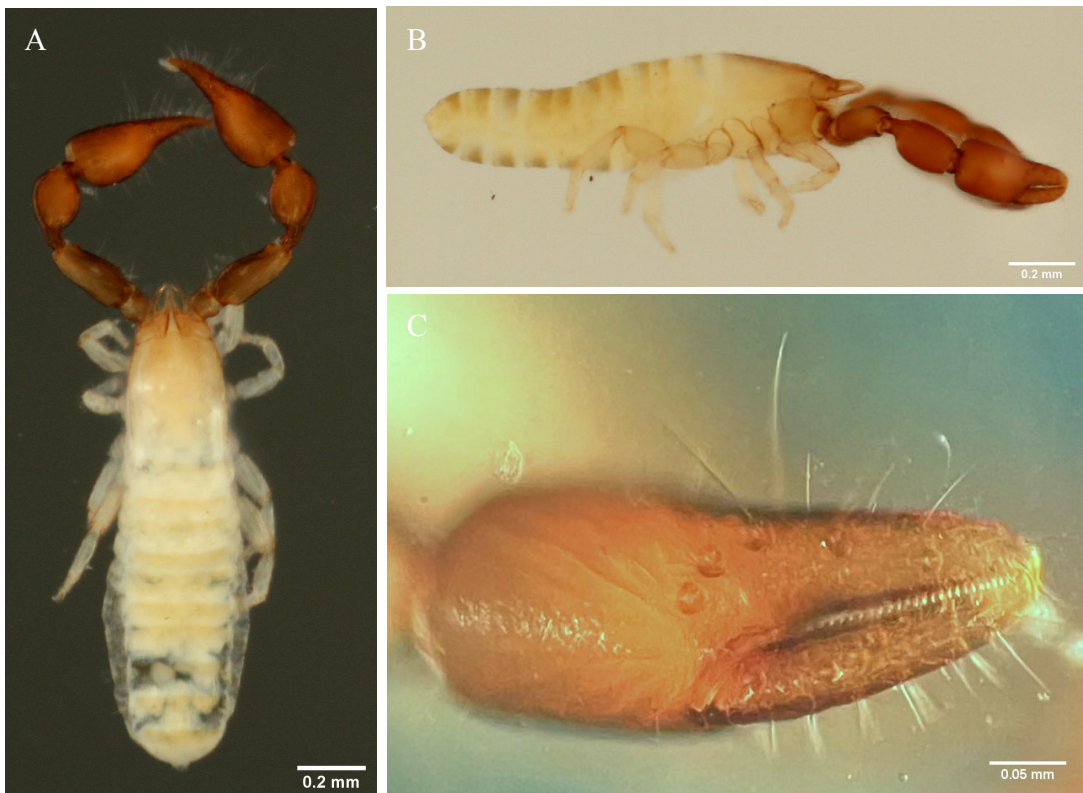


Figure 2. Male specimen of *Ideoblothrus pygmaeus* from Dominican Republic (MNHNSD 08.370). **A)** dorsal view; **B)** lateral view; **C)** right pedipalp.

*Material examined.* MNHNSD 08.370 (3 ♂ 2 ♀, Figs 2–3). Dominican Republic. Distrito Nacional. National Botanical Garden, 18.49943 -69.95007, 35 m; 27.VII.2015. D. Lubertazzi, M. Prebus. Leaf litter/Winkler sample.

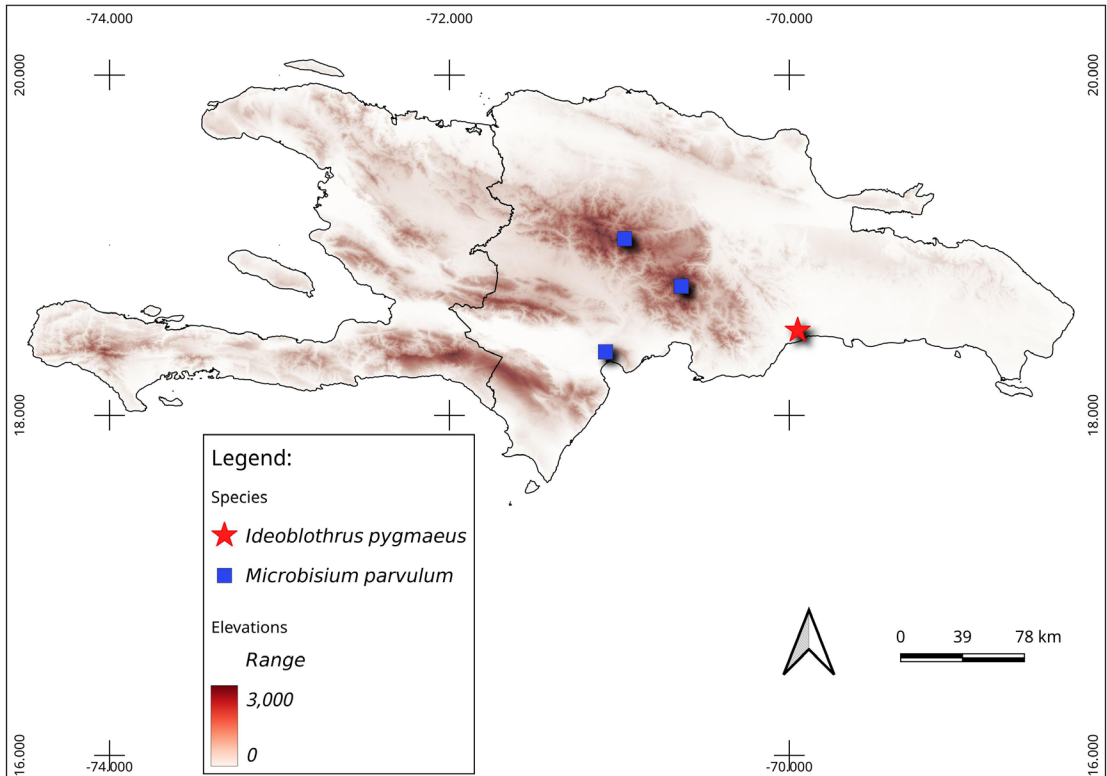


Figure 3. Collecting sites of the new records of *Ideoblothrus pygmaeus* (red star) and *Microbisium parvulum* (blue squares) from Hispaniola.

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