SPIXIANA	44	1	21–24	München, November 2021	ISSN 0341-8391

A new species of *Acutogordius* Heinze, 1952 from Peru

(Nematomorpha, Gordiida)

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Schmidt-Rhaesa, A. & Piper, R. 2021. A new species of *Acutogordius* Heinze, 1952 from Peru (Nematomorpha, Gordiida). Spixiana 44 (1): 21-24.

We describe one new species of Nematomorpha, *Acutogordius olivetti*, from the Eastern Andean foothills in Peru. This species differs from the other three described South and Central American *Acutogordius* species due to the presence of fine bristles on the otherwise smooth cuticle, the absence of bristles around the postcloacal crescent, and the presence of pointed bristles on the lateral side of the posterior end.

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Introduction

Until recently, no horsehair worms (Nematomorpha) were reported from Peru. This situation changes with the report of worms from the Panguana Station (see Schmidt-Rhaesa & Buchwitz 2021, this volume). Additionally, one other worm was collected in the Madre de Dios region and is reported here as a new species. Together with the report from Panguana, now at least eight different species are known from Peru, four of which are known at species level, while the others could only be determined to genus level.

The sampling location is on the Andean foothill ridges and consists of selectively logged primary forest bordering a completely cleared area that was a cattle ranch about 40 years ago.

Material and methods

The specimen was collected on May 14, 2018 in the re Madre de Dios region in Peru (complete location see in results). The worm emerged from an *Eubliastes* sp. cricket that was attracted by a generator-powered, 120 W mercury vapour light suspended in front of a white cotton sheet tied between small trees in the forest understorey. The worm emerged from the cricket after it was inadvertently crushed on the ground (Fig. 1A,B). The worm is deposited in the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru under the accession number MUSM-INV4664. The specimen was preserved in 96 % ethanol. For SEM investigation, a ~1 mm long piece from the midbody region and the entire posterior end were dehydrated in an increasing ethanol series, critically point dried, and mounted on stubs. Specimens were sputtered with gold and investigated with a LEO Scanning Electron Microscope 1524.

Results

Acutogordius olivetti sp. nov.

Material examined. Male specimen 2384 from CREES MLC Land, region Madre de Dios, 513 m (12°48.87'S 71°23.68'W). Emerged from a cricket of the genus *Eubliastes* Beier, 1960 that was crushed inadvertently on the ground. Collected May 14, 2018 by Ross Piper.

Etymology. The species name *olivetti* derives from a river, the Olivetti, running close to the sampling location.

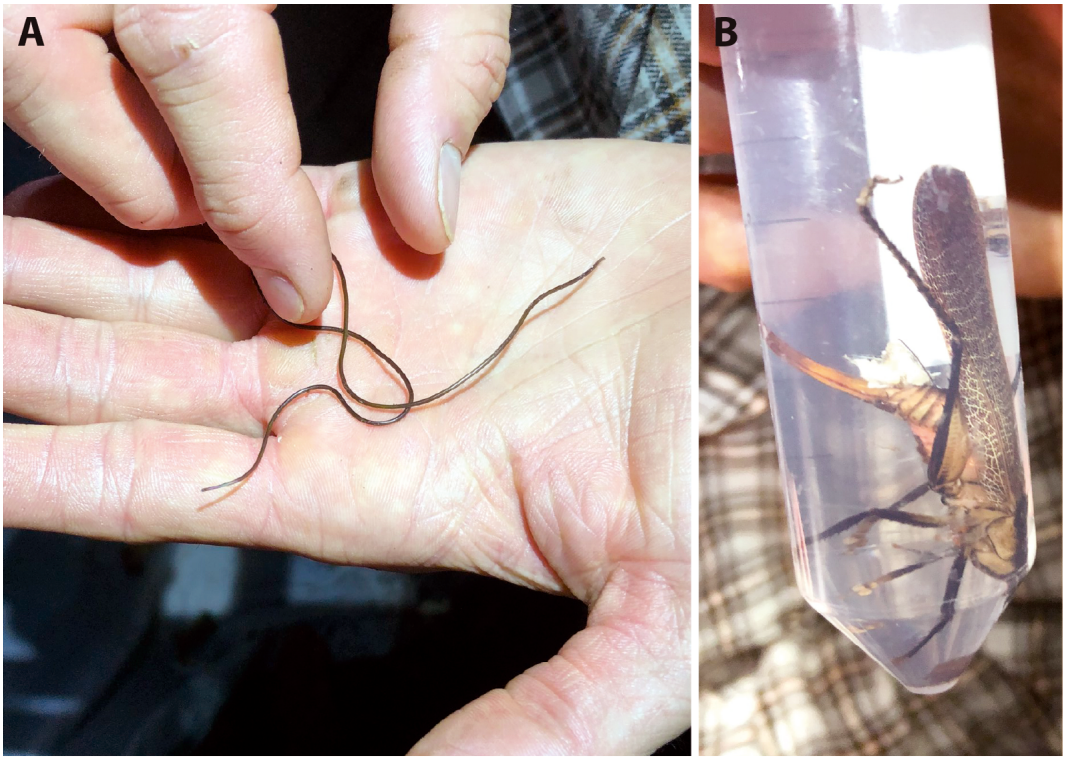

Fig. 1. A. Freshly emerged worm (photo by Peter Billingsley). **B.** The host, a *Eubliastes* sp. cricket (photo by Chris Jones).

Description

The male specimen is 165 mm long and has a diameter of 0.95 mm. It has a dark brown colour, a white anterior tip, and a black collar behind this white tip. The posterior end is bilobed, the lobes are short (about 250 µm), and the width at the level of the lobes is smaller than the width of the remaining body (Fig. 2B). A postcloacal crescent is present, it is directly on the edge where the tail lobes separate from the body (Fig. 2B,D). It is angled and the branches extend partly on the inner edge of the tail lobes. The anterior tip of the postcloacal crescent is a very small distance (less than 10 µm) behind the cloacal opening. There are numerous pointed bristles on the lateral sides of the posterior end (Fig. 2B,E), which are not arranged in certain clusters. The body cuticle lacks areoles and is smooth, with the exception of scattered fine and short bristles (Fig. 2A,C). A longitudinal region, putatively along the ventral midline, is free of bristles (Fig. 2A).

Taxonomic remarks. Three species from the genus *Acutogordius* have been described from South and Central America. A further 8 species are known from Southeast Asia, Australia and Madagascar (Schmidt-Rhaesa & Geraci 2006, Schmidt-Rhaesa & Schwarz 2016, Chiu et al. 2017). *Acutogordius acuminatus* De Miralles & De Villalobos, 1998 has been described from Brazil, *A. americanus* De Miralles & De Villalobos, 1998 from Costa Rica, and *A. obesus* (Camerano, 1895) from Ecuador (Camerano 1897, De Miralles & De Villalobos 1998). Both *A. acuminatus* and *A. americanus* have a slight pattern of polygonal areoles on the cuticle, which differs from the smooth cuticle of the Peru specimen. Fine bristles are also present in *A. acuminatus*, but are lacking or have not been described in the other species. The shape and position of the postcloacal cresent is similar in the Peru specimen and *A. acuminatus*. In *A. americanus* it is very small and in *A. obesus* it seems to extend less onto the tail lobes. The species *A. obesus* is not documented by SEM and, as there are no data on fine structures such as bristles, this species is difficult to compare to the other species. Characteristic are two long ventral folds, which may also be dehydration artifacts (see Schmidt-Rhaesa & Geraci 2006). In summary, the Peru specimen does not correspond to the other South or Central

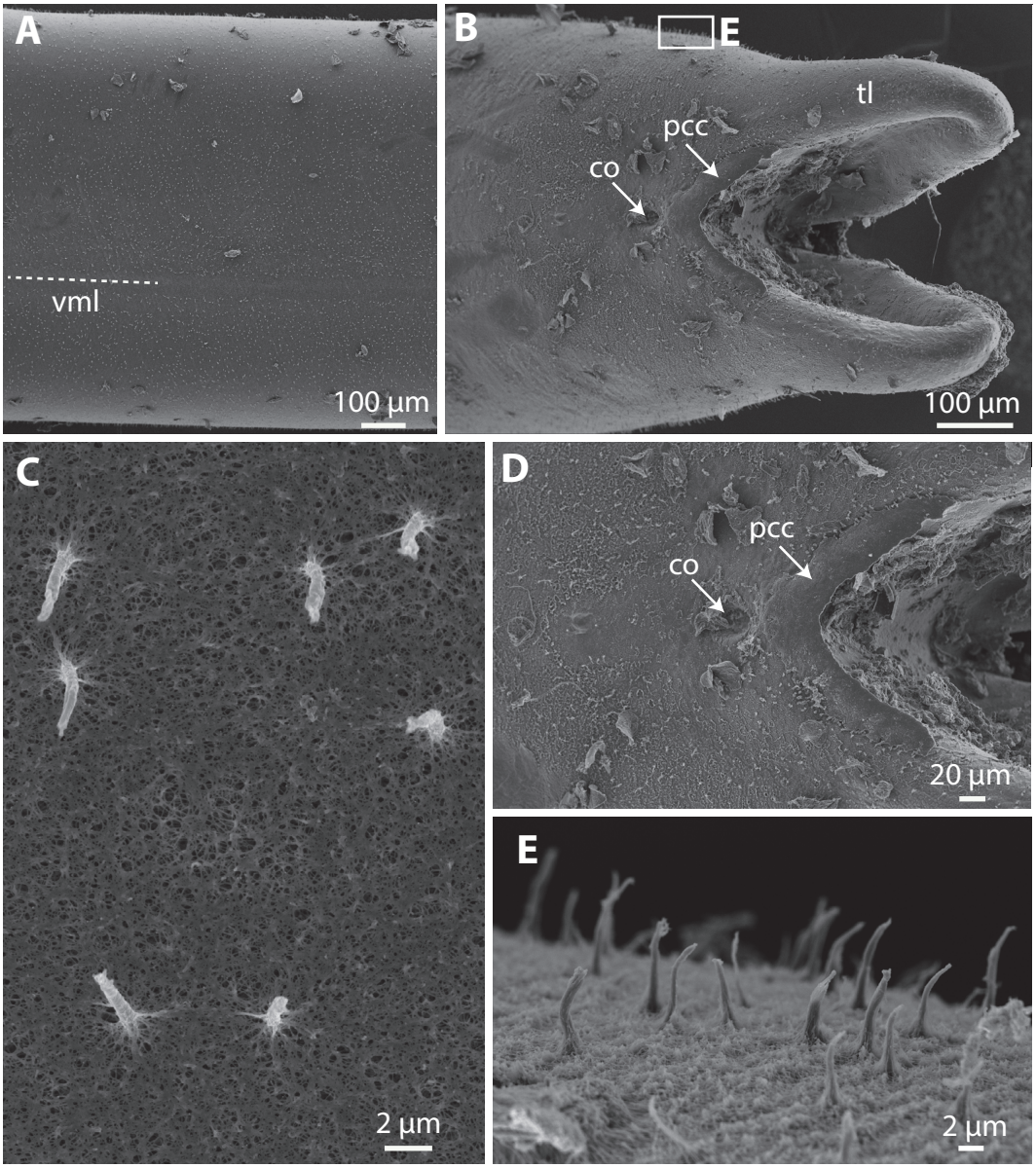

Fig. 2. A, B. *Acutogordius olivetti* sp. nov., holotype (ZMH-V13459). **A.** Overview on the cuticle showing numerous fine bristles and a bristle free stretch along the putative ventral midline (dashed line). **B.** Ventral view on posterior end showing the tail lobes (tl) and the position of postcloacal crescent (pcc) and cloacal opening (co). The rectangle indicates the position of figure E. **C.** Fine bristles on the body cuticle. **D.** Magnification of the posterior end as labelled in B. **E.** Pointed bristles on the lateral side of the posterior end (position of image indicated in B).

American species. There is also no close resemblance to the other, non-American species, as these either possess characteristic clusters of bristles in the region next to the postcloacal crescent or, if no bristles are present as in *A. doriae* (Camerano, 1890), have areoles on the cuticle (see Schmidt-Rhaesa & Geraci 2006). Fine bristles on the body cuticle have been described e. g. from *A. finni* Schmidt-Rhaesa & Schwarz, 2016 from the Philippines and *A. taiwanensis* Chiu, Huang, Wu & Shiao, 2017 (Schmidt-Rhaesa & Schwarz 2016,

Chiu et al. 2017), but these species differ in several other characters from the Peruvian specimen. Due to these differences, we regard it justified to describe the specimen from Peru as a new species despite the fact that only one specimen is known, the amount of intraspecific variation in *Acutogordius* is unknown and molecular data from any *Acutogordius* specimen are absent.

Acknowledgements

The authors would like to thank the participants of the 2018 Amazon expedition, during which this specimen was found: Richard Anderson, Peter Billingsley, Susannah Cass, Chris Jones, Tim Harrison, Jack Peacock, Matthew Smith and Rosemary Lethem. Thanks to James Dyer for organising the expedition and to CREES for access.

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