



## A new Colombian species in the milliped genus *Psammodesmus*, symbiotic host for bryophytes (Polydesmida: Platyrrhacidae)

RICHARD L. HOFFMAN<sup>1</sup>, DANIELA MARTINEZ<sup>2</sup> & EDUARDO FLOREZ D.<sup>3</sup>

<sup>1</sup>Virginia Museum of Natural History, Martinsville, Virginia 24112, U.S.A. E-mail: richard.hoffman@vmnh.virginia.gov

<sup>2</sup>Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Edificio 425, Oficina 105, Bogotá, Colombia.  
E-mail: martinez.daniela@gmail.com

<sup>3</sup>Instituto de Ciencias Naturales, Universidad Nacional de Colombia. A.A. 7495, Bogotá, Colombia. E-mail: aeflorezd@unal.edu.co

### Abstract

The name *Psammodesmus bryophorus* is proposed for an ornate platyrrhacid milliped discovered in a transitional Andean-Pacific montane rainforest in Nariño Department, Colombia. This species is remarkable for being the first milliped known to be host of ectocommensal mosses (10 species belonging to 5 families including especially Pilotrichaceae and Lejeuneaceae) that grow on the milliped's dorsum. The species is likewise of interest in that the male genitalia are similar to those of the Ecuadorian *Psammodesmus fasciolatus* Silvestri, while peripheral structures differ in a number of details. Both species are described and illustrated from type material. The effect of this situation on future conduct of platyrrhacid taxonomy is highlighted.

**Key words:** *Psammodesmus*, new species, redescription, Platyrrhacidae, Diplopoda, commensal mosses, Colombia, Ecuador

### Introduction

Millipeds of the polydesmidan family Platyrrhacidae achieve their greatest diversity in the Indo-australian region, Myanmar to the Solomon Islands, whence some 37 genera and 180 species have been so far accounted (Jeekel, 2007). Nonetheless, the family is also well-represented, albeit less diversely, in the Western Hemisphere where it occurs in the Cordilleran mountains from Peru to Nicaragua. Collectively, the range of the group thus enjoys the distinction of inhabiting regions of pronounced orogenic activity. The New World fauna is almost exclusively confined to the geologically youngest, and seismically most active, terrain in Middle and South America.

While substantial progress has been achieved in describing and classifying the Indoaustralian components of the family, the same may not be said for the Neotropical fauna. Cook proposed nine new genera (each based on a single species) in 1895, and Pocock surveyed the Middle American taxa in 1910. The single most extensive paper on South American platyrrhacids is that of Chamberlin (1941) in which 25 new species and three new genera were described from northeastern Peru. A number of museum collections now contain many unidentified samples, and the time for a comprehensive review is certainly overdue.

Considerable information has been accumulated by the first author toward a treatment of one genus, *Psammodesmus*, but when this intention may be realized is uncertain. We take here the opportunity to provide a name for a species recently discovered in southwestern Colombia which has the distinction of being the first known diplopod to serve as a substrate for ectocommensal mosses. This singular symbiosis is the subject of investigations being conducted by the second author.