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## Leaf litter copepods from a cloud forest mountain top in Honduras (Copepoda: Cyclopidae, Canthocamptidae)

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### Abstract

Five different species of Copepoda were extracted from a leaf litter sample collected on the top (at 2000 m a.s.l.) of a cloud forested mountain in El Cusuco National Park, Honduras. Three of them, one Cyclopidae and two Canthocamptidae are new to science, and are described herein. *Olmeccyclops hondo* **sp. nov.** is the second representative thus far known of this New World genus. *Moraria catracha* **sp. nov.** and *Moraria cusuca* **sp. nov.** are the first formally described members of the genus occurring in Central America. The concept of a “*Moraria*-group” is considered to be an artificial grouping and is limited here to the genera *Moraria* and *Morariopsis* only. The distributional range of this group is essentially Holarctic, with the mountainous regions in Honduras, and probably in west Nicaragua, as the southernmost limits in the New World.

**Key words:** Cyclopoida, Harpacticoida, Central America, taxonomy, new species

### Introduction

Mapping and understanding biodiversity is an ongoing process (Zhang 2011) with still a long way to go (e.g. Mora et al. 2011). Surveys are often focussed on specific habitats and areas, which are selected based on pre-existing knowledge of the occurrence of the particular taxa under study. Such a selective approach increases survey efficiency, resulting in recording the highest diversity for the taxonomic group under study, but might overlook some species occurring in peripheral habitats that are not part of the survey focus. In some cases, a considerable part of biodiversity can remain hidden for a long time, and subsequent discoveries sometimes challenge our understanding of a taxon's ecology. Such examples can be found in surveys of freshwater biodiversity. Whereas the classic approach focuses on large, clearly definable water bodies, such as lakes and rivers, there is increasing evidence that a large proportion of freshwater (invertebrate) diversity occurs in peripheral aquatic habitats, such as phytotelmata (Frank and Lounibos 2009), water films on vegetation, wet mosses, leaf carpets, and humid soils (Pinto et al. 2008).

It is well known that certain cyclopids and harpacticoids can maintain populations in such semi-terrestrial habitats. Our understanding of their occurrence and diversity, accumulated over more than a century of investigations, has been highlighted and reviewed recently by Reid (2001). Besides some particular environments which have been carefully investigated (phytotelmata, caves, etc), the presence of copepods in humid continental habitats is largely interpreted as coincidental. Their study, however, may forward key factors in order to explain evolutionary and biogeographic theories (Rémy 1932; Lewis 1986; Fiers & Ghene 2000; see also Frey 1980).

In a recent study of the aquatic invertebrate fauna in bromeliad aquaria in *el Parque Nacional Cusuco* in Honduras, the survey was complemented with sampling invertebrates in litter around some bromeliads on a high cloud forest covered ridge. The present contribution presents records of five copepods encountered in these samples. Their presence and abundance in the small sample extracted from a 200 cm<sup>2</sup> surface at the foot of the bromeliads is even more surprising considering the absence of copepods in the water filled leaf axils.