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## Description of *Pristina armata* n. sp. (Clitellata: Naididae: Pristininae) from a carnivorous plant (*Nepenthes* sp.) in Borneo, Indonesia

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### Abstract

A new clitellate species of Pristininae (Naididae), *Pristina armata* n. sp., found in the pitcher of the carnivorous plant *Nepenthes* sp., is reported from East Kalimantan, Indonesia. *P. armata* n. sp. is a very small clitellate, less than 1 mm long in fixed state, and without proboscis on the prostomium. Signs of reproduction by paratomy were observed, but the generic placement remains preliminary because sexually mature individuals were not found. *P. armata* n. sp. is characterized by giant hook-like dorsal chaetae at IV. The description of *P. armata* n. sp. was based on six fixed specimens of different size and stage of development. Noteworthy is the habitat of *P. armata* n. sp. in *Nepenthes* pitchers, this being the first clitellate species described from such a habitat. *P. armata* n. sp. may be a member of the nepenthebionts' community, realizing its life cycle inside the digestive fluid of the *Nepenthes* pitcher, or it belongs to nepenthephiles, species that commonly occur in this habitat but do not specialize on it.

**Key words:** *Pristina*, new species, giant chaetae, Oligochaeta, Clitellata, nepenthebiont, nepenthephile, pitcher

### Introduction

*Pristina armata*, n. sp., a new species of the monogeneric subfamily Pristininae, family Naididae (sensu Erséus *et al.* 2008), inhabiting pitchers of the carnivorous plant *Nepenthes* sp., is described in the present paper. The sample was taken in East Kalimantan (the Indonesian part of Borneo), Indonesia, which belongs to the centre of *Nepenthes* diversity. Forty-five freshwater oligochaete species (Annelida, Clitellata) have recently been reported from Indonesia, 17 of them occurring in Kalimantan (Ohtaka *et al.* 2006). Species diversity of Pristininae and Naidinae is high in Kalimantan, and *Pristina* is represented by six species (Ohtaka *et al.* 2006).

We have obtained six oligochaete specimens of one species from pitcher fluids of *Nepenthes* sp. The small worms (the longest specimen does not reach 1 mm) belong to the genus *Pristina*, according to the following characters: Dorsal bundles from II consisting of one hair chaeta and one needle chaeta, ventral bundles with bifid chaetae, all of the same shape, but completely distinct in shape from dorsal chaetae, marks of reproduction by paratomy, presence of coelomocytes, and no encrusted body wall, the latter two characters in contrast to *Stephensoniana* (Brinkhurst & Jamieson 1971). Specimens could not be examined alive *in situ*, because during crossing the forest, no equipment for microscopic identification was available. The material was therefore mounted on a microscopic slide and identified later in the fixed state in the Czech Republic. All specimens were sexually immature, and soft-bodied inner structures such as precursors of testes and ovaries or fine features such as the serration of hair chaetae and stomachal dilatation could not be distinguished. Nevertheless, a complex of clearly defined body features typical of the genus *Pristina*, supplemented by the presence of the distinct giant dorsal chaetae at the fourth segment, allow us to classify the collected specimens as a new species of this genus. Unfortunately, fixation by formaldehyde excluded the possibility of DNA examination.

The host plant is an undescribed species of the genus *Nepenthes*, family Nepenthaceae (M. Dančák, pers. com.). Plants of the genus *Nepenthes* form pitchers from their sward-shaped leaves, filled with digestive fluid of