Paleaequor, a New Genus of Polychaete Worm (Chrysopetalidae)

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ABSTRACT. A new genus, *Paleaequor,* of the polychaete family Chrysopetalidae is described. Three new species: *Paleaequor setula,* the type species from north-eastern Australia; *P. psamathe* from western Mexico; and *P. nicoyensis* from the Pacific coast of Costa Rica, are described. Two previously described species, *Paleanotus heteroseta* Hartman, 1945 and *Bhawania brevis* Gallardo, 1968, are referred to the new genus. A key to the species of *Paleaequor* is provided and comparison between the Western Pacific and American species made.

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Ehlers (1864) established the family Chrysopetalidae (as Chrysopetalea) to contain the new genus *Chrysopetalum* Ehlers, 1864; *Paleanotus* Schmarda, 1861; and *Bhawania* Schmarda, 1861. Levinsen (1879) later included his genus, *Dysponetus,* within the family.

While there has been some revision of individual genera and description of new chrysopetalid species (e.g. Jorge, 1954; Mileikovsky, 1962; Orensanz, 1972; Perkins, 1985) there has been no comprehensive revision of the family. The morphology of chrysopetalid species is poorly known. These worms are mostly small to very small in size, the anterior segments are retractile and difficult to study; and differences in setal structure and ornamentation can be observed only under high magnification. These may be some of the reasons why chrysopetalids have been often misidentified to genus and why widespread species have been placed into cosmopolitan species complexes.

Ongoing studies of the Chrysopetalidae by the author have established important generic differences which include degree of retraction of anterior segments; number, size and shape of appendages of the prostomium, peristomium and the first setigerous segment; presence of a caruncle or nuchal fold; form of the pygidium; and the number, type and ornamentation of setae. Identification to species is based primarily on number, type, position and ornamentation of notosetae and neurosetae.

During this study large numbers of specimens, including some misidentified as *Bhawania* and *Paleanotus,* were examined and found to represent an undescribed genus and species. These are described herein as new and a new generic name is proposed. Two previously described species, *Paleanotus heteroseta* Hartman and *Bhawania brevis* Gallardo, also are referred to the new genus.

Materials and Methods

Material examined is deposited in the following institutions: Allan Hancock Foundation, University of Southern California, Los Angeles (AHF); Australian Museum, Sydney (AM); British Museum (Natural History), London (BMNH); California Academy of Sciences, San Francisco (CAS); Museum National d'Histoire Naturelle, Paris (MNHN); Northern Territory Museum, Darwin (NTM); Queensland Museum, Brisbane (QM); National Museum of Natural History, Smithsonian Institution, Washington D.C. (USNM).

Length is measured from the tip of the most extended appendages or setae of the anterior segments to the tip