



# Article

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## Sea cucumbers collected by the Kermadec Biodiscovery Expedition 2011 (Echinodermata: Holothuroidea: Apodida and Dendrochirotida)

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### Abstract

Three shallow holothuroid species are recorded for the rocky shoreline of the Kermadec Islands. The new apodid species *Chiridota kermadeca* sp. nov. is described. Two dendrochirotid species are reported, both previously found in New Zealand: *Plesiocolochirus ignavus* (Ludwig, 1875) and *Pseudocnus sentus* O'Loughlin & Alcock, 2000.

### Résumé

Trois espèces peu profondes d'holothuries ont été observées sur le rivage rocheux des îles de Kermadec. Deux d'entre elles appartiennent à deux espèces de dendrochirotid également connues de Nouvelle Zélande: *Plesiocolochirus ignavus* (Ludwig, 1875) et *Pseudocnus sentus* O'Loughlin & Alcock, 2000. La troisième espèce: *Chiridota kermadeca* sp. nov., nouvelle pour la science, est décrite.

**Key words:** Sea cucumber, Apodida, Dendrochirotida, *Chiridota*, *Plesiocolochirus*, *Pseudocnus*, new species, Kermadec

### Introduction

To date there is no comprehensive inventory of the invertebrate fauna of intertidal and subtidal habitats of the Kermadec Islands. With a view to addressing this challenge the Kermadec Biodiscovery Expedition on RV *Braveheart* visited the islands from 9 to 29 of May 2011, under the leadership of Dr. Tom Trnski of the Auckland Museum and in collaboration with the Museum of New Zealand Te Papa Tongarewa, Australian Museum and New Zealand Department of Conservation. Benham (1912) has provided the only report of shallow holothuroid echinoderms for the Kermadec Islands: the aspidochirotid *Holothuria (Platyperona) difficilis* (Selenka, 1867) (as *Actinopyga (Muelleria) parvula*) and the apodid *Chiridota rigida* Semper, 1867 (as *Chirodota rigida*). Hansen (1975) has reported on the abyssal holothuroids from the Kermadec Trench. This paper describes a new apodid species, possibly that reported previously by Benham (1912) as *Chiridota rigida* Semper, and two dendrochirotid species reported for the Kermadec Islands for the first time. Two Australian Museum expeditioners, Stephen Keable and Amanda Reid, are preparing a paper for the Bulletin of the Auckland Museum on the marine invertebrates collected during the Expedition.

### Methods

Scanning electron microscope (SEM) images were taken by Didier VandenSpiegel after clearing the ossicles of associated soft tissue in commercial bleach, air-drying, mounting on aluminium stubs, and coating with gold. Observations were made using a JEOL JSM-6480LV SEM. Measurements were made with Smile view software. Photos of the preserved new holotype were taken by Shari Barmos with a Nikon 300s DSLR camera, using a