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New species of Gnathiidae (Crustacea, Isopoda, Cymothoida) from seamounts off northern New Zealand

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Abstract

Gnathiid isopods collected from seamounts off northern New Zealand were examined. Two species of gnathiids were found, *Caecognathia nieli* sp. nov., and *Gnathia sifae* sp. nov. *Caecognathia nieli* sp. nov. is easily distinguished from all other known New Zealand gnathiid species in shape of the head, having an evenly rounded frontal border, and a fine bifid notch. *Gnathia sifae* sp. nov. is distinguished from all other New Zealand gnathiid species in having a distinct mediofrontal process on the cephalon, but no frontolateral processes. It is further clearly distinguished from the co-occurring species, *Caecognathia nieli* sp. nov., in having relatively larger eyes and of different shape, in the presence of lateral projections on the pereopods and in the shape of the appendix masculina.

Key words: Gnathiids, Cymothoida, *Caecognathia*, new species, seamounts, New Zealand

Introduction

Several studies have indicated a high diversity and density of a variety of invertebrates on seamounts (e.g. Koslow *et al*. 2001). Little is still known of the frequency and interaction of external parasites on fish in such communities. Seamounts often hold dense fish stocks, such as the orange roughy (*Hoplostethus atlanticus* Collett, 1889) or redfish (*Sebastus* spp.) and are in many areas important fishing grounds (Bull *et al*. 2001; Dower & Perry 2001). One of the groups which one would expect to flourish on seamounts having large fish stocks are the gnathiid isopods (Arthropoda, Isopoda), because of their parasitic larval stage on fish.

Gnathiid isopods live as adults in cavities and crevices on the sea floor, such as in sponges, coral rubble, or sediment cavities while as larvae they are external fish parasites (Monod 1926; Upton 1987; Klitgaard 1997; Smit & Davies 2004). This group of

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