



Mysidae (Mysida) of New Zealand; a checklist, identification key to species and an overview of material in New Zealand collections

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Abstract

Mysida are small, mostly marine crustaceans that are an important element of food webs, specifically as prey for several commercially important fish species. Taking their ecological and economical importance into account, relatively little attention is attributed to these organisms, and they are often neglected in biodiversity surveys and studies. To draw attention to these animals and stimulate research in New Zealand, we summarize information available for New Zealand Mysidae. We present a checklist of the 17 species recorded in New Zealand waters as well as a preliminary identification key to species based on the existing literature. We also provide an overview of mysid material available in collections in New Zealand.

Key words: New Zealand, Mysidae, mysids, Mysidacea, checklist, identification key

Introduction

The order Mysidacea, commonly called “opossum shrimps”, was recently separated into three orders: Lophogastrida, Stygiomysida and Mysida (Meland & Willassen 2007). The Mysida consists of two families; the Petalophthalmidae and the Mysidae, with the latter by far the most speciose. Opossum shrimps in general and the Mysidae in particular are mainly marine organisms with a worldwide distribution occurring in all major oceans from the poles to the tropics. They fill a wide variety of niches, including benthic and pelagic lifestyles, and are found in estuarine, littoral and deep-sea habitats. Large swarms of mysids have a relatively large total biomass and make up an important food source for several marine organisms, including some fish species of economic importance. Due to their relatively high densities, opossum shrimps are a cornerstone of marine and estuarine food webs.

Despite their ecological and economic importance, relatively little is known about the New Zealand Mysidae, either taxonomically or ecologically. In a country where aquaculture and commercial fisheries are an important part of the economy, it is vital to understand the ecology and dynamics of marine food webs. This starts with a clear identification of the species in the food web. Generally, opossum shrimps have been ignored in surveys in New Zealand, mostly because of a lack of resources for taxonomic identification and/or ecological information.

As a first step and a basis for future studies we present an overview of the Mysidae in New Zealand. We include a species checklist, an overview of the material available in collections in New Zealand, and an identification key to species based on somatic characters.