



A new species of grenadier, genus *Macrourus* (Teleostei, Gadiformes, Macrouridae) from the southern hemisphere and a revision of the genus

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Abstract

A new *Macrourus* species from the southern hemisphere is described. It was first recognised from the Ross Sea, Antarctica after specimens sampled during the International Polar Year in 2008 showed significant genetic differences (C01) among those initially identified as *M. whitsoni* (Regan). *M. caml* **sp. nov.** has 8 (rarely 7 or 9) pelvic fin rays, a band (2–3 rows) of small uniform-sized teeth in the lower jaw, lacks an outer row of enlarged teeth in the upper jaw, 30–40 scales in a diagonal row from anal fin origin to lateral line, ventral surface of the head is mostly scaled, except for scaleless areas anterior to the mouth and on the anterior half of the lower jaw. *M. caml* **sp. nov.** is large, reaching at least 890 mm TL and appears to be abundant. Numerous specimens caught by commercial bottom longline vessels fishing in the Ross Sea are held at Museum of New Zealand Te Papa Tongarewa, Wellington New Zealand. All five species of *Macrourus* (*M. berglax*, *M. caml*, *M. carinatus*, *M. holotrachys*, and *M. whitsoni*) are compared and illustrated, based on examination of specimens, and a key to species is provided.

Key words: Fishes, Southern Ocean, Antarctica, taxonomy, distribution, identification key, illustration

Introduction

The development of a longline fishery for Antarctic toothfish (*Dissostichus mawsoni*) in the Ross Sea region and for Patagonian toothfish (*D. eleginoides*) further north by New Zealand fishers from about 1998 onwards resulted in the incidental capture of many slope-dwelling fishes. Numerous bycatch fish specimens were retained by New Zealand Ministry of Fisheries observers on board longline vessels and were later transported to New Zealand and gifted to the Museum of New Zealand Te Papa Tongarewa (Te Papa) where they were identified, registered, preserved, and stored in the fish collection (Roberts & Stewart 2001). Analysis of New Zealand catch data from the Ross Sea bottom longline fishery showed that macrourids, probably mostly *Macrourus* spp., made up most of the bycatch with 10 tonnes (t) reported in 1998 which increased to 480 t in 2005 (Hanchet *et al.* 2008). Identification of Ross Sea *Macrourus* specimens at sea by observers was uncertain with many records of *M. carinatus* (Günther) from early years. A sample of 375 specimens caught in 2002 in the Ross Sea bottom longline fishery frozen on board and later returned to NIWA Wellington were tentatively identified using information from Iwamoto (1990a & b) and included 364 *M. whitsoni*, now known to have included *M. caml* **sp. nov.**, and 11 *M. holotrachys* Günther (Marriott *et al.* 2003).

A biodiversity survey of the Ross Sea area was carried out in 2004 (BioRoss Western Ross Sea Voyage) funded by the New Zealand government. This sampled around the Balleny Islands and northwest Ross Sea at depths of 64–1444 m with gear including epibenthic sled, beam trawl and a large rough-bottom fish trawl. Numerous specimens of what were tentatively identified as *M. whitsoni* were captured and returned to Te Papa. A second Ross Sea biodiversity survey (IPY-CAML Voyage) was completed in 2008 and also sampled numerous specimens of *Mac-*