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## Descriptions of four species of grenadier fishes of the genera *Hymenocephalus* and *Hymenogadus* (Teleostei, Gadiformes, Macrouridae) from the New Zealand region and Tasman Sea, including two new species of *Hymenocephalus*

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### Abstract

Two new species of *Hymenocephalus* are described from the New Zealand region and Tasman Sea. *Hymenocephalus fuscus* sp. n. has 11–12 pelvic fin rays, is darkly pigmented, with enlarged bony ridges on the dorsal aspects of head, lacks a chin barbel, has few (16–19) gill rakers on inner side of first arch and is similar to other species in the *H. aterrimus* species group. *Hymenocephalus maculicaudus* sp. n. has 8 pelvic fin rays, a mid-lateral line of melanophores on body and tail that extends about a head length posterior to anal fin origin, a short (7–16 % HL) chin barbel and is similar to other species in the *H. megalops* species group. *Hymenocephalus nascens* has 12–14 pelvic fin rays, lacks a chin barbel, has a mid-lateral stripe of silvery (fresh) or brownish (preserved) pigment running along trunk and tail. *Hymenogadus gracilis* has a serrated (weak, near tip) first dorsal fin spine, 7–9 pelvic fin rays, long (20–30% HL) chin barbel, and one row of enlarged melanophores along lateral mid-line of the tail. *Hymenocephalus nascens* and *Hymenogadus gracilis* are recorded for the first time from the New Zealand region. A key to the known New Zealand species of *Hymenocephalus* and *Hymenogadus* is provided.

**Key words:** taxonomy, distribution, identification key, illustration, Australasia, new species

### Introduction

The genus *Hymenocephalus* Giglioli 1884 includes species that are commonly referred to as glasshead or membranehead rattails or grenadiers. It was first recorded from New Zealand by Paulin *et al.* (1989), and subsequently, King *et al.* (2009) listed *Hymenocephalus* spp. A–D in an inventory of known New Zealand fishes. The known New Zealand species of *Hymenocephalus* and of the recently resurrected genus *Hymenogadus* Gilbert & Hubbs 1920 (see Iwamoto *et al.* 2011) are detailed here for the first time. Species of both genera share features including small size, typically less than about 20 cm TL (Iwamoto 1990), 7 branchiostegal rays, one small lens-like light organ on the chest anterior to the pelvic fin bases plus a second just anterior to the anus, and blackish striations on a silvery chest (associated with light production). Specimens of the monotypic genus *Lepidorhynchus denticulatus* (Richardson, 1846) also have blackish striations on a silvery chest but have only one small lens-like light organ just anterior to the anus, and 6 branchiostegal rays. All known New Zealand specimens of *Hymenocephalus* and *Hymenogadus* were captured from central and northern waters and in areas north and west of New Zealand. There were few specimens held in the collection of the Museum of New Zealand Te Papa Tongarewa (Te Papa), probably due to inadequate sampling at appropriate depths with fine-mesh nets. Several specimens were taken from the Tasman Sea during the 2003 NORFANZ survey, prompting the present study. Results revealed the presence in the New Zealand region of two new species of *Hymenocephalus* and two widespread species, *Hymenocephalus nascens* Gilbert & Hubbs 1920, and *Hymenogadus gracilis* (Gilbert & Hubbs 1920).

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