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A review of the anglerfish genus *Chaunax* (Lophiiformes: Chaunacidae) from New Zealand and adjacent waters, with descriptions of four new species

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Abstract

Species of the anglerfish genus *Chaunax* Lowe, 1846 from the New Zealand region are taxonomically reviewed with six species recognized and described: *Chaunax penicillatus* McCulloch; *C. nudiventer* Ho & Shao, a new record for New Zealand; and four species new to science. *Chaunax flavomaculatus* **sp. nov.** distinguished by having its skin covered with a mix of numerous bifurcated and simple spinules, large yellow spots on dorsal surface of fresh specimens, and brownish coloured esca cirri; *Chaunax mulleus* **sp. nov.** by having a uniformly pink body with a deep red colour on ventral surfaces of the outer pectoral-fin and pelvic-fin, and lower part of caudal fin; *Chaunax reticulatus* **sp. nov.** by having cirri on the dorsal surface of head, and a pale reticulate colour pattern on a greyish background dorsally; and *Chaunax russatus* **sp. nov.** by its very wide illicial trough that is usually as wide or wider than the diameter of the pupil, and uniformly deep red body colour with creamy white to fuzzy greyish spots or patches on its dorsal surface. A key to species recognized from the study area is given.

Key words: Chaunacidae, *Chaunax*, taxonomy, new species, new record, New Zealand

Introduction

The Chaunacidae, one of 18 families in the order Lophiiformes, is a group of medium-sized (up to 400 mm total length) benthic fishes inhabiting the continental slope, usually at depths in excess of 200 m to about 2500 m. Members of Chaunacidae differ from those of other lophiiform families in having a large rounded, elevated head and a body with flaccid, loose skin, which is densely covered by minute, prickle-like scales; a relatively short illicium near the tip of the snout, bearing a terminal esca with a dense cluster of short cirri, which is retractable into a scaleless illicial trough immediately behind it; and a conspicuous network of open sensory canals on the head and body. The taxonomic history of Chaunacidae has been reviewed by Caruso (1989) and Ho & Shao (2010), who recognized a total of 16 species in two genera. Following the results of the present paper, a total of 20 species are now recognized.

The family Chaunacidae was first recorded in northern offshore waters of New Zealand by Stephenson (1971) who reported two species: *Chaunax penicillatus* McCulloch, 1915, captured in 1969 from east of the Aldermen Islands at 365–475 m depth, and *Chaunax pictus* Lowe, 1846, captured in 1962 from the northern Three Kings Ridge (outside the NZ EEZ) at 537–676 m.

Chaunax penicillatus was erroneously omitted from subsequent faunal lists of New Zealand fishes, whereas the name *Chaunax pictus* was reported in the New Zealand fish fauna by Ayling & Cox (1982: 136), Paulin & Stewart (1985: 27) and Paulin *et al.* (1989: 135, 256). Over time, following the development of a deep-water orange roughy and oreo dory fishery using bottom trawls around New Zealand, further specimens were collected by research vessels and commercial fishing vessels and sent to the National Fish Collection at Te Papa for further study. However, the names registered for these specimens were largely inaccurate due to the lack of reference resources, especially detailed descriptions and reliable keys. The accounts by Ayling & Cox (1982) and Paulin *et*