

# First Record of a Rare Cusk Eel, *Epetriodus freddyi*, from the Northern Hemisphere (Actinopterygii: Ophidiiformes: Ophidiidae)

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A specimen (184 mm SL) of the rare neobythitine ophidiid *Epetriodus freddyi* Cohen and Nielsen, 1978, the only known species of its genus, was collected in the Hyuga-nada basin, southwest of Shikoku Island, Japan, at a depth of 1,501–1,516 m in 1999. It was identified by its unique possession of needle-like teeth on both jaws as well as the vomer and palatines, and the following combination of characters: 25 pectoral-fin rays fully joined by membranes; 8 caudal-fin rays; 21 long gill rakers on the first arch; eye diameter about half snout length; two median basibranchial tooth patches; short, sharp opercular spine; and two filamentous pelvic-fin rays originating below preopercle. This species has been reported only from South Africa, Mozambique, Western Australia, and the French territory of Wallis and Futuna in the Southern Hemisphere. Thus, the present specimen represents the first record of the genus and species in the Northern Hemisphere.

**Key Words:** Ophidiid fish, Neobythitinae, western Pacific, Japan.

## Introduction

*Epetriodus freddyi* Cohen and Nielsen, 1978, is a rare ophidiid reported in the literature only from off Mozambique, South Africa, Western Australia, and New Caledonia (actually Wallis and Futuna: see “Remarks”) in the Indo-West Pacific, all these sites being located in the Southern Hemisphere (Cohen and Nielsen 1978; Shcherbachev 1980; Williams *et al.* 1996; Nielsen and Cohen 1999). This neobythitine species, the only known representative of its genus, reaches at least 215 mm SL and is a benthopelagic inhabitant at depths between 1,000 and 1,750 m (Nielsen and Cohen 1999).

In 1999, a single ophidiid specimen (184 mm SL) was collected by R/V *Tansei-maru* at a depth of 1,501–1,516 m in the Hyuga-nada basin, southwest of Shikoku Island, southern Japan. The specimen was identified as *E. freddyi* by its unique possession of numerous needle-like teeth on both jaws as well as vomer and palatines, along with a combination of other characteristic features. Consequently, this paper reports the first record of this genus and species in the Northern Hemisphere, and provides an updated diagnosis and description of the species.

## Methods

Counts and measurements mainly follow Hubbs and Lagler (1958), but the number of gill rakers, maxillary depth,

and predorsal and preanal lengths are as defined by Cohen and Nielsen (1978), and head pore counts follow Cohen (1974). Vertebrae and vertical-fin rays were counted from radiographs. Standard length is abbreviated as SL. The institutional abbreviations follow Sabaj Pérez (2014).

*Epetriodus* Cohen and Nielsen, 1978

[New Japanese name: Kurosode-itachiyo-zoku]

*Epetriodus freddyi* Cohen and Nielsen, 1978

[New Japanese name: Kurosode-itachiyo]

(Figs 1–4, Table 1)

*Epetriodus freddyi* Cohen and Nielsen, 1978: 30 (original description, type locality: off Mozambique, southwestern Indian Ocean, 21°18'S, 36°18'E); Shcherbachev 1980: 143 (record and description, east of South Africa, western Indian Ocean, 32°30'S, 35°02'E); Nielsen and Cohen 1986: 345 (short description, western Indian Ocean); Williams *et al.* 1996: 148 (record and list, Western Australia, 24°30'S, 111°51'E–27°07'S, 112°23'E); Nielsen 1999: 1980 (list, western Pacific Ocean); Nielsen and Cohen 1999: 64 (short description, off east Africa to New Caledonia); Hutchins 2001: 23 (list, Western Australia); Hoese *et al.* 2006: 559 (list, Indo-West Pacific); Fricke *et al.* 2011: 366 (list, New Caledonia).

**Material examined.** BSKU 86813, female, 184 mm SL, Hyuga-nada basin off Kochi Prefecture, Japan, Pacific Ocean (32°24.447'N, 132°16.027'E–32°25.188'N, 132°17.909'E),