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## A review of the rudderfish genus *Tubbia* (Stromateoidei: Centrolophidae) with the description of a new species from the Southern Hemisphere

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### Abstract

A combination of morphological and molecular techniques was used to confirm the existence of a second species of the monotypic centrolophid genus *Tubbia*. Adults of the seamount rudderfish, *T. stewarti* **sp. nov.**, which reaches about 56 cm SL, is mesopelagic at depths of 525–1438 m in the temperate waters of the Southern Hemisphere. It has a confirmed distribution off Australia and New Zealand where it occurs sympatrically with the wider ranging *T. tasmanica* Whitley. Like most other members of the group, juveniles live in the epipelagic zone where they have been taken at 30–50 m depth. The new species has a more robust head, more slender body, more flattened interorbit, longer jaws, denser head pores, relatively larger eyes and nostrils, narrower caudal peduncle and more vertebral centra than *T. tasmanica*, and also differs subtly in some morphometric ratios. A rediagnosis of *T. tasmanica* is also provided.

**Key words:** Centrolophidae, *Tubbia*, new species, temperate seas, Southern Hemisphere, Australia, New Zealand

### Introduction

The monotypic centrolophid genus *Tubbia* Whitley, represented by a single nominal species *Tubbia tasmanica* Whitley 1943, can be distinguished from all other centrolophid genera by a high vertebral count (i.e. 43–44 centra, McDowall, 1979) and supposedly by the arrangement of predorsal bones (Ahlstrom *et al.*, 1976); *Schedophilus* Cocco, the most morphologically similar centrolophid to *Tubbia*, has only 25–30 vertebral centra (McDowall, 1979). *Tubbia* is confined to temperate waters of the Southern Hemisphere, near seamounts and along continental slopes, where it has been recorded from off southern Australia (Tasmania and nearby seamounts), New Zealand (southern Campbell Plateau to the South Island) and South Africa (off Natal), to a depth of 850 m (McDowall, 1979; Daley *et al.*, 1997).

Whitley's (1943) description of *T. tasmanica* was based on the single juvenile holotype (as 72.5 mm SL by McDowall, 1979, as well as now) and no other documented records existed until 1979. Until then the validity of the genus *Tubbia* remained unclear. Haedrich (1967), in his groundbreaking treatment of the group, had earlier suggested that *T. tasmanica* was a likely junior synonym of *Schedophilus huttoni* (Waite 1910), which also has a temperate distribution in the Southern Hemisphere. He also stated "unfortunately, the species from the Australian region are very poorly known. Because of their isolated geographic distribution, critical examination of the species will doubtless provide much insight into the evolution of the soft-spined centrolophids". Haedrich and Horn (1972) later included *T. tasmanica* in a key to *Icichthys* Jordan & Gilbert. In 1979, McDowall provided a full redescription of *T. tasmanica* based on the holotype, three specimens from New Zealand, and a specimen previously identified by Smith (1934) as *Schedophilus medusophagus* (Cocco 1839) from southern Africa.

In November 1992, a substantial collection of adult *Tubbia* (265–405 mm SL) were taken during a survey of the fishes of the Pedra Branca seamount, off southeastern Tasmania. The catch was represented by two species of similar size that differed subtly in the morphology of the head, notably in relative eye and nostril sizes and the