

Description of a New Monacanthid Fish of the Genus *Thamnaconus* from Fiji

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Abstract

A new species of monacanthid fish, *Thamnaconus fijiensis*, is described from Fiji. It is distinguished from other members of the genus by the 4-5 lines of spots along the side of the body. *T. fajardoi* Smith from off the east coast of Africa appears to be its closest relative, differing only in the more closely spaced body spotting and noticeably larger scales.

Introduction

The monacanthid fish genus *Thamnaconus* Smith is the richest genus in the family with a known total of 15 species (Hutchins, in preparation). However, most of its members are poorly known mainly because of their generally deep water habitats (to 360 m). Also the species have been placed in a variety of genera including *Cantherhines* Swainson, *Navodon* Whitley (a junior synonym of *Meuschenia* Whitley, see Hutchins 1977) and *Pseudomonacanthus* Bleeker, thus their relationships have remained obscure. Smith (1949) described *Thamnaconus* for *Cantherhines arenaceus* Barnard, a South African species. At the same time he included another South African species, *T. modestoides* (Barnard), and subsequently (1953) described *T. fajardoi* from the Mosambique Channel. Recently the generic name has been applied to other species from Australia, Japan and Hawaii (see Hutchins 1977; Zama and Yasuda 1979; Hutchins and Randall 1982; Springer 1982). The purpose of this paper is to describe a new species of *Thamnaconus* from Fiji and to compare it with the closely related *T. fajardoi*.

Measurements and counts follow Hutchins (1977). The holotype is housed at the University of the South Pacific, Fiji (USP).

Systematics

Thamnaconus fijiensis sp. nov.

Figures 1, 2 and 3

Holotype

USP 4541, 137 mm SL, collected by fish trap outside Suva Barrier Reef, Fiji, 183 m deep, 16 January 1980.

Diagnosis

This species is placed in the genus *Thamnaconus* on the basis of its elevated anterior dorsal and anal fin rays, the laterally-directed barbs in the posterolateral series on the first dorsal

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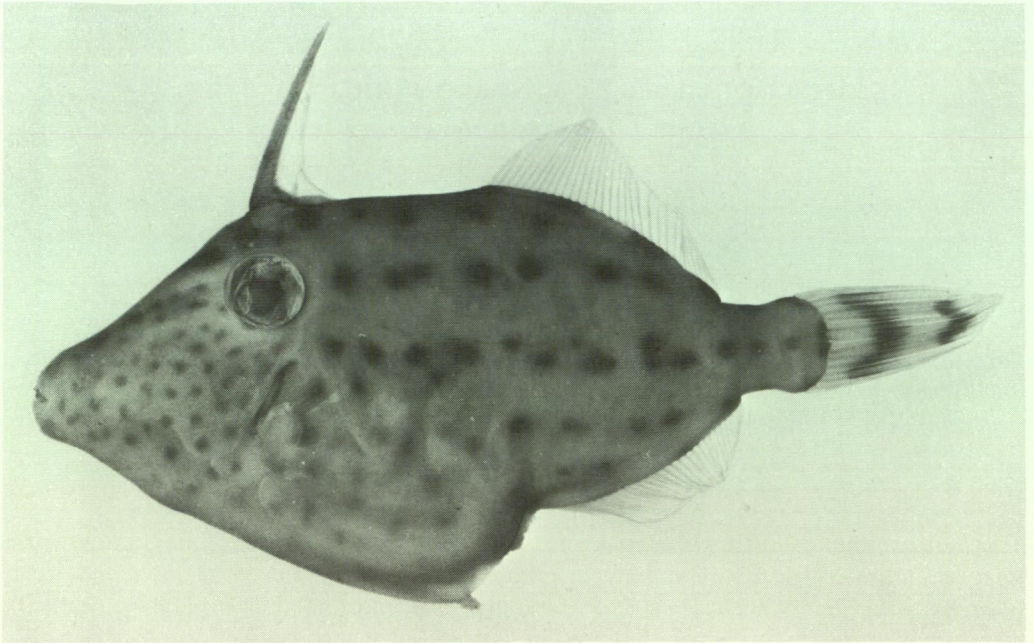


Figure 1 *Thamnaconus fijiensis* sp. nov., holotype, 137 mm SL.

spine, the two pairs of encasing scales fused immovably to the posterior end of the pelvis, and the 19 vertebrae. It is distinguished from other species of *Thamnaconus* by the 4-5 lines of dark spots along the side of the body, the others being either non-spotted, covered with very small dark spots, or possessing larger spots which do not form 4-5 lines along the side. *T. fajardoii* is most closely related to *T. fijiensis*, but its body is almost entirely covered with moderate-sized dark spots (in small specimens the upper 1-2 series tend to form lines) and noticeably larger scales.

Description

Dorsal fin rays 33; anal fin rays 32; pectoral fin rays 13-14; caudal fin rays 12; vertebrae 7 + 12 = 19.

Body compressed and moderately deep, width 2.4 in head length and depth 2.3 in SL; head length 2.9 in SL; profile of snout concave (lateral view), length 3.5 in SL; eye diameter 3.4 in head length, 1.1 in interorbital width; gill slit length 3.2 in head length, centered below and slightly anterior to centre of eye; pelvis capable of moving vertically through an arc of about 15°, producing a moderate-sized ventral flap.

Mouth small, terminal, lips not fleshy; dentition normal, consisting of 3 outer and 2 inner teeth on each side of upper jaw, extremities of inner teeth projecting between outer teeth; 3 teeth on each side of lower jaw, posteriormost small; extremities of all external teeth except posteriormost in each jaw pointed.

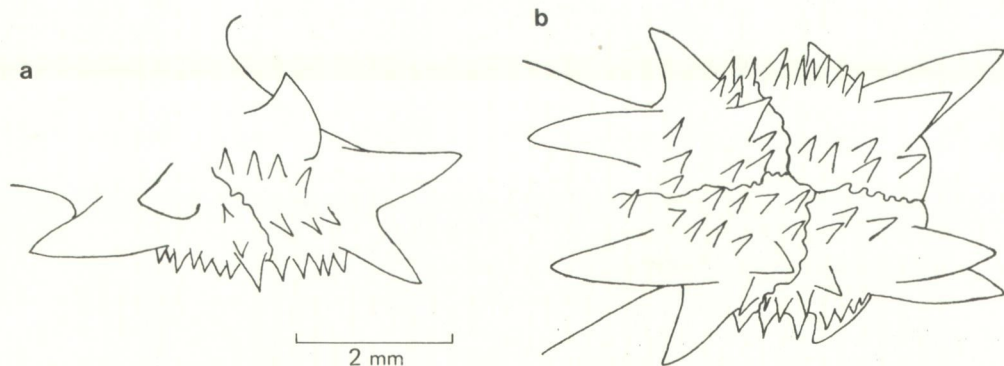


Figure 2 Lateral (a) and ventral views (b) of the pelvic fin rudiment of *Thamnaconus fijiensis* sp. nov., holotype.

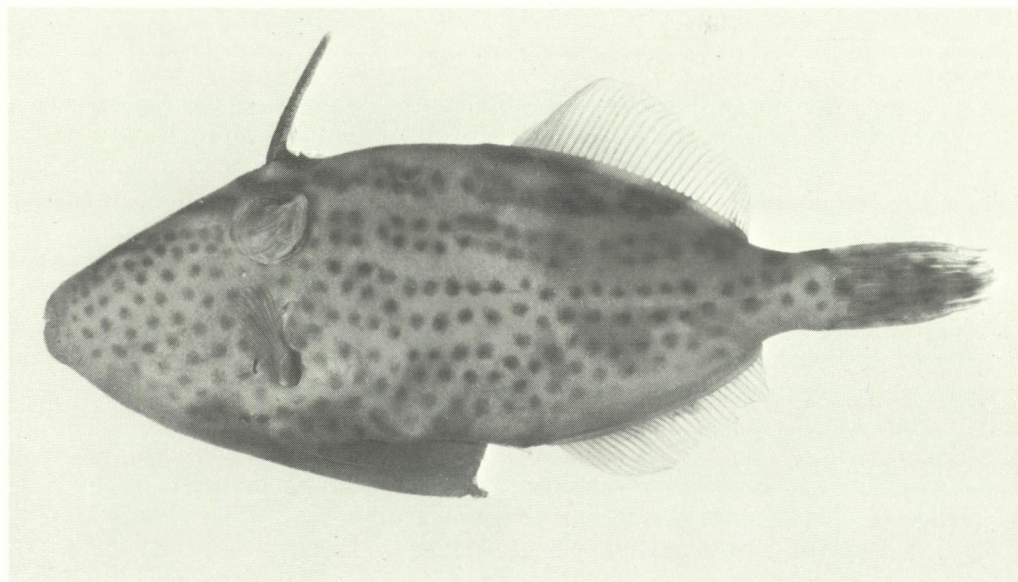


Figure 3 *Thamnaconus fajardoi*, MNHN 1983-315, 179 mm SL.

First dorsal spine strong and moderate in length (1.3 in head length), originating over anterior third of eye, received partly into shallow groove in back when depressed; dorsal spine armed with 4 series of downward-directed barbs, anterior face with 2 adjoining rows (some anterior barbs on lower half of spine also have short upward-directed projections), each posterolateral series directed laterally and numbering about 21; second dorsal spine small, hidden in skin at rear base of first spine; soft dorsal and anal fin rays moderately elevated anteriorly, longest (9th) dorsal ray 2.6 in head length, slightly longer than longest

anal ray; length of soft dorsal fin base 2.9, length of anal fin base 3.4, both in SL (bases of fin membranes not perforate); interdorsal space 1.3 in head length; base of pectoral fin below point slightly posterior to centre of eye; caudal fin length 1.3 in head length; all fin rays except those of caudal unbranched; pelvic fin rudiment non-mobile, moderate-sized (3.4 in eye diameter), consisting of 2 pairs of encasing scales fused to posterior end of pelvis, armed with small barbs (see Figure 2).

Scales on body small, armed with small, slender acute spinules which curve slightly posteriorly at extremities, giving a velvety feel; each mid-body scale possesses 2-3 transverse rows of spinules; scale outlines not visible to naked eye; caudal peduncle unarmed.

Colour of holotype in preservative (70% ethanol) (Figure 1): head and body pale brown with numerous dark brown spots, those on cheek relatively closely packed and tending to form curved lines, those on sides of body larger, more separated and forming 4-5 longitudinal series; 3 dark blotches on both soft dorsal and anal fin bases; a dark blotch surrounds anus; forehead crossed by U-shaped band at base of first dorsal spine and a V-shaped band anterior to it; all fins hyaline and unmarked except caudal which possesses 2 curved dark brown bands. Life colours unknown.

Remarks

Thamnaconus fijiensis so far is known only from the holotype collected at Fiji. Its closest relative is *T. fajardoi* (Figure 3) which inhabits seas off the East African coast, Madagascar and Mauritius at depths of 130-150 m. Both possess similar patterns of spotting, although considerably reduced on the body of *T. fijiensis* (see Figures 1 and 3). In addition, both have a dark blotch surrounding the anus, a U and V-shaped band across the forehead, and two curved bands across the caudal fin. They also possess the lowest elevated dorsal and anal fins of the genus, similar fin ray counts, and a first dorsal spine of almost identical structure. The main differences between the two lie in the degree of spotting on the body and the noticeably larger body scales of *T. fajardoi*. Thus it appears that *T. fijiensis* is most similar to *T. fajardoi*, even though there is a considerable geographical distance between the known ranges of the two. Perhaps, like *T. modestoides* which has recently been found in Australia (see Hutchins 1977) and Japan (see Zama and Yasuda 1979) as well as in South Africa, the distributions of these two species of *Thamnaconus* will be discovered, after more collecting in the intervening area, to be considerably closer together if not sympatric.

This species is named *fijiensis* with reference to the type locality.

Additional Material Examined

Thamnaconus fajardoi, 5 specimens, 79-179 mm SL: MNHN 1983-312, 79 mm SL, off Toliara (23°01'S, 43°26'E), Madagascar, 150 m, L.A. Maugé, 1 April 1969; MNHN 1983-315 to 317, 3 specimens, 152-179 mm SL, collected with previous specimen; BPBM 16309, 126 mm SL, off Grande Baie (20°00'S, 57°25'E), Mauritius, 130 m, J.E. Randall, 9 November, 1973.

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