

Description of a New Species of *Pranesus* (Atherinidae: Pisces) from the Capricorn Group, Great Barrier Reef

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DURING 1956–7 Richard J. Slack-Smith, Department of Zoology, University of Queensland, and the author investigated the fish fauna of Heron Island, Capricorn Group. A check list of the recorded species is to be published conjointly (Pap. Dep. Zool. Univ. Qd.). The fish described here is one of a number of new species collected at the island.

SUBFAMILY TAENIOMEMBRADINAE Schultz

GENUS *Pranesus* Whitley

Pranesus capricornensis, sp. nov.

HOLOTYPE: 93 mm. standard length, from reef flat, Heron I., Aug. 1956, collected by R. J. Slack-Smith, Queensland Museum no. I/8201.

PARATYPES: Queensland Museum nos. I/8202–5; 4 specimens, 69, 78, 85, and 88 mm.; 85 and 88 mm. fish taken along with holotype, 69 and 78 mm. fish collected by Woodland, Mar. 1957, reef flat, Heron I.

DESCRIPTION: Dorsal rays VII (V–VII) I,i,8 (9); anal I,i,12 (to 14); pectoral I,i,15; ventral I,5; caudal i,8 + 7,i. Scales from upper limit of gill opening to root of caudal fin 47 (46); median predorsal scales 21 (20); scales from origin of first dorsal to midline of belly 6½. Gill rakers on first right gill arch 5 (6) + 1 + 19 (to 22).

Depth 5.0 (4.8–5.1); head 4.2 (4.0–4.2); snout to first dorsal origin 1.75, to centre of anus 1.9, to anal origin 1.5 (1.4); all in standard length. Snout 4.5 (4.2–4.6); eye 2.4 (2.2–2.4); tip of snout to rear of maxilla 2.8 (to 3.2); least depth of caudal peduncle 3.2 (to 3.4); postorbital length of head 2.2 (2.1–2.3); distance between dorsal origins 1.5 (1.4); length of longest ray of pectoral fin 1.3 (1.2); interorbital space

2.8 (2.6–2.8); all in length of head. Least depth of caudal peduncle in its length 2.4 (2.0–2.4). Lateral band broad, its greatest width 1.5 in postorbital length of head (counts and measurements from holotype, with ranges exhibited in the four paratypes included in brackets).

Premaxilla with front margin slightly convex; teeth minute on dentary, vomer, and palatines, on premaxilla giving a shagreen-like finish to outer surface; air bladder and body cavity ending bluntly in front of anal origin; bony edge of preopercle with concavity near lower posterior corner; gill rakers long and slender, longest ½ as long again as diameter of pupil; maxilla reaching to halfway between vertical lines through anterior margins of orbit and pupil; centre of anus posterior to tips of depressed ventrals, 1.5 vertical scale rows distant from tips; vertical line through anus passing through fourth scale in front of first dorsal origin; anal fin origin under third scale in front of second dorsal origin; posterior margins of scales smooth; ascending premaxillary process short, broad based, not entering interorbital space (Fig. 1a); mandible without an abrupt elevation posteriorly on each ramus (Fig. 1b).

The sequence employed in listing descriptive characters is after Schultz *et al.* (1953). The formula for recording fin counts is that now in use in many taxonomic works: upper case Roman numerals for spines or, as in this instance, nonstriated rays; lower case Roman numerals for striated, unbranched rays; and Arabic numerals for branched rays.

DIAGNOSIS: *P. capricornensis* cannot be distinguished from its congeners on any single feature. Combination of the following characters is diagnostic: the broad lateral band; the scale row count from upper limit of gill opening to caudal fin base; and the position of the anus relative to the tips of the depressed ventrals and first dorsal fin origin.

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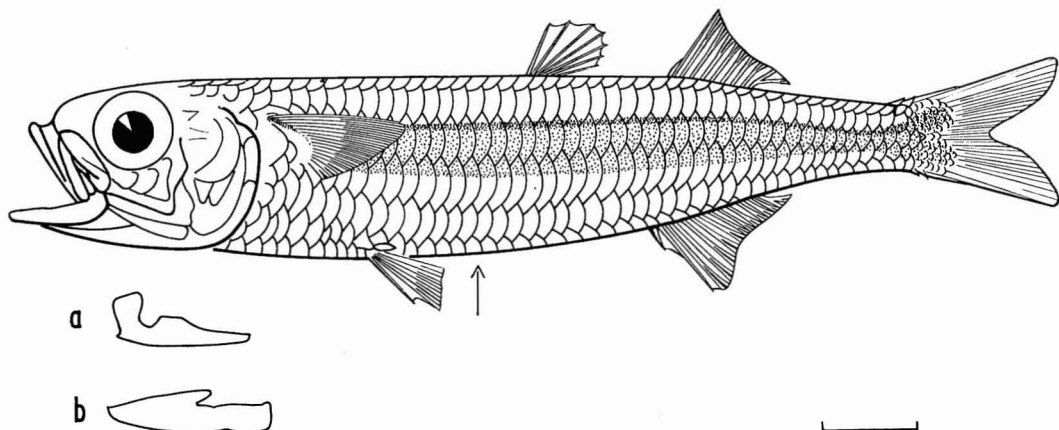


FIG. 1. *Pranesus capricornensis*, sp. nov., holotype, Queensland Museum no. I/8201 (scale line equals 10 mm.). a. Premaxilla; b, mandible.

COLOUR IN LIFE: Above lateral band, greenish; below band, silvery; lateral band silvery, but distinguishable from silver of belly by its more intense mirror-like finish; running from dorsal edge of pectoral base the full length of the upper limit of the lateral band a narrow (5.0 in width of lateral band) intense blue band terminating at root of caudal fin; a small blue spot on upper half of caudal fin scaly sheath; bluish crescent along upper $\frac{2}{3}$ of base of pectorals; dorsals, caudal, and distal half of pectoral fins faintly dusky, other fins pale; peritoneum black.

COLOUR IN FORMALIN: Above lateral band, area lying under margin of each scale with dark pigmentation; lateral band black with a suggestion of the blue of the narrow band in its upper limits; area below lateral band pale; scaly sheath at base of caudal fin with two dark patches derived by anastomosing of lateral band; narrow bluish crescent on pectoral base persisting; colour of fins as in life.

ECOLOGY: Heron I. is a coral atoll 50 mi. from the Australian mainland ($23^{\circ} 27' S.$, $151^{\circ} 57' E.$). In the cooler months (Mar.–Aug.) immense schools of atherinids are common over

the reef flat when it is flooded at high tide. All individuals taken from these schools proved to be a new species (*P. capricornensis*).

This fish was always seen swimming at depths of 1–3 ft. At low tides and during the warmer months it probably lives in open waters. The little tuna, *Euthynnus alleteratus affinis* (Cantor), which normally restricts its movement to open water, will venture on to the reef flat to feed on *P. capricornensis*.

Examination of alimentary canals of two adult fishes revealed various planktonic Crustacea, but the bulk of ingested material was unidentifiable. Females in spawning condition were recorded in Aug. 1956.

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REFERENCE

- SCHULTZ, L. P., E. S. HERALD, E. A. LACHNER, A. D. WELANDER, and L. P. WOODS. 1953. Fishes of the Marshall and Marianas islands. U. S. Nat. Mus. Bull. 202, 1: 1–685.