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A NEW FISH OF THE FAMILY SCORPAENIDAE FROM NEW GUINEA

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The ichthyological collections brought together in various parts of New Guinea by staff members of the Rijksmuseum van Natuurlijke Historie in 1954 and 1955 (cf. Boeseman, 1963), contain a series of scorpion-fishes which are here described as a new species, representing a new genus.

Cheroscorpaena genus novum

Mainly characterized by the, in the Scorpaenidae unique, pectoral fins, which consist of nine rays connected by a membrane, followed ventrally by three entirely detached simple rays of about the same length as the main fins.

The type and hitherto only species of this genus is:

Cheroscorpaena tridactyla species nova (pl. 1)

D XIII. 7 or 8, A III. 6 or 7, P i. 8-i-i-i, V I. 5, C 8 to 10 (branched rays only), gill-rakers on outer branchial arch 7 or 8 + 1 + 16 to 20, scales very small, 85 to 90 on body longitudinally, pores in lateral line about 28.

A for a member of the family Scorpaenidae fairly slender fish, depth 3.1 to 3.3 in standard length; greatest width 1.6 to 1.8 in greatest depth. Anterior profile almost straight from the blunt snout to the first dorsal spine (in the largest specimen slightly curved, concave on the snout, convex on the nape); outline of back moderately convex towards the tail; outline of body ventrally only slightly convex, with the deepest part of the body between the 2nd and 3rd dorsal spines and the basis of the ventral fins.

Head fairly large, 2.7 to 2.8 in standard length, with a more or less triangular outline. Snout blunt, anterior part vertical; eye small, its diameter about 7 in head and 2.5 in snout. Nostrils large, the posterior one in front

of lower half of eye, the anterior one in advance of the posterior one and slightly lower; anterior nostril half-way between eye and tip of snout or slightly nearer tip of snout; anterior nostril in a short tube.

Mouth large; maxillary reaching to a vertical through the posterior border of the orbit when the mouth is closed; maxillary free, not concealed by the preorbital, its posterior part more or less triangular in shape. Dentition well developed; bands of teeth on upper and lower jaws, vomer and palatines; no apparent canines, but all teeth fairly strong. Tongue well-developed, free, rounded, but slightly constricted behind the broad tip. Gill-openings wide, membranes free from the isthmus; gill-rakers well-developed, fairly long and slender, 7 or 8 + 1 + 16 to 20; usually 16 to 18 on the lower branch of the outer branchial arch; the longest two-thirds to three-fourths of eye-diameter.

Head with several spines and bony ridges, but without pits or furrows so characteristic of many other genera of Scorpaenidae. Specified the head-armature is as follows. The movable preorbital ends in a spine, directed backwards, of slightly over an eye diameter's length. On its ventral border the preorbital has a small spine, and there is usually also a small spine laterally on the basis of the great spine. More or less in one line with this is a bony horizontal ridge over the cheek, which ends at the hind border of the preoperculum in a strong spine; below this the posterior border of the preoperculum has three blunt spines. A feeble ridge runs from the snout to the anterior border of the eye, where it ends in a very small spine, which is sometimes absent on one or both sides. There is a less pronounced ridge from just above the eye backwards, where it ends in a hardly protruding spine; from there a ridge continues again, along the upper edge of the operculum, and ends in a similar spine, which is followed by a third spine. There are two, in a caudal direction slightly diverging, ridges on the top of the head, which end in little spines at the occiput. The opercula have two not very pronounced ridges, strongly diverging from a common origin, each ending posteriorly in a feeble spine, which does not protrude beyond the soft hind border of the operculum. The scapula, above the implantation of the pectoral, ends in a flat spine.

Scales. The whole body, with the exception of most of the head, is covered with small scales, 85 to 90 in a longitudinal series on the body. On the head, besides some rather indistinct ones on the nape, the scales are confined to the cheeks, both above and below the transverse bony ridge.

The lateral line is well-developed, almost straight, commencing just above the third supra-opercular spine and continued to the base of the caudal rays. There are about 28 unbranched tubes and pores.

Dorsal fin consisting of thirteen spines and seven to nine rays. The origin of the dorsal fin is on the nape, well in advance of the origin of the pectorals. Spines long and fairly slender; the first spine is from four-fifths to once the length of the snout; the second spine is half as long again; the third, fourth and fifth spines are 1.6 to 1.8 the length of the first, and less than an eye diameter shorter than the postocular part of the head; from the fifth onwards the dorsal spines gradually diminish in size to the thirteenth, which is 1.3 to 1.4 the length of the first spine. The anterior rays are slightly longer than the longest spine; their length decreases caudalwards. The membrane between the spines is deeply incised, especially between the anterior spines, where the incisions reach half-way down the length of the spines; between the posterior spines they reach down one-third.

The anal fin consists of three spines and six or seven divided rays; its origin is below the first soft ray of the dorsal fin and about three-fifths down the standard length. The first anal spine is of about the same length as the first dorsal spine; the second spine is 1.3 to 1.4 times the length of the first, and the third spine, which is longest, is 1.2 to 1.3 times the length of the second. The length of the anterior anal rays is slightly greater than that of the anterior dorsal rays, and equals the postocular part of the head; the length of the rays decreases considerably caudalwards, and the last ray is scarcely more than half the length of the first ray.

Pectoral fins large, well developed, with one simple and eight divided rays, followed by three detached simple rays. The greatest length of the pectorals is equal to or a little more than the length of the head. The three detached rays are slightly less than the length of the head.

Ventral fins with one spine and five divided rays; the spine equals in length the postorbital part of the head; the first ray equals in length the head without the snout; the following rays become successively somewhat shorter, and the last one has the same length as the ventral spine. The membrane connects the last ray over half its length with the ventral surface.

Caudal fin slightly longer than head without snout, rounded, but membrane apparently weak, and therefore frayed in all specimens. There are eight to ten divided rays, with one or two long simple rays and several short simple rays on each side.

Colour of preserved specimens light brownish, in most specimens with a number of ill-defined dark brown dots on the sides, most distinct above the lateral line. The membranes of D and A are partially darker, and P and V are blackish.

Material and measurements. Seven specimens from off Frederik Hendrik Island, collected between 28 March and 1 April 1955. Total length 103, 104,

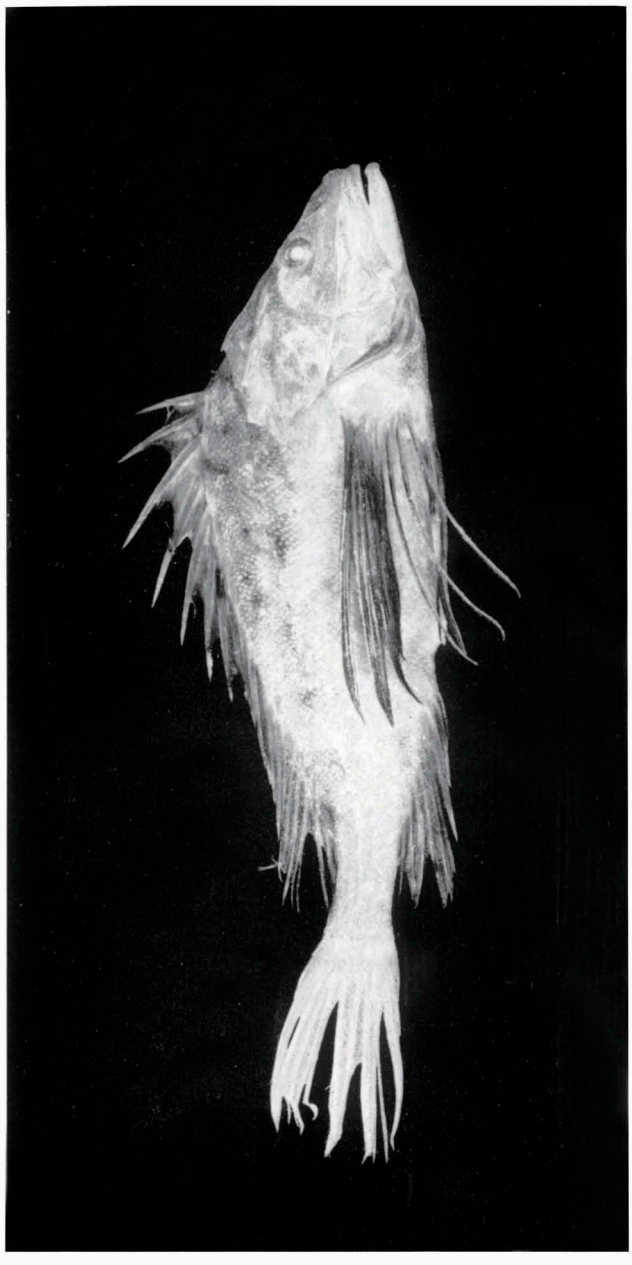
108, 111, 115, 120, 132 mm; standard length 78, 83, 84, 84, 90, 94, 105 mm. The largest specimen of this lot is the type, it is registered under no. 24787, the other specimens under no. 24788. One specimen from between Merauke and the Bian River, 10 February 1955, total length 144 mm, standard length 110 mm, regd. no. 24789. Two specimens from Merauke, 1954/1955 (no exact date is available), total length 88 and 150 mm, standard length 69 and 120 mm, regd. nos. 24790 and 24791.

Distribution. At present known from the shallow coastal waters between Merauke and Frederik Hendrik Island. It is quite likely that the species has a much wider distribution.

Systematic position. The movable preorbital with the long spine, and the small scales, place the new genus in the neighbourhood of *Paracentropogon* and related genera, rather than with more typical genera like *Scorpaena* and *Neosebastes*. Within the group of genera just indicated, however, *Cheroscorpaena* is distinct and well differentiated and in our present state of knowledge it would be premature to speculate on its precise affinities.

Reference

Boeseman, M., 1963. Notes on the fishes of western New Guinea I. — Zool. Meded. **38**: 221-242.



Cheroscorpaena tridactyla, type, natural size.