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Notes on the Fishes of the Cichlid Family I

Apistogramma cacatuoides sp. n.

by

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The Dwarf-cichlid genus *Apistogramma*, very popular among aquarists and at present among students of animal behaviour, hitherto comprises about 16 forms, several of them hardly specifically distinguished, and probably only based on stages or sexes of other species. Nevertheless I found a new form among a small collection of fresh-water fishes, imported alive by a sailor from near Paramaribo, in Dutch Guiana. I had the opportunity to keep them in an aquarium for several months, and to study their behaviour. When at last they died I tried to identify this species, and it then appeared that they were new to science. They may, however, be identical with the species described by INNES as *Apistogramma U*², of which I have been unable to find a scientific description yet.

The two specimens on which the new species is based, were captured near Paramaribo, where they lived together with *Apistogramma steindachneri* (REGAN 1908), at least forms which resemble this species in almost every character. I will report on this form in the revision of the genus which is in preparation.

Apistogramma cacatuoides new species

TYPES. Z.M.A. No. 100.033, male holotype 39.2 mm. standard length; female paratype 33.4 mm. standard length; collected near Paramaribo, Dutch Guiana (exact locality unknown), in March 1949.

DESCRIPTION. Body elongate, deeper anteriorly; greatest depth 2.96 (2.8 in female) at ventral origin; least depth of caudal peduncle 9.4 (9.25) in length, or 3.02 (2.88) in head; greatest depth of caudal peduncle 7.5 (7.2) in length, or 2.52 (2.4) in head; anus slightly more than a scale length in advance of first anal ray.

Head 3.09 (3.1) in length; snout rather short, 3.4 (3.37) in head; none of the lips projecting; nostril just half way between orbit and posterior border of maxillary; interorbital width 3.3 (3.51) in head; preorbital width 2.6 (2.41) in eye. Maxillary 2.8 (3.1) in head, extending to beyond eye. Teeth small and slender, brown tipped, in 3 rows in each jaw, outer series slightly larger.

Gill-membranes joined, free from isthmus; gill-rakers very short, knob-like, 13 on lower branch of first arch; superior lobe distinct. Branchiostegals, 5. No pseudobranchiae.

Scales feebly ctenoid, with 7 to 11 radials, and 1 to 5 radials in the cheek and opercular scales; circuli fine, coarser apically; about 25 very fine apical denticles. In a median lateral series 24-27, and up to 10 rows of very small scales on the basal half of the caudal fin; 9 scales between first dorsal spine obliquely downward and afterward to ventral; $7\frac{1}{2}$ scales between first anal spine obliquely upward and forward to base of dorsal; 8-9 predorsal scales; 11 scales round caudal peduncle; scales rather regularly arranged, smaller on caudal peduncle, on head, and on cheeks and operculum. Cheek scales in 3 rows; interopercular naked; 4 rows of opercular scales, and 2 rows of subopercular scales. Lateral line scales in the upper section 10 to 13, grooved in the posterior exposed part, not perforated by a pore; scales in lower section 5-8, rudimentary, the anterior ones usually only partly grooved.

Dorsal fin XV/5 (XV/4), inserted slightly in advance of the base of the pectorals; spines increasing in length to the sixth, then decreasing in length for five spines, the last spines of about equal length. The longest spine 0.8 in head; last spines 3.2 in head. All membranes behind the spines produced into elongate lappets; the lappets of the anterior six spines very long, from half the length of the spine in the sixth, to more than the length of the spine in the first. Spines, including membranes, free from each other to the base from first to fourth, for most of its length from fourth to seventh, and free for the lappets only in the other spines. Membranes not much produced in female. Last branched rays produced into a more or less distinct filament.

Anal fin III/7 (III/7), much as dorsal fin, except for the peculiar free anterior spiny rays in the latter. Sixth branched ray the longest, produced into a filament.

Caudal fin ii/9/ii (ii/7/ii), the outer principal rays prolonged in the male; this fin, as well as the anal fin rounded in the female.

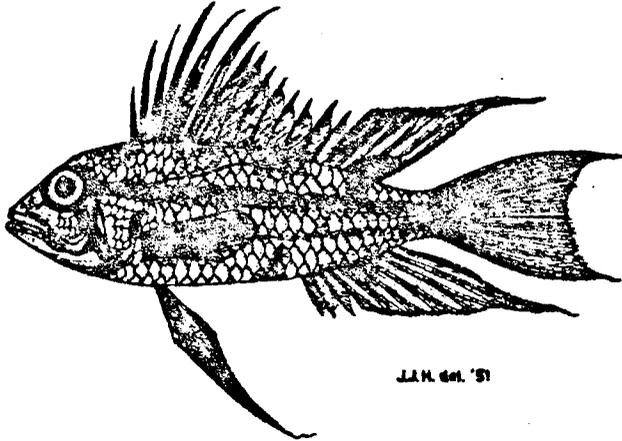
Ventral fins I/5, very elongate in the male, reaching to the base of the first soft anal ray or the filament beyond it. Pectoral fins iii/5/ii, inserted low, a little in advance of ventral origin, rounded, middle rays longest, none filamentous.

COLOURATION. Ground-colour in live, olive brown, with reflecting metallic blue scales. A dark band from hind margin of eye to the caudal spot, very distinct in both sexes. A blackish ocellus-like, rather irregular spot at the base of the last dorsal rays. First four dorsal rays very dark, scattered with melanophores, fins otherwise light blue, with darker blue dots on the posterior soft anal rays and near the base of the caudal fin. An irregular, rather broad black band extending from the outer margin of the eye obliquely downward to the angle of the operculum. There is a whitish streak at the upper side along the dark lateral band; back with dark brownish flecks. Belly lighter, above base of anal fin bright yellow; a yellow to greenish spot posteriorly above the eye; operculum with orange and light green to blue flecks. Occasionally a narrow dark streak

on the lower part of the body from pectoral base to lower part of caudal peduncle, and some transverse bands from the end of the dorsal fin, from the tenth to thirteenth dorsal spine, and from the sixth to ninth dorsal spine. Usually a dark spot in front of the first dorsal spine, at the posterior angle of the operculum, and at the corner of the mouth.

Preserved (alcohol) specimens are similarly coloured, but the bright blue, green and orange flecks are lost.

RELATIONSHIP. Technically this species is close to nearly all known forms in various characters, and especially to *Apistogramma steindachneri* (REGAN, 1908). The peculiar dorsal fin, however, puts it readily apart, and only in this character it has some resemblance with *Apistogramma ramirezi*, which is quite different otherwise. From *Apistogramma U₂* it is distinguished (taken from the photograph of this species by INNES, Exotic Aquarium Fishes, 1949 : 442) in the sixth spine being the longest, whereas it seems to be fifth in *U₂*. Nevertheless I am inclined to place *U₂*, if it does not turn out to be identical, close to this



Apistogramma cacatuoides sp. n. — ♂ holotype, standard length 39.2 mm.
Z.M.A. No. 100.033.

new species. Unfortunately the locality from which *U₂* came into aquarists circles is not known.

Before being able to put this species in its proper, natural place among the other forms, it appears to be necessary not only to revise the genus, but also to restrict the number of forms, and redefine their limits.

HABITS. A few words about the behaviour of this species may perhaps turn out to be of systematical value in course of time. When the fishes were received they measured about 30 mm. total length, and within three months they attained the definite length of 54 mm. (49 mm.) total length. They may not have been full-grown by that length, but for the year thereafter that they lived in the aquarium, they did not grow larger. From this and from the pairings that followed I concluded that this species probably is a rather small one, like *Apistogramma pertense*.

This species prefers a quiet, dark tank, some holes (stones), and at the same time loves a sunray from time to time. The eggs are light brownish, small, and are deposited on a cleaned stone, cared for and fanned by the male. The water should be neutral or slightly alkaline (pH 7 to 7.5), not hard (titrated hardness less than 2°), temperature between 18 and 25°C.

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