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A NEW BLIND CATFISH FROM BRAZIL

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CÆCORHAMDELLA, new genus

GENERIC CHARACTERS.—Eyes entirely absent. Spear-shaped occipital process comparatively long, but does not reach the basal plate of the dorsal fin, extending only $\frac{3}{4}$ of the distance from its base to the dorsal plate. Dorsal fin very high, its spine $1\frac{1}{4}$ in the head's length. Adipose fin short, contained 5 times in the length of the body (standard).

TYPE.—*Cæcorhamdella brasiliensis*, new species.

This genus differs from *Rhamdella* Eigenmann not only in the absence of eyes but also in form and length of the occipital process and in the length of dorsal and adipose fins.

Cæcorhamdella brasiliensis, new species

SPECIFIC CHARACTERS.—Body slender and long; head rounded and somewhat depressed. Dorsal fin high ($1\frac{1}{2}$ times in the head's length) and short (its base $1\frac{3}{4}$ in the distance to the adipose). Adipose short ($\frac{1}{2}$ of the length of the body).

Head in length, $4\frac{1}{2}$; depth, $6\frac{1}{4}$. Dorsal 1, 6; anal, 9.

DESCRIPTION OF TYPE.—No. 8604, American Museum of Natural History, 145 mm. long (inclusive of caudal fin). Body elongate and very low. Head covered with skin. A long, narrow, slit-like fontanel extends to the base of the occipital process, which has a very characteristic spear-shaped form and extends about $\frac{3}{4}$ way to the plate of the dorsal spine, but does not reach it. Orbit completely covered with skin; the only trace of eyes are slight depressions in their place. Maxillary barbels reach a little beyond the tip of the pectoral fin. There is a groove, extending from the base of the maxillary barbel backward along the lower margin of the orbital depression. Mental barbels (the longest) reach only to the base of pectoral fin. Dorsal fin high and its base short. Adipose short and far removed from the dorsal. Caudal forked, its upper lobe being longer than the lower. Anal short, with only 9 or 10 rays.

Three specimens, 145, 115, and 100 mm. long (total length inclusive of caudal fin), from the Province of São Paulo. Unfortunately there is no other indication as to locality and water basin where these fishes were caught.

This species greatly resembles *Rhamdella foina* (Müller uhd Troschel) and to some extent *Rhamdella eriarcha* (Eigenmann and Eigenmann). It differs, however, from both of them not only in the absence of eyes but also in some other characteristics, as follows. From *R. foina* (Müller and Troschel) in a longer occipital process (extending $\frac{3}{4}$ instead of $\frac{1}{4}$ of

the distance to the dorsal spine); in a higher dorsal spine, $\frac{1}{2}$ of the head (instead of $\frac{2}{3}$ of the head); in shorter base of the dorsal which is contained $1\frac{1}{4}$ in the distance between it and the adipose fin (instead of these two measurements being almost equal); in a much shorter adipose fin which is contained 5 times in the length of the body (instead of 3.5). From *Rhamdella* (*Rhamdia*) *eriarcha* (Eigenmann and Eigenmann) the new fish differs aside from characters given above in a round and obtuse head (instead of pointed); in form of the body and the length of the barbels; this last fish stands nearer to our new blind species than *Rhamdella foinea*, but in other characters the new species is closer to *R. foinea*.

Two other blind catfishes of the family Pimelodidae are known: *Typhlobagrus kronei*, Ribeiro (M. Ribeiro, 1911, 'Peixes. IV. Fauna Brasileira,' Arch. Mus. Nac. Rio de Janeiro, XVI, p. 250; cited by Eigenmann, 1919, "*Pimelodella* and *Typhlobagrus kronei*, Rib.," Mem. Carnegie Mus., VII, p. 255, Pl. xxiv, fig. 2); and *Cæcorhamdia urichi* Norman (J. R. Norman, 1926, 'A New Blind Catfish from Trinidad,' Ann. and Mag. Nat. Hist., XVIII, 9th Ser., No. 106, October, pp. 324-331, figs.). The first of these was found in the Cavernas das Areiras-Iporanga, São Paulo Province, Southern Brazil. According to Eigenmann, who gives a description and figure of this blind fish, it is essentially one of the genus *Pimelodella*—*Pimelodella lateristriga* (Müller and Troschel), from which it differs only by absence of eyes. (See his paper quoted above, and the article, 'The Homes of Blind Fishes,' in Geogr. Review, 1917, IV, p. 171.) His remark about the occurrence of semi-blind fish of the same species compels the admission that this is not actually a distinct genus nor even a distinct species, but simply a blind variety of the said *Pimelodella*.

The other blind catfish was brought from Guacharo cave, Trinidad (British West Indies). This is named by Mr. J. R. Norman *Cæcorhamdia*, new genus, *urichi*, new species. About its generic characters the author writes: "similar to *Rhamdia*, but without eyes." In specific characters it is referred to *Rhamdia queleni* (Quoy and Gaimard), with which it appears to be "almost identical, apart from the absence of eyes." In a footnote the author adds: "*Rhamdia wilsoni* Gill, from Trinidad, may be synonymous with this species" (*loc. cit.*, p. 325). The only difference from *Rhamdia queleni* he found is the size of the mandibular barbels, which "appear to be somewhat longer in the blind fish" (*loc. cit.*, p. 326). In regard to the erection of a new genus for this new blind fish, the author says that he did it "in order to draw attention to this interesting fish and following convention," though he realizes "that this procedure is some-

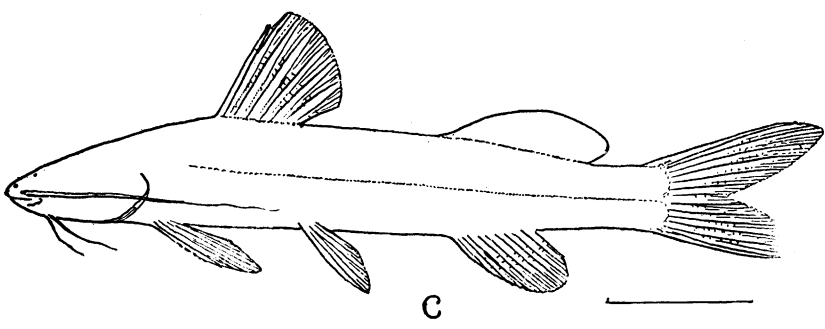
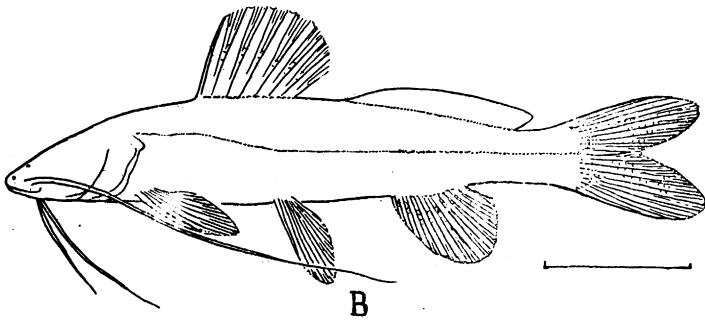
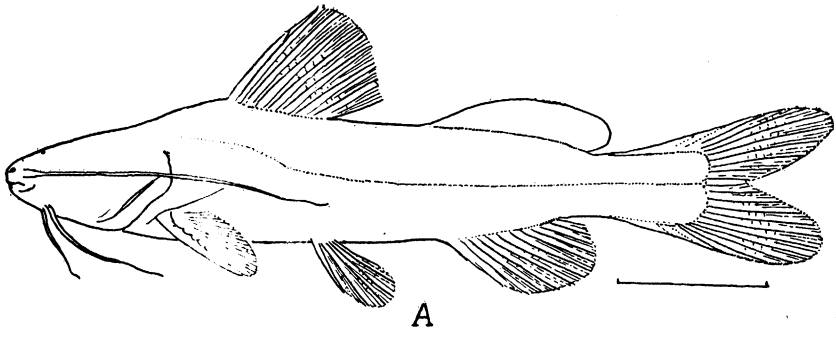


Fig. 1. A, *Typhlobagrus kronei* Ribeiro; B, *Cæcorhamdia urichi* Norman; C, *Cæcorhamdella brasiliensis* Borodin (type).

what unsatisfactory, for, were the eyes developed, the specimens from the Guacharo cave would probably be identified with the species *Rhamdia queleni*" (*loc. cit.*, p. 326). He mentions further, as a similar case, that of the other blind catfish, from São Paulo, S. E. Brazil, "*Typhlobagrus kronei* Ribeiro, which is said to be distinguishable from *Pimelodella lateristriga* (Müller and Troschel) only by the absence of eyes; indeed, Haseman (1911, *Ann. Carnegie Mus.*, VII, p. 323) has expressed the opinion that it should be designated as *Pimelodella lateristriga*, var. *kronei*" (*loc. cit.*, p. 327). There is a supplementary reason for this last opinion in the fact that all other known blind fishes possess, besides the absence of the eyes, some distinct characters of their own.

It should be worth while to mention that Mr. Norman's paper is accompanied with a list of blind fishes of different families, numbering fifteen altogether.

In a preliminary examination of this new Brazilian blind fish, I found that it closely resembled *Rhamdella foia* (Müller and Troschel). I was inclined to designate it as a blind variety of this species. But a closer study of the fish has shown that it is not only a new species but may appropriately be placed in a new genus, because it differs from the genus *Rhamdella* as well as from *Rhamdia*. I have therefore decided to follow the idea of Mr. J. R. Norman in naming this genus, adding in the form of a prefix to the name of the genus to which it is closely allied the word *cæca*, which means blind and indicates the most important characteristic of our blind catfish. Combining *cæca* with the name of the genus which stands closest (*Rhamdella*) makes evident its blindness, and also its relationship to other fishes of the same family. The new fish may then stand as *Cæcorhamdella brasiliensis* Borodin.

The accompanying table presents a summary of the comparative study of the three blind pimelodine catfishes. This comparison is completed by drawings of each. (Fig. 1, A, B, C.)

Typhlobagrus kronoi Ribeiro

Head 4-4.2
Depth 5.5
Dorsal I, 6 (I, 7 in one case)
Anal 12-15 (usually 14)
Maxillary barbel to near middle of ventral.

Posterior mental barbel to beyond base of pectoral.

Fontanel narrow, extending to base of occipital process, which reaches to dorsal, its width nearly 4 in its length.

Dorsal spine equals $\frac{1}{2}$ head.

Adipose 3.75 in the length.
Upper caudal lobe longer than lower by 0.25 to 0.2 of the length of head.

Cæcorhamdella brasiliensis

Borodin

Head $4\frac{1}{2}$
Depth $6\frac{1}{4}$
Dorsal I, 6
Anal 9-10
Maxillary barbel to or a little beyond tip of pectoral.

Mental barbel to the base of pectoral.

Fontanel narrow, extending to the base of the occipital process, which is spear shaped, and reaches only $\frac{3}{4}$ the distance to plate at base of dorsal spine.

Dorsal spine $1\frac{1}{4}$ times in the head.

Adipose 5 in the length.
Upper caudal lobe longer than the lower.

Cæcorhamdeta urichi Norman

Head $4\frac{1}{2}$ to $4\frac{1}{4}$
Depth 5
Dorsal I, 6 to 7
Anal 11
Maxillary barbel extends to anterior part or middle of adipose.

Outer mandibular barbel to the end of pectoral.

Occipital process long, narrow, *not reaching* plate at base of dorsal spine.

Dorsal spine slender, middle branched rays about $\frac{3}{4}$ length of head.

Adipose $2\frac{1}{2}$ -3 in the length.
Upper caudal lobe shorter than the rounded lower lobe.

