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AND
MAGAZINE OF NATURAL HISTORY,

INCLUDING
ZOOLOGY, BOTANY, AND GEOLOGY.

(BEING A CONTINUATION OF THE 'ANNALS' COMBINED WITH LOUDON AND
CHARLESWORTH'S 'MAGAZINE OF NATURAL HISTORY.')

CONDUCTED BY
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thought of sufficient importance to found a new genus (*Catastacus*) on. Moreover, Bell, in his description of the genus *Calocaris*, says that the second antennæ have "a large triangular scale reaching to the end of the first joint," and gives a figure of it at the head of his description of the only species. The length of this scaphocerite seems to be only a matter of degree; it is very short in the species which has just been described, it is longer in *Calastacus investigatoris*, And., and *Calastacus felix*, and longest of all in *Calastacus stilirostris*, Faxon.

C. Alcocki is easily distinguishable from *C. Macandrea* by the general naked appearance of the body and legs and by the marked differences in the rostrum and chelipeds.

From *Calastacus stilirostris* by the short external spine and scaphocerite on the second antennæ, the rostrum being grooved, the gastric area being smooth, and by differences in the chelipeds and the telson.

From *C. investigatoris* and *C. felix* by the carapace having no hairs and not being granular, in having shorter spines on the second antennæ, no denticle at the end of the carina, and the abdominal terga smooth, and by differences in the rostrum, telson, and chelipeds.

The species will be illustrated in an early issue of the "Illustrations of the Zoology of the R.I.M.S. 'Investigator.'"

LXIV.—*Diagnoses of new Fishes discovered by Mr. J. E. S. Moore in Lake Tanganyika.* By G. A. BOULENGER, F.R.S.

I. Cyprinidæ, Siluridæ.

Capoeta tanganicæ.

D. 12. A. 8. L. lat. 68-70. L. tr. $\frac{13-14}{14-15}$.

Depth of body $3\frac{3}{4}$ to 4 times in total length, length of head 5. Diameter of eye $3\frac{1}{2}$ in length of head, 2 in interorbital width; a very small barbel. Third ray of dorsal very strong, ossified. Caudal peduncle twice as long as deep. Olive above, each scale darker at the base, silvery white beneath.

Total length 320 millim.

North end of Lake Tanganyika.

*Barbus platyrhinus.*D. 11. A. 8. L. lat. 40. L. tr. $\frac{5\frac{1}{2}-6\frac{1}{2}}{5\frac{1}{2}}$.

Depth of body $3\frac{1}{4}$ times in total length, length of head 4. Snout broad and rounded, twice as long as eye, which is $5\frac{1}{2}$ times in length of head, $2\frac{1}{2}$ in interorbital width; barbels two pairs, subequal, as long as eye. No bony dorsal ray. Ventral below middle of dorsal. Caudal peduncle $1\frac{2}{3}$ as long as deep. $3\frac{1}{2}$ scales between lateral line and root of ventral. Olive-brown above, golden yellow beneath.

Total length 390 millim.

South of Usambura.

*Barbus altianalis.*D. 12. A. 8. L. lat. 35. L. tr. $\frac{6\frac{1}{2}}{5\frac{1}{4}}$.

Depth of body equal to or slightly greater than length of head, 4 to $4\frac{1}{4}$ times in total length. Snout moderately broad and rounded, $1\frac{1}{2}$ to $1\frac{2}{3}$ as long as eye, which is 5 to $5\frac{1}{2}$ times in length of head, 2 in interorbital width; barbels two pairs, subequal, as long as or a little longer than eye. Third dorsal ray very strong, bony, not serrated. Longest anal ray $\frac{5}{8}$ length of head, nearly reaching caudal when folded. First ventral ray corresponding to origin of dorsal. Caudal peduncle twice as long as deep. 3 scales between lateral line and root of ventral. Olive-brown, very dark above.

Total length 350 millim.

Lake Kivu and Rusisi River, N.E. of Tanganyika.

*Barbus serrifer.*D. 10. A. 8. L. lat. 28-30. L. tr. $\frac{4\frac{1}{2}-5\frac{1}{2}}{5\frac{1}{4}}$.

Depth of body 3 to $3\frac{1}{2}$ times in total length, length of head 4 to $4\frac{1}{2}$. Snout rounded, as long as or a little longer than eye, which is 4 to $4\frac{1}{3}$ in length of head and $1\frac{1}{3}$ to $1\frac{1}{2}$ in interorbital width; barbels two pairs, posterior longer, twice as long as eye. Third dorsal ray very strong, bony, strongly serrated. Last ventral ray below first of dorsal. Caudal peduncle $1\frac{1}{2}$ to $1\frac{2}{3}$ as long as deep. 3 scales between lateral line and root of ventral. Olive-brown above, silvery white below; a greyish stripe above lateral line; a small blackish spot at base of caudal.

Total length 120 millim.

North end of Lake Tanganyika.

*Barilius Moorii.*D. 12. A. 16-17. L. lat. 56-60. L. tr. $\frac{10-11}{7}$.

Depth of body equal to length of head, 4 times in total length. Mouth extending to below anterior third or centre of eye. Anal originating below middle of dorsal. 3 scales between lateral line and root of ventral. Silvery, brownish on the back; about 10 dark vertical bars on the body; dorsal blackish at the end.

Total length 115 millim.

North end of Lake Tanganyika.

*Barilius tanganica.*D. 13. A. 20. L. lat. 82. L. tr. $\frac{13}{7}$.

Depth of body equal to length of head, $4\frac{1}{4}$ times in total length. Mouth extending to below posterior border of eye. Anal originating below posterior third of dorsal. 4 scales between lateral line and root of ventral. Silvery, olive on the back; 16 or 17 dark vertical bars on the body.

Total length 260 millim.

North end of Lake Tanganyika.

Chrysichthys brachynema.

D. I 6. A. 12-13.

Head little longer than broad, smooth above; snout twice as broad as long; diameter of eye 5 to 6 times in length of head; maxillary barbel $\frac{1}{2}$ or $\frac{2}{3}$ length of head, outer mandibular $\frac{1}{3}$ or $\frac{1}{2}$; nasal barbel not or but scarcely longer than diameter of eye; teeth on the palate forming a broad crescentic or horseshoe-shaped band on the vomer and pterygoids. Dorsal spine $\frac{1}{3}$ or $\frac{2}{3}$ length of head. Adipose fin measuring $\frac{1}{3}$ or $\frac{1}{2}$ its distance from the rayed dorsal. Pectoral spine very strongly serrated. Caudal deeply notched, with obtusely pointed lobes. Olive above, white beneath.

Total length 400 millim.

Several specimens from Kalambo and Usambura.

Synodontis granulosus.

D. I 7. A. 11.

Head granular above; eyes supero-lateral; maxillary barbel simple, as long as or a little longer than the head;

mandibular barbels with short simple branches; anterior mandibular teeth very short, 40 to 42. Adipose dorsal 4 times as long as deep, $2\frac{1}{2}$ to $3\frac{1}{2}$ times as long as its distance from the rayed dorsal. Humeral process narrow, keeled, sharply pointed. Body covered with granular papillæ. Olive above, yellowish beneath; dorsal, anal, and paired fins black in front, orange behind; caudal black, edged with orange.

Total length 230 millim.

North end of Lake Tanganyika.

LXV.—Note on Diatoms from Chincha Guano.

By C. MERESCHKOWSKY.

[Plate XVI.]

I HAVE, through the kindness of Mr. E. Thum, of Leipzig, been provided with a very interesting slide containing a great number of Diatoms from Chincha guano (in Peru). Having carefully studied the various forms which it contains and determined the species so far as possible with the aid of the few books at my disposal, I give in the present note a list of forty-one forms accompanied by a few remarks concerning several of them and by the description of some new species and varieties.

The majority of Diatoms of which the Chincha guano material is composed belong to the group Anaraphidiæ or Cryptoraphidiæ. Different kinds of *Biddulphia*, small species of *Coscinodiscus* and *Chatoceros*, represented by a great number of species, form the greatest bulk of this material. There are only a few representatives of the group Raphidiæ and still fewer belonging to the group Pseudoraphidiæ, or Bacilloideæ, as I propose to call this group*.

1. *Diploneis vacillans*, var. *delicatula*, Cl. Very rare.
2. *Navicula Henedyi*, var. *subrostrata*, nov. var. (Pl. XVI. fig. 14.) Very rare.

Size small, length 0.044 mm., breadth 0.025 mm.: valve elliptic, with slightly rostrate apices; lateral areas moderately

* In a note which will soon be published I have separated the Nitzschioideæ and Surirelloideæ from the rest of the Pseudoraphidian Diatoms, and given to the latter the name Bacilloideæ, while the former have been united in a new group called Carinataæ.