

appear to exist in the Atlantic [? Atlas] chain of mountains in Morocco, whence it often invades the French provinces." According to other information, "the bears in question were small, thick-set, of a brown colour, with a white spot under the throat." *U. faidherbianus*, with other nominal species, was founded on remains from a cavern in the province of Constantine, Algeria, and is probably not distinct from the existing African form.

## II. *URSUS PRUINOSUS*.—*Tibetan Blue Bear*.

*Ursus pruinosus*, Blyth, Journ. Asiat. Soc. Bengal, vol. xxii. p. 589 (1853); *nec* Blanford, *ibid.* xlv. p. 318 (1877).

*Ursus lagomyiarius*, Prejevalsky, Cat. Zool. Collections of H. M. Prejevalsky, p. 9, no. 1 (St. Petersburg, 1887).

This Bear appears to be confined to Eastern Tibet, where it inhabits the neighbourhood of Lhasa. The claws and teeth are of the same type as in *U. arctus isabellinus*. Apparently it is always of small size; and is best characterized by the black and white pelage, which is quite different from that of any of the forms here included under *U. arctus*.

## III. *URSUS SPELÆUS*.—*Cave Bear*.

*Ursus spelæus*, Rosenmüller, Oss. Foss. Animal. p. 18 (1794).

The only other member of the *U. arctus* group, according to my idea, is the extinct European Cave-Bear, which is undoubtedly entitled to specific distinction. Apart from its huge size, which probably does not much exceed that of the Bear from Kadiak Island, this species is easily distinguished by the cheek-teeth. These are relatively very large, and the enamel of the molars is thrown into a number of fine corrugations or plications, producing a very complicated pattern. Even more distinctive is the last lower premolar (fig. 1, p. 419), which is relatively short, with the inner tubercles very large, and the first placed more on the inner side than in *U. arctus*. The frontal region rises very abruptly at the root of the nasals.

## 4. An Account of the Freshwater Fishes collected in Celebes by Drs. P. & F. Sarasin. By G. A. BOULENGER, F.R.S.

[Received March 9, 1897.]

(Plate XXVIII.)

At a recent meeting of this Society<sup>1</sup> I had the honour of reading a paper on the Reptiles and Batrachians of Celebes, based chiefly on the collections formed in 1893–96 by the Drs. Sarasin, and gave a full list of the species known to inhabit that island, together with a discussion of their distribution. In the present paper I will limit myself to an enumeration of the Fishes obtained by the Doctors themselves, because the question of the ichthy-

<sup>1</sup> Cf. P. Z. S. 1897, p. 193.



ological fauna of Celebes has been most ably dealt with, three years ago, by Prof. Max Weber<sup>1</sup>. Only about 80 specimens of Freshwater Fishes were collected, which are referable to 14 species, 4 being described as new. The localities are the same as enumerated in my previous paper, with the exception of the Lolak River, which runs a little to the west of the Dumoga River, in the kingdom of Bolang Mongondo, and Lake Lahendang in Minahassa.

1. *Gobius giuris*, Ham. Buch.

N. Celebes : Lolak R.

S.E. Celebes : Lakes Matanna and Towuti.

2. *Gobius sarasinorum*, sp. n. (Plate XXVIII. fig. 1.)

No canine teeth. Depth of body 4 to 5 times in total length, length of head  $3\frac{1}{3}$ . Head as broad as deep,  $1\frac{1}{2}$  as long as broad; upper jaw not projecting beyond the lower, maxillary extending to below anterior border of eye; diameter of eye  $4\frac{1}{2}$  times in length of head,  $1\frac{1}{3}$  interorbital width; opercles and occiput scaled; rest of head naked, with the sensory lines very distinct. Dorsal VI, 9; first dorsal nearly equally distant from the end of the snout and the base of the caudal; longest rays of second dorsal half length of head or a little less. Anal 9, opposite to soft dorsal. Ventral reaching the vent, or narrowly separated from it. Caudal peduncle twice as long as deep; caudal obtusely pointed. Scales 48-50; 16-20 in a transverse series. Yellowish brown to dark brown above, without markings; fins brown to blackish; ventrals sometimes whitish.

Total length 80 millim.

14 specimens from L. Posso, C. Celebes.

3. *Gobius latifrons*, sp. n. (Plate XXVIII. fig. 2.)

No canine teeth. Depth of body  $4\frac{1}{2}$ -5 times in total length, length of head  $3\frac{1}{3}$  to  $3\frac{1}{2}$ . Head broader than deep,  $1\frac{1}{4}$  as long as broad; upper jaw not projecting beyond the lower, maxillary extending to below anterior border of eye; diameter of eye 4 to  $4\frac{1}{2}$  times in length of head, as long as snout, equal to interorbital space, which is concave; opercles and occiput scaled, rest of head naked. Dorsal VI, 9; first dorsal nearly equally distant from the end of the snout and the base of the caudal; longest rays of second dorsal  $\frac{1}{2}$  to  $\frac{3}{5}$  length of head. Anal 8, opposite to soft dorsal. Ventral widely separated from vent. Caudal peduncle twice as long as deep; caudal rounded. Scales 34-35; 15 or 16 in a transverse series. Olive, with more or less distinct dark brown spots, which may form a zigzag on each side of the body; fins greyish or brown; a black spot on the first dorsal.

Total length 47 millim.

11 specimens from L. Matanna, S.E. Celebes, and one from the Kalaena River, C. Celebes.

<sup>1</sup> Zool. Ergebn. Reise Niederl. O.-Ind. iii. 1894, p. 429.



4. *SICYDIUM CYNOCEPHALUM*, C. & V.

N. Celebes : Lolak R.

5. *ELEOTRIS APOROS*, Blkr.

N. Celebes : Minahassa.

C. Celebes : Kalaena R.

6. *ELEOTRIS FUSCA*, Schn.

N. Celebes : Lolak R.

C. Celebes : Mapane.

7. *ELEOTRIS BELOBRONCHA*, C. & V.

N. Celebes : Lolak R.

8. *ANABAS SCANDENS*, Dald.

N. Celebes : L. Lahendang.

C. Celebes : L. Posso.

S. Celebes : Macassar.

9. *OPHIOCEPHALUS STRIATUS*, Bl.

N. Celebes : L. Lahendang.

C. Celebes : L. Posso.

*TELMATHERINA*, g. n.

Allied to *Atherina*, but distinguished by the more strongly compressed body, the absence of a silvery lateral band, and the smaller number of vertebræ (17+16)<sup>1</sup>.

10. *TELMATHERINA CELEBENSIS*, sp. n. (Plate XXVIII. fig. 3.)

Body strongly compressed, its depth 3 to  $3\frac{1}{3}$  times in total length; length of head  $3\frac{1}{3}$  to  $3\frac{1}{2}$  times. Upper surface of head flat, or slightly concave between the eyes; snout not projecting beyond the lower jaw, as long as the diameter of the eye, which is nearly 3 times in length of head, and a little less than interorbital width; mouth not extending to below anterior border of eye; teeth very small, forming a narrow villiform band. Gill-rakers moderately stout, nearly as long as gill-fringes, 15 on lower part of anterior arch. Snout and sides of head naked; posterior frontal and occipital regions with 8 large scales. Dorsal VI-VII, 11-12; the first dorsal much shorter than, and well separated from, the second, with the rays flexible but not articulate, the first prolonged in a filament; origin of first dorsal equally distant from the end of the snout and the base of the tail. Anal I 12-14, corresponding to the soft dorsal. Pectoral 16, obtusely pointed, upper rays longest, as long as head less snout, inserted at equal distance from the upper and the lower profile. Ventral I 5, inserted far behind the base of pectoral, opposite to origin of first

<sup>1</sup> I am indebted to Mr. J. Green for a sciagraph by means of which I have been enabled to count the vertebræ without injuring the specimen.



dorsal, nearly reaching origin of anal. Caudal bifid, deeply cleft, the lobes obtuse. Scales large, cycloid, finely striated concentrically, 32-34 in a longitudinal and 8 in a transverse series; no lateral line. Pale olive above, yellowish beneath, most of the scales with fine black specks, more crowded towards the free border; three rather indistinct dark vertical bars may be present on the body; dorsal and anal fins grey or blackish; caudal grey or blackish at the base.

Total length 70 millim.

Three specimens from Lake Matanna, S.E. Celebes.

11. *HEMIRHAMPHUS ORIENTALIS*, M. Weber.

C. Celebes: Kalaena R., Toka R. near Paloppo, stream between Enrekang and Batulappa.

S. Celebes: Macassar.

I doubt whether this species is really distinct from *H. fluviatilis*, Blkr., of Java.

12. *HEMIRHAMPHUS WEBERI*, sp. n. (Plate XXVIII. fig. 4.)

Depth of body 7 times in total length without mental appendage, length of head 4 times. Mental appendage nearly as long as the head; intermaxillary part of upper jaw longer than broad; interorbital region flat; diameter of eye  $\frac{3}{5}$  length of snout, and equal to interorbital width; nasal papilla much developed. Dorsal 9, commencing behind anterior third of anal. Anal 19, much longer than its distance from the caudal. Pectorals pointed,  $\frac{2}{3}$  length of head. Ventrals midway between eye and base of caudal. Caudal rounded. Lat. line ca. 50. Blackish above, silvery on the sides and below; fins white, pectorals black at the base, ventrals black at the tip.

Total length 90 millim.

A single specimen from Lake Matanna, S.E. Celebes.

This species, which is named in honour of Prof. Max Weber, belongs to the subgenus *Dermatogenys*, v. Hass., and differs from the other described species in the longer anal fin with more numerous rays, viz. 19 instead of 14 to 16.

13. *HAPLOCHILUS CELEBENSIS*, M. Weber.

S. Celebes: Macassar.

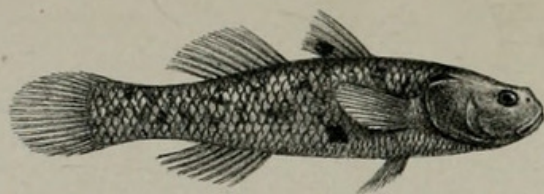
14. *ANGUILLA MAURITIANA*, Benn.

N. Celebes: Minahassa.

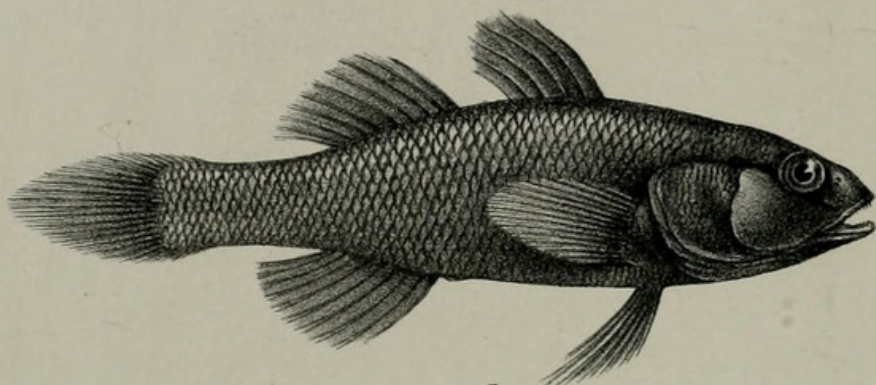
EXPLANATION OF PLATE XXVIII.

- Fig. 1. *Gobius sarasinorum*, Blgr., p. 427.  
2. „ *latifrons*, Blgr., p. 427.  
3. *Telmatherina celebensis*, Blgr., p. 428.  
4. *Hemirhamphus weberi*, Blgr., p. 429.

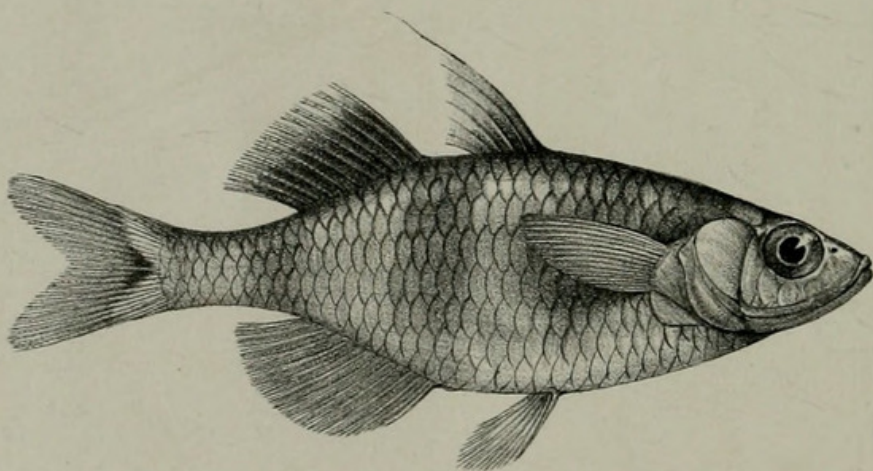




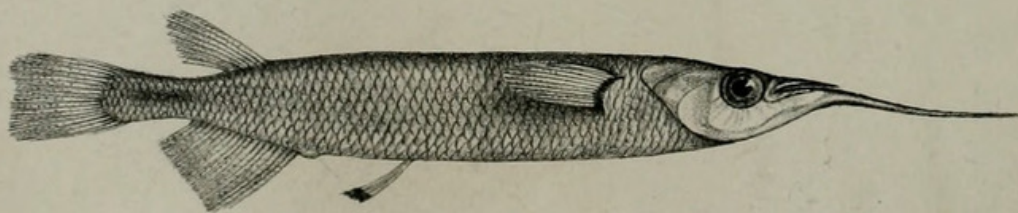
2.



1.



3.



4.



Boulenger, George Albert. 1897. "An account of the freshwater fishes collected in Celebes by Drs. P. & F. Sarasin." *Proceedings of the Zoological Society of London* 1897, 426–429.

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