

Family TACHIDIIDAE

Genus *Euterpina* Norman.

Euterpina acutifrons (Dana).

Euterpina acutifrons, Sewell, 1924, p. 836.

Euterpina acutifrons, Menon, 1931, p. 510.

Examples were taken in the Kurau river, Stations 56-64, 3. iii. 28.

This species appears to have a world-wide distribution. Menon (*loc. cit.*) notes that it is a very important constituent of the plankton of the Madras coast and is never entirely absent from it.

REFERENCES

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On some New or Rare Species of Ostariophysii from the Malay Peninsula and a New Species of Betta from Borneo

By L. F. DE BEAUFORT, ZOOLOGICAL MUSEUM, AMSTERDAM

Through the kindness of the Director of the Raffles Museum, Singapore, the fish collection of that museum and also that of the Department of Fisheries of the F.M.S. was sent to me for identification. I have now finished the study of the freshwater fishes and as a first result I give here an account of some new or rare species found in these collections.

***Acanthopthalmus pahangensis* n. sp.**

D.2.8. A.1.7. P.1.8. V.6.

Elongate, much compressed. Height 5.4, 6.3 in length with caudal. Head 4.2, almost 5 in length with caudal. Eye more than 9, more than 4 in snout. Suborbital spine bifid. Six barbels, 4 rostral and 2 maxillary ones. They are subequal and about as long as snout. Origin of dorsal more than twice diameter of eye behind origin of ventrals, which are about their

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own length nearer to tip of caudal than to tip of snout. Origin of anal slightly behind vertical through end of dorsal. Pectorals somewhat falciform, pointed, the second ray being produced, longer than head. Ventrals short. Posterior caudal margin somewhat concave. Coloration uniform. Length 44.5 mm.

One specimen, from "fish-drive" off Mentakab, Pahang river, Malay Peninsula, 30.5.1929. (Fisheries No. 235).

In the position of the dorsal this species comes near to *A. kuhli* and *A. borneensis*. It differs from both, besides in the fin formulæ, in the long falcate pectorals. In this respect it agrees with *Lepidocephalus macrochir*, with which species it has more points of resemblance. It differs however by having the head scaleless, the chief difference between the two genera *Lepidocephalus* and *Acanthopthalmus*.

***Acanthopthalmus (Cobitophis) muraeniformis* n. sp.**

D.7. A.7. P.1.7. V.6.

Compressed. Height about 16, head 7 in total length. Eye about 9, placed rather high, its posterior border in middle of head. Eight barbels, as besides the usual rostral, maxillary and mandibular pair, the lower lip, which in most species of *Acanthopthalmus* is bilobed, has two distinct barbels. The distance between the origin of the dorsal and the eye is twice, or twice and a half in young specimens, as long as the distance between origin of dorsal and caudal. End of dorsal somewhat before origin of anal. Origin of ventrals about their length before origin of dorsal, situated midway between pectorals and caudal. Pectorals about equal to ventrals, almost as long as head. First branched pectoral ray thickened. Caudal truncate. Scales minute. Colour of preserved specimens pinkish. Three brown crossbars through head, the eye between the first and second, the third through operculum. Back with a series of brown blotches, broader than the interspaces and continued or irregularly broken on upper part of sides. Belly uniform. Dorsal and caudal freckled with brown, other fins hyaline.

Six specimens, 40-49 mm. long, from Thomson Rd., Singapore Island 16.5.1912. (Raffles Museum F. 739/744).

This species belongs to the section of elongate species, which has been separated by Myers as *Cobitophis*. It differs from the two other species of the group by having 8 barbels and also by the position of the dorsal, the length of the paired fins and the coloration.

***Lepidocephalus furcatus* n. sp.**

D.2.6. A.2.5. P.8.6. V.1.6.

Elongate, much compressed. Height about 5.3, 6.6 in length with caudal. Head 4.8, 6 in total length. Eyes covered by skin,

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Mus. 8, 1933.

about 4 in head and 1.5 in snout. Suborbital spine bifid. Scales on head. Vertex, opercular and suborbital region scaleless. Eight barbels. The posterior rostral and maxillary ones about as long as eye, anterior rostral and mandibular barbels shorter. Origin of dorsal above that of ventrals, slightly nearer caudal than tip of snout. Height of dorsal equal to length of pectorals and slightly more than length of head without snout. Origin of anal at a distance equal to postorbital part of head behind last dorsal ray. Caudal forked. Scales minute. Colour of preserved specimens dark reddish brown, with irregular mottlings suggesting crossbands. Fins with rows of black spots. Length 33 mm.

Six specimens from Bukit Merah Reservoir, Perak, Malay Peninsula 18.7.1925. (Fisheries No. 218).

This species can be distinguished at once from other species of the genus by its forked tail.

Paralaubuca typus Blkr.

Paralaubuca typus Bleeker, Ned. Tijdschr. Dierk. II. 1865, p. 16.

Paralaubuca typus Sauvage, Nouv. Arch. Mus. Paris, 2. serie, Tome 4. 1881, p. 189.

?*Paralaubuca typus* Hora, Journ. Nat. Hist. Soc. of Siam, Vol. VI, 2, 1923, p. 148. Plate 10. fig. 2.

Three specimens from "fish Drive" off Mentakab, Pahang river, Malay Peninsula, 30. v. 1927.

These specimens agree with the descriptions of the species, given by the authors cited above. They all three show more or less the doubling of the lateral line, described by Sauvage and Hora. This species was only known from Siam.

Puntius sachsii (Ahl)

Barbus Sachsii Ahl, Zool. Anz. Bd. LVI. 1923. p. 182.

Barbus sachsii Ahl, Das Aquarium, October, 1929.

Five specimens from a pond at Serangoon, Singapore Island, 16. 5. 1932. (Raffles Musum F. 756/760).

Ahl did not know if his specimens came from India, the Indo-Australian Archipelago or China. The specimens from Singapore are therefore the first with a good habitat. According to Ahl, this species was introduced in Europe as an aquarium-fish as long ago as 1895.

In the largest specimen, 38 mm. long, the lateral line is complete or at least practically so, the lateral line running from head to caudal and having an interruption of one scale only at a few places. In the other specimens, otherwise perfectly similar to the former, the lateral line is only developed on the first scales.

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Lissochilus smedleyi n. sp.

D.II.8(9). A. 3.5. P.1.15-16. V.I.8-9. LI.27-28. Ltr. $\frac{5\frac{1}{2} - 6}{4\frac{1}{2}}$

Back evenly arched. Height 2.7-2.8, 3.6-3.7 in length with caudal. Head 3.9-4.5, 1-5.2 in length with caudal. Eye with a small adipose eyelid, 3.1 in head, equal to snout, which has numerous pores. Eye less than rather convex interorbital space. Rostral barbels equal to eye; maxillary barbels somewhat longer. Postlabial groove not continuous. Origin of dorsal opposite to ventrals, about midway between end of snout and base of caudal. The third simple ray strongly ossified and denticulated behind, as long as distance between anterior nostril and hindborder of operculum. Third simple ray of anal weakly ossified, about as long as the dorsal spine. Pectorals somewhat longer than ventrals, equal to head. Least height of caudal peduncle 1.3-1.4 in its length, equal to or slightly more than postorbital part of head, surrounded by 12 scales. Caudal deeply forked. Colour of preserved specimens deep brown, with light brown longitudinal series of stripes, corresponding with the rows of scales. Fins hyaline.

Two specimens, 122 and 164 mm. from Johore, Malay Peninsula.

This species is closely allied to *Poropuntius normani*, recently described by H. Smith (Proc. U.S. Nat. Mus. Vol. 79. 1931 p. 15) from Siam. This species differs from *L. smedleyi* in the following points: 14 scales round caudal peduncle, interorbital space flat, osseous part of dorsal spine equal to head less snout, ventrals and pectorals subequal 1.25 in head.

Smith created for this species the new genus *Poropuntius*, differing chiefly from *Lissochilus* by its denticulated spine. Both have a rostral groove.

I agree with Herre and Myers (Lignan Science Journal, Vol. 10. 1931 p. 244) that "the ossification of the dorsal spine cannot be accepted as a generic character to split up this group". Perhaps, when the apparently rather numerous species of this genus will be better known, it will be possible to subdivide *Lissochilus*.

Named in honour of Mr. N. Smedley, formerly Curator of the Raffles Museum.

Leiocassis chaseni n. sp.

D.II.6(7). A.14.(15). P.1.8. V.6.

Height 4.1, 4.7 in length with caudal. Head 3.5, 4 in length with caudal, the height about equal to the breadth and two thirds of length. Eye 3.7, less than twice in snout, 1.4 in interorbital space. Snout projecting beyond mouth, which is

transverse, slightly curved. Nostril of eye, maxillary barbels posterior and mental ones longer than eye. Interrorbital space with a narrow interrupted band, without posterior margin. Skin smooth. Occipital process separated from the basal shield by a line equal to its breadth. Origin of dorsal to tip of snout than to end of snout, preceded by a minute one, strong, as long as head without snout. Origin of that of dorsal, equal to its distance from twice as near to base of caudal peduncle as rays longest, scarcely shorter than dorsal spine strong, serrated along dorsal spine. Clavicular process reduced to a spine. Ventrals midway between dorsal and anal, as long as snout and half length of head. Colour of preserved specimens deep brown, with lighter patches on nape and sides of body. Dorsal, anal, pectorals and pelvic fins at base, with a transverse line developed between the anterior and posterior, an indication of a transverse line. On the head, the dorsal and pelvic fins and process are bright green, but in preservation, the specimens are brown. The caudal fin is a single specimen 85 mm. (coll. by Ulu Jelai, Pahang, (Raffles Museum F. 245).

Named in honour of Mr. N. Smedley, formerly Curator of the Raffles Museum.

This species comes from Borneo, differing by its dorsal profile from *Betta baramensis* having less serrated dorsal profile. The difference may be due to the preservation of the specimens, that of Regan's specimens.

Betta ocellata n. sp.

D.8. A.II.29. P.11. V.I.1-4

Dorsal profile almost straight. Head gently curved. Height 2.9, 3.9 in length with caudal, the height about equal to the breadth and two thirds of length. Eye 3.7, less than twice in snout, 1.4 in interorbital space. Caudal deeply forked. Snout projecting beyond mouth, which is opposite to 19th lateral scale.

Mus. 8, 1933.

ON SOME NEW OR RARE SPECIES OF OSTARIOPHYSI

transverse, slightly curved. Nasal barbels reaching front border of eye, maxillary barbels posterior border of eye, mandibular and mental ones longer than eye. Vomerine teeth in an uninterrupted band, without posterior projection. Head covered by smooth skin. Occipital process about twice as long as broad, separated from the basal shield of the dorsal spine by a distance equal to its breadth. Origin of dorsal one eye diameter nearer to tip of snout than to end of adipose fin. The dorsal spine preceded by a minute one, strong, with about 8 serræ posteriorly, as long as head without snout. Base of adipose fin longer than that of dorsal, equal to its distance from that fin. Origin of anal twice as near to base of caudal than to tip of snout. Anterior anal rays longest, scarcely shorter than head without snout. Pectoral spine strong, serrated along its inner edge, as long as dorsal spine. Clavicular process reaching to the middle of the pectoral spine. Ventrals midway between base of pectoral and end of anal, as long as snout and half eye. Caudal forked (tips broken). Colour of preserved specimen brownish, with indications of lighter patches on nape and on sides behind dorsal and adipose fin. Dorsal, anal, pectorals and ventrals smoky brown, darker at base, with a transverse colourless band in the middle, but not developed between the anterior rays. Caudal colourless, with an indication of a transverse band in the middle. The bones of the head, the dorsal and pectoral spines, and the clavicular process are bright green, but I suppose that this is due to preservation, the specimens possibly having been kept in a brass tank. The caudal fin is also stained with green. Length of single specimen 85 mm. (caudal broken).

Ulu Jelai, Pahang, Malay Peninsula, February, 1910.
(Raffles Museum F. 245).

Named in honour of Mr. F. N. Chasen, Director of the Raffles Museum.

This species comes nearest to *L. baramensis* Reg. from Borneo, differing by its longer dorsal and pectoral spines, *baramensis* having less serræ. The eye is probably larger, but the difference may be due to the difference in size of the two type-specimens, that of Regan being 190 mm.

Betta ocellata n. sp.

D.8. A.II.29. P.11. V.I.1-4. LI.34. Ltr.10.

Dorsal profile almost straight from dorsal to head, that of head gently curved. Height 4, 4.6 in length with caudal. Head 2.9, 3.9 in length with caudal. Eye 5, 1.6 in snout and 1.8 in flat interorbital space. Chin prominent. Maxillary reaching to below front border of pupil. Origin of dorsal slightly nearer to caudal than to head, separated by about 29 scales from snout, opposite to 19th lateral scale. First dorsal ray very short, equal

Mus. 8, 1933.

to half eye, sixth ray longest, reaching base of caudal when the fin is laid back. Anal beginning below seventh lateral scale. The fifth anal ray, counting from behind, longest, reaching to caudal. Pectorals as long as postorbital part of head. Produced ray of ventrals as long as head without snout. Caudal broadly rounded. Height of caudal peduncle 2.2 in head, much less than postorbital part of head. Colour of preserved specimen brownish gray, lighter below, operculum blackish. A black blotch, almost as large as eye, and bordered anteriorly by a white area, forming an indistinct ocellus, below the median line at base of caudal. Fins smoky brown. Pectorals white at base, the white bordered distally by a black band. Produced ray of ventrals whitish at tip. Length 99 mm.

One specimen from Bettotan near Sandakan, British North Borneo. (Raffles Museum F.1126).

This species comes nearest to *B. patoti*. It is distinguished by its much higher caudal peduncle, by its maxillary reaching front border of pupil and by its coloration. In this respect it shows resemblance to *B. unimaculata*, (Poeta). This species however has no anal spines.

On *Sacculina gordonii*, a new species of the Genus, Parasitic on *Atergatis floridus*

By H. BOSCHMA,

Professor of Zoology at the University at Leiden

Some time ago Dr. Isabella Gordon of the British Museum (Natural History) sent me for identification a specimen of a Sacculinid on *Atergatis floridus*. The specimen belongs to the collection of the Raffles Museum, and, as it proved to be the type of a new species, the description is given here together with a few remarks on the specimen.

Sacculina gordonii nov. spec.

Locality: Sultan Shoal, Singapore, Adolf Monteiro coll., 27. 10. 1930; 1 specimen on *Atergatis floridus* (Rumph.).

Diagnosis of the species. Male genital organs in the posterior part of the body, outside the visceral mass. Testes completely separated, enormously enlarged, forming wide, thin-walled sacs, which suddenly pass into the vasa deferentia. One of the testes much larger than the other. Colleteric glands flattened, with a comparatively small number of tubes. External cuticle covered with hairs which have the same structure as the main layers of this cuticle. The hairs have a length of 10-20 μ and bear minute lateral hairs. Internal cuticle with narrow bands of retinacula, which are composed of one to six spindles; the latter have a length of 10-20 μ and are not barbed.

The specimen is more or less the anterior region forming a stalk is found at the apex. There are a few folds and grooves (folds were turned against the abdominal concavity caused by pressure of the crab against the parasite). Measurements are: breadth 18 mm., height of anterior and posterior region), not thickness 5 mm. The main part of the anterior part of the surface of the crab, does not project, it forms a rather narrow slit. This is owing to contraction of the body. In preservation of the specimen.

The anatomy of the specimen is a series of longitudinal sections. The study of these sections.

The male genital organs are situated in the posterior part of the body, in the muscular region. They lie therefore outside the body. They are of a greatly enlarged shape. The testes are which are provided with a large amount of material is much larger than that of the latter is more or less enormous development of the parts of the two testes are of a wide sac, whilst of the other appears. In fig. 3 the wide part is drawn, here the left testis is shown in a section represented in different scales!).

Towards the ventral part of the body into the vasa deferentia, which are comparative in size. Originally undoubtedly globular, during the growth they pass into the voluminous sacs.

Near the central part of the body the mass the colleteric glands are situated to the anterior region of the body. These glands are of a comparatively small number compared with that in other species belonging to different