

ON THE PROPER SPECIFIC NAME OF THE COMMON PELAGIC  
ANTENNARIID PTEROPHYRNE.

By THEODORE GILL.

The most common and widely distributed of the Antennariids, and which is the peculiar species of the high seas, has been entered in the most recent systematic lists under the names *Antennarius marmoratus*\* and *Pterophryne picta*.† In this connection, it has been assumed that the species had first received names from Bloch and Schneider in 1801. I propose, however, to show, (1) that the species itself had long before received a name from the founder of the binomial nomenclature, and (2) that neither of the names of Bloch and Schneider is referable to these species. Long ago recognizing that the names of Bloch and Schneider had nothing to do with a *Pterophryne*, but without the bibliographical aids for certainly ascertaining what name had priority, I have hitherto adopted the provisional name *Pterophryne lævigata*, as Lütken has also recently done.

## I.

It behooves us, first, to inquire what was the basis of the *Lophius histrio* of Linnæus.

In 1747, in his "Wästgöta resa förrättad år 1746", Linnæus described, as "*Balistes*, quæ *Guaperva chinensis*", a small fish scarcely exceeding in length the last joint of the thumb, in the following terms, as translated in the German edition of 1765.‡

"*Balistes*, quæ *Guaperva chinensis*. *Corpus* acutum, compressum. *Dorsum* antice gibbum. *Pectus* compressum, pinnis pectoralibus terminatum, prominulum. *Latera* corporis picta lituris lacteis, annularibus, interruptis, puncto centrali lacteo notatis. *Caput* magnum, thoraci immersum, dentibus minutissimis instructum. *Filamentum* subulatum, erectum, loco narium. *Pinna dorsalis anterior* retrorsum falcato-subulata, mollis, alta, e gibbere dorsi juxta caput enata, *radio* I. *Pinna dorsalis posterior* radiis 12. *Pinnæ* pectorales brachiorum instar manubris instructæ, et antrorsum manuum instar inflexæ (quod in piseibus singulare), radiis 10. *Pinnæ ventrales* approximatae, radiis 5. *Pinna caudæ* radiis 9. *Pinna ani* radiis 7. *Iris oculorum* alba. *Magnitudo* totius piscis vix extimum pollicis articulum superat. Diversissima species a *Guaperva Ionstoni* T. VI. f. 6. quam ex America possideo. Die Figur dieses Fisches in natürlicher Grösse ist die 5<sup>te</sup> auf der 3<sup>ten</sup> Tafel, wo er bey *a* von der Seite, bey *b* aber auf dem Rücken vorgestellt ist, dass die Aerme an den pinnis pectoralibus deutlich in die Augen fallen."

The acute compressed body, the round milky spots, the small rostral filament (none is represented in the figure), the well developed fins,

\**Antennarius marmoratus*, Günther, Cat. Fishes in Brit Mus., v. 3, p. 185, 1861; Bleeker, Atlas Ichthyologique Indes Orient. Néerland., t. 5, p. 23, 1865.

†*Pterophryne picta*, Goode, Bull. U. S. Nat Mus., No. 5, p. 20, 1876.

‡Linné, Reisen durch Westgothland. 8vo. Halle, 1765. p. 160, S. 138.

the five rays of the ventrals, and the white irides all better suit the common *Pterophryne* than any other Antennariid.

In 1754, in his Catalogue of the Museum of King Adolphus Frederick,\* Linnæus again described, under the name "*Lophius tumidus*", evidently the same species, as follows:—

"tumidus. LOPHIUS pinnis dorsalibus tribus.

Balistes quæ Guaperua chinensis. It. W. goth. 137. t. 3. f. 5.

Guaperua. Maregr. bras. 150. Will. icht. 50. t. E. 2. f. 2.

Habitat in Pelago inter Fucos natautes.

Corpus molle instar Ranae, adpersum ramentis cutaceis. Apertura branchiarum ad axillas brachiorum s. pone pinnas pectorales, quæ decurrit ad pulmones; alia apertura nulla, quod indicat affinitatem cum Ranis. Pinnæ in dorso tres: prima radio uno capiti insidet; altera pectori radio uno instructa; tertia dorso radiatorum duodecim, quorum duo vel tres bifidi. Pectorales radiis 10, quæ ulnis s. brachiis instructæ. Ventrals radiis 5, hæ ante pectorales basi ad pectus connexæ. Ani radiis 7 bifidis. Caudæ radiis 10 bifidis."

The soft body like that of a frog (and therefore naked and not rough) and the cutaneous filaments are additional characters which corroborate those given in the former work, and certify the relevancy of the descriptions to the common *Pterophryne*. The habitat is also not the least important element in the determination of the Linnæan species, inasmuch as the true *Antennarii*, so far as known, frequent chiefly coral groves, while the *Pterophryne* is a pelagic species, principally affecting the floating sea-weeds. There can then be no reasonable doubt that the Antennariid of Linnæus was the common *Pterophryne*.

In 1758, in the tenth edition of the "*Systema Naturæ*", Linnæus first introduced, and in 1766, in the twelfth edition, retained, the name "*Lophius histrio*", and in the synonymy of the species included references to the two works just cited. The entire passage relative to the species is as follows, in the twelfth edition (p. 403):—

"histrio. 3. L. compressus.

*Chin. Lagerstr.* 21. *Lophius pinnis dorsalibus tribus.*

*Mus. Ad. Fr.* I. p. 56. *Balistes s. Guaperua chinensis.*

*It. wgoth.* 137. t. 3. f. 5. *Balistes s. Guaperua.*

*Maregr. bras.* 150. *Guaperua.*

*Pet. gaz.* t. 20. f. 6. *Piscis bras. cornutus.*

*Will. icht.* 50. t. E. 2. f. 2. *Guaperua.*

*Osborn. iter.* 305. *Lophius tumidus.*

*Habitat in Pelago inter Fucum natantem.*

*Pinnæ* D. I, I, 12. P. 10. V. 5. A. 7. C. 10."

The reference to Petiver's *Gazophylacium* was added in the twelfth edition.

\* *Museum S:æ R:æ M:is Adolphi Friderici. Car. Linnæo. Fol. Holmiæ, 1754. p. 56.*

Although the descriptions of Linnæus are unequivocal and based solely on specimens of *Pterophryne*, in the synonymy above copied are confused several species. As he seems, however, only to have known through autopsy the species of *Pterophryne*, and to have been unprepared for the polymorphous character of the type, his confusion under the synonymy is not at all to be wondered at, and is paralleled by many modern naturalists, especially Günther. His compatriot, Osbeck, had also the same species of *Pterophryne* in view in his description\* of the *Lophius histrio*, viz :—

“Die Flossquabbe, *Lophius Histrio* L. S. N. *Lophius tumidus* Mus. Reg. p. 56, und Linn. Westgoth. Reise Tab. 3, Fig. 3, aber der Faden und die erste Rückenflossfeder sind an den Spitzen borstig, die Borsten weich. Der ganze Körper ist mit einer schleimigen Haut, und kleinen blättrigen Stützen (*fuleris*) bedeckt, die man ausser dem Wasser kaum bemerkt, weil sie fest anschliessen. Der Rachen und Bauch sind gross, damit sie viele Krebsarten oder junge Krebse verschlingen können. Vielleicht hat die Vorsicht diesen Fisch deswegen so blättrig gekleidet, damit ihn die Raubfische mit dem Seegrass verwechseln und nicht gar ausrotten möchten.”

The smooth skin and the tag-like appendages evidently proclaim the fish of Osbeck to be a *Pterophryne*.

It is also to be remarked that the naturalist who first recognized specific differentiation among the Antennariids (Shaw), in his “General Zoology” (v. 5, p. 384, pl. 164), restricted the name to the *Pterophryne*, and gave, under the term *Lophius histrio*, a quite recognizable figure of that form, whose only great fault is the delineation of the first spine.

## II.

The names subsequently applied to *Pterophryne* now demand consideration.

Those accepted by the latest systematists have been attributed to Bloch's *Systema Ichthyologiæ*, edited by Schneider, but, as will presently be shown, erroneously.

In the *Systema Ichthyologiæ* (p. 142) only one species of Antennariids is admitted under the name *Lophius histrio*, but four varieties are distinguished under it, viz :—

Var. *a*, “Striated Loph. Shaw Miscell. No. 58”;

Var. *b*, *pictus*;

Var. *c*, *marmoratus*; and

Var. *d*, *ocellatus*.

As no references have been made to previous publications, except in case of var. *a*, it seems to have been generally assumed that the varietal names originated in the work in question. This, however, is not the case.

\* Osbeck, Peter. Reise nach Ostindien und China. 8vo. Rostock, 1765. p. 400.

In 1794 (as appears from the dates on the plates), Shaw published a number of his "Naturalists' Miscellany", in which he described three fishes under the generic name *Lophius*. These were designated as—

- (1) *Lophius striatus* (the Striated Lophius), pl. 175;
- (2) *Lophius pictus* (the Variegated Lophius), pl. 176, upper fig.; and
- (3) *Lophius marmoratus* (the Marbled Lophius), pl. 176, lower fig.

The originals of these are evidently the varieties (*a*, *b*, and *c*) of *Lophius histrio* admitted by Bloch and Schneider. It is quite clear that the first two were based on species of typical *Antennarius* (not *Pterophryne*), while the third is incomprehensible, and, if the figure is at all correct, must represent a factitious fish; it most certainly has nothing to do with *Pterophryne*. The other species, however, notwithstanding the bad figures, are readily identifiable.

The *Lophius striatus* (as has recently been recognized by Günther)\* is the first name of an *Antennarius* peculiar to the Pacific, and quite distinct from the Caribbean *Antennarius scaber* (= *A. histrio* Gthr.), with which it was at first confounded by Günther.†

The *Lophius pictus* was evidently based on the species or variety of *Antennarius* which was afterwards named *Antennarius phymatodes* by Bleeker, and it agrees very closely, in the distribution of colors, with a specimen figured by that ichthyologist,‡ and would probably be considered by Günther§ as a variety of his *Antennarius Commersonii*.

But whatever may be the value of the forms embraced under the name *Antennarius Commersonii* by Günther,—whether species or varieties,—the name *Antennarius pictus* must be revived from Shaw, either especially for the *Antennarius phymatodes* of Bleeker or for the collection designated as *Antennarius Commersonii*.

It has thus been demonstrated (1) that the Linnæan name *Lophius histrio* was originally created for the common *Pterophryne*, and (2) that the names generally employed for the *Pterophryne* were originally applied to very different forms, and members of even a different genus. Hence, if the laws of priority as formulated by the British and American Associations for the Advancement of Science are to guide us, there can be no question that the species of *Pterophryne* must hereafter be designated as *Pterophryne histrio*; if, however, it is allowable to go behind even the tenth edition of the *Systema Naturæ*, and to take the oldest binomial name, without other considerations, the designation *tumidus* must be revived. It seems best, however, to follow general usage.

\*Günther, Andrew Garrett's Fische der Südsee, v. 1, p. 162, 1876.

†Günther, Cat. Fishes in Brit. Mus., v. 3, p. 188.

‡Bleeker, Atlas Ichthyologique des Indes Orientales Néerlandaises, t. 5, pl. 199, fig. 5, 1865.—It must be remarked that Shaw represents 5 ventral rays in his *A. pictus*, while Bleeker attributes 6 to his *A. phymatodes*.

§Günther, in Cat. Fishes in Brit. Mus., v. 3, p. 195, has referred Shaw's name to "*Antennarius multiocellatus* var.  $\gamma$ . = *leucosoma*", but in the "Fische der Südsee" did not refer to the *L. pictus*, and places the *L. marmoratus* as a synonym of *A. Commersonii*, having evidently transposed the names of the two.