## NOTE ON THE FISHES OF THE GENUS CHARACINUS.

# By THEODORE GILL, LL. D.

FOR OVER fifty years the family name *Characini* or *Characinidæ* has been in use, but during all that time no one has used the generic name *Characinus*. The family name, indeed, has remained without a recognized name-giving genus. It is time that the nomenclature should be accordant with the facts, and the object of this note is to resuscitate the long-neglected name.

In 1754 Gronovius took the name Charax for two South American fishes, subsequently referred to the genera Anacyrtus and Tetragonopterus.

In 1758 Linnæus referred the two Gronovian fishes to his genus Salmo, and to the section of that genus named Characini.

In 1777 Scopoli adopted the genus *Charax* from Gronovius, and thus formally introduced it into the binomial nomenclature.

In 1802 Lacépède adopted the section of Characini as a genus and gave to it the singular form *Characinus*.

It will only be necessary to examine the tenth edition of the "Systema Natura" of Linnaus to select the type, but, for the sake of comparison, the species admitted into the twelfth and Gmelin's editions are added.

References to Characini in the tenth, twelfth and thirteenth editions of Linnaus' Systema Natura.

	Tenth edition.		Twelfth edition.		Gmelin.		
	Page.	No.	Page.	No.	Page.	No.	
Dontor	(a)				1383	47	Myletes niloticus (1).
Dentex	(a)				1384	48	Gasteropelecus sternicla.
Gibbosus		19	513	20	1384	20	Characinus gibbosus (2).
Notatus			513	21	1385	21	Tetragonopterus —?
Bimaculatus	311	20	513	22	1385	22	Tetragonopterus bimaculatus.
mmaculatus	312	21	513	23	1385	23	(?)
Fætens			513	24	1385	24	Synodus fœtens (4).
Cyprinoides			514	25	1385	25	Curimata cyprinoides.
Niloticus	312	22	514	26	1386	26	Myletes niloticus (1).
Egyptius					1386	49	Distichodus ægyptius (6).
Pulverulentus	312	23	514	27	1386	27	Tetragonopterus — ? (7).
Rhombeus			514	28	1386	28	Serrasalmus rhombeus.
Anostomus	312	24	514	29	1387	29	Anostomus anostomus.

a Myletes niloticus = Salmo niloticus = Cyprinus dentex, Linnæus S. N., 10. ed., p. 325; Mus. Ad. Fr., p. 108, 1764. Many would therefore prefer M. niloticus.

It is to be remembered that Gmelin intercalated the species he added to the "Systema Nature" according to their supposed affinities, but with the numbers continued from the highest of Linnæus.

The species with numbers after the accepted names require some consideration.

- 1. The Myletes niloticus or dentex is the Alestes kotschyi (not dentex) of Günther, and as it was the only described species for which Cuvier originally framed the genus, it should retain the former generic name. The South American species referred to Myletes should take the name Myleus of Müller and Troschel. This genus has been divided into two subgenera, Myletes and Myleus. For the former, Myloplus may be taken as a substitute. The classical form Mylites (dentex) has been used for the typical form by Minding<sup>2</sup>, and perhaps will be accepted by purists. The S. dentex of Hasselquist, or S. niloticus of Forskål, is a different species—M. hasselquistii, Cuvier.
- 2. The Characinus gibbosus is Alestes gibbosus, Günther, as already indicated.
  - 3. The Salmo (Characinus) immaculatus is at present unidentifiable.
- 4. The Synodus fætens is Saurus fætens of Günther, and of course has no affinity to the Characinids.
- 5. The Curimata cyprinoides must take that name, as Curimata was the first Latin form of the name given.<sup>3</sup>
- 6. The Distichodus ægyptius is D. niloticus, Günther. Dr. Günther takes the name from Hasselquist, whose work was published in 1757, but if the precepts of the British and American Associations for the Advancement of Science and other biological societies are adopted, no names behind the tenth edition can be accepted. Dr. Günther, in his synonymy quotes "Salmo ægyptiacus, Linnæus, GMELIN, I, p. 1386," but the form used by Linnæus and Gmelin was S. ægyptius. As Ægyptius was the older and more classical form, it is not obvious why any one should have wished to alter the name to Ægyptiacus.
- 7. The Salmo (Characinus) pulverulentus has never been identified, but was probably a Tetragonopterus.

Inasmuch as Linnæus really derived the conception of the genus, as well as the basis of this name, from Gronovius, we should take one of the two species originally referred by that author to his genus *Charax*. Swainson, as early as 1839, revived the Linnæan designation (*Characinus*) for the *C. gibbosus*, and Valenciennes was inclined to adopt the Gronovian name (*Charax*) for the genus, to which he nevertheless

<sup>&</sup>lt;sup>1</sup> Mem. Mus. Hist. Nat., I, 115, 1815; Règne Animal, II, 66, 1817. Dr. Günther went back for *Myletes* only to Cuvier, Mém. Mus., IV, p. 444, when the South American species attributed to it were first described.

<sup>&</sup>lt;sup>2</sup> Lehrbuch, p. 121, 1832.

<sup>&</sup>lt;sup>3</sup> Cloquet, Dict. Hist. Nat., XII, p. 240, 1818.

<sup>&</sup>lt;sup>4</sup> Cat. Fish. Brit. Mus., V, p. 360.

applied the name *Epicyrtus*.<sup>1</sup> For that genus, therefore, *Characinus* may be revived.<sup>2</sup>

The species of the tenth edition of the "Systema Natura" were referred to new genera in the following sequence:

1777. Anostomus, Scopoli (ex Gron.).

1815. Tetragonoptère, CUVIER.

1815. Myletes, CUVIER.

1817. Les Tetragonoptères (Tetragonopterus, ARTEDI) 3 CUVIER.

1845. Distichodus, MÜLLER and TROSCHEL.

1845. Alestes, MÜLLER and TROSCHEL = Characinus restricted.

Thus by successive eliminations the genus was finally restricted to *C. gibbosus*. Its synonyms are as follows:

#### Genus CHARACINUS.

Pre-binomial synonyms.

Charax, Gronovius, Mus. Ichth., I, p. 19 (?), 1754.

#### Binomial synonyms.

- Characini (Salmo \* \* \*) LINNÆUS, Syst. Nat., 10. ed., p. 311, 1758.
- < Charax, Scopoli, Int. Hist. Nat., p. 455, 1777.
- < Characinus, Lacépède, Hist. Nat. Poiss., V, p. 269, 1802.
- < Characinus, Swainson, Nat. Hist. Fish., etc., II, p. 289, 1839 (not of Vol. I).
- Epicyrtus, MÜLLER and TROSCHEL, Horæ Ichth., II, p. 17, 1845.
- Anacyrtus, GÜNTHER, Cat. Fish. Brit. Mus., V, p. 346, 1864.
- Cynopotamus, Garman, Bull. Essex Inst., XXII, p. 11, 1890.
- =Anacyrtus, Eigenmann, Proc. U.S. Nat. Mus., XIV, p. 57, 1891.

Salmo, sp., LINNÆUS et al.

Piabuques esp., CUVIER, 1817.

The name *Characinus* has been misapplied by at least two naturalists, viz:

Characinus, MINDING, Lehrb. Nat. Fische, p. 119, 1832 (= Curimata).

Characinus, Swainson, Nat. Hist. Fishes, I, pp. 241, 255, 259, 1838 (= Curimata).

<sup>&</sup>lt;sup>1</sup>Cuvier and Valenciennes, XXII, p. 41, 1849.

<sup>&</sup>lt;sup>2</sup>Some may prefer to take *Charax*, because Linneus used the plural form Characini for a section not formally designated by him as a subgenus, and I have felt and still feel inclined to adopt it myself.

The generic name Tetragonopterus has been erroneously attributed to Artedi, who was too good an ichthyologist to have confounded a Tetragonopterus (Cuvier) with a Tetragonoptrus (Klein, " $T\varepsilon\tau\rho a\gamma\omega\nu\sigma\pi\tau\rho\sigma c$ , i. e., quadratus aspectu"). Inasmuch as Artedi died in 1735 and the "Missus" in which Klein's name first occurs was published in 1744, we have another good reason for believing that Artedi had nothing to do with the name.



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