

CONTRIBUTIONS TO THE STUDY OF BAGRID FISHES. 17.
THE HISTORY AND USAGE OF THE NAME "MYSTUS"

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ABSTRACT

The name *Mystus* applied to a group of Bagrid catfishes in the generic sense has had different usage for a number of years. The proper derivation, the various connotations to which this name has been subjected to and the correct nomenclatural applicability have all been discussed in this paper.

USAGE

The first author to use the word *Mystus* is Belon (1553) who included correctly all fishes having barbels under this name. He used this name polynomially and not as a generic name or taxon. However, subsequent workers did not consider this feature of barbels when using this name.

Linnaeus (1754) used the name in a generic sense to describe *Mystus eusiformis* from China. Osbeck (1757) described the same fish as *Clupea mystus*.

Russell (1756) named one of his species "O" as *Mystus*, which does not belong to Siluriformes. Linnaeus (1758) in his 10th edition of "Systema Naturae" used the name *Mystus* in a specific sense for a species of *Silurus*. This species, *Schilbe mystus* belongs now to the family Schilbeidae; but in the same work in another place Linnaeus used the name *Mystus* again in a specific sense to describe a clupeid fish *Clupea mystus* = *Coilia mystus* (Linn.) belonging to the family Engraulidae. In the 12th edition of "Systema Naturae" also (1766) Linnaeus repeated the

above usage again to indicate a Schilbeid and a Clupeid fish respectively.

Gronow (1763) described seven fishes under the name *Mystus*. He divided the fishes into three divisions depending upon the number of barbels that each possessed as division I—with four barbels, division II—with six barbels and division III—with eight barbels, but included all under the name *Mystus*, as was done by Belon (1553) and Russell (1756). He did not give any binary names to his species under each division, for which reason they have become invalid and unavailable.

Klein (1775) adopted the name in a generic sense and described a fish *Mystus fluviatilis* which is a synonym of *Cyprinus barbatus* of Linnaeus (Cyprinidae).

Scopoli (1777) mentioned "SILURI Species Linn" as belonging to *Mystus*, though it might be contended that he did not specifically include all the Linnaean species of *Silurus*.

Walbaum (1792) while giving a name to the various species in *Artedi Piscium*, used

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the name *Mystus* in a generic sense but for a non-bagrid form, *Aspredo batrachus* Linn. which belongs to the family Aspredinidae.

Meuschen (1778) used in error the word *mystus* in a specific sense to describe a *Aspredo* species which in fact should be *Aspredo mystus* = *Aspredo fluviatilis* belonging to the family Aspredinidae, a Siluroid fish.

Lacépède (1803) utilised the name in a generic sense to describe a Clupeid fish *Clupea mystus* Linnaeus as *Mystus clupeioides*. These species however belong now to the genus *Coilia* Gray (Family Engraulidae) (see Whitehead, 1972).

Cuvier (1817) adopted the name in a specific sense to describe a species of *Thrissa* = *Coilia mystus* which belongs to the family Engraulidae.

Hamilton (1822) used the name *Mystus* in a generic sense for describing three species, *Mystus ramcarati* = *Coilia ramcarati* (Pallas), *Mystus kaporat* = *Notopterus notoapterus* (Ham.), *Mystus chitala* = *Notopterus chitala* (Ham.). Of these the first species belongs to the family Engraulidae and the other two to the family Notopteridae.

Valenciennes (1839) correctly described *Schilbe mystus* belonging to the family Schilbeidae, but in the year 1848 he confused the usage by describing an Engraulid fish as *Engraulis mystus*.

Sykes (1841) described *Notopterus bontianus* family Notopteridae under *Mystus*.

Gray (1854) in his catalogue of Fish by Gronovius present in the British Museum gave brief diagnosis of *Mystus* and classified the genus into three categories according to the number of barbels present on the snout. He included *Mystus carolinensis* = *Aelurichthys gronovii* (family Ariidae) with four barbels and *Mystus aceta* = *Pimelodus maculatus*

(Lacépède) belonging to the family Ameiuridae with six barbels and grouped all other *Mystus* under group three with eight barbels.

DISCUSSION

It would thus appear that earlier authors used the name *Mystus* only to describe either a Siluroid or a Clupeoid fish and rarely a Notopterid. The reason seems to be that these fishes also beside some Cyprinids have barbels on their snout. It is evident that the earlier authors did not attach much importance to the presence or absence of scales which is an important character of all Siluroid fishes.

The above discussion can be presented in the form of a synonymy as below :

The following list indicates that the authors have used the name in a generic sense or in a similar conception.

- 1553. *Mystus*, Belon, *De aquatilibus libri* (for all fishes with barbels).
- 1756. *Mystus* (in part), Russell, *Nat. Hist. Aleppo*, (ed. Angl.) 1 : 76, pl. xiii. fig. 2, species "o" (a non-bagrid form).
- 1775. *Mystus*, Klein, *Gesellschaft Schauplatz*, 1 : 595 (non Gronovius ; *Mystus fluviatilis* Klein = *Cyprinus barbatus* Linnaeus).
- 1781. *Mystus* (in part), Meuschen IN : Gronow's *Zoophylacii Gronoviana*, 3.
- 1792. *Mystus*, Walbaum, *Artedi. Ichthyol.*, 3 : 586 (non-Gronovius : for a non-bagrid form).
- 1803. *Mystus*, Lacépède, *Hist. Nat. Poiss.*, 6 : 466 (non-Gronovius).
- 1822. *Mystus*, Hamilton, *Fish. Ganges* 238 (non-Gronovius, for a clupeid fish).
- 1839. *Mystus*, Swainson, *Hist. Nat. Fish.*, 2 (for a non-bagrid fish).
- 1841. *Mystus*, Sykes, *Trans. zool. Soc. Lond.*, 2 : 376 (non-Gronovius : *Notopterus bontianus* Valenciennes—a Clupeid fish).
- 1854. *Mystus*, Gray, *Cat. Fish. Gronow* : 155-156.

The name has been used in a specific sense as listed below :

- 1758. *Silurus mystus*, Linnaeus, *Syst. Nat.* ed. 10 : 305.
- 1758. *Clupea mystus*, Linnaeus, *ibid.* ed. 10 : 319.
- 1766. *Silurus mystus*, Linnaeus, *ibid.* ed. 12 : 502 ;
- 1766. *Clupea mystus*, Linnaeus, *ibid.* ed. 12 : 524.
- 1778. *Aspredo mystus*, Meuschen, *Mus. Gronow* : 34.
- 1817. *Thrissa mystus*, Cuvier, *Regne. Animal*, 2 : 176.
- 1839. *Schilbe mystus*, Valenciennes, *Hist. Nat. Poiss.*, 14 : 327.
- 1848. *Engraulis mystus*, Valenciennes, *ibid.*, 21 : 73.

Nomenclature of the genus *Mystus* :

The genus *Mystus* was proposed by Gronow in 1763. He described seven Siluroid fishes under this name and divided them into three groups based on the number of barbels. He gave brief diagnosis of his species and did not follow the binomial system of nomenclature in designating the species. Gronow's usage of the name *Mystus* has therefore become invalid. However, Scopoli (1777) adopted several of Gronow's genera including *Mystus* in his "Introductio" and gave one line characterization of each. According to the International Commission (opinion 329 in ICZN's *Opinions and Declarations* 9 (23) : 309, 1955) Scopoli's names are valid and are available and hence *Mystus* Scopoli (1777) has come to usage.

Although *Mystus* Scopoli is considered a valid genus, established with a definition, it must be mentioned that no nominal species was referred to it by Scopoli. Under the present Rules the type of a genus should be selected from a species included in the first publication of the genus. Scopoli did not designate any particular species as the type.

Jordan (1917 : 21) selected *Bagrus halepensis* Valenciennes as the type species of *Mystus*

Gronow (1763) = *Mystus* Scopoli (1777). This species is equivalent to No. 388 of Gronow and defined by Gronow as *Mystus cirris octo, capite longioribus : pinna dorsali secunda longissima, a priore ad caudam ferme extensa.*

TYPE SPECIES

The earliest instance in which species were referred definitely to *Mystus* Scopoli is in Fowler's (1928) report of Fishes from the then Bombay State. Three species *vittatus*, *lamarii* (= *seenghala*) and *halepensis* were referred to *Mystus*. Of the three species, *halepensis* alone was referred in clear unambiguous terms not only to *Mystus* Gronow but also to *Mystus* of Scopoli. Thus *Mystus halepensis* becomes the type species of the genus *Mystus*.

However Solander in 1794 gave binomial names to fishes described by Russell in the book *Natural History of Aleppo* (1756). Solander did not designate any type. Fig. 1, pl. vii in Russell's book was named *Silurus pelusius* by Solander which equals as per Günther (1864) *Bagrus halepensis* Valenciennes. Hence the correct valid name of the type species becomes *Mystus pelusius* (Solander).

The synonymy is as below :

Mystus pelusius (Solander)

- 1794. *Silurus pelusius*, Solander In : *Russell's Natural History of Aleppo*, 2 : 210, pl. vii, fig. 1.
- 1840. *Bagrus halepensis* Valenciennes, *Hist. Nat. Poiss.*, 14 : 413.
- 1841. *Bagrus halepensis* Heckel in *Russegger's Reisen Europa, Asien und Africa*, 1 : 1091, pl. viii, fig. 2.
- 1864. *Macrones aleppensis* Günther, *Cat. Fish. Brit. Mus.*, 5 : 431.
- 1928. *Mystus halepensis*, Fowler, *J. Bombay nat. Hist. Soc.*, 33 : 105.

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