

HETEROTIS EHRENBERG, 1829, AND *CLUPISUDIS* SWAINSON, 1839
(PISCES): PROPOSAL TO PLACE ON THE OFFICIAL LIST OF
GENERIC NAMES IN ZOOLOGY. Z.N.(S.) 1807

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The object of the present application is to request the Commission to confirm the validity of the generic names *Heterotis* Ehrenberg in Rüppell, 1829 and *Clupisudis* Swainson, 1839.

History of the Case:

2. In 1817 Cuvier (*Règne Animal* (ed. 1) 2 : 180) defined a new genus *Sudis* without including any nominal species in it. The same generic name had already been introduced validly by Rafinesque in 1810 (*Caratteri di alcuni nuovi generi e nuove specie di animali e piante della Sicilia*: 60) for an entirely different fish. During an expedition to Egypt made during the years 1820-1825, C. G. Ehrenberg recorded a fish from the Nile which he called *Heterotis niloticus* and of which he had made a plate dated 1827*.

3. However neither the name nor the plate were published at this date and Ehrenberg was content to leave his discovery to ichthyologists of the period: Cuvier, Valenciennes and Rüppell. [It was not until 1836 that he himself used the name *Heterotis niloticus* in *Abh. phy-Kl. K. Ak. Wiss. Berlin*, 1834 : 532.] Actually Cuvier in 1829 (*Règne Animal*, (ed. 2), 2 : 180) recorded the species under the name *Sudis niloticus* Ehrenberg at the same time as a species from Senegal and one from Brazil which he named *Sudis adansonii* and *Sudis gigas* respectively. Since no type-species was designated at the time, these three nominal taxa were equally acceptable for a subsequent designation of the type-species of *Sudis* Cuvier, 1817 (non Rafinesque, 1810). All authors have followed one another in recognizing the validity of the specific name *niloticus* published for the first time by Cuvier in 1829 and attributed explicitly by him to Ehrenberg.

4. The same year but a little later, Rüppell (1829, *Beschreibung und Abbildung mehrerer neuer Fische im Nil entdeckt*: 10) gave a detailed description of the species which he named *Sudis niloticus*. In a footnote the same author added: "Da übrigens gerade Herr Valenciennes meine hier zu beschreibende *Sudis*art von dem *Heterotis niloticus* des Herrn Dr. Ehrenberg verschieden glaubt, welches durchaus irrig ist." This citation of an available specific name in conjunction with a new generic group name constituted an indication in the sense of Article 16 of the International Code of Zoological Nomenclature and renders available the generic name *Heterotis* Ehrenberg in Rüppell, 1829. *Helicobranchus*,

* This plate on which is printed "ad Nat. del C. G. Ehrenberg" and "F. W. Linger jun. Sculp. Berlin 1827" was not actually published until 1899 in a posthumous work of Hemprich and Ehrenberg entitled: *Symbolae physicae*. . . . The legend of the plate, drawn up by Hilgendorf, bears the title: *Heterotis nilotica* H. et E. *Heterotis niloticus* Ehrenberg". It represents, in left lateral view, an individual measuring 33 cm. in standard length and 37 cm. in total length. Small figures indicate the number of rays observed on the fins of the form: P.11; V.6; D.34; A.37; C.14.

proposed by Hyrtl in 1854 (*Denkschr. Ak. Wien.* 8 : 86) as a more correct name for *Heterotis* is an unnecessary new name and falls as a synonym of *Heterotis* Ehr. in Rüppell.

5. For the genus *Sudis* Cuvier, 1817, non *Sudis* Rafinesque 1810, Swainson in 1839 (*Natural History of Fishes* . . . 2 : 286) proposed the replacement name *Chupisudis*. In virtue of Article 67 i of the International Code of Zoological Nomenclature this generic name must have applied to it the same type-species as that of the replaced name, *Sudis* Cuvier, 1817. This last has been designated by Jordan (1917, *The genera of Fishes* 1 : 99), who wrote: "*Sudis* Cuvier, 1817, type (not named) *Sudis gigas* Cuvier." The generic names, *Arapaima* J. Müller, 1843 (*Beiträge zur Kenntniss der natürlichen Familien der Fische* : 326) and *Vastres* Valenciennes, 1846 (*Hist. naturelle des Poissons* 19 : 433) also proposed as replacement names for *Sudis* Cuvier, 1817, are junior synonyms of *Chupisudis* Swainson, 1839.

Gender and termination of the root to be employed in the formation of derivatives:

6. The word *Heterotis* alludes to the suprabranchial organ. Valenciennes, 1846 (*Hist. Poiss.* 19 : 465) writes: "M. Ehrenberg le croyant une annexe de l'oreille, imagina . . . de désigner son poisson par la dénomination *Heterotis*." This name has been formed from two greek words ἕτερον and οὐς, ὠτός, then latinized into *-is*. Now latin words ending in *-is*, of the third declension, are masculine or feminine and are declined like *lapis*, *lapidis* or like *collis*, *collis*. In choosing *niloticus* as the name of the species, it is clear that Ehrenberg intended to give to *Heterotis* the masculine gender and that Hilgendorf (in Hemprich and Ehrenberg, 1899) was in error in writing "*Heterotis nilotica* H. & E." The same author in the legend to plate IX, writes in the genitive *Heterotis niloticae* while on the plate itself one finds *Heterotidis niloticae*. The correct form of the genitive being *Heterotis*, the name of the family-group corresponding should be spelled HETEROTIDAE; similarly the family-group name derived from *Chupisudis* should be spelled CLUPISUDIDAE. These two names were published in this form simultaneously by Jordan (1923, *A classification of Fishes*: 123).

Type-species and synonymies

7. *Heterotis niloticus* being the single nominal species originally included in the genus *Heterotis*, it follows that *Sudis niloticus* (Ehrenberg) Cuvier, 1829 is the type-species by monotypy. The type of the species cannot now be found in the Berlin Museum. Dr. C. Karrer writes in a letter of 6.4.1967: "In unserem Eingangskatalog ist unter der Nr. 3935 ein von Hemprich und Ehrenberg gesammeltes Exemplar als Trockenpräparat aufgeführt, trägt oben hier kein Typuszeichen . . . Unter den jetzt noch vorhandenen Trockenpräparaten befindet es sich aber leider nicht mehr." Consequently of the type specimen (or syntype specimens), on which the nominal species *Heterotis niloticus* was founded, there remains only the plate engraved in 1827, with which to identify the taxon. By the application of Article 74b of the International Code we designate this figure to represent the lectotype of the species which must be validly designated by the binomen *Heterotis niloticus* (Ehrenberg in Cuvier), 1829.

8. *Sudis adansonii* Cuvier, 1829 and *Heterotis ehrenbergii* Valenciennes, 1846 are subjective synonyms. Actually the type of *Sudis adansonii* is a specimen from Senegal collected by Adanson and deposited in the Muséum national d'Histoire naturelle, Paris, as No. 3608, while the types of *Heterotis ehrenbergii* are two specimens from the Nile collected by Darnaud and deposited in the Paris Museum as No. A 824 and B 2221.

9. *Sudis gigas* is the type-species of the genus *Clupisudis* by the subsequent designation of Jordan. Now the specific name *gigas* was published for the first time not by Cuvier himself in 1829 but by Schinz (H. R.) in a German translation of the first edition of the *Règne Animal* (1822, *Das Thierreich* 2 : 305). Schinz made reference to the figure published under the name *Vastrès* given by Cuvier in 1817 (*Règne Animal* 4, pl. X, fig. 4) and which represented a specimen from Brazil presented by the Cabinet of Lisbon in 1808. This specimen preserved in the Paris Museum as No. A 8837 is the type of the species which must be validly designated by the binomen *Clupisudis gigas* (Schinz in Cuvier), 1822.

10. *Vastres cuvieri* Valenciennes, 1846 (*Hist. Poissons* 19 : 441) is an objective synonym of *Clupisudis gigas*. *Vastres mapae* Valenciennes, 1846 (*Hist. Poiss.* 19 : 449) is a subjective synonym of which the type, collected in Guiana by Pradier, is preserved in the Paris Museum as No. A 8836. *Sudis pirarucu* Spix, 1829 and *Vastres agassizii* Valenciennes, 1846 are subjective synonyms both having for type the figure published by Spix (1829, *Selecta genera et species* . . . , pl. 16). Finally *Vastres arapaima* Valenciennes, 1846 (*Hist. Poiss.* 19 : 461) is equally a subjective synonym having for its type the figure published under the name *Sudis gigas* by Schomburgk (1841, *The Natural History of the Fishes of Guiana* 1, pl. xi).

11. In conclusion the International Commission of Zoological Nomenclature is requested:

- (1) to place on the Official List of Generic Names in Zoology, the following names:
 - (a) *Heterotis* Ehrenberg in Rüppell, 1829 (gender : masculine), type-species, by monotypy, *Sudis niloticus* Ehrenberg in Cuvier, 1829;
 - (b) *Clupisudis* Swainson, 1839 (gender : masculine), type-species, by subsequent designation by Jordan, 1917, for *Sudis* Cuvier 1817, *Sudis gigas* Schinz in Cuvier, 1822;
- (2) to place on the Official List of Specific Names in Zoology, the following names:
 - (a) *niloticus* Ehrenberg in Cuvier 1829, as published in the binomen *Sudis niloticus* (type-species of *Heterotis* Ehrenberg in Rüppell, 1829);
 - (b) *gigas* Schinz in Cuvier, 1822, as published in the binomen *Sudis gigas* (type-species of *Clupisudis* Swainson, 1839);
- (3) to place on the Official List of Family-Group names in Zoology the following names (Pisces, Osteoglossiformes):
 - (a) HETEROTIDAE Jordan 1923 (*Class. Fish.* : 123), (type-genus *Heterotis* Ehrenberg in Rüppell, 1829);
 - (b) CLUPISUDIDAE Jordan 1923 (type-genus *Clupisudis* Swainson, 1839).

Heterotis Ehrenberg, 1829, and clupisidms Swainson, 1839 (pisces) : proposal to place on the official list of generic names in zoology . Z.N. (S.) 1 807

SEPARATE

OF A PAPER PUBLISHED BY
THE INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE
ON BEHALF OF
THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

This paper contains an application relating to a question of zoological nomenclature which has been submitted to the International Commission on Zoological Nomenclature for decision. As a preliminary, this paper has been published in the "Bulletin of Zoological Nomenclature". The volume in which this paper was so published and the date of publication are shown at the foot of the first page of the paper.

2. The object of publishing applications in the "Bulletin of Zoological Nomenclature" is to provide an opportunity to interested specialists to submit comments to the Commission on the action recommended in the applications so published. For this purpose an interval of six months from the date of publication is allowed to elapse before the International Commission starts to vote on any given application.

3. One of the principal objects of the International Trust for Zoological Nomenclature in providing authors with separates (off-prints) of applications published in the "Bulletin" is to secure a rapid and wide distribution of those applications among interested specialists, in order to provide to those specialists an opportunity of commenting upon the applications in question before a decision is reached by the International Commission.

4. Recipients of separates of papers published in the "Bulletin" are therefore particularly requested to furnish their comments on the action proposed as soon as possible to the Assistant Secretary, the International Commission on Zoological Nomenclature c/o British Museum (Natural History), Cromwell Road, London, S.W.7, England.