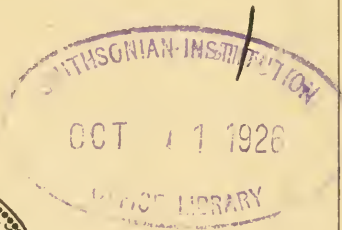


SMITHSONIAN MISCELLANEOUS COLLECTIONS

VOLUME 73, NUMBER 4

OPINIONS RENDERED BY THE INTERNATIONAL
COMMISSION ON ZOOLOGICAL
NOMENCLATURE

OPINIONS 91 TO 97



(PUBLICATION 2873)

CITY OF WASHINGTON
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OPINION 91

THIRTY-FIVE GENERIC NAMES OF MAMMALS PLACED IN THE
OFFICIAL LIST OF GENERIC NAMES

SUMMARY.—The following names are hereby placed in the Official List of Names: *Alces*, *Arvicola*, *Ateles*, *Bison*, *Bradypus*, *Canis*, *Capra*, *Cebus*, *Cervus*, *Choloepus*, *Condylura*, *Cricetus*, *Crociodura*, *Cystophora*, *Dasyprocta*, *Didelphis*, *Erethizon*, *Felis*, *Gulo*, *Halichoerus*, *Lepus*, *Lynx*, *Mus*, *Myrmecophaga*, *Nasua*, *Ovibos*, *Phyllostomus*, *Procyon*, *Putorius*, *Rangifer*, *Rhinolophus*, *Rupicapra*, *Sciurus*, *Sorex*, *Vespertilio*.

STATEMENT OF CASE.—Commissioier Apstein (1915a, pp. 198-202) has proposed the following generic names of mammals as nomina conservanda:

- Alces* Gray, 1821, 307, tat. *Cervus alces* Linn., 1758a, 66.
Arvicola Jac., 1799, 10, type *Mus amphibius* Linn., 1758a, 61.
Ateles Geoffr., 1806, 262, type *Simia paniscus* Linn., 1758a, 26.
Bison Smith, II., 1827, 373, tat. *Bos bison* Linn., 1758a, 72.
Bradypus Linn., 1758a, 34, type *B. tridactylus* Linn., 1758a, 34.
Canis Linn., 1758a, 38, type *C. familiaris* Linn., 1758a, 38.
Capra Linn., 1758a, 68, type *C. hircus* Linn., 1758a, 68.
Cebus Erxl., 1777, 44, type *Simia capucina* Linn., 1758a, 29.
Cervus Linn., 1758a, 66, type *C. elaphus* Linn., 1758a, 67.
Choloepus Ill., 1811, 108, type *Bradypus didactylus* Linn., 1758a, 35.
Condylura Ill., 1811, 125, type *Sorex cristatus* Linn., 1758a, 53.
Cricetus Leske, 1779, 168, tat. *Mus cricetus* Linn., 1758a, 60.
Crociodura Wagl., 1832, 275, type *Sorex leucodon* Herm., 1780, 382.
Cystophora Nills., 1820, 382, type *Phoca cristata* Erxl., 1777, 590.
Dasyprocta Ill., 1811, 93, type *Mus aguti* Linn., 1766, 80.
Didelphis Linn., 1758a, 54, type *D. marsupialis* Linn., 1758a, 54.
Erethizon Cuv., 1822, 432, type *Hystrix dorsata* Linn., 1758a, 57.
Felis Linn., 1758a, 41, type *F. catus* Linn., 1758a, 42.
Gulo Pallas, 1780, 25, tat. *Mustela gulo* Linn., 1758a, 45.
Halichoerus Nilk., 1820, 376, type *Phoca grypus* Fabr., 1791, 107.
Lepus Linn., 1758a, 57, type *L. timidus* Linn., 1758a, 57.

- Lynx* Kerr, 1792, 32, tat. *Felis lynx* Linn., 1758a, 43.
Mus Linn., 1758a, 59, type *M. musculus* Linn., 1758a, 62.
Myrmecophaga Linn., 1758a, 35, type *M. tridactyla* Linn., 1758a, 35.
Nasua Storr, 1780, 35, tat. *Viverra nasua* Linn., 1766, 64.
Ovibos Blainv., 1816, 76, type *Bos moschatus* Zimm., 1780, 86.
Phyllostomus Lac., 1799, 16, type *Vespertilio hastatus* Pall., 1767, 7.
Procyon Storr, 1780, 35, type *Ursus lotor* Linn., 1758a, 48.
Putorius Cuv., 1817, 147, tat. *Mustela putorius* Linn., 1758a, 46.
Rangifer Smith, H., 1827, 304, type *Cervus tarandus* Linn., 1758a, 67.
Rhinolophus Lac., 1799, 15, type *Vespertilio ferrum-equinum* Schreb., 1774,
 174, pl. 62.
Rupicapra Blainv., 1816, 75, tat. *Capra rupicapra* Linn., 1758a, 68.
Sciurus Linn., 1758a, 63, type *S. vulgaris* Linn., 1758a, 63.
Sorex Linn., 1758a, 53, type *S. araneus* Linn., 1758a, 53.
Vespertilio Linn., 1758a, 31, type *V. murinus* Linn., 1758a, 32.

DISCUSSION.—Dr. G. S. Miller, of the United States National Museum, has studied these names from the standpoint of the International Rules and he reports that in his opinion they are available and valid under the rules. Accordingly, it is not necessary to adopt them as “nomina conservanda” under suspension of the rules, but they appear to be eligible for the official list in their own right.

The names have been published in several scientific journals for the information of zoologists and no objection of any kind has been received by the Secretary to these names.

In view of the foregoing data, the Secretary recommends that the 35 names in question be placed in the Official List of Generic Names.

Opinion written by Stiles.

Opinion concurred in by thirteen (13) Commissioners: Apstein, Bather, Handlirsch, Hartert, Horvath, Jordan, D. S., Jordan, K., Kolbe, Loennberg, Monticelli, Skinner, Stiles, Warren.

Opinion dissented from by no Commissioner.

Not voting, four (4) Commissioners: Dabbene, Dautzenberg, Hoyle, Stejneger.

OPINION 92

SIXTEEN GENERIC NAMES OF PISCES, AMPHIBIA, AND REPTILIA
PLACED IN THE OFFICIAL LIST OF GENERIC NAMES

SUMMARY.—The following names are hereby placed in the Official List of Generic Names: PISCES: *Blennius*, *Echeneis*, *Esox*, *Ophidion*. AMPHIBIA: *Cryptobranchus*, *Desmognathus*, *Siren*. REPTILIA: *Alligator*, *Calamaria*, *Chelydra*, *Crotalus*, *Dermochelys*, *Eremias*, *Lacerta*, *Mabuya*, *Phrynosoma*.

STATEMENT OF CASE.—Commissioner Apstein (1915a, pp. 190-192) has proposed the adoption of the following generic names of Pisces, Amphibia, and Reptilia, as "nomina conservanda."

PISCES

Blennius Linn., 1758a, 256, type *B. ocellaris* Linn., 1758a, 256.
Echeneis Linn., 1758a, 260, type *E. naucrates* Linn., 1758a, 261.
Esox Linn., 1758a, 313, type *E. lucius* Linn., 1758a, 314.
Ophidion Linn., 1758a, 259, type *O. barbatum* Linn., 1758a, 259.

AMPHIBIA

Cryptobranchus Lueck, 1821, 259, mt. *Salamandra gigantea* Barton = *alleganiensis* Daud., 1803, 231 = *alleganiensis* Harlan, 1825, 233.
Desmognathus Baird, 1849, 282, type *Triturus fuscus* Raf., 1820, 4.
Siren Linn., 1766, addenda, mt. *S. lacertina* Linn., 1766, addenda.

REPTILIA

Alligator Cuv., 1807, 25, type *Crocodylus mississippiensis* Daud., 1803, v. 2, 412.
Calamaria Boie, 1827, 236, tat. *Coluber calamaria* Linn., 1758a, 216.
Chelydra Schweigg., 1812, 292, mt. *Testudo serpentina* Linn., 1758a, 199.
Crotalus Linn., 1758a, 214, type *C. horridus* Linn., 1758a, 214.
Dermochelys Blainv., 1816, 119, type *Testudo coriacea* Linn., 1766, 350.
Eremias Wieg., 1834, 9, type *Lacerta velox* Pall., 1771, 457.
Lacerta Linn., 1758a, 200, type *L. agilis* Linn., 1758a, 203.
Mabuya Fitz., 1826, 23, type *Scincus sloanii* Daud., 1803, v. 4, 287.
Phrynosoma Wieg., 1828, 367, type *Lacerta orbiculare* Linn., 1758a, 206.

DISCUSSION.—The 4 names of fishes have been studied by Commissioner David Starr Jordan from the standpoint of the International Rules, and he reports that they are valid under the rules.

The 3 names of Amphibia and the 9 names of Reptilia have recently been studied by Commissioner Stejneger from the standpoint of the International Rules and he reports that they are valid under the rules.

The names of the Amphibia have also been studied by Dr. Arthur E. Brown (Proceedings Academy Natural Science, Philadelphia, 1908) and he adopts them.

All of these names have been published in certain zoological journals for the information of zoologists, and in order to give members of the profession the opportunity to express their opinion for or against them. Not a single objection to any one of these names has reached the Secretary's office.

In view of the foregoing premises the Secretary recommends that the names in question, with types cited, be placed in the Official List of Generic Names.

Opinion prepared by Stiles.

Opinion concurred in by ten (10) Commissioners: Apstein, Horvath, Jordan, D. S., Jordan, K., Kolbe, Loennberg, Monticelli, Skinner, Stiles, Warren.

Opinion dissented from by no Commissioner.

Not voting, seven (7) Commissioners: Bather, Dabbene, Dautzenberg, Handlirsch, Hartert, Hoyle, Stejneger.

OPINION 93

TWELVE GENERIC NAMES OF FISHES PLACED IN THE OFFICIAL LIST, BY SUSPENSION OF THE RULES

SUMMARY.—The following 12 generic names of fishes are herewith placed in the Official List of Generic Names, under the Plenary Power for Suspension of the Rules: *Conger* Cuv., 1817 (*Muraena conger* L.); *Coregonus* Linn., 1758 (*Salmo lavaretus* L.); *Elcotris* Bloch & Schneider, 1801 (*gyrinus* Cuv. & Val.); *Epinephelus* Bloch, 1792 (*marginalis* Bloch); *Gymnothorax* Bloch, 1795 (*reticularis* Bloch); *Malapterurus* Lacépède, 1803 (*Silurus electricus* L.); *Mustelus* Linck, 1790 (*Squalus mustelus* L. [= *Mustelus laevis*]); *Polynemus* Linn., 1758 (*paradisaeus* L.); *Sciæna* Linn., 1758 (*umbra* L. = *Cheilodipterus aquila* Lacép. as restr. by Cuvier, 1815); *Serranus* Cuv. (*Percacabrilla* L.); *Stolephorus* Lacép., 1803 (*commersonianus* Lacép.); *Tcuthis* Linn., 1766 (*javus* L.).

Names now current are not to be discarded unless the reasons for change show a clear-cut necessity.

STATEMENT AND DISCUSSION OF CASE.—The following cases are submitted and discussed by Commissioner David Starr Jordan. The U. S. Bureau of Fisheries (signature H. F. Moore, Acting Commissioner) concurs in the recommendations regarding them.

It seems to me that a legitimate use of the plenary power will be to cast it on the side of names now current unless the reason for change is a clear-cut necessity, priority of actual date for example. But in cases where a reasonable argument on both sides exists, it seems better to give current nomenclature the preference.

The earlier writers had no conception of genotype, regarding a genus merely as a convenient pigeon-hole in which to stow species, to be more or less arbitrarily divided when the receptacle became too full or its contents too obviously incongruous. In applying the rule of the first reviser, we find many difficulties as every taxonomist knows. Often a name has been dislocated by application to a species unknown to the original author. Often a wiser or more characteristic choice could have been made; still more often a writer mentions a given species not as a type, but rather as an illustration. And it is a rare case where a designated type among the early authors can be "rigidly construed" as indicated in accepted rules.

I now ask the Commission to consider stabilizing current nomenclature in a number of genera of fishes, in which the pertinence of current nomenclature has been questioned, for reasons more or less plausible, but in no case beyond question.

I propose that, subject to possible new information, the following current generic names be provisionally legalized with the type species indicated, notwithstanding certain contrary arguments of greater or less validity, but in no case clear-cut and conclusive.

AETOBATUS Blainville, 1816: type *Raja narinari* Euphraten.

The name *Aëtobatus* was applied by Blainville to the Eagle Rays, of which *Raja aquila* L. = *Aëtobatus vulgaris* Blainville would be the natural type. But as the genus *Myliobatis* (Duméril) Cuvier, 1817, had been established also for the Eagle Rays, the first reviser, Müller & Henle adopted both names, assigning *R. aquila* to *Myliobatis* and an unwonted type, *R. narinari* to *Aëtobatus*. From this arrangement Cantor (1849) dissented making *Myliobatis* a synonym of *Aëtobatus* and giving a new name, *Stoasodon* to *R. narinari*. It will create less confusion, however, to let the first revision stand, accepting *R. narinari* as type of *Aëtobatus*.

CONGER Cuvier, 1817: type *Muraena conger* L.

The name *Leptocephalus* was given by Gronow, a non-binomial author, in 1763 to a translucent ribbon-like larva, now shown to be that of the Conger Eel. In binomial nomenclature, this name dates from its adoption by Scopoli in 1777. The name *Conger*, used by Houttuyn in 1764, is said not to be available, although noted as such in Jordan, *Genera of Fishes*, p. 22.

As *Leptocephalus* and its derivatives have been in use for more than a century as the designation of these peculiar larvae I recommend that this use be continued and that the generic name of the Conger eels be established as *Conger*, in accordance with current usage.

[Apstein, 1915a, 187: *Conger* Cuv., 1817, type *vulgaris* Richards, 1844.]

COREGONUS Linnaeus, 1758: type *Salmo lacarctus* L.

The generic name *Coregonus*, taken from Artedi, is given by Linnaeus in the plural form only as *Coregoni*. The sub-generic names *Truttae* (*Salmo trutta*), *Osmerus* (*Salmo eperlanus*) and *Characinus* (*Salmo gibbosus*) appear in the same fashion as plurals. To reject these names in almost universal use, to substitute some possible later synonym would be a source of needless confusion. I recommend that these plural nouns be maintained as valid.

[Apstein, 1915a, 187: *Coregonus* Cuv., 1817, type *zwartmanni* Bl., 1784.]

ELEOTRIS Bloch and Schneider, 1801: type *Eleotris gyrinus* Cuv. & Val.

The generic name *Eleotris* first appears in Gronow, *Zoophylaceum* p. 183, 1763, with a good description and three species polynomially named, the name *Eleotris* being especially associated with a Chinese species, *Gobius eleotris* L., *Gobius chinensis* Osbeck. The other, apparently a true "*Eleotris*" was named *Gobius pisonis* by Gmelin (1789), and *Gobius amorca* by Walbaum (1792).

The first binomial author to revive the name *Eleotris* is Schneider in his edition of Bloch. The genus is here nominally equivalent to *Gobius*, the ventral fins being described as "connexae," a statement true of some of the species named but not of the *Eleotris* of Gronow. No species belonging to the genus *Eleotris* as now understood is included, though reference is made to *Eleotris pisonis* as a "species non definienda."

Meanwhile the *Amore Pixuma* of Maregrave's pre-Linnaean *Historia Naturalis Brasiliae* edited by Dr. Wilhelm Piso is brought into the synonymy. This is a crude figure of some small goby with two dorsal fins, perhaps an *Elcotris*, but not the actual type of any specific name.

In 1800, Lacépède established a genus *Gobiomoroides* on a dried fish "sent by Holland to France," which he identified as *Gobius pisonis*, naming it *Gobiomoroides piso*. It could, however, not be either *Elcotris pisonis* or "*Amore pixuma*" as it had a single dorsal of 45 rays and canine teeth. It was probably not a goby, and the name cannot be used for *Elcotris*.

Elcotris next appears with Cuvier (*Règne Animal* 1, 257, 1817) who accepts the name from Gronow, and gives a correct definition. His types are specimens from Levaillant taken in Surinam. The species described by Cuvier and Valenciennes as *Elcotris gyrimus* later authors have generally regarded as the type of *Elcotris*. It is identified by Jordan & Evermann with *Gobius pisonis* Gmelin.

We have apparently two alternatives in case Gronow's names, "binary" but not binomial, are not accepted.

(1) We may use the name *Elcotris* as dating from Schneider, taking *Gobius pisonis* Gmelin, waiving the fact that this is a "species non definienda" in Schneider's conception—thus stabilizing current nomenclature.

(2) We may apply the name *Elcotris* to some one of the species enumerated by Schneider, thus arbitrarily displacing one of the following well-established names: *Valenciennesa*, *Nomcus*, *Apocryptes*, *Hypselcotris*, *Boleophthalmus* or *Pomatomus*, genera of later date included in the incoherent mass.

Convenience as well as justice is served by adopting the first alternative, using the name *Elcotris* in the sense of Gronow and Cuvier with *Gobius pisonis* as the type.

The name *Gobiomoroides* has no place in this connection, and its type is as yet unidentified.

EPINEPHELUS Bloch, 1792: type *Epinephelus marginalis* Bloch.

The genus *Epinephelus* was based on *E. afer*, *E. marginalis*, *E. merri*, and *E. ruber*: *marginalis* and *merri* are congeneric, and belong to the great group called *Epinephelus* by Gill, Bleeker, and nearly all recent authors. Of these, *marginalis* is typical. The species named first, *afer*, has been on that account chosen as type by Fowler. This species was separated as the type of *Alphestes* by Bloch & Schneider, 1801; *ruber* was named as type by Jordan & Gilbert, in 1882, who supposed it to be congeneric with *marginalis* and this species under another name (*acutirostris* Cuv. & Val.) became the type of *Parcepinephelus* Bleeker, 1875. Justice and convenience are best served by retaining the name *Epinephelus* for its chief components, typified by *E. marginalis*, as understood by nearly all authors. Otherwise the genus would stand as *Cerna* Bonaparte, 1837, unless, with Fowler, we recognize *Epinephelus gigas* (*Perca gigas*) L. as the type of *Serranus* Cuvier, 1817, a change I think unnecessary.

GYMNOTHORAX Bloch, 1795: type *Gymnothorax reticularis* Bloch.

As originally given, *Gymnothorax* was simply a substitute name for *Muraena* L. Later, in dividing this extensive genus, Bleeker and after him Günther used the name *Gymnothorax* for one of its great divisions, and this arrangement has been largely followed. The first fixation of type may be held to separate *Gymnothorax* from *Muraena*, and I think that the use of the former name

should be preferred to the later *Lycodontis* McClelland based on one of the species of *Gymnothorax*. The case for the use of *Gymnothorax* is stated in Jordan, Genera of Fishes p. 168, that for its suppression on p. 53.

LAMPETRA Gray, 1851: type *Petromyzon fluviatilis* L.

The type of *Ammocoetus* Duméril, 1806, *Petromyzon planeri*, is a larval lamprey of uncertain genus, and the name may be preferably used (as *Ammocoetes*) as the designation for larval lampreys; while *Lampetra*, the earliest name based on *Petromyzon fluviatilis* L. may be retained.

MALAPTERURUS Lacépède, 1803: type *Silurus electricus* L.

In 1775, Forskål discovered the Electric Catfish of the Nile (*Silurus electricus* L.), which he confused with the Electric Ray (*Raja torpedo* L.) and which seemed to him to justify generic separation from *Raja*. He questions whether it might be allied to *Mormyrus* or whether it might find a place among the torpedoes of Rondelet, or might it be type of a new genus. "Aut potius novum constituere genus. Certe determinatur torpedinis *Character Genericus*: Piscis branchiostegus: apertura lineari, obliqua supra pinnae pectorales; corpore nudo; pinnis ventralibus seu abdominalibus; dentibus numerossissimis densis, subulatis." This statement leaves no question as to the species in mind.

In view of the confusion in Forskål's account, and the uncertain fashion in which he describes the supposititious new genus, I suggest that the current use of *Torpedo* for the Electric Ray and *Malapterurus* for the Electric Catfish be approved.

[Apstein 1915a, 188: *Malapterurus* Lacép., 1803, type *electricus* Gmel., 1788.]

MUSTELUS Linck, 1790: type *Squalus mustelus* L. (= *Mustelus laevis*).

The generic name *Mustelus* has been applied to a genus of sharks, typified by *Squalus mustelus* L. by several authors (Linck, 1790; Leach, 1812; Fischer, 1813; and Cuvier, 1817). This Linnaean species is however based on references to both the two European species of this group, now usually regarded as belonging to different genera or subgenera. These have been usually called *Mustelus laevis* Risso, the "smooth hound" and *Mustelus stellatus* Risso (*canis*), the "spotted hound." Those of the early writers who recognized these fishes failed to use the specific name *mustelus* for either, or else applied it to both.

Linck, the earliest writer to propose the name *Mustelus*, however, distinctly mentions *Mustelus laevis* as a synonym of *Squalus mustelus* L. and as his type, a fact which must fix the name *Mustelus mustelus* on the "Smooth Hound." The name thus replaces *Pleuracromylon* Gill, *Galcus* Rafinesque (as restricted by Jordan and Evermann, to *S. mustelus* L.) is also a synonym of *Mustelus*.

The genus containing the "Spotted Hound" should then stand as *Cynias* Gill, the type species standing as *Cynias canis* (Mitchill).

Valmont de Bomare, 1768, speaks of the "Spotted Hound" as "*Galcus asterias* aut *Mustelus stellaris*; chien de mer à taches rondes." But this binomial combination is merely a Latin translation of the French, certainly not intended as a scientific name.

Garman (*Plagiostomia*, 1913) rejects the name *Mustelus* altogether, because of its similarity to *Mustela*. But *Mustela* is a weasel and *Mustelus* a shark, a case parallel to that of *Pica* and *Picus*.

[Apstein, 1915a, 188: *Mustelus* Cuv., 1817, type *vulgaris* J. Müll. & Henle, 1841.]

POLYNEMUS Linnaeus, 1758: type *Polynemus paradisacus* L.

The first real restriction seems to be that of Günther, Cat. Fishes, II, 1860, 319. No type is specified, but the non-congeneric species, *P. quinquarius* L., is removed to form the genus *Pentacnemus*, a name originally employed by Artedi, but changed to *Polynemus* by Gronow. As this species, *quinquarius*, was the only one known to Artedi or to Gronow, Dr. Gill, with numerous writers, ourselves included, has regarded it as the type of *Polynemus*. But common usage with the formal selection of *P. paradisacus* L. as type by the first reviser, Jordan & Gilbert, Synopsis Fishes, 1882, should prevail.

SCIAENA Linnaeus, 1758: type *Sciaena umbra* L. = *Chcilodipterus aquila* Lacépède, as restricted by Cuvier, 1815.

Sciaena umbra of Linnaeus was a complex species made up of the later *Sciaena aquila* Lacépède and *Corvina nigra* (Bloch); *umbra* is the natural type of *Sciaena*, but its component parts are not congeneric. The two species were confused until Cuvier (Mém. du Museum, 1815, and later in the Règne Animal, Edition II, 1829) made clear the difference and definitely chose *aquila* as the type of *Sciaena*. Jordan & Evermann have adopted *Corvina nigra*, under the name of *Sciaena umbra*, as type of *Sciaena*. An argument can be made for either arrangement, but convenience is best served and probably justice also by accepting the name *umbra* for the species called *aquila* and recognizing this as type of *Sciaena*. The two species concerned should then stand as *Sciaena umbra* L. and *Corvina nigra* (Bloch). Bleeker has chosen as type *Sciaena cirrosa*, the species placed first as the type of *Umbrina* Cuvier, but this arrangement is not the first revision.

[Apstein, 1915a, 189: *Sciaena* L., 1758, type *aquila* Risso, 1826.]

SERRANUS Cuvier: type *Perca cabrilla* L.

In proposing the generic name *Serranus*, Cuvier speaks of the species of the genus as "*les serrans*," "leur nom sur plusieurs côtes du Méditerranée." "La Méditerranée en produit beaucoup, dont les plus communes s'y confondent sous les noms vulgaires de *perche de mer*, de *serran*, etc., et sont fort remarquables par la vivacité de leurs couleurs surtout à l'époque de l'amour."

These *Serrans* thus designated are obviously the species still called by that name, *Serranus cabrilla* and *Serranus scriba* of authors. But Cuvier neglects to mention either by its scientific name. In a further paragraph he mentions in *Serranus*, another species "beaucoup plus grand," *Holocentrus gigas* Schneider, which is a species of *Epinephelus*. For this reason, Fowler (Proc. Acad. Nat. Sci. Phila. 1907, 266) has taken *gigas* as the type of *Serranus*, thus replacing *Epinephelus* of authors, which name he leaves to *Alphestes afer*. No other writer has taken this view of the case, and I recommend the approval of the current nomenclature, regarding *Perca cabrilla* L. as the genotype of *Serranus*.

[Apstein, 1915a, 189: *Serranus* Cuv., 1829, type *scriba* L., 1758.]

STOLEPHORUS Lacépède, 1803: type *Stolephorus commersonianus* Lacépède.

Under the head of *Stolephorus*, Lacépède (Hist. Nat. Poiss. V. 381, 1803) mentions two species, the first the *Atherina japonica* of Houttuyn, the second his own *S. commersonianus*. From the latter he derives his description, and on the latter Bleeker bases the genus *Stolephorus* as largely accepted. The *Atherina japonica* is very briefly and incorrectly described by Houttuyn, and it has been taken for granted that it was congeneric with the other, and being the first species named, it was indicated as type of the genus by Jordan & Evermann in 1896. It is probable, however, that Houttuyn had in mind the species of another family, named by Bleeker, *Spratelloides argyrotaenia*. In 1917 (Genera of Fishes, 67) the present writer gave reasons for retaining *A. japonica* as type of *Stolephorus*, thus replacing *Spratelloides* Bleeker, while *Stolephorus* of Bleeker and authors generally would stand as *Anchovicella* Fowler. But it would make far less confusion as well as secure substantial justice to retain *Stolephorus* for the large group of which *S. commersonianus* is typical.

TEUTHIS Linnaeus, 1766: type *Tcuthis javus* L.

In the twelfth edition of the Systema Naturae, Linnaeus introduces the genus *Tcuthis*, with two species, *Tcuthis hepatus* and *Tcuthis javus*. These species under polynomial names constitute the genus *Hepatus*, of the non-binomial Zoophylaceum of Gronow, 1763. The name *Tcuthis* was taken from Browne (Jamaica), 1756, a pre-Linnaean writer, whose type was congeneric with that of Forskål's *Acanthurus*.

The two Linnaean species of *Tcuthis* are but distantly related, a fact recognized by various subsequent writers. In 1775, the relatives of *hepatus* were set off by Forskål as *Acanthurus*, those of *javirus* as *Siganus*. Cuvier used *Teuthyes* as a group name covering both types, the one being called *Acanthurus*, the other, after Bloch and Schneider, 1801, *Amphacanthus*.

The first author after Linnaeus to use *Tcuthis* as a generic name was Cantor, 1849. It here replaces *Siganus*, with a correct definition and the Linnaean species *Tcuthis javus*, placed at the head of the series.

In this usage, Günther and all European writers have followed, and although the word "type" is not mentioned by Cantor, the arrangement will bear rigorous interpretation.

Later Gill showed reasons why *Tcuthis hepatus* should have been taken as type, *Tcuthis* being a re-naming of *Hepatus* of Gronow, by reverting to the still earlier name of Browne. There is room for argument on both sides, but inasmuch as the first reviser (Cantor) selected *Tcuthis javus* as type of *Tcuthis* and current nomenclature outside of America uses *Acanthurus* for *hepatus* and its relatives and *Tcuthis* instead of *Siganus*, I recommend that this course be approved by the Commission. In my own papers I have lately followed the suggestion of Dr. Gill, replacing the familiar *Acanthurus* by *Tcuthis* or by *Hepatus*, reviving *Siganus* for the *javirus* group. I am inclined to think this change unnecessary as it was certainly confusing, and that to follow Cantor is in better accord with established rules.

Opinion prepared by Commissioner David Starr Jordan.

Report on final vote: Two names *Aëtobatus* and *Lampetra* have been tabled without prejudice pending further discussion at the next

meeting of the Commission. The other 12 names are unanimously adopted by a vote of 13 to 0.

Opinion concurred in by thirteen (13) Commissioners: Apstein, Bather, Handlirsch, Hartert, Horvath, Jordan, D. S., Jordan, K., Loenberg, Monticelli, Neveu-Lemaire, Skinner, Stiles, and Warren.

Opinion dissented from by no Commissioner.

Not voting, four (4) Commissioners: Dabbene, Hoyle, Kolbe, and Stejneger.

OPINION 94

TWENTY-TWO MOLLUSK AND TUNICATE NAMES PLACED IN THE
OFFICIAL LIST OF GENERIC NAMES

SUMMARY.—The following names are hereby placed in the Official List of Generic Names: MOLLUSCA: *Anodonta*, *Argonauta*, *Buccinum*, *Calyptaca*, *Columbella*, *Dentalium*, *Helix*, *Limax*, *Mastra*, *Mya*, *Mytilus*, *Ostrca*, *Physa*, *Sepia*, *Sphaerium*, *Succinea*, *Teredo*. TUNICATA: *Botryllus*, *Clavelina*, *Diazona*, *Distaplia*, *Molgula*.

STATEMENT OF CASE.—In Circular Letter No. 78, March, 1924, the Secretary submitted 39 generic names which had been proposed by Commissioner Apstein (1915a, pp. 181-184) as "nomina conservanda." These names were studied independently, especially by Dr. Bartsch of the United States National Museum and by Mr. B. B. Woodward of London, England. Several other specialists were also kind enough to consider the names, and the bibliographic references were checked in the Secretary's office. It appears from the reports reaching the Secretary's office that of these, 22 names are valid under the International Rules and that, therefore, they do not have to be adopted as "nomina conservanda" under "Suspension of the Rules."

Considerable correspondence has reached the Secretary in regard to the names.

DISCUSSION.—In regard to 22 of the names no objection of any kind has reached the Secretary. In regard to 17 of the names, objection of one kind or another has reached the Secretary and these 17 cases are tabled without prejudice for consideration at the next meeting of the Commission.

The following 22 names have not been objected to, and on this account and on basis of reports by specialists the Secretary recommends their inclusion in the Official List of Generic Names subject of course to the usual conditions:

Anodonta Lam., 1799, 87, mt. *Mytilus cygneus* Linn., 1758a, 706.

Argonauta L., 1758a, 708, type *A. argo* L., 1758a, 708.

Botryllus Gaert., 1774, 35, type *Alcyonium schlosseri* Pallas, 1766, 355, s.

Botryllus stellatus.

Buccinum L., 1758a, 734, type *B. undatum* L., 1758a, 740.

Calyptaca Lam., 1799, 78, mt. *Patella chinensis* L., 1758a, 781.

Clavelina Savig., 1816, 171, type *Ascidia lepadiformis* Müller, 1776a, 226.

Columbella Lam., 1799, 70, mt. *Voluta mercatoria* L., 1758a, 730.

Dentalium L., 1758a, 785, type *D. elephantinum* L., 1758a, 785.

Diazona Savig., 1816, 35, tod. *D. violacea* Savig., 1816, 35.

Distaplia Della Valle, 1881, 14, [mt. *D. magnilarva* Della Valle, not mentioned in 1881, 14-15, in Latin, but "grossa larva" given on p. 14, later (1882, 47) published in Latin].

Helix L., 1758a, 768, type *H. pomatia* L., 1758a, 771.

Limax L., 1758a, 652, type *L. maximus* L., 1758a, 652.

Mactra L., 1767, 1125, type *M. stultorum* L., 1767, 1126.

Molgula Forbes, 1848; 1853, 36, type *M. oculata* Forbes, 1848; 1853, 36.

Mya L., 1758a, 670, type *M. truncata* L., 1758a, 670.

Mytilus L., 1758a, 704, type *M. edulis* L., 1758a, 705.

Ostrea L., 1758a, 696, type *O. edulis* L., 1758a, 699.

Physa Drap., 1801, 31, type *Bulla fontinalis* L., 1758a, 727.

Sepia L., 1758a, 658, type *S. officinalis* L., 1758a, 658.

Sphaerium Scop., 1777, 397, type *Tellina cornua* L., 1758a, 678.

Succinea Drap., 1801, 32, type *Helix putris* L., 1758a, 774.

Teredo L., 1758a, 651, type *T. navalis* L., 1758a, 651.

Opinion prepared by Secretary.

Opinion concurred in by fourteen (14) Commissioners: Apstein, Bather, Dautzenberg, Handlirsch, Hartert, Horvath, Jordan, D. S., Jordan, K., Kolbe, Loennberg, Monticelli, Skinner, Stiles, Warren.

Opinion dissented from by no Commissioner.

Not voting, three (3) Commissioners: Dabbene, Hoyle, Stejneger.

OPINION 95

TWO GENERIC NAMES OF PROTOZOA PLACED IN THE OFFICIAL LIST OF GENERIC NAMES

SUMMARY.—The following names are hereby placed in the Official List of Generic Names—PROTOZOA: *Endamoeba*, *Trypanosoma*.

STATEMENT OF CASE.—1. Professor R. W. Hegner, of the Johns Hopkins School of Hygiene and Public Health, has recommended to the Helminthological Society of Washington, that the said Society bring to the attention of the International Commission on Zoological Nomenclature the following five generic names of important parasitic Protozoa, with a view to inserting them in the Official List of Generic Names. The Society has voted to support the names.

2. The Secretary of the Commission has studied all five of these cases in detail, and believes that they are nomenclatorially available and valid under the International Rules, and he recommends their adoption by the Commission.

3. The names are as follows :

Endamoeba Leidy, 1879a, 300, mt. *blattae* Buetschli, 1878a, 273, t. h. *Blatta orientalis*.

Giardia Kunstler, 1882, CrAS, v. 95, 349, mt. *G. agilis* Kunstler, 1882, 349, in intestine of tadpole of *Rana*.

Trichomonas (Donné, 1837) Ehrenb., 1838a, 331 (emendation of *Trichomonas*), mt. *vaginalis* Donné, 1837.

Trypanosoma Gruby, 1843a, 1134, mt. *T. sanguinis* Gruby, 1843a, Nov. 13, = *Amoeba rotatoria* Mayer, 1843, in blood of *Rana*.

Balantidium Clap. & Lachm., 1858b, 247, mt. *Bursaria entozoneon* Ehrenb., 1838b, 327.

4. Commissioner Apstein has proposed three of the foregoing names in his paper of 1915a, nomina conservanda, p. 122, as follows :

Balantidium Clap. & Lachm., 1858, type *coli* Malmst., 1857.

Trichomonas Donné, 1837, type *vaginalis* Donné, 1837.

Trypanosoma Gruby, 1843, type *sanguinis* Gruby, 1843.

5. Commissioner Apstein and the Secretary agree in all details in regard to *Trichomonas* and *Trypanosoma*. Apstein accepts *coli* as the type of *Balantidium*, but *Balantidium* 1858 was monotypic (*entozoneon*), and C. & L. in the same paper classified *coli* as a *Plagiotoma*; accordingly under the Code, *coli* is excluded as type of *Balantidium*. Commissioner Apstein does not mention *Endamoeba* or *Giardia*.

6. Report on Voting: *Endamoeba*, type *blattae*, and *Trypanosoma*, type *sanguinis=rotatoria*, received 14 affirmative votes and no vote in the negative.

Giardia, *Trichomonas* and *Balantidium* are tabled without prejudice. They will be discussed further at the next meeting of the Commission.

Opinion prepared by Stiles.

Opinion concurred in by fourteen (14) Commissioners: Annandale, Apstein, Bather, Handlirsch, Horvath, Jordan, D. S., Jordan, K., Kolbe, Loennberg, Monticelli, Neveu-Lemaire, Skinner, Stiles, Warren.

Opinion dissented from by no Commissioner.

Not voting, three (3) Commissioners: Dabbene, Hartert, Stejneger.

OPINION 96

MUSEUM BOLTENIANUM

SUMMARY.—The Commission accepts the Museum Boltenianum 1798 as nomenclatorially available under the International Rules.

STATEMENT OF CASE.—Dr. C. Tate Regan of London submits the following case for opinion :

Are the names in the *Museum Boltenianum* to be accepted?

Museum Boltenianum is the title of a catalogue of the shells, minerals, and objects of art collected by Dr. Bolten. It was printed in 1798, after his death, by his family, who wished to sell the collections. Failing in their object to sell the collections as a whole the catalogue was reprinted in 1819, when the title-page states it is a catalogue of the shells, minerals, etc., which will be openly sold by J. Noodt on April 26 at 10 o'clock in the morning.

Bolten had his own system of nomenclature of shells and to make his names intelligible to intending purchasers one Roeding was employed to add the names in Gmelin's Edition of Linnaeus.

There is no author's name on the catalogue. No indication that it was published, or sold.

It was, in fact, a sale catalogue, doubtless distributed to likely purchasers, but without other circulation.

Opinion 51 seems to apply.

DISCUSSION.—In Opinion 51 the Commission has frankly admitted the extreme difficulty of clearly defining the word "publication" and it has expressed the opinion "that in some cases it is an easier matter to take a specific paper and decide the individual case on its merits, than it is to lay down a general rule which will be applicable to all cases."

The Museum Boltenianum has been discussed by Wm. H. Dall in Publication 2360 Smithsonian Institution (copies herewith submitted to members of the Commission) which is herewith made a part of Opinion No. 96.

The Secretary has submitted the case again to Dr. Wm. H. Dall and to Dr. Paul Bartsch, specialists in conchology. Dr. Dall has not changed the opinion he expressed in 1915 and he reports to the Secretary as follows :

It was not a sale-catalogue in the ordinary sense of being made for the purpose of selling, and the additions of Röding were a labor of love.

Bolten's names have been adopted by all first class workers in conchology, and I know of only one man, a German, who objects to them.

Since they are practically in universal use, any action invalidating them would be a calamity.

Dr. Bartsch concurs with Dr. Dall.

The Secretary has examined three prints of this Catalogue, one of 1798, a second of 1819, and a third of 1906.

If this case rested upon the edition of 1819, the Secretary would feel that there is distinct room for a legitimate difference of opinion on the question at issue, although he would find it very difficult to explain why an auctioneer's catalogue should contain detailed bibliographic references, the compiling of which probably cost much more than the price the collection would bring at auction.

The edition of 1798, however, bears all the earmarks of a carefully prepared manuscript intended to be printed as a permanent record with only incidental reference to sale. The Secretary is constrained to concur with Doctors Dall and Bartsch that this (first edition, at least) represents a scientific document rather than a sales catalogue, and the fact that the family of the deceased author wished to sell the collection seems to have its parallel in some modern zoological papers in which authors offer to exchange specimens (namely, to dispose of their specimens for a consideration); the fact that the return-consideration asked is specimens (with a money value) in one case and money itself in another case, appears to represent conditions identical in general but differing only in detail.

The Commission has the statement of two specialists in Conchology that "Bolten's names" "are practically in universal use" and that "any action invalidating them would be a calamity." On basis of this expert testimony combined with the fact that no formal necessity (under the Rules) appears to be present to indicate the necessity of rejecting the (first edition, 1798, of this) publication, the Secretary recommends that the Commission accept the *Museum Boltenianum*, 1798, as nomenclatorially available under the International Rules.

Opinion written by Stiles.

The foregoing Opinion was submitted to the Commission and a vote was taken with the following result:

Opinion concurred in by twelve (12) Commissioners: Apstein, Bather, Dautzenberg, Horvath, Jordan, D. S., Jordan, K., Kolbe, Monticelli, Skinner, Stejneger, Stiles, Warren.

Opinion dissented from by three (3) Commissioners: Annandale, Handlirsch, Loennberg.

Not voting, three (3) Commissioners: Dabbene, Hartert, Hoyle.
Commissioner Annandale states:

I feel obliged to dissent from the opinion proposed in your circular letter No. 72. I think it necessary to give my reasons. In the first place I do not

agree with Dr. Dall that all first class workers on conchology have accepted the nomenclature of the Museum Boltenianum.

In the second place, the question is, as is acknowledged, an extremely difficult one and I do not believe in revising nomenclature that has been universally accepted for many years, in doubtful cases.

I should state, however, that my colleague, Dr. Bains Prashad, the only other zoologist in Asia but myself who has yet done considerable systematic work in malacology, is now prepared to accept the Boltenianum nomenclature, although he has not done so in his published papers up to the present.

Commissioner Handlirsch states:

Die Bolten'schen Namen sind nur in Amerika in "universal use"—in Europa keineswegs. Man sieht aus diesem Beispiele wieder, dass eine ausgiebige Liste von "nomina conservanda" ein Segen für unsere Wissenschaft wäre.

Commissioner Skinner states:

Dr. H. A. Pilsbry takes exception to the opinion on the ground of what "constitutes publication," a paucity of copies, not accessible to nearly contemporary writers, this making all the trouble.

The foregoing objections were submitted to the Commission and a new vote was taken with the following result:

Opinion concurred in by eleven (11) Commissioners: Bather, Chapman, Horvath, Jordan (D. S.), Jordan (K.), Monticelli, Neveu-Lemaire, Skinner, Stejneger, Stiles, and Warren.

Opinion dissented from by three (3) Commissioners: Apstein, Handlirsch, and Kolbe.

Not voting, four (4) Commissioners: Dabbene, Hartert, Hoyle, Loennberg.

NOTE BY SECRETARY.—During the proof-reading of Opinion 96, Dr. H. A. Pilsbry has submitted to the Secretary an elaboration of his views cited briefly by Commissioner Skinner. This document will be sent to the Commissioners.

OPINION 97

DID HÜBNER'S TENTAMEN, 1806, CREATE MONOTYPIC GENERA?

SUMMARY.—Hübner's Tentamen, 1806, was obviously prepared essentially as a manifolded manuscript, or as a proof sheet (cf. Opinion 87), for examination and opinion by a restricted group of experts, *i. e.*, in *Lepidoptera*, and not for general distribution as a record in Zoology. Accordingly, the conclusion that it was published in 1806 is subject to debate. Even if the premise be admitted that it was published in 1806, the point is debatable whether the contained binomials should be construed as generic plus specific names. Even if it be admitted that the binomials represent combinations of generic plus specific names, they are essentially *nomina nuda* (as of the date in question) since authors who do not possess esoteric information in regard to them are unable definitely to interpret them without reference to later literature. If published with more definite data at later dates, these names have their status in regard to availability as of their date of such republication.

STATEMENT OF CASE.—Dr. J. McDunnough, Entomological Branch, Department of Agriculture, Ottawa, Canada, has submitted to the Commission the question: Did Hübner's Tentamen, 1806, create monotypical and valid genera? As the validity of the units in question is a zoological, not a nomenclatorial problem, the Secretary modifies the question to read: Did Hübner's Tentamen, 1806, create monotypic genera? Dr. McDunnough presented the following data:

In the May number of the Entomologist's Record for 1919, the second instalment of Baker and Durrant's comparison of Jacob Hübner's Tentamen and Verzeichniss, elucidating his system of *Lepidoptera*, is prefaced by a few remarks by Mr. Bethune Baker, who strongly supports the view that the Tentamen creates generic names perfectly valid for use by systematic workers.

As my name is mentioned as one of those opposing the adoption of the Tentamen terms as valid genera, perhaps a few brief words, explaining my views more explicitly than I have heretofore done, may not be amiss.

The question of the validity or non-validity of the so-called 'genera' of the Tentamen has already been the subject of much controversy and no one is more anxious than I am to arrive at a definite decision regarding this perplexing pamphlet. Until this is done it will be impossible to introduce stability into the generic nomenclature of *Lepidoptera* as, owing to the early date of issue (1806), the Tentamen names, if accepted, will take priority over numerous long established generic names.

Since the publication of the brief statement in the introduction to Barnes & McDunnough's Check List of North American Lepidoptera, I have given the matter considerable further study, and I am now perfectly willing to agree with Mr. Baker that we must consider the Tentamen to have at least been published and that it certainly will not be sufficient to discard the names therein proposed as inedited. This, however, does not settle the matter to

my mind and we are still faced with the question as to whether Hübner created what can be termed modern genera in the aforesaid work or not.

It is a well-known fact that Hübner did not employ the term 'genus' to signify the category immediately above a species. The Hübnerian 'coitus' as used in the Verzeichniss has been, however, generally accepted as typifying the modern 'genus' and as fulfilling the requirements of the International Code in respect to generic validity. Turning to the Tentamen, we at once see from the title that Hübner is not dealing with *coiti* but with *stirpes* and that, in fact, the Tentamen is but the merest skeleton of a system which was amplified ten years later in the Verzeichniss, where the *stirpes* of the Tentamen are employed *only in a plural sense* [in the text, but in the singular in the index.—C. W. S.] and correspond with our modern ideas of a sub-family or even a family. The unfortunate fact remains that in the Tentamen Hübner, besides his plural usage, actually has employed the *stirpes* name in the singular in connection with a specific name. It must seem evident that the intention was merely to cite a species considered by the author to be typical of each *stirps* and the usage of the term in the singular number was probably merely to conform to the rules of correct Latin [the paper is entirely in Latin.—C. W. S.]; one of the strongest arguments in favor of this view is the fact that in the Verzeichniss each and every specific [107.—C. W. S.] name used in the Tentamen is placed by Hübner in a *coitus* not identical in name with the term employed in the Tentamen (as would naturally be the case if he had intended creating *coiti* in this pamphlet) but for which he either uses a generic name created by one of the early writers (Fabricius, Schrank, Ochsenheimer, etc.) or, failing this, actually proposes a new name.

The vital question then is, briefly stated—did Hübner by his employment of a *stirps* name in the singular along with a valid specific name actually—even if unintentionally—create a valid generic name? Common sense would seem to tell us, No, but on the other hand there is nothing in the International Code which would definitely forbid the usage of these terms as genera nor can I find any ruling under the Opinions rendered by the International Commission which would cover this case. Under the Code the sole absolute requirements for generic validity [availability.—C. W. S.] would appear to be unimominality and association with a valid [valid?—C. W. S.] specific name.

I would, therefore, offer the suggestion that the decision be left to an International Committee; I, for one, would willingly abide by their ruling and I am sure that most systematic workers in *Lepidoptera* would be glad to see the end of a vexatious question which, while affecting considerably the nomenclature of *Lepidoptera*, has, after all, no vital bearing on the larger problem of the interrelationships of the various species.

DISCUSSION BY SECRETARY.—The case now before the Commission has for many years been the subject of earnest controversy. It has been before the Commission for many months and has resulted in voluminous correspondence.

The Committee on Nomenclature of the Washington Entomological Society has studied the case and reports to the Secretary as follows:

In the minds of this Committee there is no doubt that Hübner's Tentamen is a publication and should therefore be treated as such.

To certain entomologists, Sir George H. Hampson, Bart., submitted this case in the following form, namely:

Are the genera of Hübner's *Tentamen* to be accepted or not? If accepted, what date is assigned to them?

and J. H. Durant¹ (1899) summarizes the replies as follows:

I. AS TO VALIDITY.

To be accepted: 1 Walsingham, 2 Kirby, 3 Fernald, 4 Grote (=4/11). It may be assumed from his writings and note that Scudder concurs (=5/11).

To be rejected: 1 Hampson, 2 Meyrick, 3 Smith, 4 Snellen, 5 Aurivillius, 6 Staudinger (=6/11).

Result 5-6/11; majority against accepting genera.

2. AS TO DATE.

No reply received from 1 Hampson, 2 Meyrick, 3 Snellen, 4 Aurivillius (11-4=7).

Published in 1806: 1 Walsingham, 2 Fernald, 3 Staudinger, 4 Grote, 5 Smith (=5/7). It may be assumed that Scudder concurs as he has adopted this date (=6/7).

Commissioner Karl Jordan submitted the case to "Members of the Entomological Committee on Nomenclature" and "various local committees and . . .," in addition, asked "a number of entomologists for their views." He reports to the Secretary as follows:

1. *Arguments for the acceptance of the Tentamen names.*—I. The *Tentamen* was distributed as a printed quarto sheet in 1806. Hübner in *Verzeichniss* 1816, says of it that he made it at once known "10 years ago." Ochsenheimer states in 1816 that "Hübner has issued . . . the plan of a classification of the *Lepidoptera* printed on a quarto sheet," and treats it as a publication of valid names, which he adopts; a reference in Vol. III of Ochsenheimer implies that he knew the *Tentamen* to have been in existence before 1810. Several copies are known, some discovered bound up in other books on *Lepidoptera*, which is evidence that the recipients of a copy did not consider it to be a mere advertisement, but scientific matter well worth preserving. The classification published in the *Tentamen* was adopted by Hübner on the plates of Vol. I of his *Samml. Exot. Schmett.* (1806-1834).

2. The stirpes (genera) are well defined by the fact that only one species is cited under each stirps. All these species (types of genera) were known. In every case the names of the *Tentamen* can be identified through Hübner's own illustrations of the species cited. "We can find out to a dead certainty what Hübner meant" (Grote), and there can be no doubt about the publication of each generic name.

¹ Nomenclature of *Lepidoptera* <Proceedings 4th International Congr. Zool. (1898), 1899, 285.

3. The citation of a known species as the type of a new genus is a much better definition and guide than, for instance, Hübner's descriptions in the Verzeichniss, the names of which are generally accepted as valid [available.—C. W. S.] in spite of the futility of these so-called descriptions. With regard to the Tentamen, we turn to Hübner's figure and can ascertain what species was intended, and for ourselves test whether the genus be valid or not.

4. No one will be disposed to doubt the necessity for full definition of all genera published after the acceptance of the British Association Rules, but it was impossible for authors who lived and died before these rules were made known to act upon them. The *nomina nuda* published before 1842 (Brit. Assoc.) stood upon an entirely different footing from those published after that date (cf. Zool. Congr. 1868).

5. If the Tentamen names are rejected, many other names (*i. e.*, many of Ochsenheimer's and Guenee's, which are in general use, but have no more claim to recognition than have Hübner's) must be discarded, and the confusion would be terrible.

In favor of the acceptance of the Tentamen are: C. T. Bethune Baker (Leamington Spa), J. H. Durant (London), J. de Joannis (Paris), R. Puen-geler (Aachen), N. D. Riley (London), H. Stichel (Berlin).

II. *Arguments against the acceptance of the Tentamen names.*—1. The Tentamen was probably sent only to some of the subscribers to Hübner's Samml. Europ. Schmett., which would account for the number of known copies being so very small. Hübner, in Verzeichniss in 1818, states that he conceived the idea of a classification of the *Lepidoptera*, but that, before he would adopt it himself, he had communicated the plan of it to experts for examination and criticism. He was his own publisher, and the quarto sheet giving the skeleton of a tentative classification appears to be in the nature of a publisher's prospectus, which is not a publication valid for nomenclatorial purposes. Hübner nevertheless adopted the plan for the plates of Vol. 1 of Samml. Exot. Schmett., interpolating here a third name between stirpes and species, *Nercis fulva Polymnia*. In the letter-press to this Vol. 1 and in all his other publications he rejected the Tentamen names, employing them in the plural form for higher divisions only, not for genera.

2. The stirpes in the Tentamen are without descriptions and references. Though under each stirps one species is quoted (*Rusticus Argus—Princeps Machaon*—), no author is given. The majority of these specific names occurred among *Lepidoptera* only once before 1808, and we assume that such specific names in the Tentamen refer to those known species and not to other species. However, 17 of the names had been applied before 1806 to two, three, or four species (*proserpina, maturna, malvac, fabius, culiciformis, carpiui, parthenias, lunaria, auriflua, affinis, aprilina, flavicincta, fulvago, lyth-orylea, umbratica, barbalis, bombycalis*). In these cases again we may assume that Hübner meant the species he had figured before 1806. But which of the two *fabius* then known did he mean with *Consul Fabius*, not figured by him? What is his *Elophila Linnalis*? Is *Linnalis* a new name or is it (like *Macniata* for *Mocniata*) a misprint for *Limbalis* or for *Lennalis*, both figured before? What is *Phyllonorycter Rajella*? Did he mean *Rajella* Linn., or the very different *Rahella* Hübn.?

Rigorously construed, the absence of descriptions, references and authors leaves all the names open to conjecture.

3. The combination of two words *Princeps Machaon* can in no way be interpreted as a definition of the genus *Princeps*. The combination can mean that the new genus *Princeps* contains only one species, *machaon*, or all the species similar to *machaon*, or all the butterflies not placed in other genera. In 1806 the recipient of a copy of the Tentamen could not know whether Hübner wished him to put the one or the other construction on the naked names. Nobody in 1806, except Hübner himself, could know in which stirpes of the Tentamen to place the larger proportion of the species then already well known. There is not the slightest indication where to place, for instance, the numerous Erycinids then already figured. The Tentamen was a mere skeleton intended to be filled in later, but abandoned by its author.

The citation of a species is not a definition of a genus; a higher category is not defined by one lower category. [Cf., however, Opinion 1.—C. W. S.]

4. Linnaeus clearly stated the rules of nomenclature in the introduction to *Syst. Nat.* X, 1758 [*Philos. botan.*, 1753.—C. W. S.]. He demanded that the various systematic concepts be defined by stating the differences.

5. If the Tentamen names are adopted no good will be served, some familiar names, such as *Abraças*, will be superseded, other lists of naked names will become valid publications, and numerous useless changes and infinite chaos will result.

Against the acceptance of the Tentamen names are: G. J. Arrow (London), Chr. Aurivillius (Stockholm), E. E. Austen (London), K. G. Blair (London), E. L. Bouvier (Paris), G. C. Champion (Woking), H. Eltringham (Oxford), A. Handlirsch (Wien), C. G. Gahan (London), K. Enderlein (Berlin), M. Hering (Berlin), K. Holdhaus (Wien), O. Meissner (Potsdam), F. Reyer (Saarbruecken), E. Meyrick (Marlborough), H. Rebel (Wien), Rothschild (Tring), L. B. Prout (London), S. Schenkling (Berlin), P. Schulse (Berlin), W. H. Tams (London), H. Zerny (Wien).

E. L. Bouvier, R. Verity, and J. Waterston would be in favor of retaining such names as are in general use, which could be done by placing them by common consent on the List of *Nomina Conservanda*.

K. M. C. Heller (Dresden) is not quite sure that the Tentamen can be regarded as a publication.

Messrs. Enderlein, Hering, and Hesse (Berlin) are against the reintroduction of names which have been out of use for a period of (say) 50 years.

The Secretary has found a division of opinion among American entomologists, but nearly or practically all of the North American workers in *Lepidoptera* seem to be distinctly of the opinion that the names in question are available under the Code; and the following summary by Foster H. Benjamin seems to be a fair presentation of their views:

We believe that the Tentamen was published about 1805 or 1806, and that copies have been available ever since; that its authorship is clear, that its author created a number of monotypic genera, thereby designating types; that these genotypes were published in tabular form under the name of their former genus or subgenus; that in consideration of the date of issue of the Tentamen it requires no knowledge of *Lepidoptera* to determine that *Papilio polyminia*, or *Noctua segetis* are species which have been well published under

all rules of the Code; that authorship following the specific names is not only not definitely required under the Code, but that any general zoologist in 1806 would have known immediately in his own mind exactly what taxonomic organism Hübner listed at least in the great bulk of the listings without even the need of trying to look anything up; we find nothing in the Code which states that what constitutes an easily interpreted indication in 1806 (or 1925) may later, 1925 (or 2044) become not valid by reason of the addition of unsuppressed homonyms or because of any other complications, especially after the indication had been rendered still more available by correct interpretation by a number of different authors in the intermediate period.

The Secretary presents the following evidence to the Commission.

TITLE OF DOCUMENT.—The following is the title of the document in question as copied from a photostatic reproduction of a copy bearing the following "Reprinted in facsimile by S. H. Scudder—Cambridge, U. S. A., 1873": *Tentamen determinationis digestionis atque denominationis singularum stirpium Lepidopterorum, peritis ad inspiciendum et dijudicandum communicatum*, a Jacobo Hübner.

This title might be translated into English, in various phraseology, as follows: "a tentative (or attempt) determination (or to determine, limit), division (or to divide, orderly distribution, arrangement) and naming (denominating, change of name=metonymy) of the separate (single, one by one) stems (sticks, families, races, cf. stirps, genus, family) of Lepidoptera *communicated to experts* (the skilled, the experienced, the practically acquainted) *for their inspection (look into, consideration, contemplation, examination) and judgment*. [Italics by Secretary.]

Ochsenheimer (1816, viii) states:

Herr Hübner hat unter dem Titel: Tentamen [etc.] den Entwurf eines Systems des Schmetterlinge auf einem Quartblatte abgedruckt herausgegeben, worin die von ihm angegebenen Familien mit Gattungsnamen von verschiedenen Werthe belegt sind.

Hübner (1816, Verzeichniss, p. 3) refers to the Tentamen as follows:

Die Grundlage dieses Entwurfes habe ich sogleich, unter dem Titel: Tentamen determinationis, digestionis atque denominationis singularum stirpium Lepidopterorum bekannt gemacht, *damit sie von Verständigen, bevor ich sie annehme, geprüft und beurtheilt werden möchte*. [Italics by Secretary.]

Hübner (1818, Zuträge, pp. 4-5) printed what is practically a second, modified and enlarged, version of his Tentamen, preceding it with the following statement:

Dem mein 1806 bekannt gemachter *Versuch einer Bestimmung, Anordnung und Benennung aller Stämme der Schmettlinge* wurde weder gleich verworfen, noch gleich ergriffen. Erst nach und nach wird er beachtet, und durch

Zusätze, Berichtigungen und Verbesserungen zu einem brauchbaren System erhoben werden können.

Weil ich mich nun bey diesen Zuträgen sowohl als bey meiner Sammlung exotischer Schmetterlinge einstweilen nach meinem Entwurfe zu richten habe, bis ein trefflicheres System entstanden seyn wird, so halte ich es für unumgänglich, denselben nach seinem hauptsächlichsten Inhalt hier einigermaßen verbessert aufzustellen.

From the foregoing the conclusion would seem justified that in 1806 Hübner had no intention whatever of placing on record a series of generic and specific names in the sense of publication as ordinarily understood by the zoological profession and if the names in question are accepted as available under the Code, this must be on the principle of holding a man responsible for something which he obviously did not intend to do and in face of the precaution he took to state that this document was for *examination by experts*, namely specialists in *Lepidoptera* [rather than as a permanent record]. If this decision is made against Hübner despite the precautionary wording of the title a very broad question is opened up as to the status of numerous documents printed and privately distributed with such headings as "Printed as Manuscript" "Not for Citation," etc. Cf. also Opinion 89.

Granting that the word "publication" is poorly defined and the fact that the Tentamen was manifolded by printing, the point is still outstanding that Hübner did not intend this document for general distribution as a permanent document but only in the light of correspondence for *restricted distribution to specialists in Lepidoptera*.

The Secretary concludes that the question whether this document was actually "published" or not is subject to debate, but that Hübner himself clearly warned that it was not to be considered a permanent document for general distribution.

HÜBNER'S USE OF TERMS "STIRPS," "COITUS," AND "GENERA".—Hübner (1806) divides the *Lepidoptera* into *Phalanx I Papiliones* to *Phalanx IX Alucitae*. The following subdivisions of *Phalanx I* show the full details of his use of technical names in the Tentamen.

PHALANX I. PAPILIONES

Tribus I: nymphales

- I. Nereides—Nereis Polymnia.
- II. Limnades—Limnas Chrysippus.
- III. Lemoniades—Lemonias Maturua.
- IV. Dryades—Dryas Paphia.
- V. Hamadryades—Hamadryas Jo.
- VI. Najades—Najas Populi.
- VII. Potamides—Potanis Iris.
- VIII. Oreades—Oreas Proserpina.

The question arises as to how the entry "I. *Nereides*" etc., for instance, is to be interpreted. It will be noticed the *Nereides* is in the plural and that "*Nereis Polymnia*" is in the form of a binomial in the singular. Hübner, 1816, p. 8, and 1818, 4, shows that *Nereides* was intended as Stirps, printed as plural in the text and as singular *Nereis* in the Index. Further Hübner (1816, p. 8) uses the German word "Verein," Latin "Coitus," in the sense of "genus" of other authors, while in the indices both in 1816 and 1818 he uses the German word "Gattungen" (Latin "genera") in the sense of "species" of other zoologists. The coitus name he prints (1816, p. 8), example *Hymenites*, in the plural, in the text, when used alone, but in the singular (example, *Hymenitis diaphana* p. 8) when used in a binomial form, and in the index, he prints it in the singular (example *Hymenitis*). Thus, from his other publications it seems clear: (a) that the Verein="Coitus" of Hübner is intended to be identical with the genus as used by other authors, and (b) that the next lower unit "Gattung"="Genus" of Hübner is intended to represent the "species" of other authors. Hübner (1816, p. 8) quotes *Nereides* as Stirps I in the plural and it seems reasonable to conclude that he intended the *Nereides* as used in his Tentamen, 1806, to represent Stirps I.

It is to be noted that the word "Stirps" among early authors is not used uniformly. Thus Brisson (1762, 131-132) divides groups in the following serial units: Ordo, Sectio, Genus, Stirps [practically a subgenus], [species]. Gronovius (1763, 5) quotes the Stirps practically as a genus. Hübner (1816) clearly used the Stirps (=Stamm) as supergeneric.

Possibly Hübner's word "stirpium" in the Tentamen title (1806) is clear to specialists, but only by consulting his other works (as 1816 and 1818) does it become clear to the general zoologist that Hübner's Stirps is a supergeneric group, cited sometimes in the plural, sometimes in the singular. Accordingly, the position of the "stirpium" of 1806 is not clear as of the date 1806.

In seeking for an interpretation of the binomial *Nereis Polymnia* on the other hand it is to be noticed that there is a Linnaean species *polymnia* quoted by Hübner (1816, p. 11) as *Mechanitis polymnia*, and that no combination "*Nereis Polymnia*" appears to be cited in 1816. In hunting for the second binomial combination *Limnas Chrysippus* 1806, it is found that there is a species (1816, p. 15) cited as *Euploea Chrysippe*, but a combination *Limnas Chrysippus* does not seem to be present in Hübner, 1816.

Thus a legitimate question arises as to whether Hübner intended *Nereis Polymnia* etc. to be interpreted as binomial combinations in nomenclature. Apparently 107 binomial combinations of this type are involved.

Were it not for Hübner's later publication 1816 the presumption would be that *Limnas Polymnia* of 1806 represents a binomial combination of our generic and specific names, *i. e.*, his coitus and generic names.¹

Further, it is seen that Hübner sometimes quotes his "coitus" (our genus) in the plural, other times in the singular, and that his "genus" ("Gattung") is our species.

The Secretary concludes that the plural names cited in 1806 in Hübner's Tentamen represent a supergeneric taxonomic unit which in 1816 Hübner calls a Stamm (German) or Stirps (Latin) but that the question is open to debate whether the binomial combinations (example *Limnas Polymnia*) in 1806 are intended to designate monotypic genera. However clear the title of the Tentamen may be to specialists in *Lepidoptera* it was not clear to the Secretary until he consulted Hübner, 1816, p. 8. The word *stirpium* in the title of the Tentamen becomes unambiguous in 1816, namely, it refers to the Stamm (German) = Stirps (Latin), namely, a supergeneric unit and it becomes obvious that the real object back of the Tentamen was the tentative division of the *Lepidoptera* into supergeneric groups (Stirps = Stamm), and not the consideration of 107 generic names with their type species. In other words Hübner asked his special colleagues for their opinion on the names printed in the plural, not on the question of the validity of new genera.

¹ Mr. Benjamin, in correspondence with the Secretary, has pointed out that five of the names used by Hübner are of prior date, namely—

1. *Hepialus* [emended to *Hepiolus* by Illiger] *humili* Fabr., 1775, 589.
2. *Pterophorus pentadactylus* (Linn., 1758a [*Phalaena*]) Fabr., 1775, 672, cf. *Pterophora pentadactyla* in Hübner.
3. *Sesia culiciformis* (Linn., 1758a [*Sphinx*]) Fabr., 1775, 549.
4. *Thyris* Laspeyres in Illiger, 1803, II, 39 [Cf. *Thyris* Ochsenh., 1808, cited by Agassiz.]
5. *Zygaena filipendulae* (Linn., 1758a [*Sphinx*]) Fabr., 1775, 550.

and Mr. Benjamin maintains that Hübner attempts to fix the type for *Zygaena*.

The Secretary has checked these references (no. 4 in Agassiz; nos. 1, 2, 3, 5, in Sherborn).

Mr. Benjamin has undoubtedly raised an interesting point; but the Secretary is not persuaded that the argument is materially altered; nor is it clear to the Secretary that the type of *Zygaena* was fixed by Hübner.—Note added after third vote was taken.

As these supergeneric names were again printed in Hübner, 1816, they take Hübnerian status of availability in 1816 in case Hübner, 1806, is not accepted as publication.

Are Hübner's binomials of 1806 nomina nuda?—Granting for the sake of argument that Hübner's Tentamen is to be accepted as a published document in nomenclature and also that the binomials, example, *Nercis Polymnia*, are to be accepted as publication of monotypic genera, the question arises whether these binomials are available in nomenclature as of the date 1806.

The point is to be emphasized that the question at issue is primarily one of zoological nomenclature, not one of the nomenclature of *Lepidoptera*. For instance, potentially each one of the 107 [or at least 102] names in question, if admitted as of generic value in the sense of the Code, might theoretically jeopardize the identical name, of later date, in some group other than *Lepidoptera*. Whether any such case exists, or not, is immaterial in the argument. The fundamental principle is that names in *Lepidoptera* must be available, understandable, and traceable, from the standpoint of workers in other groups if they are to enjoy status of availability in *Lepidoptera*. Compare, for instance, Hübner's name *Amocba vs. Amocba* Bory; also *Hamadryas* Hübner, 1806, *vs. Hamadryas* 1832, 1840, 1850, and 1864.

The point is rather striking that in two votes taken by the Commission, every vote but one cast by the zoologists who are not specialists in *Lepidoptera* was against the Tentamen. Here is a practical demonstration that Hübner's Tentamen presents difficulties which call for analysis.

Thus, the first name in question in Hübner, 1806, is *Nercis*. There is also a *Nercis* Linn., 1758a, 654, so that the Hübnerian name is a dead homonym, if interpreted as generic. But assume that *Nercis* 1758 bore the date of 1810; the zoologist who deals with the *Polychaeta* would have to determine whether *Nercis* 1806 were a *nomen nudum* or not; his one clue is "*polymnia*," to which Hübner gives no reference as to author, date, or publication. It is, however, noticed that Hübner cites *Nercis* as I *Papiliones*, I *nymphales*; and possibly it might occur to the worker in *Polychaeta* to examine Sherborn's 1902 index, where he would discover a *Papilio polymnia* Linn., 1758a, 466; following this clue, it is found that Linné classified *polymnia* not as *Nymphales* (p. 472) as did Hübner, but as *Heliconii* (p. 465-467); conceivably, the worker might have time to trace up later publications by Hübner, to solve his terms genus (=species), coitus (=genus), stirpes (=supergeneric name), etc., and to trace the literature on *polymnia*, but this is, at least, open to doubt.

To admit the Hübnerian (1806) combination "*Nereis Polymnia*" as available, as of 1806, as a generic plus specific name, means to admit 107 [or at least 102] combinations of essentially like status, and potentially to serve notice on zoologists in groups other than *Lepidoptera* that they must familiarize themselves with the literature of *Lepidoptera* in case any one of these debatably generic names competes for priority with names in their own groups. Is this reasonable?

The Secretary is assured by specialists in *Lepidoptera* that there is no difficulty in tracing these Hübnerian names. Commissioner Jordan's report, however, cites 17 specific names which, however clear to specialists in *Lepidoptera*, would present some difficulty to specialists in other groups.

On basis of the assurances given by specialists in *Lepidoptera*, the Secretary is not prepared to dispute their claim, but he reverts to the point that the document was intended only for specialists in *Lepidoptera* (not for the zoological profession), and it can be only through special or esoteric information that the Hübnerian (1806) names can be interpreted as monotypic genera each based upon a definitely recognizably published species; in other words, to zoologists of other groups these names, as of 1806, are *nomina nuda*.

The data in this case were submitted to the Commission in Secretary's C. L. No. 63, with request for suggestions and an informal vote. The vote stood: for acceptance, 2 Commissioners; for rejection, 9 Commissioners.

Additional data were submitted in Secretary's C. L. No. 97, with request for formal vote. The formal vote stands: 9 for rejection, 1 for acceptance.

The final draft of the Opinion is submitted herewith for approval to the Commissioners in Secretary's C. L. No. 100, with recommendation that the Commission adopt as Opinion the following:

SUMMARY.—Hübner's Tentamen, 1806, was obviously prepared, essentially as a manifolded manuscript, or as a proof sheet (Cf. Opinion 87), for examination and opinion by a restricted group of experts, *i. e.*, in *Lepidoptera*, and not for general distribution as a record in zoology. Accordingly, the conclusion that it was published in 1806 is subject to debate. Even if the premise be admitted that it was published in 1806, the point is debatable whether the contained binomials should be construed as generic plus specific names. Even if it be admitted that the binomials represent combinations of generic plus specific names they are essentially *nomina nuda* (as of the date in question) since authors who do not possess esoteric information in regard to them are unable definitely to interpret them without refer-

ence to later literature. If published with more definite data at later dates, these names have their status in regard to availability as of their date of such republication.

Opinion written by Stiles.

Opinion concurred in by eleven (11) Commissioners: vApstein, Bather, Handlirsch, Horvath, Jordan (D. S.), Jordan (K), Kolbe, Loennberg, Monticelli, Stiles, Warren.

Opinion dissented from by two (2) Commissioners: Neveu-Lemaire, Skinner.

Not voting, four (4) Commissioners: Chapman, Dabbene, Hartert, Stejneger.

NOTE BY SECRETARY.—During the reading of the proof of Opinion 97, application to validate Hübner's Tentamen as of January 1, 1806, under Suspension of the Rules, has reached the Secretary's office. See notice in the scientific journals.