PROCEEDINGS OF THE CALIFORNIA ACADEMY OF SCIENCES

Volume 51, No. 1, pp. 1–17. March 29, 1999

Higher-level Names for Catfishes (Actinopterygii: Ostariophysi: Siluriformes)

by

Carl J. Ferraris, Jr.
Department of Ichthyology, California Academy of Sciences
Golden Gate Park, San Francisco, California 94118

and

Mário C. C. de Pinna
Department of Zoology, University of São Paulo, Caixa Postal 11461,
São Paulo, SP 05422-970, Brazil

A comprehensive list is provided of all family-group and other suprageneric names proposed for the order Siluriformes. The list contains 169 names including both available and unavailable names, whether in current usage or not. Dates and authorship for all names are provided. In view of the present intense research activity on catfish phylogeny and classification, this list will be a useful reference for future work, avoiding unnecessary proposal of new names and facilitating decisions on priority.

During the past few decades, there has been a growing interest in the study of higher-level relationships among catfishes (Ostariophysi: Siluriformes). This interest has resulted in several doctoral dissertations and publications on phylogenetic relationships of one or more families of catfishes. A number of these studies have included revisions in the classification of families, with the recognition of additional monophyletic groups above the generic level. Many of these newly-recognized suprageneric groups have previously been assigned formal family-level names. Others with informal names will likely be given formal names in the future. The tracing of family-level groups and their dates can be difficult. A number of obscure, but available, names have been proposed in rare or inaccessible publications and others are buried in texts on unrelated groups making their discovery unlikely for the specialist. Because of that, the assignment of family-group names to the classification of various catfish groups has on occasion been mistaken in both the older and modern literature. We believe that the piecemeal correction of these errors is detrimental to the stability of the classification of catfishes.

In anticipation of future phylogenetic studies, the results of which may necessitate the recognition of more family-level groups of catfishes, we have attempted to collect all previously proposed names among catfishes. This provides a comprehensive list that will serve as a general reference for future classificatory works on siluriforms. We made an effort to locate all relevant names, whether or not in current use. As groupings of catfish are reexamined, it is possible that two or more currently used names may be synonymous at some level. Following the rules of priority, it would then be necessary to establish which name was proposed first. To that end, we have attempted to provide the earliest use for each of the names.

Unlike generic and specific names, use of family-level names has historically been rather informal in ichthyology and, we believe, in zoology as a whole. Names are often cited without

authorship or with no indication of the date of first usage. The initial proposal of family-level names often lacks an indication that the author intended to coin a new name. The rules that govern the formation of new family-level names are considerably less stringent than those for names at the generic and specific level. While not advocating more strict requirements, we believe that everyone benefits if new names are proposed with care, and that proper attribution should be made when family-level names are used.

METHODS

Throughout the paper, we refer to the third edition of the International Code of Zoological Nomenclature (ICZN 1985) as the Code.

The name list was built on the basis of statements in the literature, deliberate search for additional names in references, and fortuitous encounters during our reading on other topics. We benefited greatly from access to a copy of Henry W. Fowler's draft list of fishes of the world that is on file at the California Academy of Sciences. Fowler attempted to document the earliest usage of every family-level name and the first proposed usage at each level within the range of family-level taxa. We checked each citation by Fowler, and in many cases found earlier usage of a name. In some cases we have not been able to confirm the names listed in the publications which he cited.

In the process of our search, we considered only works that are unquestionably published, thus excluding dissertations and similar documents. This follows the criteria of publication of the Code (Arts. 8, 9). Only names that were clearly proposed as suprageneric are included. Accordingly, all names proposed in Cuvier (1816) and Cuvier and Valenciennes (1840), except Siluroïdes, are unavailable because there is no evidence that they were applied at a suprageneric rank.

Names in the following list represent the earliest form we encountered of what we believe to be a suprageneric scientific name. We have included names that have their basis in a generic name, as well as names that have been proposed without an underlying generic name. All of the latter are unavailable by our reading of the Code, and some of the former are likewise unusable for other reasons. We chose to include all names in order to provide the most complete record of names proposed for catfishes. The Code changes, and it is possible that future versions of the Code may change the status of currently unavailable names.

In attempting to determine the availability of the names listed below, we encountered two provisions of the Code that relate to several names, and we think it best to summarize our thoughts here, rather than repeat our statements in each relevant account. Article 13 of the Code requires that all new names published after 1930 be "accompanied by a description or definition that states in words characters that are purported to differentiate the taxon." This requirement was first stated in the second edition of the International Code of Zoological Nomenclature (ICZN 1961), but backdated to 1930. No equivalent provision was in force for family-group names previous to 1961, although a recommendation to that effect was put forth in the *Copenhagen Decisions on Zoological Nomenclature* (Hemming 1953). Therefore, a family-group name first published between 1930 and 1961 that was based on an available generic name but without a diagnosis was validly proposed when published, but is not now available because of the provisions of Art. 13. Within catfishes, family-group names published in Fowler (1935), Hoedeman (1949), Fowler (1951) and Fernández-Yépez and Martín (1953) fall into this category. By our reading of the Code these names may be made available again by use of the name in conjunction with a diagnosis, as was done in Lundberg et al. (1991), for the name Pseudopimelodinae.

Article 29 of the Code requires that family-group names be formed by the addition of a prescribed suffix to the stem derived from a generic name. Names first proposed prior to 1900 are exempt from the requirement of a suffix [Art. 11(f)iii], provided the names have been subsequently adopted with an appropriate suffix. The first proposal of several catfish family-group names (e.g., Loricaria

Rafinesque, 1815, Siluroïdes Cuvier, 1816, and Hypostomiden Kner, 1853) fit into this category and are, by our interpretation, available. An unusual case is provided in the work of Bleeker (1858). Suprageneric names of the ranks of subfamily, stirps, and cohors were provided with standardized suffixes added to generic stems. The type genera of the names were not designated but can be inferred from the generic stem. However, in two cases, subfamily-level names are somewhat ambiguous with regard to the type genus. The Silurichthyoidei included the genera *Silurus* and *Silurichthys*, and the Bagrichthyoidei included *Bagrus* and *Bagrichthys*. Bleeker (1858) uniformly used the complex suffix *-ichthyoidei* for subfamily names (e.g., Sisorichthyoidei for *Sisor*, and Plotosichthyoidei for *Plotosus*). As such, we conclude that *Silurus* and *Bagrus* were the intended types for the Silurichthyoidei and Bagrichthyoidei, respectively.

Form of Presentation

In the list below, we provide the family-level name as originally spelled, its author, date of publication and, when specified, original rank. We list the names in alphabetical order, and at the end of each account we provide the current familial allocation of its type genus. For a name with no type genus, we inferred the current familial placement on the basis of included taxa, even though the name is not available. For a name that is based on a generic name, we also include the type genus with corresponding author and date of publication.

Information relating to the type genus was not always complete in the publication in which the family-level name was first used. We copied all pertinent information provided in the publication, whether it was associated directly with the proposed name or found elsewhere in the text. Additional information about the type genus that was not found in the publication, but inferred by us, is enclosed in brackets. In all cases, we agree with Eschmeyer and Bailey (in Eschmeyer 1998) on the source and date of publication of the generic names. Therefore, literature citations that relate only to generic names are not included here, but can be found in Eschmeyer (1998). Generic names preceded by a dagger (†) indicate a name proposed for a fossil taxon.

Unless otherwise noted, we consider the names listed to be available. Appendix 1 shows the same list arranged according to currently valid families. The spelling provided for currently-used family names follows Steyskal (1980). We note that the spellings recommended in Steyskal (1980) are not uniformly adopted (e.g., Nelson 1996; Eschmeyer 1998). However, as no alternative explanation of the derivation of these names has been more recently published, we continue to use Steyskal's spellings.

Family-Level Names of Siluriformes

Acanthicini Bleeker, 1862:2 (stirps). Type genus: *Acanthicus* Spix [Spix and Agassiz, 1829]. Loricariidae.

Acestridiinae Isbrücker and Nijssen, 1974:67, 68 (subfamily). Type genus: *Acestridium* Haseman, 1911. Loriicariidae.

Acestrini Bleeker, 1862:4 (stirps). Type genus: *Acestra* Kner, [1853]. Permanently invalid, following Art. 39 of the Code. *Acestra* Kner is preoccupied by Dall, 1852, in Hemiptera. Loricariidae.

Acrochordonichthyini de Pinna, 1996:61 (tribe). Type genus: *Acrochordonichthys* Bleeker, 1858. Akysidae.

Ageneiosi Bleeker, 1862:14 (phalanx). Type genus: *Ageneiosus* Lac [La Cépède, 1803]. Auchenipteridae.

Ailichthyoidei Bleeker, 1858:ix, 49, 248 (subfamily). Type genus: *Ailia* Gray, [1831]. Also proposed in the same publication as phalanx Ailianini Bleeker, 1858:ix, 49. Schilbidae.

Akyses Gill, 1861b:52 (group). Type genus: *Akysis* Bleeker, [1860]. Akysidae.

Amblycepinae Day, 1873:cclxviii (subfamily). Type genus: *Amblyceps* Blyth, 1858. Amblycipitidae.

Amiurina Günther, 1864:98. Type genus: *Amiurus* [*Ameiurus* Rafinesque, 1820]. The family-level name must be corrected to Ameiurina, following Art. 35(d) of the Code. Ictaluridae.

Amphiliidae Regan, 1911:565 (family). Type genus: *Amphilius* [Günther, 1864]. Also proposed in same publication as subfamily Amphiliinae. Amphiliidae.

Anchariidae Glaw and Vences, 1994:380 (family). Type genus: *Anchariu*s Steindachner, 1881. Glaw and Vences cite de Pinna's unpublished dissertation and a then-unpublished manuscript by Stiassny as the source of this family name. Stiassny and Raminosoa (1994:140, footnote 4) also use the name, but do not provide characters that purport to differentiate the family, as required in Art. 13 of the Code. Thus, it appears that Glaw and Vences provide the first published use of the name Anchariidae that satisfies the requirements of availability. Anchariidae.

Ancistri Kner, 1854:6 (Untergruppe). Type genus: *Ancistrus* Kner, 1854. Proposed as an alternate name for Lictores. First used in Kner (1853:282) but not available from that publication because *Ancistrus* was not yet published. Loricariidae.

Andinichthyidae Gayet, 1988:833 (family). Type genus: † *Andinichthys* Gayet, 1988. Andinichthyidae.

Anesipoma Latreille, 1825:125 (tribe). Not available. Not based on a generic name. Incertae sedis.

Anodontes Bleeker, 1858:49, 245 (phalanx). Listed with *Hypophthalmus* as sole included genus. Not available, not based on a generic name. Pimelodidae.

Argeini Bleeker, 1862:15 (stirps). Type genus: *Arges* Val [Valenciennes, in Cuvier and Valenciennes, 1840]. Astroblepidae.

Arii Bleeker, 1862:7, 25 (phalanx). Type genus: *Arius* Val [Valenciennes, in Cuvier and Valenciennes, 1840]. Ariidae.

Ariobagri Bleeker, 1862:10 (phalanx). Not available, not based on a generic name. Incertae sedis.

Ariodontes Bleeker, 1858:49, 57 (phalanx). Not available, not based on a generic name. Incertae sedis.

Aspidoradidi Hoedeman, 1952:4 (tribe). Type genus: *Aspidoras* Ihering, 1907. Callichthyidae.

Aspredinae Swainson, 1838:332, 354 (subfamily). Type genus: *Aspredo* Artedi [= *Aspredo* Swainson, 1838, not *Aspredo* Scopoli, 1777]. Also in Swainson, 1839:189, 308. Permanently invalid, as the name is based on a junior homonym (ICZN 1985, art. 39). Aspredinidae.

Aspredinidae Adams et al., 1854:107 (family). Type genus: [*Aspredo*? Scopoli, 1777]. It is not clear whether this name is based on *Aspredo* Scopoli or on *Aspredo* Swainson, 1838. The diagnosis of the family indicates the presence of a "first pectoral ray generally excessively developed," which is not consistent with the description of Swainson. If this name is not considered available, the next name that dates to *Aspredo* Scopoli is Aspredinoidei (Bleeker, 1858:327; also Aspredinini). Bleeker's *Aspredo* comes from usage of Valenciennes (in Cuvier and Valenciennes, 1840), which is based on *Aspredo* of Gronovius (1763), on which Scopoli also based his *Aspredo*. Aspredinidae.

Astephinae Grande and Lundberg, 1988:146 (subfamily). Type genus: † *Astephus* Cope, 1873. Ictaluridae.

Astroblepiformes Bleeker, 1862:15 (subfamily). Type genus: *Astroblepus* Humb [Humboldt, 1805]. Astroblepidae.

Astrophysi Bleeker, 1862:7 (phalanx). Type genus: *Asterophysus* Kner, [1858]. The family-level name must be corrected to Asterophysi, following Art. 35(d) of the Code. Auchenipteridae.

Auchenipterini Bleeker, 1862:14 (stirps). Type genus: *Auchenipterus* Val [Valenciennes, in Cuvier and Valenciennes, 1840]. Eigenmann and Eigenmann (1890) synonymized *Euanemus* Müller and Troschel, 1842, into *Auchenipterus* and adopted the name Auchenipterinae over the older Euanemini Bleeker, 1858. Since then, Euanemini has not been used. Article 40(b) of the Code allows for the continued usage of a generally-accepted, junior family-level synonym over an unused older name and provides an example that closely resembles the situation here. By this provision of the Code, the name Auchenipterini is to be considered a senior synonym of Euanemini. Auchenipteridae.

Auchenoglanidinae Jayaram, 1966:1119 (subfamily). Type genus: *Auchenoglanis* Günther, 1864. Claroteidae.

Austroglanididae Mo, 1991:160 (family). Type genus: *Austroglanis* Skelton, Risch and Vos, 1984. Austroglanididae.

Bagarina Günther, 1864:3, 9, 183 (group). Type genus: *Bagarius* Bleeker, [1853]. Sisoridae.

Bagreidae Schultz, 1944:182 (family). Type genus: *Bagre* Oken, 1817. Ariidae.

Bagrichthyes Bleeker, 1862:8, 48 (phalanx). Type genus: *Bagrichthys* Bleeker, 1858. Bagridae.

Bagrichthyoidei Bleeker, 1858:49, 54 (subfamily). Type genus: *Bagrus* Blkr. [= Bosc, 1816]. Also proposed as cohors Bagrini in the same publication (p. 49, 64). Based on the style of Bleeker's subfamily name generation, we consider this name available with *Bagrus*, and not *Bagrichthys* Bleeker, as type. Bagridae.

Bagroidinae Jayaram, 1968:371 (subfamily). Type genus: *Bagroides* Bleeker, 1851. Bagridae.

Batasinae Tilak, 1967:431 (subfamily). Type genus: *Batasio* Blyth, 1860. Bagridae.

Batrachocephalinae Gill, 1893:132 (subfamily). Type genus: [*Batrachocephalus*] Bleeker, [1846]. Ariidae.

Bunocephalini Bleeker, 1858:xi, 328 (phalanx). Type genus: *Bunocephalus* Kner, [1855]. Aspredinidae.

Callichthini Bonaparte, 1838:131 (subfamily?). Type genus: [*Callichthys* Scopoli, 1777]. Callichthyidae.

Callophysinae Eigenmann, 1890:12 (subfamily). Type genus: [*Callophysus*, = *Calophysus* Müller and Troschel, 1842]. Generic and subfamily names spelled consistently throughout Eigenmann, 1890 (also in Eigenmann and Eigenmann 1890:6, 7, 94) following changed spelling in Müller and Troschel (1849), which is a misspelling (and not an unjustified emendation). Because of this, the spelling Callophysinae is a based on a misspelled generic name and must be corrected to Calophysinae. Pimelodidae.

Cascaduridi Hoedeman, 1952:3 (tribe). Type genus: *Cascadura* Ellis, 1913. Callichthyidae.

Centrochirinae Fowler, 1951:3 (subfamily). Type genus: *Centrochir* Agassiz, 1829. This name was available when published, but it does not now meet the criterion for availability specified in Art. 13 of the Code and is therefore unavailable. Doradidae.

Centromochli Bleeker, 1862:7 (phalanx). Type genus: *Centromochlus* Kner, [1858]. Auchenipteridae.

Cetopsini Bleeker, 1858:49, 250, 257 (phalanx). Type genus: *Cetopsis* Ag [Agassiz, 1829]. Cetopsidae.

Chacini Bleeker, 1858:49, 310, 322 (phalanx). Type genus: *Chaca* CV [= Gray, 1831]. Chacidae.

Chaetostomidi Fowler, 1958:14 (tribe). Type genus: *Chaetostomus* Heckel, [1846]. Loricariidae.

Chiloglanidinae Riehl and Baensch, 1990:396 (Unterfamilie). Type genus: [*Chiloglanis* Peters, 1868]. Mochokidae.

Chrysichthyinae Regan, 1911:561. Type genus: *Chrysichthys* [Bleeker, 1863]. Also mistakenly proposed as new in Jayaram (1966). Claroteidae.

Clariini Bonaparte, 1846:5 (subfamily?). Type genus: [*Clarias* Scopoli, 1777]. Clariidae.

Claroteini Bleeker, 1862:4 (stirps). Type genus: *Clarotes* Kner, [1855]. Claroteidae.

Clypeati Kner, 1853:282. Not available, not based on a generic name. Proposed as a subgroup of Loricariidae for *Sisor*. Sisoridae.

Continae de Pinna, 1996:64 (subfamily). Type genus: *Conta* Hora, 1950. Erethistidae.

Copionodontinae de Pinna, 1992:179 (subfamily). Type genus: *Copionodon* de Pinna, 1992. Trichomycteridae.

Corydoradinae Hoedeman, 1952:4 (subfamily). Type genus: *Corydoras* La Cépède, 1803. Also proposed as a new tribe Corydoradidi in the same publication. Callichthyidae.

Cranoglanidae Myers, 1931:355 (family). Type genus: *Cranoglanis* Peters, 1880. Cranoglanididae.

Cyclopidae Eigenmann, 1910:416 (family). Type genus: *Cyclopium* Swainson, 1838. Astroblepidae.

Dianemidi Hoedeman, 1952:4 (tribe). Type genus: *Dianema* Cope, 1872. Callichthyidae.

Diplomystidae Eigenmann, 1890:14 (family). Type genus: *Diplomystes* [Bleeker, 1858]. Diplomystidae.

Diptéronotes Duméril, 1856:479 (family). Not available. Proposed for a broad array of catfish genera, but not on an available generic name. Incertae sedis.

Doiichthyidae Weber 1913:532 (family). Type genus: *Doiichthys,* Weber 1913. Ariidae.

Doradini Bleeker, 1858:48, 52 (phalanx). Type genus: *Doras* CV [= La Cépède, 1803]. Doradidae.

Doumeinae Regan, 1911:554. Type genus: [*Doumea* Sauvage, 1879]. Amphiliidae.

Eremophilini Bonaparte, 1846:5 (subfamily?). Type genus: [*Eremophilus* Humboldt, 1805]. Trichomycteridae.

Erethistides Bleeker, 1862:13 (phalanx). Type genus: *Erethistes* Müll. Trosch. [Müller and Troschel, 1849]. Erethistidae.

Euanemini Bleeker, 1858:49, 189 (cohors). Type genus: *Euanemus* Müller and Troschel, [1842]. Auchenipteridae.

Exostomatina Günther, 1864:264. Type genus: *Exostoma* Blyth, [1860]. Sisoridae.

Farlowellidi Fowler, 1958:14 (tribe). Type genus: *Farlowella* Eigenmann and Eigenmann, [1889]. Loricariidae.

Gephyroglanidini Jayaram, 1966:1099 (tribe). Type genus: *Gephyroglanis* Boulenger, 1899. Claroteidae.

Glanapteryginae Myers, 1944:592 (subfamily). Type genus: *Glanapteryx* Myers, 1927. Trichomycteridae.

Glani Latreille, 1825:125 (tribe). Not available. Proposed for a broad array of catfish genera, but not on a generic name recognized as valid or even available at that time. Incertae sedis.

Glyptosterni Gill, 1861b:53 (group). Type genus: *Glyptosternum* McClelland, [1842]. Sisoridae.

Glyptothoracini de Pinna, 1996:64 (tribe). Type genus: *Glyptothorax* Blyth, 1860. Sisoridae.

Goniodontes Kner, 1853:279 (family). Not available, not based on a generic name. Used as an alternative name for Loricata Kner, 1853. Loricariidae.

Harttiinae Boeseman, 1971:4, 10 (subfamily). Type genus: *Harttia* Steindachner, 1876. Loricariidae.

Helogenidae Regan, 1911:573 (family). Type genus: *Helogenes* [Günther, 1863]. Cetopsidae.

Hemidoradinae Fowler, 1951:3 (subfamily). Type genus: *Hemidoras* Bleeker, 1858. Available when published, but does not meet availability criterion as now specified in Art. 13 of the Code. Doradidae.

Hemiodontichthyina Isbrücker, 1979a:88, 89 (subtribe). Type genus: *Hemiodontichthys* Bleeker, 1862. Loricariidae.

Hemipimelodinae Gill, 1861b:46 (subfamily). Type genus: [*Hemipimelodus* Bleeker, 1858]. This subfamilial name is mentioned briefly in the text, noting that only one genus is included. Ariidae.

Heptapterinae Gill, 1861b:54 (subfamily). Type genus: *Heptapterus* Bleeker, [1858]. Pimelodidae.

Heterobranchia Latreille, 1825:125 (tribe). Not available. Proposed for a group consisting of the genera *Plotose* [*sic*] and *Macropterotere* [*sic*] and therefore not based on a genus recognized as valid in that publication.

Heterobranchoidei Bleeker, 1858:33, 37, 41, 333 (family). Type genus: *Heterobranchus* Geoffr [Geoffroy St. Hilaire, 1808]. The name Heterobranchini is also proposed in the same publication. Clariidae.

Heteropneustidae Hora, 1936:209 (family). Type genus: *Heteropneustes* Müller, 1840. Heteropneustidae.

Hopliancistrini Isbrücker and Nijssen, 1989:543 (tribe). Type genus: *Hopliancistrus* Isbrücker and Nijssen, 1989. Loricariidae.

Hoplomizoninae Fernández-Yépez, 1950:113 (subfamily). Type genus: *Hoplomyzon* [Myers, 1942]. Spelling of name incorrectly derived from type genus. Correct spelling is Hoplomyzontinae, as currently recognized. Aspredinidae.

Hoplosterninae Miranda Ribeiro, 1959:1 (Grupo). Type genus: *Hoplosternum* Gill, 1858. Callichthyidae.

Hypophthalmini Bleeker, 1862:15 (stirps). Type genus: *Hypophthalmus* Spix [Spix and Agassiz, 1829]. Pimelodidae.

Hypoptopominae Eigenmann and Eigenmann, 1890:8, 12, 353, 388 (subfamily). Type genus: *Hypoptopoma* Günther, 1868. Spelling of name incorrectly derived from type genus. Correct spelling is Hypoptopomatinae, as currently recognized. Loricariidae.

Hypostomiden Kner, 1853:279. Type genus: *Hypostomus* La Cépède, 1803. Loricariidae.

Hypsidoridae Grande, 1987:28 (family). Type genus: † *Hypsidoris* Lundberg and Case, 1970. Also as superfamily Hypsidoroidea in the same publication. Hypsidoridae.

Ichthyaelurinae Meek, 1904:10 (subfamily). Type genus: *Ichthyaelurus* [= *Ichthaelurus*] Cope, 1868. The family-group name must be corrected to Ichthyaelurinae, following Art. 35(d) of the Code. Ictaluridae.

Ictaluri Gill, 1861b:49 (group). Type genus: *Ictalurus* Raf [Rafinesque, 1820]. Ictaluridae.

Inermes Kner, 1853:282. Not available, not based on a generic name. Proposed as an alternate name for Clypeati, a subgroup of Loricata, for *Sisor* Hamilton, 1822. Sisoridae.

Kryptopterini Bleeker, 1862:18, 85 (stirps). Type genus: *Kryptopterus* Bleeker, [1858]. Siluridae.

Laguviini de Pinna, 1996:65 (tribe). Type genus: *Laguvia* Hora, 1921. Erethistidae.

Lictores Kner, 1853:282, 1854:255. Not available, not based on a generic name. Proposed as an alternate name for Ancistri. Loricariidae.

Lithodoradinae Fowler, 1951:3 (subfamily). Type genus: *Lithodoras* [Bleeker, 1862]. Available when published, but does not meet availability criterion as now specified in Art. 13 of the Code. Doradidae.

Lithogeneinae Gosline, 1947:80 (subfamily). Type genus: *Lithogenes* Eigenmann, 1909. Correct spelling should be Lithogeninae, as currently adopted. Loricariidae.

Lithoxina Isbrücker, 1980:77 (subtribe). Type genus: *Lithoxus* Eigenmann, 1910. Loricariidae.

Loricaria Rafinesque, 1815:89 (subfamily). Type genus: *Loricaria* Linnaeus, 1758. Loricariidae.

Loricariichthyina Isbrücker, 1979a:87, 89 (subtribe). Type genus: *Loricariichthys* Bleeker, 1862. Loricariidae.

Luciopimelodinae Driver, 1919:451 (subfamily). Type genus: *Luciopimelodus* Eigenmann and Eigenmann, 1888. Pimelodidae.

Malapterurini Bleeker, 1858:ix (subfamily). Type genus: *Malapterurus* Lac [La Cépède, 1803]. Malapteruridae.

Metaloricariina Isbrücker, 1979a:88, 90 (subtribe). Type genus: *Metaloricaria,* Isbrücker 1975. Loricariidae.

Mochokidae Jordan, 1923:150 (family). Type genus: *Mochokus* Joannis, 1835. Mochokidae.

Mystidae Fowler, 1935:275. Type genus [*Mystus* Scopoli, 1777]. This name was available when published, but it does not meet the criterion for availability as now specified in Art. 13 of the Code and is therefore unavailable. Mystini Hoedeman, 1949, is similarly unavailable. Bagridae.

Nangrina de Pinna, 1996:62 (subtribe). Type genus: *Nangra* Day, 1876. Sisoridae.

Nematogenyini Bleeker, 1862:16 (stirps). Type genus: *Nematogenys* Girard, 1854. Nematogenyidae.

Nematognathi Gill, 1861a:11, 56 (order). Not available as a family-group name, not based on a generic name. Proposed as an alternate name for Siluriformes.

Neoplecostominae Regan, 1904:306 (subfamily). Type genus: *Neoplecostomus* Eigenmann and Eigenmann, 1888. Loricariidae.

Olyrinae Gill, 1893:132 (subfamily). Type genus: *Olyra,* McClelland 1842. Bagridae.

Oplophoria Rafinesque, 1815:88 (family). Not available as a family-group name, not based on a generic name. Apparently the first collective name for fishes now called Siluriformes.

Osteogeniosinae Fowler, 1951:3 (subfamily). Type genus: *Osteogeneiosus* Bleeker, 1846. Available when published, but does not meet availability criterion as now specified in Art. 13 of the Code. Ariidae.

Otocinclini Isbrücker, 1979b:114 (tribe). Type genus: *Otocinclus* Cope, 1871. Loricariidae.

Otothyrini Schaefer, 1991:31 (tribe). Type genus: *Otothyris* Myers, 1927. Loricariidae.

Pangasianodonidi Fowler, 1958:14 (tribe). Type genus: *Pangasianodon* Chevey, [1930]. Pangasiidae.

Pangasini Bleeker, 1858:49, 63 (cohors). Type genus: *Pangasius* CV [Valenciennes, in Cuvier and Valenciennes, 1840]. Pangasiidae.

Parakysidae Roberts, 1989:141 (family). Type genus: *Parakysis* Herre, 1840. Akysidae.

Pareiodontinae Eigenmann, 1918:261 (subfamily). Type genus: *Pareiodon* Kner, 1855. Trichomycteridae.

Pelteobagrini Jayaram, 1966:1071 (tribe). Type genus: *Pelteobagrus* Bleeker, 1865. Bagridae.

Phalacronotini Bleeker, 1862:18, 90 (stirps). Type genus: *Phalacronotus* Bleeker, [1858]. Siluridae.

Phreatobinae Reichel, 1927:383 (subfamily). Type genus: *Phreatobius* Goeldi, 1905. Pimelodidae.

Pimelodinae Swainson, 1838:331, 338 (subfamily). Type genus: *Pimelodus* [La Cépède, 1803]. Also as Pimelodi in the same publication. Priority over Pimelodini Bonaparte, 1838, not established. Pimelodidae.

Pimelodini Bonaparte, 1838:131 (subfamily?). Type genus: [*Pimelodus* La Cépède, 1803]. See Pimelodinae Swainson. Pimelodidae.

Pinirampidae Fernández-Yépez, 1965:12 (family). Type genus: [*Pinirampus* Bleeker, 1858]. Pimelodidae.

Planiloricariina Isbrücker, 1979a:87, 89 (subtribe). Type genus: *Planiloricaria* Isbrücker, 1971. Loricariidae.

Platystacinae Eigenmann and Eigenmann, 1890:9,13,20 (subfamily). Type genus: *Platystacus* Bloch, 1794. Aspredinidae.

Plecostomiformes Bleeker, 1862:2 (subfamily). Type genus: *Plecostomus* Gron [Gronovius, 1763]. Also as stirps Plecostomini in the same publication. Not available, based on a name in a publication that was placed on the Official Index of Rejected and Invalid Works in Zoology, Opinion 261 (in Melville and Smith, 1987). Loricariidae.

Plotosichthyoidei Bleeker, 1858:49, 310 (subfamily). Type genus: *Plotosus* Lacép [La Cépède, 1803]. Also phalanx Plotosini in the same publication. We consider this name to be available, with *Plotosus* as the type, based on the style of Bleeker's publication and the definite reference to a single genus. Plotosidae.

Porcinae Fowler, 1915:219 (subfamily). Type genus: *Porcus* Geoffroy St. Hilaire, 1808. Not available, based on a generic name that was placed on the Official Index of Rejected and Invalid Generic Names In Zoology, Opinion 1402 (in Melville and Smith, 1987). Bagridae.

Pseudacanthicini Isbrücker, 1980:76 (tribe). Type genus: *Pseudacanthicus* Bleeker, 1862. Also as subtribe Pseudacanthicina in the same publication. Loricariidae.

Pseudauchenipterini Bleeker, 1862:6 (stirps). Type genus: *Pseudauchenipterus* Bleeker, [1862]. Also as phalanx Pseudauchenipteri in the same publication. Auchenipteridae.

Pseudecheneidina de Pinna, 1996:64 (subtribe). Type genus: *Pseudecheneis* Blyth, 1860. Sisoridae.

Pseudopimelodidae Fernández-Yépez and Martín, 1953:234 (family). Type genus: *Pseudopimelodus* Bleeker, 1858. Available when published, but does not meet availability criterion as now specified in Art. 13 of the Code. Mistakenly considered as earliest available proposition of the name by Silfvergrip (1992:305). This name was also used in subsequent papers by A. Fernández-Yépez, but without associated diagnostic characters. Pimelodidae.

Pseudopimelodinae Lundberg et al., 1991:204 (subfamily). Type genus: *Pseudopimelodus* Bleeker, 1858. Pimelodidae.

Pteronotidae Adams et al., 1854:107 (family). Type genus: [*Pteronotus* Swainson, 1839]. Permanently invalid, as *Pteronotus* Swainson is a junior homonym of *Pteronotus* Gray, 1837 (Mammalia) (McKenna and Bell, 1997). Pimelodidae.

Pygidiidae Eigenmann and Eigenmann, 1888:649 (family). Type genus: *Pygidium* Meyen, 1835. There is apparently a discrepancy between Meyen's (1835) original and Eigenmann and Eigenmann's subsequent notions of *Pygidium*. Refer to Tchernavin (1944) for a detailed account of the problem. The name Pygidiidae in virtually all the literature refers to the group known today as Trichomycteridae. Trichomycteridae.

Reganellina Isbrücker, 1979a:87, 89 (subtribe). Type genus: *Reganella* Eigenmann, 1905. Loricariidae.

Rhamdiae Bleeker, 1862:11, 60 (phalanx). Type genus: *Rhamdia* Bleeker, 1858. Pimelodidae.

Rhinoglanina Günther, 1864:4, 10, 216 (group). Type genus: *Rhinoglanis* Günther, 1864. Mochokidae.

Ricolina Isbrücker, 1981:54 (subtribe). Type genus: *Ricola* Isbrücker and Nijssen, 1978. Loricariidae.

Rineloricariina Isbrücker, 1979a:87, 89 (subtribe). Type genus: *Rineloricaria* Bleeker, 1862. Loricariidae.

Ritae Bleeker, 1862:8 (phalanx). Type genus: *Rita* Blkr. [Bleeker, 1858]. Bagridae.

Saccobranchini Bleeker, 1858:xi, 336 (phalanx). Type genus: *Saccobranchus* [Valenciennes, in Cuvier and Valenciennes, 1840]. Heteropneustidae.

Sarcoglanidinae Myers and Weitzman, 1966:278 (subfamily). Type genus: *Sarcoglanis* Myers and Weitzman, 1966. Trichomycteridae.

Schilbeini Bleeker, 1858:49, 250, 256 (phalanx). Type genus: *Schilbe* Valenc. ex parte [= Oken, 1817]. Schilbidae.

Scleracanthi Miranda-Ribeiro, 1917:49 Not available as a family-group name, not based on a generic name. Proposed as an alternate name for Siluriformes or Nematognathi.

Scoloplacinae Bailey and Baskin, 1976:5 (subfamily). Type genus: *Scoloplax* Bailey and Baskin, 1976. Scoloplacidae.

Siluranodontinae Regan, 1911:568. Type genus: *Siluranodon* [Bleeker 1858]. Schilbidae.

Silurichthyoidei Bleeker, 1858:49, 249 (subfamily). Type genus: *Silurus* L CV [= Linnaeus, 1758]. Both *Silurus* and *Silurichthys* were included in Bleeker's subfamily Silurichthyoidei, leaving some doubt regarding the type genus. We believe the name to be based on *Silurus*, because of Bleeker's convention of generating subfamily names by adding *-ichthyoidei* to the generic root. Therefore, we do not consider this name to be available as a family-group name based on *Silurichthys*. Siluridae.

Siluridae Anomalopterae Günther, 1864:3, 7, 66 (subfamily). Not available, not based on a generic name.

Siluridae Branchicolae Günther, 1864:4, 12, 276 (subfamily). Not available, not based on a generic name.

Siluridae Heteropterae Günther, 1864:2, 5, 30 (subfamily). Not available, not based on a generic name.

Siluridae Homalopterae Günther, 1864:2, 5, 13 (subfamily). Not available, not based on a generic name.

Siluridae Opisthopterae Günther, 1864:4, 12, 271 (subfamily). Not available, not based on a generic name.

Siluridae Proteropodes Günther, 1864:4, 11, 222 (subfamily). Not available, not based on a generic name.

Siluridae Proteropterae Günther, 1864:3, 7, 69 (subfamily). Not available, not based on a generic name.

Siluridae Stenobranchiae Günther, 1864:3, 10, 191 (subfamily). Not available, not based on a generic name.

Siluroïdes Cuvier, 1816:199. Type genus: [*Silurus* Linnaeus, 1758]. Available as a family-level name for Siluridae. Originally used for the group generally known as Siluriformes. Siluridae.

Simuldentinae Taverne and Aloulou-Triki, 1974:64 (subfamily). Not available, not based on a generic name. Mochokidae.

Sisorichthyoidei Bleeker, 1858:48, 50 (subfamily). Type genus: *Sisor* Buch. [Hamilton, 1822]. Sisoridae.

Sorubinae Swainson, 1838:356 (also Swainson, 1839:190, 309) (subfamily). Type genus: *Sorubium* (= *Sorubim*) Spix [Spix and Agassiz, 1829]. *Sorubium* Swainson, 1838, is an emendation of *Sorubim*, which Swainson (1838:356) concluded was "no doubt a misprint." As Swainson's Sorubinae was based on an available generic name which he treated as valid, it is an available name, but with *Sorubium* as its type. Pimelodidae.

Spectracanthicina Isbrücker and Nijssen, 1989:544 (subtribe). Type genus: *Spectracanthicus* Nijssen and Isbrücker, 1987. Loricariidae.

Stegophilina Günther, 1864:5, 12, 276 (group). Type genus: *Stegophilus* Reinhardt, 1858. Trichomycteridae.

Synodontini Bleeker, 1862:6 (stirps). Type genus: *Synodontis* Cuv [Cuvier, 1816]. Mochokidae.

Tachysurinae Eigenmann, 1890:12 (subfamily). Type genus: *Tachysurus* La Cépède, 1803. Ariidae.

Torpedininae Fowler, 1915:225 (subfamily). Type genus: *Torpedo* [Forsskål, 1775]. Permanently invalid, as the name is based on a junior primary homonym of *Torpedo* Houttuyn, 1764.

Trachelyopterini Bleeker, 1858:49, 250, 257 (phalanx). Type genus: Trachelyopterini [*Trachelyopterus*] CV [Valenciennes, in Cuvier and Valenciennes, 1840]. See also entry above on Auchenipteridae. Auchenipteridae.

Trichomycterini Bleeker, 1858:49, 250, 257 (phalanx). Type genus: *Trichomycterus* CV [Valenciennes, 1833]. Trichomycteridae.

Tridentinae Eigenmann, 1918:275 (subfamily). Type genus: *Tridens* Eigenmann and Eigenmann, 1889. Trichomycteridae.

Trichogeninae Isbrücker, 1986:276 (subfamily). Type genus: *Trichogenes* Britski and Ortega, 1983. Trichomycteridae.

Vandelliini Bleeker, 1862:17 (stirps). Type genus: *Vandellia* Valenciennes, 1846. Trichomycteridae.

Vorhisiidae Frizzell, 1965:179 (family). Type genus: † *Vorhisia* Frizzell, 1965. Ariidae.

ACKNOWLEDGMENTS

This paper benefitted from reviews of one or more versions of the manuscript by: Reeve Bailey, Bill Eschmeyer, Susana Ferraris, Tomio Iwamoto, Maurice Kottelat, Alan Leviton, John Lundberg, Richard Vari, and two anonymous reviewers. Isaäc Isbrücker provided an exceptionally thorough review of the manuscript and pointed out a number of names about which we were previously unaware. We greatly appreciate the time each of these people took on our behalf.

LITERATURE CITED

ADAMS, A., W. B. BAIKIE, AND C. BARRON. 1854. A manual of natural history for the use of travellers; being a description of the families of the animal and vegetable kingdoms: with remarks on the practical study of geology and meteorology. John Van Voorst, Paternoster Row, London. viii + 749 pp.

BAILEY, R. M. AND J. N. BASKIN. 1976. *Scoloplax dicra*, a new armored catfish from the Bolivian Amazon. Occasional Papers, Museum of Zoology, University of Michigan (674):1–14.

BLEEKER, P. 1858. De visschen van den Indischen Archipel. Beschreven en toegelicht: Siluri. Acta Societatis Scientiarum Indo-Neêrlandicae, 4:i–xii, 1–370 (also published in same year, with same pagination, as: Ichthyologiae Archipelagi Indici Prodromus. Vol 1. Siluri. Lange and Co., Batavia).

———. 1862. Atlas ichthyologique des Indes Orientales Néêrlandaises, publié sous les auspices du Gouvernement colonial néêrlandais. Tome II. Siluroïdes, Chacoïdes et Hétérobranchoïdes. Lange and Co., Amsterdam. 1–112, pls. 49–101.

BOESEMAN, M. 1971. The "comb-toothed" Loricariinae of Surinam, with reflections on the phylogenetic tendencies within the family Loricariidae (Siluriformes, Siluroidei). Zoologische Verhandelingen (Leiden) (116):1–56, pls. 1–8.

BONAPARTE, C. L. 1838. Synopsis vertebratorum systematis. Nuovi Annali delle Scienze Naturali (Bologna) 2:105–133.

———. 1846. Catalogo metodico dei pesci Europei. Stamperia e Cartieri del Fibreno, Napoli. 98 pp.

CUVIER, G. 1816. Le Règne Animal, distribué d'après son Organisation. Tome 2. Les Reptiles, les poissons, les mollusques et les annélides. Deterville, Paris. xviii + 532 pp.

CUVIER, G. AND A. VALENCIENNES. 1840. Histoire naturelle des poissons. Tomes 14 and 15. Pitois-Levrault, Paris.

DAY, F. 1873. Report on the fresh water fish and fisheries of India and Burma. Office of the Superintendent of Government Printing, Calcutta. cccvii + 118 pp.

DRIVER, C. S. 1919. On the Luciopimelodinae, a new subfamily of the South American Siluridae. Proceedings of the American Philosophical Society 58:448–456, pl. 2.

DUMÉRIL, A. M. C. 1856. Ichthyologie analytique ou essai d'une classification naturelle des poissons, a l'aide de tableaux synoptiques. Didot Frères, Fils, etc., Paris. 507 pp.

EIGENMANN, C. H. 1890. The evolution of catfishes. Zoe 1(1):10–15.

———. 1910. Catalogue of the fresh-water fishes of tropical and south temperate America. *In* Reports of the Princeton University expeditions to Patagonia 1896-1899. Zoology 3(4):375–511.

———. 1918. The Pygidiidae, a family of South American catfishes. Memoirs of the Carnegie Museum 7(5):259–398.

EIGENMANN, C. H. AND R. S. EIGENMANN. 1888. American Nematognathi. American Naturalist 22:647–649.

———. 1890. A revision of the South American Nematognathi or cat-fishes. Occasional Papers of the California Academy of Sciences (1):1–508 + errata and map.

ESCHMEYER, W. E., ed. 1998. Catalog of Fishes. California Academy of Sciences. 2905 pp.

FERNÁNDEZ-YÉPEZ, A. 1950. Notas sobre la fauna ictiológica de Venezuela. Memoria, Sociedad de Ciencias Naturales La Salle 10(26):113–118.

———. 1965. Contribucion al conocimiento de los peces de Venezuela. Dieciséis especies nuevas para Venezuela. Evencias (18):1–12.

FERNÁNDEZ-YÉPEZ, A. AND F. MARTÍN S. 1953. Apuntes sobre la ictiologia de Perija. Memoria de la Sociedad de Ciencias Naturales La Salle 13(35):227–243.

FOWLER, H. W. 1915. Notes on nematognathous fishes. Proceedings of the Academy of Natural Sciences, Philadelphia 67:203–243.

———. 1935. Scientific results of the Vernay-Lang Kalahari Expedition, March to September, 1930: Fresh-water fishes. Annals of the Transvaal Museum 16(2):251–291, pls. 6–9.

———. 1951. Some new or emended names of fish-like vertebrates. The Fish Culturist 39(10, supplement):1–4.

———. 1958. Some new taxonomic names of fishlike vertebrates. Notulae Naturae (Philadelphia) (310):1–16.

FRIZZELL, D. L. 1965. Otoliths of new fish (*Vorhisia vulpes*, n. gen., n. sp. Siluroidei?) from Upper Cretaceous of South Dakota. Copeia 1965 (2):178–181.

GAYET, M. 1988. Le plus ancien crane de siluriforme: *Andinichthys bolivianensis* nov. gen., nov. sp. (Andinichthyidae nov. fam.) du Maastrichtien de Tiupampa (Bolivie). Comptes Rendus de L'Academie des Sciences, Serie II: Mecanique, Physique-Chimie Sciences de l'Univers Sciences de la Terre 307(7):833–836.

GILL, T. N. 1861a. Catalogue of the fishes of the eastern coast of North America, from Greenland to Georgia. Proceedings of the Academy of Natural Sciences, Philadelphia 13 (Supplement):1–63.

———. 1861b. Synopsis of the genera of the sub-family of Pimelodinae. Proceedings of the Boston Society of Natural History 8(for 1861–1862):46–55.

———. 1893. Families and subfamilies of fishes. Memoirs of the National Academy of Sciences, Washington (6):125–138.

GLAW, F. AND M. VENCES. 1994. A fieldguide to the amphibians and reptiles of Madagascar. Second edition, including mammals and freshwater fish. Privately published, Köln, Germany, 480 pp.

GOSLINE, W. A. 1947. Contributions to the classification of the loricariid catfishes. Arquivos do Museu Nacional, Rio de Janeiro 41:79–134, pls. 1–9.

GRANDE, L. 1987. Redescription of † *Hypsidoris farsonensis* (Teleostei: Siluriformes), with a reassessment of its phylogenetic relationships. Journal of Vertebrate Paleontology 7(1):24–54.

GRANDE, L. AND J. G. LUNDBERG. 1988. Revision and redescription of the genus *Astephus* (Siluriformes: Ictaluridae) with a discussion of its phylogenetic relationships. Journal of Vertebrate Paleontology 8(2):139–171.

GRONOVIUS, L. T. 1763. Zoophylacii Gronoviani, (fasciculus primus). Lugduni Batavorum. 126 pp., 14 pls.

GÜNTHER, A. 1864. Catalogue of the fishes in the British Museum. Volume 5, Catalogue of the Physostomi, containing the families Siluridae, Characinidae, Haplochitonidae, Sternoptychidae, Scopelidae, Stomiatidae in the collection of the British Museum. xxii + 455 pp.

HEMMING, F., ed. 1953. Copenhagen decisions on zoological nomenclature. Additions to, and modifications of, the Règles Internationales de la Nomenclature Zoologique. Approved and adopted by the fourteenth International Congress of Zoology, Copenhagen, August, 1953. International Trust for Zoological Nomenclature, London.

HOEDEMAN, J. J. 1949. Onderorde Siluroidea "Meervallen." Encyclopaedie voor de aquariumhouder: X.30.X.1–6.

———. 1952. Notes on the ichthyology of Surinam (Dutch Guiana). The catfish genera *Hoplosternum* and *Callichthys*, with key to the genera and groups of the family Callichthyidae. Beaufortia (12):1–11.

HORA, S. L. 1936. Siluroid fishes of India, Burma and Ceylon. II. Fishes of the genus *Akysis* Bleeker. III. Fishes of the genus *Olyra* McClelland. IV. On the use of the generic name *Wallago* Bleeker. V. Fishes of the genus *Heteropneustes* Müller. Records of the Indian Museum (Calcutta) 38(2):199–209.

ISBRÜCKER, I. J. H. 1979a. Descriptions préliminaries de nouveaux taxa de la famille des Loricariidae, poissons-chats cuirassés néotropicaux, avec un catalogue critique de la sous-famille nominale (Pisces, Siluriformes). Revue Française d'Aquariologie et Herpetologie 5(4) (for 1978):86–117.

———. 1979b. Les poissons de la famille des Loricariidés ou poissons-chats cuirassés. Revue Française d'Aquariologie et Herpetologie 6(4):109–124.

———. 1980. Classification and catalogue of the mailed Loricariidae (Pisces, Siluriformes). Verslagen en Technische Gegevens, Instituut voor Taxonomische Zoölogie, Universiteit van Amsterdam (22):1–181.

———. 1981. Revision of *Loricaria* Linnaeus, 1758 (Pisces, Siluriformes, Loricariidae). Beaufortia 31:51–96.

———. 1986. Trichomycteridae, mysterieuze meervallen. Het Aquarium 56(11):274–279.

ISBRÜCKER, I. J. H. AND H. NIJSSEN. 1974. *Rhadinoloricaria* gen. nov. and *Planiloricaria*, two genera of South American mailed catfishes (Pisces, Siluriformes, Loricariidae). Beaufortia 22(290):67–81.

———. 1989. Diagnose dreier neuer Harnischwelsgattungen mit fünf neuen Arten aus Brasilien (Pisces, Siluriformes, Loricariidae). Die Aquarien- und Terrarienzeitschrift 42(9):541–547.

ICZN. 1961. International Code of Zoological Nomenclature, 2nd ed. International Trust for Zoological Nomenclature, London and Berkeley.

———. 1985. International Code of Zoological Nomenclature, 3rd ed. International Trust for Zoological Nomenclature, London and Berkeley.

JAYARAM, K. C. 1966. Contributions to the study of the fishes of the family Bagridae. 2. A systematic account of the African genera with a new classification of the family. Bulletin de l'Institut Fondamental d'Afrique Noire, série A 28(3):1064–1139.

———. 1968. Contributions to the study of bagrid fishes (Siluroidea: Bagridae). 3. A systematic account of the Japanese, Chinese, Malayan and Indonesian genera. Treubia 27(2–3):287–386.

JORDAN, D. S. 1923. A classification of fishes including families and genera as far as known. Stanford University Publications, University Series, Biological Sciences 3(2):i–x + 77–243.

KNER, R. 1853. Über die Hypostomiden, oder die zweite Hauptgruppe der Panzerfische. Sitzungsberichte der Mathematisch-Naturwissenschaftlichen Classe der Kaiserlichen Akademie der Wissenschaften in Wien 10(3):278–282.

———. 1854. Die Hypostomiden. Zweite Hauptgruppe der Familie der Panzerfische. (Loricata vel Goniodontes). Denkschriften der Mathematisch-Naturwissenschaftlichen Classe der Kaiserlichen Akademie der Wissenschaften in Wien 7:251–286 [1–36 of separate], pls. 1–5.

LATREILLE, P. A. 1825. Famillies naturelles du règne animal exposées succinctement et dans un ordre analytique, avec l'indication de leurs genres. 2nd. ed. Paris. 570 pp.

LUNDBERG, J. G., A. H. BORNBUSCH, AND F. MAGO-LECCIA. 1991. *Gladioglanis conquistador* n. sp. from Ecuador with diagnoses of the subfamilies Rhamdiinae Bleeker and Pseudopimelodinae n. subf. (Siluriformes: Pimelodidae). Copeia 1991(1):190–209.

MCKENNA, M. C. AND S. K. BELL. 1997. Classification of mammals above the species level. Columbia University Press, New York. 631 pp.

MEEK, S. E. 1904. The fresh-water fishes of Mexico north of the isthmus of Tehuantepec. Field Columbian Museum, Zoological Series 5:i–lxiii + 1–252, pls. 1–17.

MELVILLE, R. V. AND J. D. D. SMITH, eds. 1987. Official lists and indexes of names and works in zoology. The International Trust for Zoological Nomenclature, London. 366 pp.

MEYEN, F. J. F. 1834–1835. Reise um die erde ausgeführt auf dem Königlich preussischen seehandlungs-schiffe Prinzess Louise, commandirt von captain W. Wendt, in den jahren 1830, 1831 und 1832; Historischer bericht. Sander'sche buchhandlung, Berlin. 2 vols.

MIRANDA RIBEIRO, A. DE. 1917. De Scleracanthis. Fluvio "Solimões" anno MCMVIII a cl. F. Machado da Silva duce brasiliense inventis et in Museo Urbis "Rio de Janeiro" servatis. Revista de Sciencias 1:49–52.

MIRANDA RIBEIRO, P. DE. 1959. Considerações sôbre Callichthyidae Gill, 1872 (Nematognathi). Boletim do Museu Nacional, n. s. (206):1–9.

MO, T. 1991. Anatomy, relationships and systematics of the Bagridae (Teleostei, Siluroidei) with a hypothesis of siluroid phylogeny. Koeltz Scientific Books, Koenigstein, Germany. vii + 216 pp. + 63 unnumbered figures.

MÜLLER J. AND F. H. TROSCHEL. 1849. Horae ichthyologicae: Beschreibung und Abbildung neuer Fische, Drittes Heft. Verlag von Veit and Co., Berlin. 28 pp., 5 pls.

MYERS, G. S. 1931. On the fishes described by Koller from Hainan in 1926 and 1927. Lingnan Science Journal 10(2–3):255–262.

———. 1944. Two extraordinary new blind nematognath fishes from the Rio Negro, representing a new subfamily of Pygidiidae, with a rearrangement of the genera of the family, and illustrations of some previously described genera and species from Venezuela and Brazil. Proceedings of the California Academy of Sciences (Series 4) 23(40):591–602, pls. 52–56.

MYERS, G. S. AND S. H. WEITZMAN. 1966. Two remarkable new trichomycterid catfishes from the Amazon basin in Brazil and Colombia. Journal of Zoology (London) 149:277–287.

NELSON, J. S. 1994. Fishes of the World. 3rd ed. John Wiley and Sons, Inc., New York. xvii + 600 pp.

PINNA, M. C. C. DE. 1992. A new subfamily of Trichomycteridae (Teleostei, Siluriformes), lower loricarioid relationships and a discussion of the impact of additional taxa for phylogenetic analysis. Zoological Journal of the Linnean Society 106:175–229.

———. 1996. A phylogenetic analysis of the Asian catfish families Sisoridae, Akysidae, and Amblycipitidae, with a hypothesis on the position of the neotropical Aspredinidae (Teleostei, Ostariophysi). Fieldiana: Zoology (n. s.) (84):1–83.

PINNA, M. C. C. DE AND R. P. VARI. 1995. Monophyly and phylogenetic diagnosis of the family Cetopsidae, with synonymization of the Helogenidae (Teleostei: Siluriformes). Smithsonian Contributions to Zoology (571):1–26.

RAFINESQUE, C. S. 1815. Analyse de la nature, ou tableau de l'univers et des corps organisés. Privately published, Palerme. 224 pp.

REGAN, C. T. 1904. A monograph of the fishes of the family Loricariidae. Transactions of the Zoological Society of London 17(part 3, number 1):191–350, pls. 9–21.

———. 1911. The classification of the teleostean fishes of the order Ostariophysi. 2. Siluroidea. Annals and Magazine of Natural History (8)8:553–577.

REICHEL, M. 1927. Etude anatomique du *Phreatobius cisternarum* Goeldi, silure aveugle du Brésil. Revue Suisse de Zoologie 34(16):285–403, pls. 2–6.

RIEHL, R. AND H. A. BAENSCH. 1990. Mergus Aquarien Atlas, Band 3. Mergus Verlag, Melle, Germany. 1104 pp.

ROBERTS, T. R. 1989. The freshwater fishes of western Borneo (Kalimantan Barat, Indonesia). Memoirs of the California Academy of Sciences (14):i–xii + 1–210.

SCHAEFER, S. A. 1991. Phylogenetic analysis of the loricariid subfamily Hypoptopomatinae (Pisces: Siluroidei: Loricariidae), with comments on the generic diagnoses and geographic distribution. Zoological Journal of the Linnean Society 102(1):1–41.

SCHULTZ, L. P. 1944. The catfishes of Venezuela, with descriptions of thirty-eight new forms. Proceedings of the United States National Museum 94(3172):173–338, pls. 1–14.

SILFVERGRIP, A. M. C. 1992. *Zungaro*, a senior synonym of *Paulicea* (Teleostei: Pimelodidae). Ichthyological Explorations of Freshwaters 3(4):305–310.

STEYSKAL, G. C. 1980. The grammar of family-group names as exemplified by those of fishes. Proceedings of the Biological Society of Washington 93:168–177.

STIASSNY, M. L. J. AND N. RAMINOSOA. 1994. The fishes of the inland waters of Madagascar. Annales du Musée Royal de l'Afrique Centrale, Série in 8°, Sciences Zoologiques (275):133–149.

SWAINSON, W. 1838. The natural history and classification of fishes, amphibians, and reptiles, or monocardian animals, volume 1. Longman, Orme, Brown, Green and Longmans, and John Taylor, London. vi + 368 pp.

———. 1839. The natural history and classification of fishes, amphibians, and reptiles, or monocardian animals, volume 2. Longman, Orme, Brown, Green and Longmans, and John Taylor, London. vi + 448 pp.

TAVERNE, L. AND A. ALOULOU-TRIKI. 1974. Étude anatomique, myologique et ostéologique du genre *Synodontis*

Cuvier (Pisces: Siluriformes, Mochocidae). Annales du Musée Royal de l'Afrique Centrale, série in 8°, Sciences Zoologiques (210):1–69, pls. 1–2.

TCHERNAVIN, V. V. 1944. A revision of some Trichomycterinae based on material preserved in the British Museum (Natural History). Proceedings of the Zoological Society (London) 114(1–2):234–275.

TILAK, R. 1967. Studies of the osteocranium and the Weberian apparatus of the fishes of the genus *Batasio* Blyth, 1860 (Pisces: Siluroidei) with remarks on the systematic position of the genus. Anatomische Anzeiger 121:415–434.

WEBER, M. 1913. Süsswasserfische aus niederländisch Süd- und Nord-Neu-Guinea. Nova Guinea (Zool.) 9(4):513–613, pls. 12–14.

APPENDIX 1

Catfish family-group names arranged alphabetically within current familes. Arrangement of families follows Nelson (1994), with modifications by Mo (1991), de Pinna and Vari (1995) and de Pinna (1996). Available family-group names, except those that are ruled permanently invalid, are in bold face. Names originally based on incorrect spelling of generic root are corrected; variant spellings not included.

Akysidae
- **Acrochordonichthyini** de Pinna, 1996
- **Akyses** Gill, 1861b
- **Parakysidae** Roberts, 1989

Amblycipitidae
- **Amblycepinae** Day, 1873

Amphiliidae
- **Amphiliidae** Regan, 1911
- **Doumeinae** Regan, 1911

Anchariidae
- **Anchariidae** Glaw and Vences, 1994

Andinichthyidae
- **Andinichthyidae** Gayet, 1988

Ariidae
- **Arii** Bleeker, 1862
- **Bagreidae** Schultz, 1944
- **Batrachocephalinae** Gill, 1893
- **Doiichthyidae** Weber, 1913
- **Hemipimelodinae** Gill, 1861b
- Osteogeniosinae Fowler, 1951
- **Tachysurinae** Eigenmann, 1890
- **Vorhisiidae** Frizzell, 1965

Aspredinidae
- Aspredinae Swainson, 1838
- **Aspredinidae** Adams et al., 1854
- **Bunocephalini** Bleeker, 1858
- **Hoplomyzontinae** Fernández-Yépez, 1950
- **Platystacinae** Eigenmann and Eigenmann, 1890

Astroblepidae
- **Argeini** Bleeker, 1862
- **Astroblepiformes** Bleeker, 1862
- **Cyclopidae** Eigenmann, 1910

Auchenipteridae
- **Ageneiosi** Bleeker, 1862
- **Asterophysi** Bleeker, 1862
- **Auchenipterini** Bleeker, 1862
- **Centromochli** Bleeker, 1862
- **Euanemini** Bleeker, 1858
- **Pseudauchenipterini** Bleeker, 1862
- **Trachelyopterini** Bleeker, 1858

Austroglanididae
- **Austroglanididae** Mo, 1991

Bagridae
- **Bagrichthyes** Bleeker, 1862
- **Bagrichthyoidei** Bleeker, 1858
- **Bagroides** Bleeker, 1851
- **Batasinae** Tilak, 1967
- Mystidae Fowler, 1935
- Mystini Hoedeman, 1949
- **Olyrinae** Gill, 1893
- **Pelteobagrini** Jayaram, 1966
- Porcinae Fowler, 1915
- **Ritae** Bleeker, 1862

Callichthyidae
- **Aspidoradidi** Hoedeman, 1952
- **Callichthini** Bonaparte, 1838
- **Cascaduridi** Hoedeman, 1952
- **Corydoradinae** Hoedeman, 1952
- **Dianemidi** Hoedeman, 1952
- **Hoplosterninae** Miranda Ribeiro, 1959

Cetopsidae
- **Cetopsini** Bleeker, 1858
- **Helogenidae** Regan, 1911

Chacidae
- **Chacini** Bleeker, 1858

Clariidae
- **Clariini** Bonaparte, 1846
- **Heterobranchoidei** Bleeker, 1858
- **Saccobranchini** Bleeker, 1858

Claroteidae
- **Auchenoglanidinae** Jayaram, 1966
- **Chrysichthyinae** Regan, 1911
- **Claroteini** Bleeker, 1862
- **Gephyroglanidini** Jayaram, 1966

Cranoglanididae
- **Cranoglanidae** Myers, 1931

Diplomystidae
- **Diplomystidae** Eigenmann, 1890

Doradidae
- Centrochirinae Fowler, 1951
- **Doradini** Bleeker, 1858
- Hemidoradinae Fowler, 1951
- Lithodoradinae Fowler, 1951

Erethistidae
- **Continae** de Pinna, 1996
- **Erethistides** Bleeker, 1862
- **Laguviini** de Pinna, 1996

Heteropneustidae
- **Heteropneustidae** Hora, 1936
- **Saccobranchini** Bleeker, 1858

Hypsidoridae

Hypsidoridae Grande, 1987
Ictaluridae
Amieurina Günther, 1864
Astephinae Grande and Lundberg, 1988
Ichthaelurinae Meek, 1904
Ictaluri Gill, 1861b
Loricariidae
Acanthicini Bleeker, 1862
Acestridiinae Isbrücker and Nijssen, 1974
Acestrini Bleeker, 1862
Ancistri Kner, 1853
Chaetostomidi Fowler, 1958
Farlowellidi Fowler, 1958
Goniodontes Kner, 1853
Harttiinae Boeseman, 1971
Hemiodontichthyina Isbrücker, 1979a
Hopliancistrini Isbrücker and Nijssen, 1989
Hypoptopomatinae Eigenmann and Eigenmann, 1890
Hypostomiden Kner, 1853
Lictores Kner, 1853
Lithogeninae Gosline, 1947
Lithoxina Isbrücker, 1980
Loricaria Rafinesque, 1815
Loricariichthyina Isbrücker, 1979a
Metaloricariina Isbrücker, 1979a
Neoplecostominae Regan, 1904
Otocinclini Isbrücker, 1979b
Otothyrini Schaefer, 1991
Planiloricariina Isbrücker, 1979a
Plecostomiformes Bleeker, 1862
Pseudacanthicini Isbrücker, 1980
Pseudoloricariina Isbrücker, 1981
Reganellina Isbrücker, 1979a
Ricolina Isbrücker, 1981
Rineloricariina Isbrücker, 1979a
Spectracanthicina Isbrücker and Nijssen, 1989
Malapteruridae
Malapterurini Bleeker, 1858
Mochokidae
Chiloglanidinae Riehl and Baensch, 1990
Mochokidae Jordan, 1923
Rhinoglanina Günther, 1864
Simuldentinae Taverne and Aloulou-Triki, 1974
Synodontini Bleeker, 1862
Nematogenyidae
Nematogenyini Bleeker, 1862
Pangasiidae
Pangasianodonidi Fowler, 1958
Pangasini Bleeker, 1858
Pimelodidae
Anodontes Bleeker, 1858
Calophysinae Eigenmann, 1890
Heptapterinae Gill, 1861b
Hypophthalmini Bleeker, 1862
Luciopimelodinae Driver, 1919
Phreatobinae Reichel, 1927
Pimelodinae Swainson, 1838
Pimelodini Bonaparte, 1838
Pinirampidae Fernández-Yépez, 1965
Pseudopimelodidae Fernández-Yépez and Martín, 1953
Pseudopimelodinae Lundberg et al., 1991
Pteronotidae Adams et al., 1854
Rhamdiae Bleeker, 1862
Sorubinae Swainson, 1838
Plotosidae
Plotosichthyoidei Bleeker, 1858
Schilbidae
Ailichthyoidei Bleeker, 1858
Schilbeini Bleeker, 1858
Siluranodontinae Regan, 1911
Scoloplacidae
Scoloplacinae Bailey and Baskin, 1976
Siluridae
Kryptopterini Bleeker, 1862
Phalacronotini Bleeker, 1862
Silurichthyoidei Bleeker, 1858
Siluroïdes Cuvier, 1816
Sisoridae
Bagarina Günther, 1864
Clypeati Kner, 1853
Exostomatina Günther, 1864
Glyptothoracini de Pinna, 1996
Glyptosterni Gill, 1861b
Inermes Kner, 1853
Nangrina de Pinna, 1996
Pseudecheneidina de Pinna, 1996
Sisorichthyoidei Bleeker, 1858
Trichomycteridae
Copionodontinae de Pinna, 1992
Eremophilini Bonaparte, 1846
Glanapteryginae Myers, 1944
Pareiodontinae Eigenmann, 1918
Pygidiidae Eigenmann and Eigenmann, 1888
Sarcoglanidinae Myers and Weitzman, 1966
Stegophilina Günther, 1864
Trichogeninae Isbrücker, 1986
Trichomycterini Bleeker, 1858
Tridentinae Eigenmann, 1918
Vandelliini Bleeker, 1862

UNASSIGNED FAMILY-LEVEL NAMES (INCLUDING SUPRAFAMILIAL NAMES)

Anesipoma Latreille, 1825
Ariobagri Bleeker, 1862
Ariodontes Bleeker, 1858
Diptéronotes Duméril, 1856
Glani Latreille, 1825
Heterobranchia Latreille, 1825
Nematognathi Gill, 1861a
Oplophoria Rafinesque, 1815
Scleracanthi Miranda-Ribeiro, 1917
Siluridae Anomalopterae Günther, 1864
Siluridae Branchicolae Günther, 1864
Siluridae Heteropterae Günther, 1864
Siluridae Homalopterae Günther, 1864
Siluridae Opisthopterae Günther, 1864
Siluridae Proteropodes Günther, 1864
Siluridae Proteropterae Günther, 1864
Siluridae Stenobranchiae Günther, 1864

Golden Gate Park
San Francisco, California 94118