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FAMILIES AND SUBFAMILIES OF FISHES.

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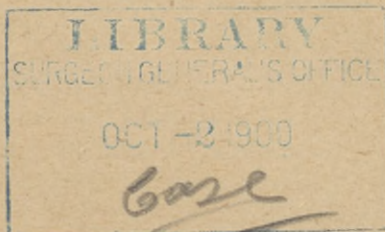
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FAMILIES AND SUBFAMILIES OF FISHES.

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# FAMILIES AND SUBFAMILIES OF FISHES.

By THEODORE GILL.

In 1872, the present author published an "Arrangement of the Families of Fishes, or Classes Pisces, Marsipobranchii, and Leptocardii, prepared for the Smithsonian Institution." In that opuscle, the living fin-bearing branchiferous vertebrates were divided into 3 classes, 21 orders, and 244 families. The sequence was based upon a consideration of their morphology, really commencing with the most generalized or primitive types and ending with the most specialized. The author's views as to their approximate relations were given in the introduction to the memoir (pages xix-xlii), in which the Leptocardians were regarded as the lowest of the vertebrates and the Pediculates, in some respects, the most specialized. Nevertheless, in obedience to the wish of Prof. Baird, at that time Assistant Secretary of the Smithsonian Institution, the sequence was reversed in the list of families, and the series commenced with the order Plectognathi and terminated with the Leptocardii. At that time people generally had not been accustomed to see the vertebrates arranged with the lowest first, and it was with the desire of conforming as nearly as possible to prevailing usage that the generally adopted sequence was preserved.

Since the publication of the arrangement, numerous observers have published the results of their studies in the various departments of morphology and taxonomy of the branchiferous classes. Many new species and several entirely new types have been discovered and described, and the light that has been thrown upon the structure of various forms, living and extinct, renders it desirable that a new census of the several classes should be taken. The present list of families and sub-families is the outcome of such a review.

As already indicated, in the "Arrangement of the Families of Fishes" of 1872 the names of 244 families appeared. In the introduction it was remarked that—

The families have been much multiplied and, it may be urged, unduly so, and such may really be the case, but as analysis should precede synthesis, and as many of the more comprehensive families have either not received diagnoses common to and at the same time peculiar to all their constituents, or, in case of applicable diagnoses, the characters are of suspicious value, it has been deemed best to isolate the groups as families and allow them to stand on their own merits. Several of the families admitted (*e. g.*, *Gadiform*, *Labyrinthiform*, *Scobriform*, *Perciform*, *Siluriform*) are, however, of very dubious value, and are only provisionally adopted and kept in prominence to attract future examination.

Subsequent studies, instead of invalidating the families that were thus regarded as being of suspicious value, have rather confirmed them (or at least most of them), and all of the series just named have been retained in the present list. The latest authors that have published on any of those groups are Dr. and Mrs. Carl Eigenmann, who have studied the long neglected rich collections of Nematognath or siluriform fishes made by the late Prof. Agassiz and associates in South America. All of the families named in the arrangement have been adopted as a consequence of the profound studies of Dr. and Mrs. Eigenmann. The author, therefore, has little hesitation in retaining all of the families named in the arrangement and has even added a number of others, some of which have been dissevered from previously recognized groups, while others are the result of discoveries made since 1872. Several other of the most independent ichthyologists of the United States, and who are well entitled to the most attentive consideration on account of the

wide range and thoroughness of their researches, have likewise adopted most of the families proposed by the author when they chanced to treat of forms embraced in any of them. Such are President David S. Jordan and Prof. Charles H. Gilbert, of the University of California, Dr. G. Brown Goode, Director of the United States National Museum, and Dr. Tarleton Bean, the Curator of Fishes of the same museum. Prof. E. D. Cope, while often differing, has also accommodated his views in many instances to those enunciated by myself. When so many independent and eminent authorities more or less agree, there is good reason to believe that the views in which they concur can not be very far wide of the truth, however much they may deviate from those prevalent in other parts of the world.

For while there is essential accord among American ichthyologists as to the limits of families, the divergence among them being slight, there is a great divergence in that respect from most European ichthyologists. It may be well, then, to sustain the current American usage in the limitation of the families of fishes by reference to the treatment of well-studied groups of other classes by the most competent European authorities.

The illustrious Huxley, in his memoirs and well-known volume on the crayfishes and their relations, has exemplified the extent to which family differentiation should be carried, in his work. An equally celebrated and profound German naturalist, Prof. H $\ddot{a}$ ckel, in the various classes which he has studied, has adopted similar principles. The numerous ornithological authors, forming so large a contingent of the army of science, have even carried the discrimination of families to a much greater extent.

It is scarcely possible that anyone who should carefully study the morphology and characteristics generally of the families of passerine birds, for example, and who should likewise survey the morphology and characteristics of the families of fishes, could deny that there is scarcely one (if any) of the families of fishes based upon characters so trivial as those which have served for the differentiation of the great majority of those belonging to the great group of Passeres. If, therefore, the general zoologist has the slightest desire to be consistent, he must either reject most of the families of birds and recombine them or apply a far stricter analysis to the families of fishes than is generally used in Europe. But, indeed, we have not to go outside the classes of fishes to notice inconsistencies. Anyone who reviews the characteristics on which the families of Percoid and Scombroidean fishes have been distinguished must recognize that the distinctions which have been employed to separate them are of far less value and significance than the characters which differentiate various constituents or constituents in the sets of families as recognized by ichthyologists of the old school.

The author insists, as in previous publications, on the entirely provisional nature of the present arrangement. Changes—grave changes—must necessarily be made in the system when the species shall be studied in a more scientific way than has been generally done heretofore. Many families are entirely unknown in an anatomical point of view, and until their structure has been investigated and carefully compared with that of others, their systematic relations must remain doubtful. No scientific investigator should fear to change his opinion. An obstinate persistence in ancient views because they have been once adopted has been too long detrimental to the interests of systematic ichthyology, and such obstinacy has retarded the general progress of science for twenty to thirty years. While the aspect of every other branch of vertebrate zoology has entirely changed within that period, ichthyology, the most complex and the least advanced of all, might appear to the casual observer to have had a more certain basis than any, inasmuch as the textbooks of a past generation have essentially the same system as the latest. Either almost omniscience and prescience were the attributes of the guides of the past who keep to the same path in the present, or obstinacy and blindness to an extraordinary degree have been manifested. To a great extent ichthyology has been limited to descriptions of species or habits, and taxonomic principles have been quite neglected. One author even, treating of the fish fauna of Great Britain, had appreciated a few of the faults of the system he adopted, and yet seriously gave as a reason for adopting it that "specimens are arranged in the national collection in accordance with it."\* If such reasons were generally regarded as sufficient we might well despair of any rapid progress of

\* Day's Fishes of Great Britain and Ireland, vol. 1, p. XXIX, 1884.

ichthyology, but let us hope that few could reason so and that museums may not become obstacles to the advancement of science, but be used for its furtherance only.

The National Museum of the United States may be the first in which provision is made for the thorough study of systematic ichthyology. The policy of having a skeleton of every species has been recognized by its enlightened director, Dr. Goode, and we may hope that before many years have passed a collection may be formed which will be worthy of a national museum and may serve to put ichthyology on a sound basis.

Meanwhile ichthyology is still a crude and inchoate science. The present list has been prepared as a check-list and adjuvant to the use of the collection. Many families have been allocated in their positions simply because they have been placed there before and because equal doubts would be involved in placing them elsewhere. In many cases, it is certain that the general conceptions of their relations (if so positive a term may be applied to what are vague reiterations of past utterances) are baseless, but the indications furnished by the exterior is insufficient to justify positive conclusions. Until the anatomy or at least the osteology of every family and subfamily is known, much doubt must remain as to the proper allocation of such groups.

In order to furnish clews to the literature, the names of the proposers and modifiers of family terms are appended, and the dates will enable the student to obtain the desired result by use of the recognized channels of information. The names of authors inclosed within parentheses are of those who have given the name in more or less different forms or with different ranges of characters; those in open space are of such as have given the forms adopted and also essentially the same limits.

In the family names derived from compounds with *πους*, the shorter termination—*pidæ* is adopted rather than—*podidæ*. (Compare the alternative or poetical forms *πολοπους*, gen. *πολόπου*, *θιδίπους*, gen. *θιδίπου*, etc.) Thus *Lepidopidæ* is used instead of *Lepidopodidæ*.

In names derived from compounds with *σωμα* and similar words the termination—*idæ* is also employed, as *Ginglymostomidæ*. As this is contrary to almost universal usage among naturalists, I can not do better than cite, in this connection, the words of the scholarly Hermannsen.\*

Class MYELOZOA (Is. Geoffr. St. Hil., Bonaparte, 1856), or LEPTOCARDIANS.

Order AMPHIOXI (Bon., 1846).

1. BRANCHIOSTOMIDÆ Bon., 1846.

Class MARSIPOBRANCHII or MYZONTS.

Order HYPEROTRETA (Müller, 1844).

2. HEPTATREMIDÆ Gill, 1892=BDELLOSTOMIDÆ Gill, 1872.
3. MYXINIDÆ (Raf., 1810) Gill, 1872.

Order HYPEROARTIA (Müller, 1844).

4. MORDACIDÆ Gill, 1892.
5. PETROMYZONTIDÆ Risso, 1826.
  - a. *Petromyzontinæ* (Bon., 1832) Gill, 1892.
  - b. *Geotrinæ* Gill, 1892.

Class SELACHIANS.

Order OPISTHRARTHRI (Gill, 1882).

6. CHLAMYDOSELACHIDÆ Garman, 1884.
7. HEXANCHIDÆ Gill, 1885=NOTIDANIDÆ (M. H.).

Order PROSARTHRI.

8. HETERODONTIDÆ Gill, (1862) 1872=CESTRACIONTIDÆ (Agass., 1883) Owen, 1846.

Order TECTOSPONDYLI.

9. ECHINORRHINIDÆ Gill (1862), 1872.
10. OXYNOTIDÆ Gill (1862), 1872.
11. SQUALIDÆ (Bon., 1832) Gill, 1888=SPINACIDÆ.
12. DALATIDÆ Gill, 1892=SCYMNIDÆ (Müller and Henle, 1845).
  - a. *Somniosinæ* Gill, 1888.
  - b. *Dalatiinæ* Gill, 1892=*Scymninæ* (Bon., 1837), Gill.

\* Vocabula composita Græcæ originis, quorum terminalis radix generis neutralis, in *a* cxiens, genitivo *atos* flectitur, *nonnisi* adjectivo sensu adhibentur. Hinc si neutralia numero plurali obveniunt, ut *Adeloderma*, *Cricostoma*, terminentur genitivo *orum*; sin autem singulari numero, ut *Amphidesma*, *Cyclostoma*, feminini erunt generis, et declinabimus „*Cyclostomæ*.“—Documento sicut veterum nomina *δοσπρακόδερμα*, *τρίστομος*, *άδεσμος*.

“Omni vel specie rectæ rationis, qui *Pleurotomam* similiaque vocabula neutralis generis habent. Conferatur *περίτομος*.”—Hermannsen, *Indicis Generum Malacozoorum Primordia*, vol. I, 1846, p. xiii.

## Class SELACHIANS—Continued.

## Order ASTEROSPONDYLI

13. GALEIDÆ (Rich., 1848), Gill, 1892=GALEORHINIDÆ Gill (1862), 1872.  
*a. Galeorhinina* Gill, 1862.  
*b. Galeina* Gill, 1892, or *Mustelina* Bon.
14. SCYLLIORHINIDÆ Gill (1862), 1872, or SCYLLIIDÆ (Müller and Henle, 1877), Rich.  
*a. Scylliorhinina* Gill, 1862.  
*b. Parascylliina* Gill, 1862.  
*c. Hemiscylliina* Gill, 1862.  
*d. Pseudotriacina* Gill, 1892.
15. GINGLYMOSTOMIDÆ Gill (1862), 1892.  
*a. Ginglymostomina* Gill, 1862.  
*b. Stegostomina* Gill, 1862.
16. CROSSORHINIDÆ Gill (1862), 1872.
17. ALOPIDÆ Gill, 1885.
18. CARCHARIDÆ Gill, 1892=ODONTASPIDIDÆ (Müller and Henle, 1837) Gill, 1862.
19. ISURIDÆ Gill, 1892.  
*a. Carcharodontina* Gill, 1892.  
*b. Isurina* (Gray, 1851) Gill, 1892.
20. CETORHINIDÆ Gill, 1872.
21. RHINODONTIDÆ (Müller and Henle) Richardson, 1856.
22. PRISTIOPHORIDÆ (Bleeker, 1859) Günther, 1870.  
 Suborder RHINÆ.
23. SQUATINIDÆ (Müller and Henle, 1837), Gray, 1851.

## Order HYPOTREMI.

## Suborder SARCURA.

## (Pristoidea.)

24. PRISTIDÆ (M. and H., 1837) Bon., 1846.

## (Raioida.)

25. RHAMPHOBATIDÆ Gill (1872).
26. RHINOBATIDÆ (Müller and Henle, 1841), Rich., 1856.
27. RAIDÆ (Bonaparte, 1831), Rich., 1856.

## (Torpedinoidea.)

28. TORPEDINIDÆ (M. and H., 1841), Rich., 1856.  
*a. Torpedinina* (Bon., 1837), Gill, 1862.  
*b. Narcinina* Gill, 1862.  
*c. Hypnina* Gill, 1862.

## Suborder MASTICURA.

## (Dasybatoidea.)

29. DASYBATIDÆ Gill (1892), or TRYGONIDÆ (M. and H.) Rich., 1856.  
*a. Dasybatina* Gill, 1892, or *Trygonina* (Bon., 1837).  
*b. Paratrygonina* Gill, 1892.  
*c. Pteroplateina* Gill, 1892.

## Aetobatoidea.

30. AETOBATIDÆ Jordan, 1888=MYLIOBATIDÆ (M. and H., 1837).  
*a. Aetobatina* Gill, 1892, *Myliobatina* (Bon., 1837) Agass.  
*b. Stosodontina* Gill, 1892=*Etobatina* Agass.
31. MOBULIDÆ Gill, 1892=CEPHALOPTERIDÆ (M. and H., 1837).

## Class SELACHIANS—Continued.

## Subclass HOLOCEPHALI.

## Order HOLOCEPHALI.

32. CHIMERIDÆ Bonaparte, 1831.  
*a. Chimarina* Bon., 1831.  
*b. Harriottiina* Gill, 1892.

## Class TELEOSTOMES or TRUE FISHES.

## Subclass DIPNOI Müller, 1845.

## Order Sirenoidei Müller, 1843.

## Suborder MONOPNEUMONA.

33. CERATODONTIDÆ Gill, 1872.

## Suborder DIPLOPNEUMONA.

34. LEPIDOSIRENIDÆ Bonaparte, 1841.  
*a. Lepidosirenina* (Bonaparte, 1841) Gill, 1876.  
*b. Protopterina* Gill, 1876.

## Subclass BRACHIOGANOIDEA.

## Order CROSSOPTERYGII.

35. POLYPTERIDÆ Bon., 1846.  
*a. Polypterina* (Bon., 1837) Gill, 1892.  
*b. Calamoichthyina* Gill, 1892.

## Subclass CHONDROGANOIDEA.

## Order CHONDROSTEI.

36. ACIPENSERIDÆ Bon., 1831.  
*a. Scaphirhynchopina* Gill, 1892.  
*b. Acipenserina* (Bon., 1837).

## Order SELACHOSTOMI.

37. POLYDONTIDÆ Bon., 1837.

## Subclass HYOGANOIDEA.

## Order RHOMBOGANOIDEA.

38. LEPIDOSTEIDÆ Bon., 1837.

## Order CYCLOGANOIDEA.

39. AMIIDÆ Bon., 1837.

## Subclass TELEOSTEI.

## Order MALACOPTERYGII.

## (Osteoglossoida.)

40. OSTEOGLOSSIDÆ (Bon., 1846).
41. ARAPAIMIDÆ (Bleeker, 1859).
42. HETEROTIDIDÆ (Cope, 1871).
43. PANTODONTIDÆ (Peters, 1876), Günther, 1880.

## (Hyodontoida.)

44. HYODONTIDÆ (Val., 1846), Günther, 1868.

## (Albuloidea.)

45. ALBULIDÆ (Bleeker, 1859), Gill, 1872.

## Class TELEOSTOMES, etc.—Continued.

## Subclass TELEOSTEI—Continued.

## Order MALACOPTERYGII—Continued.

## (Elopoidea).

46. ELOPIDÆ (Val., 1856), Richardson, 1856.  
 a. *Elopinæ* (Bon., 1846), Jordan and Gilbert, 1882.  
 b. *Megalopinæ* Jordan and Gilbert, 1882.

## (Clupeoidea).

47. CHIROCENTRIDÆ (Bleeker, 1859), Günther, 1868.  
 48. CHANEIDÆ Gill, (1872)=LUTODEIROIDEI Bleeker, 1859.  
 49. DUSSUMERIDÆ Gill, 1872.  
 50. CLUPEIDÆ (Bon., 1831), Gill, 1872.  
 51. DOROSOMIDÆ Gill, 1872.  
 52. STOLEPHORIDÆ Gill, 1884=ENGRAULIDIDÆ Gill, 1872.  
 53. ALEPOCEPHALIDÆ (Val., 1846) Richardson, 1856.  
 54. PTEROTHRISIDÆ Gill, 1892=BATHYTHRISIDÆ Günther, 1877.

## (Salmonoidea).

55. ARGENTINIDÆ Gill, 1884.  
 a. *Argentininæ* (Bon., 1846), Gill, 1884.  
 b. *Retropinninæ* Gill, 1892.  
 c. *Plecoglossinæ* Gill, 1867.  
 56. MICROSTOMIDÆ Gill (1861) 1872.  
 a. *Microstominæ* Gill, 1861.  
 b. *Bathylaginæ* Gill, 1892.  
 57. THYMALLIDÆ Gill, 1884.  
 58. SALMONIDÆ (Raf., 1815), Gill, 1884.  
 a. *Salmoninæ* (Bon., 1831), Gill, 1892.  
 b. *Coregoninæ* Gill, 1892.  
 59. SALANGIDÆ Gill, 1872.

## (Notopteroidea).

60. NOTOPTERIDÆ (Bleeker, 1859), Günther, 1868.

## (Gonorhynchoidea).

61. GONORHYNCHIDÆ (Bleeker, 1859).

## (Galaxioidea).

62. GALAXIDÆ Richardson, 1856.  
 63. HAPLOCHITONIDÆ Günther, 1868.

## (Aulopoidea).

64. AULOPIDÆ Cope, 1871.

## (Iniomi\*).

65. SYNODONTIDÆ Gill, 1872.  
 66. BENTHOSAURIDÆ Gill, 1892.  
 67. BATHYPTERIDÆ Gill, 1888.  
 68. MYCTOPHIDÆ Gill, 1892=SCOPELIDÆ (Müller, 1843), Rich., 1848.  
 a. *Scopelinæ* (Bon., 1846), Gill, 1892.  
 b. *Odontostominæ* Gill, 1892.

## Class TELEOSTOMES, etc.—Continued.

## Subclass TELEOSTEI—Continued.

## Order MALACOPTERYGII—Continued.

## (Iniomi)—Continued.

69. MAUROLOCIDÆ Gill, 1884.  
 70. CHAULIODONTIDÆ Bon., 1846.  
 71. GONOSTOMIDÆ Gill, 1892.  
 72. ASTRONESTHIDÆ Gill, 1892.  
 73. STOMIATIDÆ Günther, 1864.  
 74. IPNOLIDÆ Gill, 1883.  
 75. MALACOSTEIDÆ Gill, 1892.  
 76. IDIACANTHIDÆ Gill, 1892.

## (Paralepidoidea).

77. ALEPISAURIDÆ Bon., 1846.  
 78. PARALEPIDIDÆ Gill, 1872.

## (Sternoptyoidea).

79. STERNOPTYCHIDÆ (Dum., 1806), Gill, 1884.  
 a. *Sternoptychinæ* (Rap., 1815), Gill 1884.  
 b. *Argyroplecicinæ* Gill, 1884.  
 c. *Polyipinæ* Gill, 1892.

## (Incertæ sedis).

80. RONDELETIDÆ Goode & Bean, 1892.  
 81. CETOMIMIDÆ Goode & Bean, 1892.

## Order PLECTOSPONDYLI.

## Suborder HETEROGNATHI.

82. CHARACIDÆ Gill, 1892=CHARACINIDÆ (Müller and Troschel).  
 a. *Tetragonopterinæ* (Gill, 1858).  
 b. *Hydrocyoninæ* (Bon., 1837; Günther, 1864).  
 c. *Distichodontinæ* (Günther, 1864).  
 d. *Ichthyoborinæ* (Gthr., 1864).  
 e. *Crenuchinæ* (Gthr., 1864).  
 f. *Xenocharacinæ* (Gthr., 1864).  
 g. *Serrasalmoninæ* (Gthr., 1864).  
 h. *Characinæ* (Gill, 1891)=*Anastominæ* (Gthr., 1864)=*Myletidini* (Bon., 1837).  
 i. *Citharinæ* (Gthr., 1864).  
 j. *Curimatina* (Bleeker, 1859; Günther, 1864).  
 k. *Stevardiinæ* Gill, 1859.  
 83. ERYTHRINIDÆ (Val., 1846; Bleeker, 1859).  
 a. *Pyrrhulinæ* Gill, 1891.  
 b. *Lebiasinæ* Gill, 1891.  
 c. *Erythrinæ* Gill, 1858.

## Suborder EVENTOGNATHI

84. CATASTOMIDÆ Gill, 1861.  
 a. *Ichthyobina* Jordan (188 )=*Bubalichthyina* Gill, 1861.  
 b. *Cycleptina* Gill, 1861.  
 c. *Catostomina* Gill, 1861.

\* The families comprised under the designation of *Iniomi* do not appear to form a homogeneous group, and may be hereafter distributed under several superfamilies or even widely dispersed and otherwise associated, but the data are not at present in hand to undertake the requisite examination.

## Class TELEOSTOMES, etc.—Continued.

## Subclass TELEOSTEI—Continued.

## Order PLECTOSPONDYLI—Continued.

## Suborder EVENTOGNATHI—Continued.

85. CYPRINIDÆ (Bon., 1837) Gill, 1861.  
 a. *Cyprina* (Bon., 1831).  
 b. *Rohtichthyina* (Günther, 1868).  
 c. *Leptobarbina* (Günther, 1868).  
 d. *Danionina* (Günther, 1868).  
 e. *Semiplotina* (Günther, 1868).  
 f. *Xenocypridina* (Günther, 1868).  
 g. *Leuciscina* (Bon., 1837).  
 h. *Rhodeina* (Günther, 1868).  
 i. *Hypophthalmichthyina* (Günther, 1868).  
 j. *Abramidina* (Günther, 1868).  
 k. *Medina* Gill, 1892 = *Plagopterinæ* Jordan and Gilbert, 1882.  
 l. *Exoglossina* Jordan and Gilbert, 1882.  
 m. *Campostomina* Jordan and Gilbert, 1882.
86. HOMALOPTERIDÆ Gill, 1861.  
 87. COBITIDÆ (Swainson, 1839).  
 88. KNERIIDÆ Günther, 1868.

## Suborder GYMNONOTI.

89. GYMNOTIDÆ (Bon., 1846) Gill = STERNOPYGIDÆ Cope, 1871.  
 a. *Gymnotina* (Bon., 1831) Gill, 1892 = *Carapini* Bon., 1850.  
 b. *Sternarchina* Gill, 1892.
90. ELECTROPHORIDÆ Gill, 1872 = GYMNOTIDÆ Cope, 1871.

## Order NEMATOGNATHI.

91. DIPLOMYSTIDÆ Eigenmann, 1891.  
 92. SILURIDÆ (Cuv., 1817), Gill, 1872.  
 a. *Batrachocephalina* Gill, 1892.  
 b. *Tachisurina* C. and R. Eigenmann, 1891 = *Ariina* (Günther, 1864).  
 c. *Bagarina* (Günther, 1864).  
 d. *Rhinoglanina* (Günther, 1864).  
 e. *Pimelodina* (Bleeker, 1858).  
 f. *Bagrina* (Bleeker, 1858; Günther, 1864).  
 g. *Ictaturina* (Gill, 1861) Jordan.  
 h. *Olyrina* Gill, 1892.  
 i. *Erethistina* Gill, 1892.  
 j. *Silurina* (Bon. 1831), Gill, 1892.  
 k. *Ailiina* (Bleeker, 1858), Gill, 1892.  
 l. *Auchenipterina* Gill, 1892.  
 m. *Doradina* (Gthr., 1864).  
 n. *Ageneiosina* (Bleeker 1858), Gill, 1892.
93. MALAPTERURIDÆ Gill, 1892.  
 94. CHACIDÆ Gill, 1872.  
 95. PLOTOSIDÆ Gill, 1872.  
 96. CLARIIDÆ Gill 1872.  
 a. *Clarina* (Bon., 1846).  
 b. *Heterobranchina* Gill, 1892.
97. CALLICHTHYIDÆ Gill, 1872.  
 98. ARGIDÆ Gill, 1872; Eigenmann, 1888.  
 99. SISORIDÆ Gill, 1872.  
 100. LORICARIDÆ Bon. 1837.  
 a. *Loricarina* (Bon. 1831).  
 b. *Hypostomina* (Bleeker, 1859).

## Class TELEOSTOMES, etc.—Continued.

## Subclass TELEOSTEI—Continued.

## Order NEMATOGNATHI—Continued.

101. ASPREDINIDÆ (Bleeker, 1859).  
 a. *Aspredinina* (Bleeker, 1862), Eigenmann, 1891.  
 b. *Bunocephalina* (Bleeker, 1862), Eigenmann, 1891.
102. HYPOPTHALMIDÆ Cope, 1871.  
 103. PYGIDIDÆ C. and R. Eigenmann (1888)=TRICHOMYCTERIDÆ Gill, 1872.  
 a. *Cetopsina* (Bleeker 1858), C. and R. Eigenmann, 1858.  
 b. *Pygidina* C. and R. Eigenmann (1888)=*Trichomycterina* (Bleeker, 1858).  
 c. *Nematogenyina* (Günther, 1864)  
 d. *Stegophilina* (Günther, 1864).

## Order SCYPHOPHORI.

104. MORMYRIDÆ Bon., 1837.  
 a. *Mormyria* (Bon., 1831), Gill, 1859.  
 b. *Petrocephalina* Gill, 1862.
105. GYMNARCHIDÆ (Bleeker, 1859) Gthr., 1864.

## Order SYMBRACHIA.

## (Symbranchoidea).

106. SYMBRACHIDÆ (Swainson 1839), Gill, 1872.  
 107. MONOPTERIDÆ Gill, 1872.

## (Amphipnoidea.)

108. AMPHIPNOIDÆ Gill, 1872.

## (Chilobranchoidea.)

109. CHILOBRANCHIDÆ Gill, 1872.

## Order CARENCHALI.

110. DERICHTHYIDÆ Gill, 1884.

## Order APODES.

## Suborder ENCHELYCEPHALI.

## (Anguilloidea.)

111. LEPTOCEPHALIDÆ (Kaup., 1856), JORDAN = CONGRIDÆ (Kaup., 1856).  
 112. ANGUILLIDÆ (Raf., 1810), Kaup., 1856.  
 113. SIMENCHELYIDÆ Gill, 1879.  
 114. ILYOPHIDÆ Gilbert (1891).  
 115. SYNAPHOBANCHIDÆ Johnson (1862).  
 116. HETEROCONGRIDÆ Jordan and Davis (1891).  
 117. NETTASTOMIDÆ Jordan & Davis, 1891.

## (Ophichthyoidea.)

118. MURENESOCIDÆ (Cope, 1872), Gill, 1890.  
 119. OPICHTHYIDÆ Gill (1885) = OPHISURIDÆ (Risso, 1826), Kaup., 1856.  
 a. *Ophichthyina* Gill, 1892.  
 b. *Sphagebranchina* Gill, 1892.  
 c. *Myrina* Kaup, 1856.

## (Incertæ sedis.)

120. DYSOMMIDÆ, Gill, 1892.

## Class TELEOSTOMES, etc.—Continued.

## Subclass TELEOSTEI—Continued.

## Order APODES—Continued.

## Suborder ENCHELYCEPHALI—Continued.

## (Nemichthyoidea.)

121. NEMICHTHYIDÆ Gill, 1872.  
 a. *Spinivomerinæ* Gill, 1892.  
 b. *Nemichthyinæ* (Gthr., 1870).  
 c. *Gavialicipitinæ* Gill, 1892.

## Suborder COLOCEPHALI.

122. MURÆNIDÆ (Risso., 1826), Cope, 1871, 1872.  
 123. MYROCONGRIDÆ Gill, 1892.  
 124. MORINGUIDÆ Gill, 1885 = RATABURIDÆ Cope 1872.

## Order LYOMERI, Gill and Ryder, 1883.

125. SACCOPHARYNGIDÆ (Bleeker, 1859), Gill, 1872.  
 126. EURYPHARYNGIDÆ Gill, 1883.

## Order XENOMI, Gill.

127. DALLIIDÆ Gill, 1885.

## Order OPISTHOMI (Cope, 1870), Gill, 1872.

128. MASTACEMBELIDÆ (Gthr., 1861).

## Order HETEROMI.

129. NOTACANTHIDÆ (Raf., 1810), Gthr., 1861.  
 130. LIPOGENYIDÆ, Gill, 1892.

## Order TELEOCEPHALI.

## Suborder HAPLOMI.

131. ESOCIDÆ (Cuv., 1817; Bon., 1831).  
 132. UMBRIDÆ (Val.), Gthr., 1866.  
 133. POECILIDÆ, Bon., 1837 = CYPRINODONTIDÆ (Ag., 1834).  
 a. *Cyprinodontinæ* (Gill, 1861), J. and G., 1882.  
 b. *Fundulinæ* (Gthr., 1866) = *Hydrargyrinæ* (Gill, 1861).  
 c. *Orestiinæ* Gill, 1892.  
 d. *Jenynsiinæ* (Gthr., 1866).  
 e. *Anablepinæ* (Bon., 1837).  
 f. *Gambusinæ*, Gill, 1892.  
 g. *Pacilinæ* (Bon., 1837) J. and G., 1882.  
 134. AMBLYOPSIDÆ Bon., 1846.

## Suborder SYNENTOGNATHI.

135. EXOCETIDÆ (Risso, 1826; Bon., 1846) Gill, 1872 =  
 SCOMBERESOCIDÆ (Müller, 1842) Rich.  
 a. *Exocetinæ* (Bon., 1837) Gill, 1861.  
 b. *Hemirhamphæ* Gill, 1861.  
 c. *Scomberesocinæ* Gill, 1859.  
 136. BELONIDÆ Gill, 1872.

## Class TELEOSTOMES, etc.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder UNCERTAIN.

## (Percopsoidæ.)

137. PERCOPSIDÆ (Agass, 1846) Günther, 1868.

## (Aphrododeroidæ.)

138. Aphrododeridæ Bon., 1846.

## Suborder PERCESOCES.

139. SPHYRÆNIDÆ (Raf., 1815) Bon., 1831.  
 140. ATHERINIDÆ (Risso, 1836) Bon., 1837 (incl. Pseudomugilidæ).  
 141. MUGILIDÆ (Cuv., 1829) Bon., 1831.

## Suborder ACANTHOPTERYGII.

## (Berycoidea.)

142. STEPHANOBERYCIDÆ Gill, 1884.  
 143. BERYCIDÆ Lowe, 1884.  
 a. *Berycinæ* Gill, 1862.  
 b. *Melamphainæ* Gill, 1892.  
 c. *Anoptogastrinæ* Gill, 1892.  
 144. TRACHICHTHYIDÆ (Blkr., 1859).  
 145. MONOCENTRIDÆ Gill, 1859.  
 146. HOLOCENTRIDÆ (Rich., 1846) Gill, 1885.  
 147. ANOMALOPIDÆ Gill, 1885.

## (Scombroidea.)\*

148. ELACATIDÆ Gill (1862), 1888.  
 149. POMATOMIDÆ Gill, 1865.  
 150. DREPANIDÆ Gill, 1872.  
 151. CARANGIDÆ (Bleeker, 1859) Gill, 1872, 1883.  
 a. *Chloroscombinæ* Gill, 1862.  
 b. *Seriolinæ* Gill (1861), 1883.  
 c. *Caranginæ* (Raf., 1815) Gill, 1862.  
 d. *Vomerinæ* (Bon., 1838) Gill, 1862.  
 e. *Trachynotinæ* Gill, 1862.  
 f. *Scombroidinæ* J. and G., 1862.  
 g. *Paropsinæ* Gill, 1883.  
 152. NEMATISTIDÆ Gill, 1862.  
 153. SCOMBRIDÆ (Raf., 1815) Bon., 1831.  
 a. *Sardinæ* Gill, 1888 = *Oreyninæ* (Gill, 1861).  
 b. *Scombrinæ* (Bon., 1831) Gill, 1861.  
 c. *Gempylinæ* Gill, 1862.  
 d. *Thyrstinæ* Gill, 1862.  
 154. LEPIDOPIDÆ Gill, 1885.  
 a. *Aphanopinæ* Gill, 1892.  
 b. *Lepidopinæ* Gill, 1863.  
 155. TRICHIURIDÆ (Raf., 1810) Gill, 1885.  
 156. HISTIOPHORIDÆ (Raf., 1810) Gill, 1883.  
 157. XIPHIDÆ (Raf. 1810) Gill, 1883.  
 158. CORYPHENIDÆ (Lowe, 1839).  
 159. BRAMIDÆ (Lowe, 1836).

\*The *Scombroidea* as still retained do not constitute a natural group and will undoubtedly be hereafter dispersed and otherwise associated, but the task can only be done with good anatomical material, and as naturalists are accustomed to find the families in more or less close juxtaposition convenience dictates the continuance of such collocation for the present. It is certain, however, that their dispersion on account of differences in the relative proportions of the first and second dorsal fins or the development of an ensiform weapon outrages all natural affinities.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder ACANTHOPTERYGII—Continued.

## (Scombroidea)—Continued.

160. PTERACLADIDÆ, Gill, 1872.  
 161. STROMATEIDÆ (Raf., 1810) Gill, 1862.  
 a. *Centrolophina* Gill, 1861, 1884.  
 b. *Stromateina* (Raf., 2815), Gill, 1861, 1884.  
 c. *Icosteina* J. and G., 1882.  
 d. *Ichthyina*, J. and G., 1882.  
 162. ACROTIDÆ Gill, 1892.  
 163. GRAMMICOLEPIDIDÆ (Poey, 1873).  
 164. NOMEIDÆ Gthr., 1861.  
 a. *Nomeina* (Gthr., 1860).  
 b. *Gasteroschismina*, Gill, 1892.  
 165. PEMPHERIDIDÆ Gill, 1862.  
 166. LUVARIDÆ Gill, 1885.  
 167. LAMPRIDIDÆ Gill, 1862.  
 168. MENIDÆ Gill, 1885.  
 169. LOGNATHIDÆ Gill, 1892 = EQUULIDÆ (Bleeker, 1859) Gill, 1872.  
 170. ZEIDÆ (Swains., 1839).  
 a. *Zeina* (Bon., 1831) = *Cyttina*, Gthr., 1860.  
 171. CAPROIDÆ (Lowe, 1844).

## (Tetragonuroidea.)

172. TETRAGONURIDÆ (Risso., 1826), Bon., 1837.

## (Percoidea.)

173. CENTRARCHIDÆ Gill, 1864.  
 a. *Centrarchina* Gill, 1864.  
 b. *Lepomina* Gill, 1864.  
 c. *Micropterina* Gill, 1864.  
 174. ELASSOMIDÆ (J. and G., 1882).  
 175. PERCIDÆ (Cuv., 1817, Bon., 1831).  
 a. *Gymnocephalina* Gill, 1891 = *Acerinina* (Blkr.).  
 b. *Percina* (Bon., 1831).  
 c. *Etheostomina* (Agass., 1848) J. and G.  
 176. CHILODIPTERIDÆ (Blkr., 1859) Gill, 1872 = APOGONIDÆ.  
 a. *Enoplosina* Gill, 1891.  
 b. *Chilodipterina* Gill.  
 177. ACROPOMIDÆ Gill, 1891.  
 178. SCOMBROPIDÆ Gill, 1891.  
 179. SERRANIDÆ (Rich., 1848) Gill, 1872.  
 a. *Serranina* (Swains., 1839).  
 b. *Granimistina* Gill, 1892.  
 c. *Polyprionina* (Blkr., 1876).  
 d. *Myriodontina* (Blkr., 1876).  
 e. *Diploprionina* (Blkr., 1876).  
 f. *Dischistina* Gill, 1891.  
 g. *Latina* Gill, 1891 = *Labracina*.  
 180. LOBOTIDÆ Gill (1862), 1883.  
 181. RHYPTICIDÆ Gill, 1885.  
 182. KYPHOSIDÆ = PIMELEPTERIDÆ (Blkr., 1859) Gill, 1862.  
 a. *Kyphosina* = *Pimelepterina* Gill, 1862.  
 b. *Scorpidina* (Gthr., 1860) Gill, 1862.  
 c. *Girellina* Gill, 1862.  
 183. THERAPONIDÆ (Rich., 1856).

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder ACANTHOPTERYGII—Continued.

## (Percoidea)—Continued.

184. HÆMULONIDÆ (Rich., 1848) = PRISTIPOMIDÆ (Gthr., 1859).  
 a. *Hæmulonina* Gill, 1892 = *Pristipomina*, Gill, 1873.  
 b. *Xenichthyina* Gill, 1863.  
 185. LUTJANIDÆ Gill, 1884.  
 a. *Hoplopagrina* Gill, 1862.  
 b. *Lutianina* Gill, 1862, 1884.  
 c. *Etelina* Gill, 1888 = *Platyiniini* Poey, 1868.  
 d. *Denticina* (Blkr., 1876).  
 186. APHAREIDÆ (Blkr., 1876).  
 187. SPARIDÆ (Bon., 1831).  
 a. *Boridinina* (Blkr., 1876).  
 b. *Sparina* (Bon., 1831).  
 188. GERRIDÆ (Gill, 1861) Gthr., 1862.  
 189. MENIDÆ (Cuv., 1829) Bon. 1831.  
 a. *Menina* (Bon., 1831).  
 b. *Centracanthina* Gill, 1891.  
 190. SCLENIDÆ (Cuv., 1829) Lowe.  
 a. *Otolithina* Gill, 1862.  
 b. *Sciæninæ* (Bon., 1832) Gill., 1862.  
 c. *Equitina* Gill., 1862.  
 d. *Haplodimotina* (Gill., 1862) Gill., 1891.  
 e. *Liostomina* (Gill., 1862).  
 191. CENTROPOMIDÆ (Poey, 1865) Gill., 1883.

## (Related to Percoidea.)

192. POLYCENTRIDÆ Gthr., 1861.  
 193. NANDIDÆ (Blkr., 1859) Gthr., 1861.  
 194. HOPLÉGNATHIDÆ (Rich.)  
 195. SILLAGINIDÆ (Rich., 1846) Gill., 1861.  
 196. PENTACEROTIDÆ Gill, 1885.  
 a. *Anoplina* Gill, 1891.  
 b. *Pentacerotina* Gill, 1891.  
 c. *Histiopterina* Gill, 1891.  
 197. VELIFERIDÆ (Blkr., 1879) Gill, 1891.

## (Priacanthoidea.)

198. PRICANTHIDÆ Gill, 1872.

## (Mullioidea.)

199. MULLIDÆ (C. and V. 1828) Bon., 1831.

## (Polymixioidea.)

200. POLYMIXIIDÆ Gill (1862), 1872.

## (Toxotoidea.)

201. TOXOTIDÆ (Blkr., 1859) Gill, 1872.

## (Scatophagoidea.)

202. SCATOPHAGIDÆ Gill, 1883.

## (Chaetodontioidea.)

203. EPHIPPIDÆ Gill (1862), 1883.  
 204. CHÆTODONTIDÆ (Bon., 1831) Gill, 1872.  
 a. *Chaetodontina* (Raf., 1815, Bon., 1831).  
 b. *Holacanthina* Gill, 1892.  
 205. ZANCLIDÆ Gill, 1885.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder ACANTHOPTERYGII—Continued.

## (Tenthidoidea.)

206. TEUTHIDIDÆ (Lat., 1825) Gill, 1873=ACANTHURIDÆ (Blkr., 1859) Gill, 1872.  
 207. SIGANIDÆ (Rich., 1836) Gill, 1884=AMPHACANTHIDÆ (Blkr., 1859) Gill, 1872.

## (Anabantoidea.)

208. OSPHROMENIDÆ Cope, 1871.  
 a. *Ospromeninae*.  
 b. *Polyacanthinae*.  
 c. *Bettinae*.  
 209. ANABANTIDÆ (Rich., 1836) Bon., 1837.  
 210. HELOSTOMIDÆ Gill, 1872.  
 211. LUCIOCEPHALIDÆ Gthr., 1861.

## (Ophiocephaloidea.)

212. OPHIOCEPHALIDÆ (Bon., 1831) Blkr., 1859.

## (Pomacentroidea.)

213. POMACENTRIDÆ Girard, 1858.  
 214. CICHLIDÆ (Blkr., 1859) Gill, 1872=CHROMIDÆ (Müller, 1839) Bon., 1846.

## (Labroidea.)

215. HOLCONOTIDÆ (Blkr., 1859) Gill, 1891=EMBIOTOCIDÆ (Agass., 1853) Girard, 1858.  
 a. *Holconotinae* Gill, 1892 = *Embiotocinae* Gill, 1862.  
 b. *Hysteroecarpinae* Gill, 1862.  
 216. LABRIDÆ (Cuv. 1817, Bon., 1831) Gill.  
 a. *Labrinae* (Bon., 1831) Gthr.  
 b. *Chilioninae* Gill, 1892.  
 c. *Chæropinae* (Gthr., 1861) Gill, 1863.  
 d. *Xyrichthyinae* Gill, 1862.  
 e. *Coridinae* Gill, 1892 = *Julidinae* (Gthr., 1861).  
 f. *Gomphosinae* Gill, 1862.  
 g. *Anampsinæ* Gill, 1892.  
 h. *Chilinae* Gill, 1892.  
 i. *Pseudolabrinae* Gill, 1892.  
 j. *Clepticinae* Gill, 1862.  
 k. *Pseudodacinae* (Gthr., 1861).  
 217. ODACIDÆ Gill, 1885.  
 218. SIPHONOGNATHIDÆ (Gill, 1862).  
 219. SCARIDÆ (Raf., 1810).  
 a. *Scarinae* (Bon.).  
 b. *Sparisominae* Gill, 1892.

## (Cirritoidea.)

220. CIRRITIDÆ (Gray, 1846) Gill, 1862.  
 221. APLODACTYLIDÆ Gill, 1892.  
 a. *Latridinae* Gill, 1862.  
 b. *Aplodactylinae* (Gthr., 1860) Gill, 1862.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder ACANTHOPTERYGII—Continued.

## (Scorpaenoidea.)

222. CARACANTHIDÆ Gill (1885) 1889.  
 223. HEXAGRAMMIDÆ Gill, 1889 = CHIRIDÆ (Swains., 1839).  
 a. *Oxylebiinae* Gill, 1862.  
 b. *Hexgramminæ* Gill, 1862.  
 c. *Ophiodontinae* Gill, 1863.  
 224. ANOPILOPOMIDÆ Gill, 1863.  
 a. *Erilepidinae* Gill, 1892.  
 b. *Anoplopominae* (J. and G., 1882).  
 225. SCORPÆNIDÆ (Risso, 1826; Swains., 1839) Gill, 1889.  
 a. *Scorpaninae* (Bon., 1831) Gill.  
 b. *Sebastinae* (Kaup, 1873) Gill.  
 c. *Apistinae* (Kaup, 1873) Gill.  
 226. SYNANCEIDÆ (Adams, 1854) Gill.  
 a. *Synanceiinae* (Kaup, 1873).  
 b. *Pelorinae* Gill, 1891.

## (Platycephaloidea.)

227. PLATYCEPHALIDÆ (Blkr., 1859).  
 228. BEMBRASIDÆ Kaup, 1873.  
 229. HOPLICHTHYIDÆ Gill, 1889.

## (Cottoidea.)

230. COTTIDÆ (Rich., 1836) Girard, 1858.  
 a. *Cottinae* (Bon., 1831) J. and G., 1882.  
 b. *Blepsiinae* (Swains., 1839).  
 c. *Ascellichthyinae* J. and G., 1882.  
 d. *Synchirinae* Bean, 1891.  
 e. *Psychrolutinae* (J. and G., 1882) Gill, 1888.  
 231. HEMITRIPTERIDÆ Gill, 1872.

## (Cyclopteroidea.)

232. CYCLOPTERIDÆ (Bon., 1831) Gill, 1872.  
 233. LIPARIDIDÆ Gill, 1872.  
 a. *Liparidinae* Gill (1861), 1864.  
 b. *Paraliparidinae* Gill, 1891 = *Amitrinae* J. and G. 1882.

## (Rhamphocottoidea.)

234. RHAMPHOCOTTIDÆ Gill, 1889.

## (Agonoidea.)

235. AGONIDÆ Swains., 1839.  
 a. *Agoninae* Gill.  
 b. *Aspidophoroidinae* J. and G.

## (Comephoroidea.)

236. COMEPHORIDÆ Gthr., 1861.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder ACANTHOPTERYGII—Continued.

## (Percophoidea.)\*

237. PSEUDOCROMIDÆ (Müll. and Trosch., 1849) Bleeker, 1859.  
 a. *Cichlopina* (Bleeker, 1875).  
 b. *Plesiopina* (Bleeker, 1875).  
 c. *Pseudoplesiopina* (Bleeker, 1875).
238. MALACANTHIDÆ Günther, 1861.  
 a. *Malacanthina* Gill, 1892.  
 b. *Caulolatilina* Gill, 1892.  
 c. *Latilina* Gill (1861), 1872.
239. BATHYMASTERIDÆ Jordan, 1885.
240. PERCOPHIDÆ Adams, 1854.  
 a. *Percophina* Gill, 1892.  
 b. *Paraperoidina* Gill, 1892.
241. NOTOTHENIDÆ Gill, 1861.  
 a. *Nototheniina* Gill, 1861.  
 b. *Eleginopina* Gill, 1892=*Eleginina*, Gill, 1861.
242. HARPAGIFERIDÆ Gill, 1861.
243. CHENICHTHYIDÆ Gill (1861), 1872.  
 a. *Chenichthyina* Gill, 1861.  
 b. *Pagetodina* Gill, 1861.
244. CHIASMODONTIDÆ Gill, 1882.
245. OPISTHOGNATHIDÆ Gill, 1872.
246. BOVICHTHYIDÆ Gill (1861), 1872.
247. TRICHODONTIDÆ Gill (1861), 1872.
248. HEMEROCÆTIDÆ Gill, 1892.

## (Trachinoidea.)

249. TRACHINIDÆ (Risso, 1826; Bon., 1837), Gill.

## (Uranoscopioidea.)

250. URANOSCOPIDÆ Gill, 1861.  
 251. LEPTOSCOPIDÆ Gill (1862), 1872.  
 252. DACTYLOSCOPIDÆ Gill, 1872.

## (Batrachoidea.)

253. BATRACHIDÆ Swains., 1839.

## (Gobioidea.)

254. OXUDERCIDÆ Gthr., 1861.
255. GOBIDÆ (Cuv., 1817; Bon., 1831).  
 a. *Eleotridina* Gill, 1861.  
 b. *Gobiina* (Bon., 1831), Gill, 1862.  
 c. *Gobiopina* Gill, 1859.  
 d. *Oxymetoponina* Gill, 1894.  
 e. *Sicydiina* Gill, 1860.  
 f. *Periophthalmina* Gill, 1892.  
 g. *Amblyopina* (Gthr. 1861).  
 h. *Trypanchenina* (Gthr. 1861).  
 i. *Luciogobiina* Gill, 1860.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder ACANTHOPTERYGII—Continued.

## (Callionymoidea.)

256. PLATYPTERIDÆ Gill, 1872.  
 257. CALLIONYMIDÆ Bon., 1837.

## (Cepoloidea.)

258. CEPOLIDÆ Bon., 1831.

## (Gadopsoida.)

259. GADOPSIDÆ Gunther, 1862.

## (Blennioidea.)

260. CLINIDÆ Gill, 1885.
261. BLENNIDÆ (Raf., 1810; Bon., 1831), Gill, 1872.
262. XIPHASIDÆ Gill, 1885 = NEMOPHIDÆ Kaup., 1858.  
 a. *Xiphasiina* Gill, 1864.  
 b. *Plagiotremina* Gill (1865), 1892.
263. CRYPTACANTHODIDÆ Gill (1861), 1872.
264. STICHEIDÆ Gill (1864), 1872.
265. PHOLIDIDÆ Gill, 1892 = XIPHIDIONTIDÆ Gill (1864), 1872.
266. ACANTHOCLINIDÆ Gthr., 1861.
267. CHENOPSIDÆ Gill, 1865.
268. ANARRHICADIDÆ Gill, 1865.
269. CEBIDICHTHYIDÆ Gill (1864), 1872.
270. PTILICHTHYIDÆ Gill, 1885.

## (Patæcoidea.)

271. PATÆCIDÆ Gill, 1872.
272. CONGIOPODIDÆ Gill, 1889 = AGRIPODIDÆ Kaup., 1873.
273. GNATHANACANTHIDÆ Gill, 1892.

## (Zoarcoidea.)

274. ZOARCIDÆ (Swainson, 1839) Jordan and Gilbert, 1882 = LYCODIDÆ (Gunther, 1862) Gill, 1872.  
 a. *Zoarcina* Jordan and Gilbert, 1882.  
 b. *Lycodina* Gill, 1863.  
 c. *Gyunculina* Gill, 1863.

## (Ammodytoidea.)

275. AMMODYTIDÆ Bon., 1846.

## (Ophidioidea.)

276. BROTULIDÆ (Adams, 1854) Gill, 1884.  
 a. *Brotulina* (Swainson, 1839) Gill, 1863.  
 b. *Brosomphycina* Gill, 1863.  
 c. *Bythitina* Gill, 1863.  
 d. *Sirembina* Gill, 1863.
277. BROTULOPHIDÆ Gill (1872).
278. OPHIDIIDÆ (Raf., 1810) Gill, 1872.

\* The Percophoidæ are undoubtedly a heterogeneous group and need a thorough revision. It is not probable that the *Latilina* are related to the *Malacanthidæ*, although the species of *Caulolatilus* are referred to the genus *Latilus* by Dr. Günther and his followers. *Bathymaster* is also apparently more nearly related to the *Blennioidea* than the *Percophoidea*.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder ACANTHOPTERYGII—Continued.

## (Ophidioidea)—Continued.

279. FIERASFERIDÆ Gill, 1864, 1884.  
 280. ATELEOPIDÆ (Kaup., 1858) Gthr., 1862.  
 281. CERDALIDÆ Jordan, 1885.  
 282. XENOCEPHALIDÆ Gill, 1872, 1884.  
 283. CONGROGADIDÆ Gill, 1872, 1884.

## (Lophotoidea.)

284. LOPHOTIDÆ (Blkr., 1859) Gthr., 1861.

## Suborder HYPOSTOMIDES.

285. PEGASIDÆ Kaup, 1853.

## Suborder RHEGNOPTERI.

286. POLYNEMIDÆ (Cuv., 1828) Rich., 1846.

## Suborder CRANIOMI.

## (Trigloidea.)

287. TRIGLIDÆ (Risso., 1826; Bon., 1831) Gill, 1889.  
 288. PERISTEDIONTIDÆ Gill (1889) 1892.

## (Dactylopteroidea.)

289. DACTYLOPTERIDÆ Gill, 1885.

## Suborder DISCOCEPHALI (Bleeker, 1859) Gill, 1883.

290. ECHENEIDIDÆ (Raf., 1810) Bon., 1832.

## Suborder TÆNIOSOMI.

291. TRACHYPTERIDÆ (Swains., 1839) Gill, 1889.  
 292. REGALECIDÆ Gill (1885) 1889.

## Suborder XENOPTERYGH.

293. GOBIESOCIDÆ (Blkr., 1859) Gthr., 1861.

## Suborder ANACANTHINI (Müller, 1846) Cope, 1870.

294. GADIDÆ (Raf., 1810) Gill, 1872, 1884.  
 a. *Gadina* (Bon., 1832) Gill, 1863.  
 b. *Phycina* (Swains., 1839) Gill, 1863.  
 c. *Lotina* (Bon., 1839) Gill, 1863.  
 d. *Onina* Gill, 1888 = *Ciliatina* Gill, 1863.  
 295. BROSMIDÆ (Adams, 1854) Gill, 1892.  
 296. MERLUCIIDÆ (Adams, 1864) Gill, 1872.  
 297. RANICIPITIDÆ Gill, 1872, 1884.  
 298. BREGMACEROTIDÆ Gill, 1872, 1884.  
 299. MACRURIDÆ Bon., 1838.  
 300. BATHYONIDÆ Gthr., 1886.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order TELEOCEPHALI—Continued.

## Suborder HETEROSOMATA.

301. PLEURONECTIDÆ (Raf., 1810) Bon. (1832), 1846.  
 a. *Hippoglossina* Gill, 1864.  
 b. *Psettinæ* (Bon., 1846) Gill, 1889 = *Rhombinæ* (Gill, 1864).  
 c. *Samarina* Jordan and Goss, 1889.  
 d. *Oncopterinæ* Jordan and Goss, 1889.  
 e. *Pleuronectinæ* (Bon., 1833) Gill, 1864 = *Platesinæ* (Bon., 1846) Jordan and Goss, 1889.  
 302. SOLEIDÆ Bon., 1846.  
 a. *Soleinæ* (Bon., 1833, 1846).  
 b. *Cynoglossinæ* Jordan and Goss, 1889 = *Plagusinæ* (Bon., 1846).

## Order HEMIBRANCHII Cope, 1870.

## (Gasterosteoidea.)

303. GASTEROSTEIDÆ Bon., 1840.  
 a. *Apellinæ* Gill, 1884.  
 b. *Gasterosteina* (Bon., 1832) Gill, 1884.  
 c. *Spinachina* Gill, 1862.  
 304. AULORHYNCHIDÆ Gill (1862), 1872.

## (Aulostomoidea.)

305. AULOSTOMIDÆ (Latreille, 1825) Gill, 1872.  
 306. FISTULARIIDÆ (Bon., 1832) Gill, 1872.

## (Macrorhamphosoidea.)

307. MACRORHAMPHOSIDÆ (Blkr., 1879) Gill, 1884 = CENTRISCIDÆ (Raf., 1826) Gill, 1872.

## (Amphisiloidea.)

308. AMPHISILIDÆ (Bleeker, 1859) Cope, 1872.

## Order LOPHOBRANCHII.

## Suborder SOLENOSTOMI.

309. SOLENOSTOMIDÆ Kaup.

## Suborder SYNGNATHI.

310. SYNGNATHIDÆ (Raf., 1810) Nardo, 1845.  
 a. *Syngnathina*.  
 b. *Siphostomina*.  
 c. *Nerophina*.  
 311. HIPPOCAMPIDÆ (Nardo, 1844) Cope, 1872.  
 a. *Solegnathina*.  
 b. *Hippocampina*.

## Order PLECTOGNATHI (Cuv. 1817).

## Suborder SCLERODERMI (Cuv., 1815) Gill, 1872.

312. TRIACANTHIDÆ (Bleeker, 1859) Cope, 1870.  
 a. *Triacanthodina* Gill, 1862.  
 b. *Triacanthina* (Hollard, 1860) Gill, 1884.  
 313. BALISTIDÆ (Raf., 1810) Cope, 1870.  
 a. *Balistinæ* (Raf., 1815) Gill, 1861.  
 b. *Monacanthina* (Nardo, 1844) Gill, 1861, 1864.  
 c. *Psilocephalina* (Bleeker, 1866) Gill, 1884.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order PLECTOGNATHI—Continued.

## Suborder OSTRACODERMI Gill, 1872.

314. OSTRACIONTIDÆ (Raf., 1810) Nardo, 1844.

## Suborder GYMNODONTES (Cuv., 1817) Hollard, 1857.

## (Triodontoidea.)

315. TRIODONTIDÆ (Bleeker, 1865) Gill, 1872.

## (Tetraodontoidea.)

316. TETRAODONTIDÆ (Bon., 1832) Gill, 1884.

a. *Tetraodontinæ* (Bon., 1838) Gill, 1884.b. *Colomesinæ* Gill, 1884.

317. CANTHIGASTERIDÆ Gill, 1892 = PSILONOTIDÆ Gill, 1884.

318. CHONORHINIDÆ Gill, 1884.

## (Diodontoidea.)

319. DIODONTIDÆ (Bibron, 1855) Cope, 1872.

## (Moloidea.)

320. MOLIDÆ (Ranzani, 1837) Claus, 1882 = ORTHAGORISCIDÆ Bon., 1838.

## Class TELEOSTOMES, ETC.—Continued.

## Subclass TELEOSTEI—Continued.

## Order PLECTOGNATHI—Continued.

## Order PEDICULATI (Gill, 1865).

## (Lophioidea.)

321. LOPHIIDÆ (Raf., 1810; Bon., 1832) Swainson, 1839.

## (Antennarioidea.)

322. ANTENNARIIDÆ Gill (1863) 1878.

a. *Antennariinæ* Gill, 1861, 1863.b. *Brachionichthyinæ* Gill, 1863.c. *Chaunacinæ* Gill, 1863.

323. CERATIIDÆ Gill, 1863.

a. *Ceratiinæ* Gill, 1861, 1878.b. *Oncirodinæ* Gill, 1878.c. *Himantolophinæ* Gill, 1861, 1878.d. *Egwonichthyinæ* Gill, 1878.e. *Melanocctinæ* Gill, 1878.

## (Maltheoidea.)

324. ONCHOCEPHALIDÆ Gill, 1892 = MALTHEIDÆ (Bleeker, 1859) Gill, 1863

a. *Onchocephalinæ* Gill, 1892 = *Maltheinæ* Gill, 1861, 1863.b. *Halicutaina* Gill, 1863.



