

# ZOOLOGICAL NAMES

A List of  
Phyla, Classes, and Orders



*Prepared for*

Section F

American Association for the Advancement  
of Science

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Durham, North Carolina  
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## PREFACE

American zoological writers who have published books or scientific papers during the past decade show little uniformity in their reference to larger groups of animals. Of course no zoologist wishes to be limited in the choice of names which seem to be most appropriate; no one wishes to have imposed on him terms which he is ordered to use; and none desires to have nomenclature become fixed and inflexible. Of all the rewards that Science gives to her retainers those most prized and enjoyed are independence and the right to change old dogmas as soon as the discovery of new truths makes them illogical. Yet because the species of animals now number several hundreds of thousands, the sorting of species into groups must necessarily be continually more accurate and critical. Furthermore, there are men who through ignorance, inertia, or bigotry take little or no cognizance of the progress of current scientific evidence and opinion. For example, certain writers of recent textbooks use such old terms as *Annulata* and *Anura* when the most thoughtful and competent students of annelids and amphibians agree that *Annelida* and *Salientia* are to be preferred. Dr. R. E. Snodgrass, who has recently studied the anatomy of onychophorans in detail, is convinced that these animals cannot be called arthropods because their muscular systems have quite different relations to nervous structures from those which obtain in arthropods. Dr. J. P. Moore does not believe that onychophorans may be included among annelids. There seems to be no alternative but to set off *Onychophora* as a group by itself.

Those who know animals and their classifications in detail perhaps may enjoy using various names for the same group and delight in thus displaying their technical knowledge, but a novice who refers to two or three textbooks and finds the same group called by two or three names is greatly confused. In an attempt to bring about greater uniformity and more careful selection in the use of zoological group names the writer was authorized to form an informal committee and to prepare a list of phyla, classes, and orders of animals which would represent current good usage. This action was taken by Section F of the American Association for the Advancement of Science at the Boston Meeting; December, 1933.

Since then many persons who appeared to be interested have been consulted. The following gave advice in connection with the groups mentioned:

Invertebrata: A. H. Clark, B. G. Chitwood, Roy Miner, L. E. Noland, H. S. Pratt, Waldo Schmitt, H. J. Van Cleave.

Protozoa: L. E. Noland, and forty-odd protozoologists to whom he sent a questionnaire.

Porifera: H. V. Wilson.

Coelenterata: Elizabeth Deichmann (except *Zoantharia*).

Aschelminthes: B. G. Chitwood, M. C. Hall.

Platyhelminthes: E. W. Price; Cestoda: G. R. La Rue; Nemertea: W. R. Coe.

Nemathelminthes: B. G. Chitwood, G. Steiner, Acanthocephala: H. J. Van Cleave.

Bryozoa: R. S. Bassler, R. C. Osburn.

Echinodermata: A. H. Clark, H. L. Clark, E. Kirk.

Brachiopoda: G. A. Cooper.

Enteropneusta: W. E. Ritter.

Annelida: J. P. Moore, A. L. Treadwell.

Arthropoda: H. E. Ewing, R. E. Snodgrass.

Crustacea: E. A. Birge, Norma C. Furtos, H. A. Pilsbry, Mary J. Rathbun, Waldo Schmitt, J. P. Visscher, C. B. Wilson.

Pycnogonidia: *L. J. Cole*; Arachnida: *H. E. Ewing*.

Insecta: *C. L. Kennedy*, *Z. P. Metcalf*, *J. G. Needham*, *H. G. Barber*, *H. E. Ewing*.

Mollusca: *P. Bartsch*, *H. Rehder*.

Chordata: *C. W. Gilmore*, *W. K. Gregory*.

Tunicata: *W. E. Ritter*, *W. G. Van Name*.

Pisces: *W. K. Gregory*, *C. L. Hubbs*, *G. S. Myers*.

Amphibia: *Helen T. Gaige*, *G. K. Noble*.

Reptilia: *Helen T. Gaige*, *G. K. Noble*.

Aves: *A. Wetmore*.

Mammalia: *L. R. Dice*, *C. W. Gilmore*, *Remington Kellogg*.

Those whose names appear in italics furnished essentially the terms that appear in the following pages. While the writer gladly acknowledges the obligation to those persons and appreciates greatly the work they did, they are not to be held responsible for the published list. The differences of opinion among zoologists in the United States were found to be so great that there was little hope of agreement and the editor finally did what seemed to him best.

Perhaps forty per cent of those consulted strongly urged the use of uniform endings for the larger groups of animals. The difficulty encountered in this connection was that protozoologists, helminthologists, conchologists, ornithologists, etc. had already moved more or less in the direction of uniformity and each group of specialists had a tendency to adopt a different system. After long consideration the editor has used the system in vogue among protozoologists and students of some other groups, as it seemed to be at present more generally in use than any other. The endings are as follows: Phylum and Subphylum, *-a*; Class, *-ea*; Subclass, *-ia*; Order, *-ida*; Suborder, *-ina*. In presenting this report to Section F it is not supposed that uniform endings shall be adopted as official, or even recommended. The zoological world had perhaps best be left to make its own choice. In the list the names in the first column represent what the editor after consultation believes to be best current usage; those in the second column are what a few zoologists would like to see used, but perhaps in presenting these the editor is "a hundred years ahead of his time." In any attempt to attain uniformity difficulties arise. For example, Dr. Steiner points out that two names suggested as suborders under Nematoda are objectionable because identical names already have good standing as genera in the same group (*Rhabditina* Cobb 1922, *Chromadorina* Filipjev 1926).

Another matter about which there is wide disagreement is whether there should be few or many groups—the old controversy between "lumpers" and "splitters." Shall there be ten or thirty phyla, or orders of insects? The position has been taken that it is more truthful, and therefore more scientific, to present many groups; otherwise it is necessary to compromise to the extent of grouping things together which have remote or insignificant relationships. To the objection that students cannot be expected to master such a long list of technical jargon there is only one answer. It is better to tell students part of the truth frankly than to falsely affirm that they are learning a complete and simple story. Biology is not always simple and clear. It therefore seems proper to say to a student in an elementary course, "of the thirty-odd phyla of animals, or orders of insects, only ten or a dozen which are of particular biological significance to you will be studied," rather than, "for convenience and simplicity all animals, or all insects, are presented under ten phyla, or orders, which may be easily remembered." Science is truth. Classification must be expected to grow more complex as knowledge increases and becomes more critical.

In most groups the authors' names and the dates following correctly indicate when a particular scientific name was given to a group, but these should be used with caution for in cases where no specialist could be found to furnish accurate information (birds, fishes, etc.), the editor browsed through systematic works and found such information,

some of which later proved to be incorrect. For example, some references credited to Lamarck by various writers are for vernacular names which should have no scientific standing as scientific names. The following groups have been carefully corrected by specialists and are believed to be reliable for authors and dates: Protozoa, Porifera, Coelenterata (except Zoantharia), Platyhelminthes, Nemertea, Acanthocephala, Nematoda, Bryozoa, Brachiopoda, Echinodermata, Annelida, Arachnida, Crustacea, Insecta, Tunicata, Amphibia, Reptilia, and Mammalia; other groups may not be.

Duke University, June 1, 1936.

A. S. PEARSE, Editor.

#### SECOND EDITION

As there is continual demand for this list, which has been out of print for several years, it seems desirable to publish a second edition. A few changes have been made and the following persons made suggestions for the revision. A. H. Clark suggested the term Hemizoa and other general changes. Grateful acknowledgment is made to G. W. Wharton who corrected the proofs for the list. An excellent discussion of various modern systems of classification will be found in Libbie H. Hyman's "The Invertebrates: Protozoa through Ctenophora," 1940:22-43.

Invertebrata: A. H. Clark, C. G. Bookhout; Protozoa: R. R. Kudo; Porifera: M. W. de Laubenfels; Nemertea: W. R. Coe; Acanthocephala: H. J. Van Cleave; Bryozoa: R. C. Osburn; Annelida: Grace E. Pickford; Arthropoda: R. E. Snodgrass; Pycnogonida: Joel W. Hedgpeth; Arachnida: Elizabeth B. Bryant; Acarina: G. W. Wharton; Myriapoda: Nelle B. Causey; Crustacea: Fenner A. Chace; Insecta: C. F. W. Muesebeck and colleagues; Tunicata: W. G. Van Name; Vertebrata: E. C. Horn, I. E. Gray.

Duke University, September 1, 1946.

A. S. PEARSE, Editor.

#### THIRD EDITION

The second edition of this list was so full of errors that it was never sent to the general biological public. In the revision for this third edition the list of groups that has "uniform" endings has been omitted. The following persons have furnished information for the groups indicated: Invertebrata, Libbie H. Hyman and M. W. de Laubenfels; Protozoa, R. R. Kudo; Porifera, M. W. de Laubenfels; Platyhelminthes, Libbie H. Hyman and H. W. Manter; Cestoda, Robt. P. Dollfus; Nemertea, Libbie H. Hyman and Arthur G. Humes; Brachiopoda, Preston E. Cloud, Jr.; Annelida, Olga Hartman and Grace E. Pickford; Crustacea, Fenner A. Chace, Jr.; Arachnida, Alexander Petrunkevitch; Acari, G. W. Wharton; Pycnogonida, Joel W. Hedgpeth; Myriapoda, Nelle B. Causey; Insecta, F. M. Carpenter and Charles L. Remington; Mollusca, H. A. Rehder; Tunicata, W. G. Van Name and A. G. Huntsman; Fishes, Carl H. Hubbs; Amphibia and Reptilia, Grace L. Orton; Aves, Ernst Mayr and Alexander Wetmore. For trematodes Dawes (1946) "the Trematoda" has been followed, for fishes, amphibians, and reptiles the classification in Romer's (1945) "Vertebrate Paleontology" has been used, and for mammals that in Simpson's (1945) "The Principles of Classification and a Classifications of Mammals" has been followed.

July 1, 1948.

A. S. P.

#### FOURTH EDITION

In preparation of this edition helpful suggestions have been received from Austin H. Clark, Herbert Friedmann, J. B. S. Haldane, Harald A. Rehder, Curtis W. Sabrosky, and Alexander Wetmore.

October 30, 1949.

A. S. P.

# A List of Phyla, Classes, and Orders

Extinct groups are indicated by an asterisk (\*)

- Kingdom Animalia Linnaeus 1758
- Subkingdom Protozoa Goldfus 1817
- Phylum Protozoa Goldfus 1817
- Subphylum Plasmodroma Doflein 1901
  - Class Mastigophora Diesing 1865
  - Subclass Phytomastigina Doflein 1916
    - Order Chysomonadina Stein 1878
      - Suborder Euchrysomonadina Pascher 1913
      - Suborder Rhizochrysidina Pascher 1913
      - Suborder Chrysocapsina Pascher 1913
    - Order Cryptomonadina Stein 1878
      - Suborder Eucryptomonadina Pascher 1913
      - Suborder Phoecapsina Pascher 1913
    - Order Phytomonadina Blochmann 1895
    - Order Euglenoidina Bütschli 1884
    - Order Chloromonadina Klebs 1892
    - Order Dinoflagellata Bütschli 1885
      - Suborder Porocentrinea Poche 1913
      - Suborder Peridiniinea Poche 1913
      - Suborder Cystoflagellata Haeckel 1873
  - Subclass Zoomastigina Doflein 1916
    - Order Rhizomastigina Bütschli 1883
    - Order Protomonadina Blochmann 1895
    - Order Polymastigina Blochmann 1895
      - Suborder Monomonadina Kudo 1939
      - Suborder Diplomonadina Kudo 1939
      - Suborder Polymonadina Kudo 1939
    - Order Hypermastigina Grassi 1911
  - Class Sarcodina Hertwig & Lesser 1874
  - Subclass Rhizopoda von Siebold 1845
    - Order Proteomyxa Lankester 1885
    - Order Mycetozoa de Bary 1859
      - Suborder Eumycetozoa Zopf 1884
      - Suborder Sorophora Zopf 1887
    - Order Amoebina Ehrenberg 1830
    - Order Testacea Schultze 1854
    - Order Foraminifera D'Orbigny 1826
  - Subclass Actinopoda Calkins 1909
    - Order Heliozoa Haeckel 1866
    - Order Radiolaria J. Müller 1858
  - Class Sporozoa Leuckart 1879
  - Subclass Telosporidia Schaudinn 1900
    - Order Gregarinida Lankester 1866
      - Suborder Eugregarinaria Doflein 1901
      - Suborder Schizogregarinaria Léger 1900
    - Order Coccidia Leuckart 1879
      - Suborder Eimeridea Léger 1911

- Suborder Adeleidea Léger 1911
- Order Haemosporidia Danilewsky 1886
- Subclass Acnidosporidia Cépède 1911
  - Order Sarcosporidia Balbiani 1882
  - Order Haplosporidia Caullery & Mesnil 1899
- Subclass Cnidosporidia Doflein 1901
  - Order Myxosporidia Bütschli 1881
    - Suborder Eurysporea Kudo 1920
    - Suborder Sphaerosporea Kudo 1920
    - Suborder Platysporea Kudo 1920
  - Order Actinomyxidida Stolç 1899
  - Order Microsporidia Balbiani 1883
    - Suborder Monocnidea Léger & Hesse 1922
    - Suborder Dcnidea Léger & Hesse 1922
  - Order Helicosporidia Kudo 1931
- Subphylum Ciliophora Doflein 1901
  - Class Ciliata Perty 1852
    - Subclass Protociliata Metcalf 1918
    - Subclass Euciliata Metcalf 1918
      - Order Holotricha Stein 1859
        - Suborder Astomata Schwiakoff 1896
        - Suborder Gymnostomata Bütschli 1889
        - Suborder Trichostomata Bütschli 1889
        - Suborder Hymenostomata Hickson 1903
        - Suborder Thigmatricha Chatton & Lwoff 1926
        - Suborder Apostomea Chatton & Lwoff 1935
      - Order Spirotricha Bütschli 1889
        - Suborder Heterotricha Stein 1859
        - Suborder Oligotricha Bütschli 1887
        - Suborder Ctenostomata Kahl 1932
        - Suborder Hypotricha Stein 1859
      - Order Chonotricha Wallengren 1895
      - Order Peritricha Stein 1859
        - Suborder Sessilia Kahl 1935
        - Suborder Mobilia Kahl 1935
    - Class Suctoria Claparède & Lachmann 1858
  - Subkingdom Mesozoa van Beneden 1877
  - Subkingdom Parazoa Sollas 1884
  - Phylum Porifera Grant 1835
    - Class Calcispongiae Schmidt 1862
      - Order Asconosa de Laubenfels 1936
      - Order Syconosa de Laubenfels 1936
    - Class Hyalospongiae Vosmaer 1885
      - Order Hexasterophora Schulze 1899
      - Order Amphidiscophora Schulze 1899
    - Class Desmospongiae Sollas 1875
      - Order Carnosa Carter 1875
      - Order Choristida Sollas 1888
      - Order Epipolasida Sollas 1888
      - Order Hadromerina Topsent 1898
      - Order Poecilosclerina Topsent 1898
      - Order Haplosclerina Topsent 1898



Order Keratosa Grant 1861  
 Phylum \*Archaeocyatha Bornemann 1884  
 Subkingdom Metazoa Haeckel 1877  
 Branch Enterozoa Lankester 1878  
 Superseries Radiata Schimkewitsch 1891  
 Phylum Coelenterata Leuckart 1848  
 Class Hydrozoa Huxley 1857  
 Order Hydroida Huxley 1857  
 Order Trachylina Haeckel 1877  
 Order Milleporina Hickson 1899  
 Order Stylasterina Hickson 1899  
 Order Siphonophora Eschscholtz 1829  
 Suborder Calycophorae Leuckart 1854  
 Suborder Rhizophysaliae Chun 1882  
 Suborder Chondrophorae Chamisso & Eysenhard 1821  
 Order \*Graptolitoidea Lapworth 1873  
 Suborder \*Monoprionidea Hopkinson 1875  
 Suborder \*Diprionidea Hopkinson 1875  
 Suborder \*Retiolithidea Lapworth 1873  
 Class Scyphozoa Grobben 1910  
 Order Lucernariidea Johnston 1847  
 Order Charybdeidea Gegenbaur 1856  
 Order Corona Vanhoffen 1892  
 Order Semaestomeae L. Agassiz 1862  
 Order Rhizostomeae Cuvier 1799  
 Class \*Stromatoporoidea Nicholson & Murie 1878  
 Class Anthozoa Ehrenberg 1834  
 Subclass Alcyonaria Milne-Edwards & Haime 1857  
 Order Stolonifera Hickson 1883  
 Order Telestacea Hickson 1930  
 Order Alcyonacea Verrill 1866  
 Order Gorgonacea Verrill 1866  
 Suborder Scleraxonia Wright & Struder 1889  
 Suborder Holaxonia Wright & Struder 1889  
 Order Coenothecalia Bourne 1900  
 Order Pennatulacea Verrill 1866  
 Subclass Zoantharia Blainville 1830  
 Order Cerianthidea M.-Edw. & Haime 1857  
 Order Antipitharia Dana 1846  
 Order Zoanthidea Dana 1846  
 Order Edwardsiidea R. Hertwig 1888  
 Order Proactiniae McMurrich 1892  
 Order Actinaria McMurrich 1829  
 Suborder Ptychodaetiaria Stephenson 1921  
 Suborder Coralliomorpha Carlgren 1936  
 Suborder Actiniaria Carlgren 1925  
 Order Madreporaria Linnaeus 1748  
 Suborder Aporosa M.-Edw. & Haime 1857  
 Suborder Fungacea M.-Edw. & Haime 1857  
 Suborder Perforata M.-Edw. & Haime 1857  
 Phylum Ctenophorae Eschscholtz 1829  
 Class Tentaculata Wagner 1834

- Order Cydippidea Lesson 1843
- Order Lobata Eschscholtz 1829
- Order Cestoidea Lesson 1843
- Order Platyctenea Bourne 1900
- Class Nuda Bourne 1900
  - Order Beroidea Eschscholtz 1829
- Subbranch Triploblastica Lankester 1900
- Superseries Bilateria Schimkewitsch 1891
- Series Enterocoela Lankester 1876
- Subseries Acoelomata Schimkewitsch 1891
- Phylum Platyhelminthes Gegenbaur 1859
  - Class Turbellaria Ehrenberg 1831
    - Order Acoela Ulfjanin 1870
    - Order Rhabdocoela Ehrenberg 1831
      - Suborder Temnocephalida Haswell 1888
    - Order Alloiocoela Graff 1882 (Allococoela Spengel 1884)
    - Order Tricladida (Lang 1881)
    - Order Polycladida (Lang 1881) Graff 1885
  - Class Trematoda Rudolphi 1808
    - Subclass Monogenea Carus 1863
      - Order Monopisthocotylea Odhner 1912
      - Order Polyopisthocotylea Odhner 1912
    - Subclass Aspidogastrea (Burmeister 1856) Monticelli 1892
    - Subclass Digenea Carus 1863
      - Order Gasterostoma Odhner 1905
      - Order Prosostomata Odhner 1905
  - Class Cestoidea Rudolphi 1808
    - Subclass Cestodaria Monticelli 1892
      - Order Amphilinidea Poche 1922
      - Order Gyrocotylidea Benham 1901
    - Subclass Cestoda van Beneden 1848
      - Order Pseudophyllidea Carus 1863
      - Order Cyclophyllidea Braun 1900
      - Order Tetraphyllidea Braun 1900
      - Order Trypanorhyncha Diesing 1863
      - Order Heterophyllidea Southwell 1925
- Phylum Nemertea Delle Chiaje 1841
  - Class Anopla Schultze 1852
    - Order Paleonemertea Hubrecht 1879
    - Order Heteronemertea Bürger 1892
  - Class Enopla Schultze 1852
    - Order Hoplonemertea Hubrecht 1879
      - Suborder Monostilifera Brinkmann 1917
      - Suborder Polystilifera Brinkmann 1917
    - Order Bellonemertea Coe 1905
- Phylum Acanthocephala Rudolphi 1808
  - Class Eoacanthocephala Van Cleave 1936
    - Order Gyracanthocephala Van Cleave 1936
    - Order Neoacanthocephala Van Cleave 1936
  - Class Metacanthocephala Van Cleave 1948
    - Order Palaacanthocephala Meyer 1931
    - Order Archiacanthocephala Meyer 1931

Subseries Pseudocoelomata Schimkewitsch 1891  
 Superphylum Aschelminthes Grobben 1909  
 Phylum Rotatoria Ehrenberg 1838  
   Class Seisonidea Wesenberg-Lund 1899  
   Class Bdelloidea Hudson & Gosse 1889  
   Class Monogononta Ehrenberg 1832  
     Order Ploima Hudson & Gosse 1889  
     Order Flosculariacea Haring 1913  
     Order Collothecacea Haring 1913  
 Phylum Gastrotricha Metchnikof 1864  
   Order Macrodasyoidea Remane 1926  
   Order Chaetonotoidea Remane 1926  
 Phylum Echinodera Zelinka 1928 (Kinorhyncha Reinhard 1887)  
 Phylum Nematomorpha Vejevsky 1866  
   Class Gordididea Orthepp 1924  
   Class Nectonematoidea Rauther 1930  
 Phylum Nematodea Rudolphi 1808  
   Class Phasmodia Chitwood & Chitwood 1933  
     Order Rhabditida Chitwood 1933  
       Suborder Rhabditata Chitwood 1933  
       Suborder Ascaridata Skrjabin 1915  
       Suborder Strongylata Railliet & Henry 1913  
     Order Spirurida Chitwood 1933  
       Suborder Spirurata Railliet & Henry 1913  
       Suborder Camallanta Chitwood 1936  
   Class Aphasmodia Chitwood & Chitwood 1933  
     Order Enoplata Chitwood 1933  
       Suborder Enoplata Filipjev 1929  
       Suborder Dorylaimata Chitwood 1933  
       Suborder Diotophymata Skrjabin 1923  
     Order Chromadorida Chitwood 1933  
       Suborder Monohysterata Filipjev 1929  
       Suborder Desmoscolecata Filipjev 1929  
       Suborder Chromadorata Filipjev 1929  
 Phylum Tardigrada Spallanzani 1776  
   Class Heterotardigrada Marcus 1927  
     Order Arthrotardigrada Marcus 1927  
     Order Echiniscoidea Richters 1926  
   Class Eutardigrada Richters 1926  
 Subseries Eucoelomata Schimkewitsch 1891  
 Phylum Chaetognatha Leuckart 1854  
 Phylum Entoprocta Nitsche 1870  
 Phylum Bryozoa Ehrenberg 1831  
   Class Gymnolaemata Allman 1856  
     Order Cyclostomata Busk 1852  
       Suborder Tubipora Hagenow 1851  
       Suborder Cerioporina Hagenow 1851  
       Suborder Ceramoporoidea Bassler 1913  
       Suborder Hedrelloidea Bassler 1934  
     Order Trepostomata Ulrich 1883  
     Order Cryptostomata Vine 1883  
     Order Ctenostoma Busk 1852

- Order Cyclostomata Busk 1852
  - Suborder Anasca Levinsen 1909
  - Suborder Ascophora Levinsen 1909
- Class Phylactolaemata Allman 1856
- Phylum Brachiopoda Cuvier 1802
  - Class Inarticulata Huxley 1869 (Gastrocaulia Thompson 1927)
    - Order Atremata Beecher 1891
    - Order Neotremata Beecher 1891
  - Class Articulata Huxley 1869
    - Order \*Paleotremata Thompson 1927
    - Order Protremata Beecher 1891
    - Order Telotremata Beecher 1891
- Phylum Phoronidea E. Shultz 1903 (Pygocaulia Thompson 1927)
- Phylum Pogonophora Johansson 1937
- Phylum Pterobranchia Lankester 1877
- Phylum Enteropneusta Gegenbaur 1870
  - Class Balanoglossida Delle Chiaje 1820
- Phylum Linguatula Frolich 1789
- Phylum Echinodermata Laske 1778
- Subphylum Pelmatozoa Leuckart 1848
  - Class \*Cystoidea von Buch 1844
    - Order \*Amphoridae Haeckel 1896
    - Order \*Rhombifera Zittel 1879
    - Order \*Diploporita Zittel 1879
    - Order \*Aporita Zittel 1879
    - Order \*Edrioasteroidea Billings 1858
  - Class \*Blastoidea Say 1925
    - Order \*Protoblastoidea Bather 1899
    - Order \*Eublastoidea Bather 1899
  - Class Crinoidea Miller 1921
    - Order \*Camerata Wachsmuth & Springer 1885
    - Order \*Adunata Bather 1899
    - Order Flexibilia Zittel 1879
      - Suborder \*Sagenocrinida Springer 1926
      - Suborder \*Taxocrinida Springer 1926
    - Order \*Inadunata Wachsmuth & Springer 1885
      - Suborder \*Larviformia Wachsmuth & Springer 1885
      - Suborder \*Fistulata Wachsmuth & Springer 1885
    - Order Articulata Miller 1821
      - Suborder Bourgueticrinida H. L. Clark 1939
      - Suborder Pentacrinida Claus 1868
      - Suborder Holopida Haeckel 1896
    - Order Comatulida (Parks 1891) A. H. Clark 1908
      - Suborder Oligophreata A. H. Clark 1908
      - Suborder Macrophreata A. H. Clark 1908
- Subphylum Asterozoa Leuckart 1848
  - Class Asteroidea Burmeister 1837
    - Order Phanerozoona Sladen 1889
    - Order Spinulosa Perrier 1894
    - Order Forcipulata Perrier 1894
      - Suborder Brisingina Fisher 1928
      - Suborder Astერიadina Fisher 1928

- Class Ophiuroidea Norman 1865
  - Subclass \*Aegophiurida Matsumoto 1915
    - Order \*Lysophiurida Matsumoto 1913
  - Subclass Myophiurida Matsumoto 1915
    - Order \*Ophiocystiida H. L. Clark 1939
    - Order \*Aganasterida H. L. Clark 1939
    - Order Phrynophiurida Matsumoto 1915
    - Order Laemophiurida Matsumoto 1915
    - Order Gnathophiurida Matsumoto 1915
    - Order Chilophiurida Matsumoto 1915
- Subphylum Echinozoa Leuckart 1848
  - Class Echinoidea Bronn 1860
    - Order \*Bothriocidaroida Duncan 1889
    - Order Cidaroida Duncan 1889
    - Order Centrechinoida Jackson 1912
      - Suborder Aulodonta Jackson 1912
      - Suborder Stirodonta Jackson 1912
      - Suborder Camerodonta Jackson 1912
    - Order Exocycloida Jackson 1912
      - Suborder Holoctypina Gregory 1900
      - Suborder Echinoneima Hawkins 1925
      - Suborder Clypeastrina Gregory 1900
      - Suborder Nucleolitina Hawkins 1925
      - Suborder Cassidulina Hawkins 1925
      - Suborder Urechinina H. L. Clark 1925
      - Suborder Spatangina Jackson 1912
    - Order Perischoechinoida Jackson 1912
    - Order Echinocystoida Jackson 1912
    - Order Perichoechinoida Jackson 1912
  - Class Holothurioidea Semper 1868
    - Order Dendrochirota MacBride 1909
    - Order Elasipoda Theele 1882
    - Order Aspidochirota MacBride 1909
    - Order Molpadonia Ekman 1925
    - Order Apoda Lampert 1885
- Phylum Priapulioidea Sedgwick 1898
- Phylum Annelida Lamarck 1809
  - Class Archannelida Hatschek 1893
  - Class Polychaeta Grube 1850
    - Order Errantia Audouin & Milne-Edwards 1832
    - Order Sedentaria Lamarck 1818
    - Order Aplacophora von Ihreing (see page 17) 1878
    - Order \*Miskoa Walcott 1911
  - Class Myzostoma Graff 1884
  - Class Oligochaeta Grube 1850
    - Order Plesiopora plesiotheca Michaelsen 1930
    - Order Plesiopora prosotheca Michaelsen 1930
    - Order Prosopora Michaelsen 1930
    - Order Opisthopora Michaelsen 1930
  - Class Hirudinea Lamarck 1818
    - Order Rhynchobdellida Blanchard 1887
    - Order Gnathobdellida Vaillant 1890

Order Pharyngobdellida Johansson 1913  
 Phylum Poebioidea Fisher 1946  
 Phylum Echiuroidea Sedgwick 1898  
   Class Echiurida Savigny 1817  
     Order Echiuroinea Bock 1942  
     Order Xenopneusta Fisher 1946  
     Order Heteromyota Fisher 1946  
   Class Saccosomatida Fisher 1946  
 Phylum Sipunculoidea Sedgwick 1898  
 Phylum Onychophora Grube 1851  
 Phylum Arthropoda Siebold & Stannius 1845  
 Subphylum \*Trilobita Schlotheim 1820  
   Class \*Hypoparia Beecher 1897  
   Class \*Opisthoparia Beecher 1897  
   Class \*Proparia Beecher 1897  
 Subphylum Chelicerata Dahl 1913  
   Class Merostomata Woodward 1878  
     Order \*Eurypterida Woodward 1878  
     Order \*Synxiphosura Packard 1885  
     Order Xiphosura Latreille 1806  
   Class Pycnogonida Latreille 1804  
     Order Colossendeomorpha Cole 1905  
     Order Nymphonomorpha Pocock 1904  
     Order Ascorhynchomorpha Pocock 1904  
     Order Pycnogonomorpha Pocock 1904  
   Class Arachnida Lamarck 1815  
   Subclass Latigastra Petrunkevitch 1946  
     Order Scorpiones Latreille 1810  
     Order Pseudoscorpiones Latreille 1810  
     Order Opiliones Sundevall 1833  
     Order \*Architarbi Petrunkevitch 1946  
     Order Acari Leach 1817  
       Suborder Notostigmata With 1903  
       Suborder Holothyroidea Reuter 1909  
       Suborder Parasitiformes Reuter 1909  
       Suborder Trombidiformes Reuter 1909  
       Suborder Sarcoptiformes Reuter 1909  
       Suborder Tetrpodili Bremi 1872  
   Subclass Stethostomata Petrunkevitch 1948  
     Order \*Haptopoda Pocock 1911  
     Order \*Anthracomarti Karsh 1882  
   Subclass Soluta Petrunkevitch 1948  
     Order Trigonotarbi Petrunkevitch 1948  
   Subclass Caulogastra Pocock 1910  
     Superorder Latisterna Petrunkevitch 1948  
     Order Palpigradi Thorell 1888  
     Superorder Camarostomata Petrunkevitch 1948  
     Order Schizomida Petrunkevitch 1913  
     Order Telyphonida  
     Order Kustarachnae Petrunkevitch 1913  
     Superorder Labellata Petrunkevitch 1948  
     Order Phrynichida Petrunkevitch 1946

- Order Araneae Lamarck 1818
- Superorder Cucullifera Pocock 1910
- Order Ricinulei Latreille 1802
- Superorder Rostrata Petrunkevitch 1948
- Order Solifugae Sundevall 1833
- Subphylum Mandibulata McLeay 1821
- Superclass Crustacea Pennant 1777
- Class Eucrustacea Kingsley 1894
- Subclass Branchiopoda Lamarck 1801
  - Order Anostraca Sars 1867
  - Order Notostraca Sars 1867
  - Order Conchostraca Sars 1867
  - Order Cladocera Latreille 1829
    - Suborder Calyptomera Sars 1865
    - Suborder Gymnomera Sars 1865
- Subclass Ostracoda Latreille 1802
  - Order Myodocopa Sars 1866
  - Order Cladocopa Sars 1866
  - Order Podocopa Sars 1866
  - Order Platycopa Sars 1866
- Subclass Copepoda Latreille 1831
  - Order Eucopepoda Claus 1875
    - Suborder Calanoida Dana 1852
    - Suborder Harpacticoida Sars 1901
    - Suborder Cyclopoida Burmeister 1834
    - Suborder Notodelphyoida Sars 1903
    - Suborder Monstrilloida Sars 1903
    - Suborder Caligoida Claus 1885
    - Suborder Lernaepodoida Stebbing 1910
  - Order Branchiura Burmeister 1834
    - Suborder Arguloida Wilson 1932
- Subclass Cirripedia Burmeister 1834
  - Order Thoracica Darwin 1854
    - Suborder Turrilepadomorpha Clarke 1896
    - Suborder Lepadomorpha Darwin 1852
    - Suborder Verrucomorpha Darwin 1854
    - Suborder Balanomorpha Darwin 1854
  - Order Ascothoracica Lacaze-Duthiers 1883
  - Order Apoda Darwin 1854
  - Order Rhizocephala F. Müller 1862
- Subclass Malacostraca Latreille 1802
- Infraclass Leptostraca Claus 1880
  - Division Phyllocarida Packard 1879
    - Order Nebaliacea Clarke 1882
    - Order \*Rhinocarina Clarke 1882
    - Order \*Ceratiocarina Clarke 1882
    - Order \*Hymenocarina Clarke 1882
  - Division \*Nahecarida Broili 1928
- Infraclass Eumalacostraca Grobben 1892
  - Division Syncarida Packard 1886
    - Order Anaspidacea Thomson 1892
  - Division Peracarida Calman 1904

Order Mysidacea Boas 1883  
 Order Thermosbaenacea Monod 1927  
 Order Cumacea Krøyer 1846  
 Order Tanaidacea Hansen 1895  
 Order Isopoda Latreille 1817  
   Suborder Flabellifera Sars 1882  
   Suborder Valvifera Sars 1882  
   Suborder Asellota Latreille 1806  
   Suborder Phreatoicoidea Stebbing 1903  
   Suborder Epicaridea Latreille 1831  
   Suborder Oniscoidea Sars 1882  
 Order Amphipoda Latreille 1816  
   Suborder Gammaridea Dana 1852  
   Suborder Hyperiidea Dana 1852  
   Suborder Caprellidea Dana 1852  
   Suborder Ingolfiellidea Hansen 1903  
 Division Eucarida Calman 1904  
 Order Euphausiacea Boas 1883  
 Order Decapoda Latreille 1802  
   Suborder Natantia Boas 1879  
   Suborder Reptantia Boas 1879  
 Division Hoplocarida Calman 1904  
 Order Stomatopoda Latreille 1817  
 Superclass Progoneata Pocock 1893  
 Class Pauropoda Lubbock 1866  
   Order Pauropoda Lubbock 1866  
     Suborder Ectomorpha Bagnall 1935  
     Suborder Endomorpha Bagnall 1935  
 Class Symphyla Ryder 1880  
   Order Symphyla Ryder 1880  
 Class Diplopoda Latreille 1802  
 Subclass Pselaphognatha Latzel 1884  
   Order Ancyrotricha Cook 1895  
   Order \*Lophotricha Cook 1895  
 Subclass Chilognatha Leach 1814  
   Superorder Opisthandria Verhoeff 1894  
     Order Limacomorpha Pocock 1894  
     Order Oniscomorpha Pocock 1887  
       Suborder Sphaerotheria Brandt 1833  
       Suborder Glomeridia Brandt 1833  
   Superorder Proterandria Verhoeff 1894  
     Order Colobognatha Brandt 1834  
     Order Nematophora Verhoeff 1913  
       Suborder Chordeumoidea Latzel 1884  
       Suborder Stemniuloidea Cook 1895  
       Suborder Striaroidea Cook 1896  
       Suborder Lysioptaloidea Verhoeff 1900  
   Order Proterospermophora Verhoeff 1913  
     Suborder Polydesmoidea Attems 1914  
     Suborder Strongylosomoidea Attems 1914  
   Order Opisthospermophora Verhoeff 1913  
     Suborder Juloidea Meinert 1868



- Suborder Spiroboloidea Sylvestri 1896
- Suborder Spirostreptoidea Pocock 1894
- Suborder Cambaloidea Bollman 1893
- Superclass Opisthogoneata Pocock 1893
- Class Chilopoda Latreille 1802
- Subclass Pleurostigma Pocock 1902
  - Superorder Epimorpha Haase 1880
  - Order Geophilomorpha Leach 1814
  - Order Scolopendromorpha Newport 1844
  - Superorder Anamorpha Haase 1880
  - Order Lithobiomorpha Verhoeff 1907
  - Order Craterostigma Pocock 1902
- Subclass Notostigma Pocock 1902
  - Order Scutigermorpha Pocock 1895
- Class Insecta Linnaeus 1758
- Subclass Synaptera Packard 1883
  - Order Collembola Lubbock 1871
  - Order Protura Silvestri 1907
  - Order Entotrophi Grassi 1888
  - Order Thysanura Latreille 1796
- Subclass Pterygota (Brauer 1885) Lang 1889
  - Order Odonata Fabricius 1793
  - Order Plecoptera Packard 1886
  - Order Orthoptera Latreille 1796
  - Order Isoptera Brullé 1832
  - Order Dermaptera Leach 1815
  - Order Plecoptera Burmeister 1835
  - Order Embioptera Hagen 1861 (Shipley 1904)
  - Order Corrodentia Burmeister 1839
  - Order Zoraptera Silvestri 1913
  - Order Mallophaga Nitsch 1818
  - Order Anoplura Leach 1815
  - Order Hemiptera Linnaeus 1758
    - Suborder Heteroptera Latreille 1825
    - Suborder Homoptera Latreille 1817
  - Order Thysanoptera Haliday 1836
  - Order Neuroptera Linnaeus 1758
  - Order Mecoptera Packard 1886
  - Order Diptera Linnaeus 1758
    - Suborder Orthorrhapha Brauer 1863
    - Suborder Cyclorrhapha Brauer 1863
  - Order Siphonaptera Latreille 1825
  - Order Trichoptera Kirby 1813
  - Order Lepidoptera Linnaeus 1758
    - Suborder Jugatae Comstock 1892
    - Suborder Frenatae Comstock 1892
    - Suborder Rhopalocera Duméril 1806
  - Order Megaloptera Latreille 1802
  - Order Raphidioidea Burmeister 1835
  - Order Coleoptera Linnaeus 1758
    - Suborder Adephaga Leconte & Horn 1883
    - Suborder Polyphaga Emery 1885

Order Strepsiptera Kirby 1813  
 Order Hymenoptera Linnaeus 1758  
   Suborder Chalastogastra Konow 1897  
   Suborder Clitogastra Konow 1905  
 Order \*Palaeodictyoptera Goldenberg 1877  
 Order \*Megasecoptera Brongniart 1885  
 Order \*Protephemerida Handlirsch 1906  
 Order \*Protodonata Brongniart 1885  
 Order \*Protoperlaria Tillyard 1928  
 Order \*Protelytroptera Tillyard 1931  
 Order \*Caloneurodea Martynov 1938  
 Order \*Glosselytrodea Martynov 1938  
 Order \*Protorthoptera Handlirsch 1906  
 Order \*Protohemiptera Handlirsch 1906

The following extinct orders of insects have also been described, but, according to F. M. Carpenter, probably do not "deserve recognition":

Order \*Protoblattoidea Handlirsch 1906  
 Order \*Hadentomoidea Handlirsch 1906  
 Order \*Sypharopteroidea Handlirsch 1906  
 Order \*Mixotermioidea Handlirsch 1906  
 Order \*Reculoidea Handlirsch 1906  
 Order \*Hapalopteroidea Handlirsch 1906  
 Order \*Protomecoptera Tillyard 1917  
 Order \*Paratrichoptera Tillyard 1919  
 Order \*Paramecoptera Tillyard 1919  
 Order \*Synarmogoidea Handlirsch 1919  
 Order \*Diaphanopteroidea Handlirsch 1919  
 Order \*Aeroplanoptera Tillyard 1923  
 Order \*Protohymenoptera Tillyard 1923  
 Order \*Protocoleoptera Tillyard 1923  
 Order \*Miomoptera Martynov 1927  
 Order \*Pruvostitoptera Zalessky 1929  
 Order \*Meganisoptera Martynov 1931  
 Order \*Permodonata Zalessky 1931  
 Order \*Archodonata Martynov 1932  
 Order \*Protodiptera Tillyard 1935  
 Order \*Hemipsocoptera Zalessky 1937  
 Order \*Cnemidolestioidea Handlirsch 1937  
 Order \*Paraplecoptera Martynov 1938  
 Order \*Archaeohymenoptera Haupt 1941  
 Order \*Palaeohymenoptera Haupt 1941  
 Order \*Protocicadida Haupt 1941  
 Order \*Protofulgorida Haupt 1941  
 Order \*Hemiodonata Zalessky 1943  
 Order \*Anisaxia Forbes 1943  
 Order \*Perielytrodea Zalessky 1943  
 Order \*Permodictyoptera Zalessky 1944  
 Order \*Aphelophlebia Pierce 1945  
 Phylum Mollusca Linnaeus 1758  
 Class Crepidoda Goldfuss 1820 (Polyplacophora Gray 1821)  
 Order Eoplacophora Pilsbry 1892

- Order Aplacophora von Ihering 1877
  - Suborder Chaetodermatina Simroth 1893
  - Suborder Neomeniina Simroth 1893
- Order Mesoplacophora Pilsbry 1892
- Order Isoplacophora Cotton & Weeding 1939
- Order Teleoplacophora Pilsbry 1892
- Class Gastropoda Cuvier 1798
- Subclass Prosobranchia Milne-Edwards 1848
  - Order Archacogastropoda Thiele 1925 (Aspidobranchia Pelseneer 1890)
  - Order Mesogastropoda Thiele 1925
  - Order Neogastropoda Wenz 1938 (Stenoglossa Bouvier 1887)
- Subclass Opisthobranchia Milne-Edwards 1846
  - Order Tectibranchia Cuvier 1812 (Pleurocoela Thiele 1931)
  - Order Pteropoda Cuvier 1804
    - Suborder Thecosomata Blainville 1824
    - Suborder Gymnosomata Blainville 1824
  - Order Sacoglossa von Ihering 1876
  - Order Acoela Thiele 1931
    - Suborder Notaspidea Fischer 1883
    - Suborder Nudibranchia Cuvier 1817
- Subclass Pulmonata Cuvier 1817
  - Order Basommatophora A. Schmidt 1895
  - Order Stylommatophora A. Schmidt 1895
- Class Scaphopoda Bronn 1862
- Class Pelecypoda Goldfuss 1820
- Subclass Prionodesmacea Dall 1889
  - Order Palaeoconcha Neumayr 1883
  - Order Taxodonta Neumayr 1883
  - Order Schizodonta Steinmann 1890
  - Order Dysodonta Neumayr 1883
- Subclass Anomalodesmacea Dall 1889
  - Order Anomalobranchia Iredale 1939
  - Order Septibranchia Perrier 1897
- Subclass Teleodesmacea Dall 1889
  - Order \*Pantodonta Dall 1895
  - Order Diogenodonta Dall 1895
  - Order Cyclodonta Dall 1895
  - Order Teleodonta Dall 1895
  - Order Asthenodonta Dall 1895
- Class Cephalopoda Cuvier 1798
  - Order Tetrabranchia Owen 1832
    - Suborder Nautiloidea Lamarck 1809
    - Suborder \*Ammonitoidea Haan 1825
  - Order Dibranchia Owen 1832
    - Suborder Vampyromorpha Robson 1929
    - Suborder Decapoda Leach 1817
    - Suborder Octopoda Hasselquist 1850
- Phylum Chordata Haeckel 1874
- Subphylum Tunicata Lamarck 1816 (Urochordata)
- Class Ascidiacea Blainville 1825
  - Order Stolidobranchiata Lahille 1887
  - Order Aspiraculata Seeliger 1909

- Order Phlebobranchiata Lahille 1887
- Order Aplousobranchiata Lahille 1887
- Class Larvacea Herdman 1882
- Class Thaliacea Van der Hoeven 1850
- Subclass Myosomata Garstang 1895
  - Order Salpida Jones 1848
  - Order Doliolida Keferstein 1862
- Subclass Pyrosomata Garstang 1895
  - Order Pyrosomatida Jones 1848
- Division Acrania Hackel 1866 (Cephalochorda)
- Subphylum Leptocardii J. Muller 1845
  - Class Amphioxi J. Muller 1844
    - Order Amphioxi J. Muller 1844
- Division Craniata Lankester 1877 (Vertebrata)
- Subdivision Anamnia
  - Superclass Pisces Linnaeus 1758
    - Class Agnatha
      - Subclass Cephalaspidomorphi
        - Order \*Osteostraci Lankester 1868
        - Order \*Anaspida Traquair 1899
        - Order Cyclostomata
          - Suborder Myxinoidea (Hyperotriti Muller 1844)
          - Suborder Petromyzontia (Hyperoustii Muller 1844)
      - Subclass \*Pteraspidomorphi
        - Order \*Heterostraci Lankester 1868
        - Order \*Coelolepida
    - Class \*Placodermi McCoy 1848
      - Order \*Acanthodii Owen 1860
      - Order \*Arthrodira Cope 1891
        - Suborder \*Euarthrodira
          - Infraorder \*Arctolepida
          - Infraorder \*Brachythoraci
        - Suborder \*Ptyctodontida Woodward 1891
        - Suborder \*Phyllolepida
      - Order \*Macropetalichthyida
      - Order \*Antiarchi Cope 1885
      - Order \*Stegoselachii
        - Suborder \*Stensioellida
        - Suborder \*Rhenanida
      - Order \*Palaeospondyloidea Sollas 1903
  - Class Chondrichthyes J. Muller 1846
  - Subclass Elasmobranchii Bonaparte 1832
    - Order \*Cladoselachii Dean 1894
    - Order Selachii Cuvier 1829
      - Suborder \*Hybodontoidae
      - Suborder Heterodontoidea
      - Suborder Notidanoidea
      - Suborder Galcoidea
      - Suborder Squaloidea
    - Order Batoidea Gunther 1870
    - Order \*Pleuracanthodii Cope 1889
  - Subclass Holocephali Bonaparte 1832

- Order \*Bradyodonti Woodward 1892
- Order Chimaerae
- Class Osteichthyes
- Subclass Actinopterygii Cuvier 1828
  - Superorder Chondrostei G. Müller 1846 (Ganoids)
    - Order \*Palaeoniscoidea Bridge 1879
    - Order Polypterini Bonaparte 1837
    - Order Acipenseroidei Agassiz 1843
    - Order \*Subholostei
  - Superorder Holostei J. Müller 1846 (Ganoids)
    - Order \*Semionotoidea Woodward 1890
    - Order \*Pycnodontoidea
    - Order \*Aspidorhynchoidea
    - Order Amioidea Huxley 1861
    - Order \*Pholidophoroidea Woodward 1890
  - Superorder Teleostei Owen 1847
    - Order Isospondyli Cope 1872
      - Suborder Clupeoidea
      - Suborder Salmonoidea
      - Suborder Opisthoproctoidea
      - Suborder Osteoglossoidea
      - Suborder Stomiatoidea
      - Suborder Gonorhynchoidea
    - Order Ostariophysi Bonaparte 1809
      - Suborder Cyprinoidea
      - Suborder Siluroidea
    - Order Apodes Rafinesque 1815
    - Order Heteromi Gill
    - Order Mesichthyes
      - Suborder Haplomi Cope 1872
      - Suborder Iniomi Gill 1894
      - Suborder Cyprinodontes Agassiz
      - Suborder Syntognathi Cope 1872
      - Suborder Thoracostei
      - Suborder Salmopercae
    - Order Acanthopterygii Cuvier 1828
      - Suborder Berycoidea
      - Suborder Zeoidea
      - Suborder Percoidea
      - Suborder Carangoidea
      - Suborder Scombroidea
      - Suborder Trachinoidea
      - Suborder Blennioidea
      - Suborder Anacanthini Müller 1846
      - Suborder Chaetodontoidea
      - Suborder Plectognathi Cuvier 1817
      - Suborder Heterosomata Bonaparte 1846
      - Suborder Scorpaenoidea
      - Suborder Batrachoidea
      - Suborder Pediculati Gill 1865
      - Suborder Gobioidae
      - Suborder Anabantoidea

- Suborder Mugiloidea
- Suborder Polynemoidea
- Suborder Ammodytoidea
- Suborder Echenoidea
- Suborder Xenopterygii Gill 1894
- Suborder Allotriognathi Regan 1907
- Suborder Opisthomi Cope 1870
- Suborder Synbranchii
- Subclass Amphibioidei Hubbs 1911
  - Order Crossopterygii Huxley 1861 (Ganoids)
    - Suborder \*Rhipidistia Cope 1887
    - Suborder Coelacanthini Agassiz 1843
  - Order Dipnoi J. Müller 1846
- Superclass Tetrapoda Williston
- Class Amphibia Linnaeus 1858
  - Superorder \*Labyrinthodontia Huxley 1871
  - Order \*Ichthyostegalia Save-Soderberg 1832
  - Order \*Rhachitomia Cope 1880
    - Suborder \*Lexommoidea
    - Suborder \*Edopsoidea
    - Suborder \*Eryopsoidea
    - Suborder \*Neorhachitomi
  - Order \*Stereospondyli Fraas 1889
  - Order ‡Embolomeri Cope 1880
  - Order \*Seymouriamorpha
- Superorder Salientia Laurenti 1768
  - Order \*Eoanura
  - Order \*Proanura
  - Order Anura
    - Suborder Amphicoela Nobel 1931
    - Suborder Opisthoceola Nicholls 1916
    - Suborder Anomocoela Nicholls 1916
    - Suborder Proceala Nicholls 1916
    - Suborder Diplasiocoela Nicholls 1916
- Subclass \*Lepospondyli Zittel 1887
  - Order \*Aistopoda Miall 1890
  - Order \*Nectridia Miall 1890
  - Order \*Microsauria
  - Order Urodela (Caudata Oppel 1811)
    - Suborder Cryptobranchoidea Dana 1922
    - Suborder Amblystomoidea Noble 1931
    - Suborder Salamandriodea Cope 1890
    - Suborder Proteidea Cope 1866
  - Order Apoda Oppel 1911
- Class Reptilia Laurenti 1768
- Subclass Anapsida Osborn 1918
  - Order \*Cotylosauria Cope 1880
    - Suborder \*Captorhinomorpha Watson 1917
    - Suborder \*Diadectomorpha Case 1911
  - Order Chelonia Owen 1842 (Testudinata Oppel 1811)
    - Suborder \*Eunotosauria Watson 1914
    - Suborder \*Amphichelydia Lydekker 1889
    - Suborder Pleurodira Cope 1869

- Suborder Cryptodira Cope 1869
- Subclass \*Ichthyopterygia Owen 1860
- Subclass \*Synptosauria Williston 1912
  - Order \*Protosauria Seeley 1871
  - Order \*Sauropterygia Owen 1859
    - Suborder \*Nothsauria Deecke 1866
    - Suborder \*Plesiosauria Andrews 1895
    - Suborder \*Placodontia Meyer 1863
- Subclass Lepidosauria Zittel 1890
  - Order \*Eosuchia Broom 1814
    - Suborder \*Younginiiformes Romer 1945
    - Suborder \*Choristodera Cope 1876
    - Suborder \*Thalattosauria Merriam 1904
    - Suborder \*Acrosauria Kuhn 1937
  - Order Rhynchocephalia Gunther 1886
  - Order Squamata Opper 1811
    - Suborder Lacertilia Cuvier 1834
    - Suborder Serpentes Linnaeus 1758
- Subclass \*Archosauria Cope 1891
  - Order \*Thecodontia Owen 1860
    - Suborder \*Pseudosuchia Cope 1891
    - Suborder \*Phytosauria Lydekker 1888
  - Order Crocodilia Wagler 1830
    - Suborder \*Protosuchia Mook 1934
    - Suborder \*Sebecosuchia Simpson 1937
    - Suborder \*Mesosuchia Mook 1934
    - Suborder Eusuchia Mook 1934
  - Order \*Pterosauri Kaup 1834
    - Suborder \*Rhamphorhynchoidea Abel 1919
    - Suborder \*Pterodactyloidea Seeley 1866
  - Order \*Saurischia Seeley 1888
    - Suborder \*Theropoda Marsh 1881
    - Suborder \*Sauropoda Marsh 1878
  - Order \*Ornithischia Seeley 1888
    - Suborder \*Ornithopoda Cope 1869
      - Suborder \*Ankylosauria Brown 1908
      - Suborder \*Ceratopsia Zittel 1890
- Subclass \*Synapsida Osborn 1903
  - Order \*Pelycosauria Cope 1878
    - Suborder \*Ophiacodontia Romer & Price 1940
    - Suborder \*Sphenacodontia Romer & Price 1940
    - Suborder \*Edaphosauria Romer & Price 1940
  - Order \*Therapsida Broom 1905
    - Suborder \*Dinocephalia Broom 1914
    - Suborder \*Dicynodontia Owen 1859
    - Suborder \*Theriodontia Owen 1859
  - Order \*Ictidosauria Broom 1912
- Class Aves Linnaeus 1758
  - Subclass \*Archaeornithes Cope 1898
    - Order \*Archaeopterygiformes Fürbringer 1888
- Subclass Neornithes Reynolds 1897
  - Superorder \*Odontognathae Marsh 1873
    - Order \*Hesperornithiformes Marsh 1872

Order \*Ichthyornithiformes Marsh 1873  
 Superorder Palaeognathae Pycraft 1910  
 Order \*Caenagnathiformes  
 Order Struthioniformes Haeckel 1866  
 Order Rheiformes Newton 1884  
 Order Casuariiformes Sclater 1880  
 Order \*Dinornithiformes Stejneger 1884  
 Order \*Aepyornithiformes Newton 1884  
 Order Apterygiformes Wetmore & Miller 1936  
 Order Tinamiformes Gray 1840  
 Superorder Impennes Illiger 1811  
 Order Sphenisciformes Viellot 1818  
 Superorder Neognathae Pycraft 1896  
 Order Gaviiformes Brandt 1839  
 Order Colymbiformes Bonaparte 1852  
 Order Procellariiformes Wagner 1843  
 Order Pelecaniformes Stejneger 1885  
   Suborder Phaëthontes Gray 1840  
   Suborder Pelecani Owen 1856  
   Suborder Fregatae Vigors 1830  
   Suborder Odontopteryges Lydekker 1892  
 Order Ciconiiformes Owen 1832  
   Suborder Ardeinae Wagler 1830  
   Suborder Balaenicipites Gould 1851  
   Suborder Ciconiae Bonaparte 1834  
   Suborder Phoenicopteri Bonaparte 1831  
 Order Anseriformes Swainson 1837  
   Suborder Anhimae Brisson 1760  
   Suborder Anseres Linnaeus 1735  
 Order Falconiformes Naumann 1822  
   Suborder Cathartae Lafresnaye 1829  
   Suborder Falcones Naumann 1822  
 Order Galliformes Latreille 1825  
   Suborder Galli Dumeril 1806  
   Suborder Opisthocomi Gray 1840  
 Order Gruiformes Stejneger 1885  
   Suborder Mesoanatides Lowe 1924  
   Suborder Turnices Gray 1840  
   Suborder Grues Owen 1856  
   Suborder Heliornithes Gray 1840  
   Suborder Rhynocheti Gould 1837  
   Suborder Eurypygae Illiger 1811  
   Suborder \*Phororhaci Lydekker 1893  
   Suborder Cariamae Brisson 1760  
   Suborder Otides Wagler 1830  
 Order \*Diatrymiformes Cope 1877  
 Order Charadriiformes Fürbinger 1888  
   Suborder Charadrii Huxley 1867  
   Suborder Lari Bonaparte 1857  
   Suborder Alcae Stejneger 1885  
 Order Columbiformes Bonaparte 1853  
   Suborder Pterocletes Knowlton 1909  
   Suborder Columbae Bonaparte 1857



- Order Psittaciformes Illiger 1811
- Order Cuculiformes Stejneger 1884
  - Suborder Musophagi Sharpe 1891
  - Suborder Cuculi A. O. U. 1886
- Order Strigiformes Wagler 1830
- Order Caprimulgiformes Stejneger 1885
  - Suborder Steatornithes Bonaparte 1850
  - Suborder Caprimulgi Bonaparte 1840
- Order Apodiformes Lucas 1889
  - Suborder Apodi Peters 1940
  - Suborder Trochili Lesson 1931
- Order Coliiformes Swainson 1837
- Order Trogoniformes Swainson 1831
- Order Coraciiformes Seeböhm 1880
  - Suborder Alcedines Bonaparte 1831
  - Suborder Meropes Bonaparte 1831
  - Suborder Coracii Gray 1845
  - Suborder Bucerotes
- Order Piciformes Sharpe 1891
  - Suborder Galbulae Fürbinger 1888
  - Suborder Pici Wagler 1830
- Order Passeriformes Nitzsch 1829
  - Suborder Eurylaimi Gadow 1893
  - Suborder Tyranni Swainson 1837
  - Suborder Menuræ Stejneger 1885
  - Suborder Passeres Linnaeus 1758
- Class Mammalia Linnaeus 1758
- Subclass Prototheria Gill 1872
  - Order Monotremata Bonaparte 1838
- Subclass \*Allotheria Marsh 1880
  - Order \*Multituberculata Cope 1884
  - Order \*Triconodontia Osborn 1888
- Subclass Theria Parker & Haswell 1897
- Infraclass \*Pantotheria Simpson 1929
  - Order \*Pantotheria Marsh 1880
  - Order \*Symmetrodonta Simpson 1925
- Infraclass Metatheria Huxley 1880
  - Order Marsupialia Illiger 1811
- Infraclass Eutheria Gill 1872
- Cohort Unguiculata Linnaeus 1766
  - Order Insectivora Bowdich 1821
  - Order Dermoptera Illiger 1811
  - Order Chiroptera Blumenbach 1779
    - Suborder Megachiroptera Dobson 1875
    - Suborder Microchiroptera Dobson 1875
  - Order Primates Linnaeus 1758
    - Suborder Prosimii Illiger 1811
    - Suborder Anthropoidea Mivart 1864
  - Order \*Tillodontia Marsh 1875
  - Order \*Taeniodontia Cope 1876
  - Order Edentata Cuvier 1798
    - Suborder \*Palaeonodonta Matthew 1918
    - Suborder Xenarthra Cope 1889

- Order Pholidota Weber 1904
- Cohort Glires Linnaeus 1758
  - Order Lagomorpha Brandt 1855
  - Order Rodentia Bowdich 1821
    - Suborder Sciuromorpha Brandt 1855
    - Suborder Myomorpha Brandt 1855
    - Suborder Hystricomorpha Brandt 1855
- Cohort Mutica Linnaeus 1766
  - Order Cetacea Brisson 1762
    - Suborder \*Archaeoceti Fowler 1883
    - Suborder Odontoceti Fowler 1867
    - Suborder Mysticeti Fowler 1864
- Cohort Ferungulata Simpson 1945
  - Superorder Ferae Linnaeus 1758
    - Order Carnivora Bowdich 1821
      - Suborder \*Creodonta Cope 1875
      - Suborder Fissipeda Blumenbach 1791
      - Suborder Pinnipedia Illiger 1811
  - Superorder \*Protungulata Weber 1904
    - Order \*Condylarthra Cope 1881
  - Order \*Liptopterna Ameghino 1889
  - Order \*Notoungulata Roth 1903
    - Suborder \*Notioprogonia Simpson 1934
    - Suborder \*Toxodonta Scott 1904
    - Suborder \*Typotheria Zittel 1892
    - Suborder \*Hegetotheria Simpson 1945
  - Order \*Astrapotheria Lydekker 1894
    - Suborder \*Trigonostylopoidea Simpson 1934
    - Suborder \*Astrapotherioidea Ameghino 1894
  - Order Tubulidentata Huxley 1872
  - Superorder Paenungulata Simpson 1945
    - Order \*Pantodonta Cope 1873
    - Order \*Dinocerata Marsh 1873
    - Order \*Pyrotheria Ameghino 1895
  - Order Proboscidea Illiger 1811
    - Suborder \*Moeritherioidea Osborn 1921
    - Suborder Elephantoidea Osborn 1921
    - Suborder \*Deinotherioidea Osborn 1921
    - Suborder \*Barytherioidea Simpson 1945
  - Order \*Embrithopoda Andrews 1906
  - Order Hyracoidea Huxley 1869
  - Order Sirenia Illiger 1811
    - Suborder Trichechiformes Hay 1923
    - Suborder \*Desmostyliformes Hay 1923
- Superorder Mesaxonia Marsh 1884
  - Order Perissodactyla Owen 1848
    - Suborder Hippomorpha Wood 1937
    - Suborder Ceratomorpha Wood 1937
- Superorder Paraxonia Marsh 1884
  - Order Artiodactyla Owen 1848
    - Suborder Suiformes Jaekel 1911
    - Suborder Tylopoda Illiger 1811
    - Suborder Ruminantia Scopoli 1777

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