

The Taxonomicon
Systema Naturae 2000

Classification of
Phylum Miozoa
(protists)
down to Order

Compiled by Drs. S.J. Brands
Universal Taxonomic Services

9 Apr 2017

Systema Naturae 2000
- Phylum *Miozoa* -

[Kingdom *Chromista* - protists]

Phylum *Miozoa* Cavalier-Smith, 1987

- 1 Subphylum *Protalveolata* Cavalier-Smith, 1991
 - 1 Class *Colponemea* Cavalier-Smith, 1993
 - 1 Order *Colponemida** Cavalier-Smith, 1993
- 2 Subphylum *Myozoa* Cavalier-Smith & Chao, 2004
 - 1 Infraphylum *Dinozoa* Cavalier-Smith, 1981
 - 1 Superclass *Perkinsozoa* Norén et al., 1999
 - 1 Class *Myzomonadea* Cavalier-Smith & Chao, 2004
 - 1 Order *Algovorida* Cavalier-Smith & Chao, 2004
 - 2 Order *Chilovorida* Cavalier-Smith & Chao, 2004
 - 2 Class *Perkinsea* Levine, 1978
 - 1 Order *Perkinsida** Levine, 1978
 - 2 Order *Phagodiniida* Cavalier-Smith, 1993
 - 3 Class *Squirmidea* Cavalier-Smith, 2014
 - 1 Order *Squirmida** Cavalier-Smith, 2014
 - 2 Superclass *Dinoflagellata* Bütschli, 1885
 - 1 Family †*Arpyloraceae* Sarjeant (1978), incertae sedis
 - 2 Family *Protodiniiferaceae* Kof. & Swezy (1921), incertae sedis
 - 3 Class *Ellobiopsa* Loeblich, 1970
 - 1 Order *Ellobiopsida** Whisler, 1990
 - 4.1 Order *Duboscquellales* Cachon & Cachon-Enj. (1987) [higher rank(s) implied]
 - 4.2 Class *Syndinea* Chatton, 1920
 - 1 Order *Rastrimonadida* Cavalier-Smith & Chao, 2004
 - 2 Order *Syndiniales** A.R. Loeb. (1976)
 - 5 Class *Oxyrrhea* Cavalier-Smith, 1987
 - 1 Order *Oxyrrhida** Sournia, 1990
 - 2 Order *Acrocoelida* Cavalier-Smith & Chao, 2004
 - 6.1 Class *Noctiluiphyceae* Fensome, F.J.R. Taylor, G. Norris, Sarjeant, Wharton & G.L. Williams (1993)
 - 1 Order *Noctilucales** Haeckel (1894)
 - 6.2 Class *Dinophyceae* Pascher (1914)
 - 01 Genus †*Cobricosphaeridium* Harland & Sarjeant (1970), incertae sedis
 - 02 Genus †*Diacrocanthidium* Deflandre & Foucher (1967), incertae sedis
 - 03 Genus †*Prolixosphaeridium* Davey, Downie, Sarjeant & Williams (1966), incertae sedis
 - 04 Genus †*Suibindia* Jingxian Yu (1982), incertae sedis
 - 05 Genus †*Xylochoarion* Erkmén & Sarjeant (1978), incertae sedis
 - 06 Genus *Berghiella* Kof. & J.R. Michener (1911), incertae sedis
 - 07 Genus *Ceratoperidinium* Margalef ex A.R. Loeb. (1980), incertae sedis
 - 08 Genus *Pseudoactiniscus* Bursa (1969), incertae sedis
 - 09 Genus *Pyramidodinium* T. Horig. & C. Sukigara (2005), incertae sedis
 - 10 Genus *Thaumtodinium* Böhm (1933), incertae sedis
 - 11 Order *Desmocapsales* Pascher (1914), incertae sedis
 - 12 Order *Haplozoonales* Poche (1913)
 - 13.1.1 Order *Dinotrichales* Pascher (1914), incertae sedis
 - 13.1.2 Order *Dinococcales* Pascher (1914), incertae sedis
 - 13.2 Subclass *Gymnodiniphycidae* Fensome, F.J.R. Taylor, G. Norris, Sarjeant, Wharton & G.L. Williams (1993)
 - 1 Genus *Akashiwo* Gert Hansen & Moestrup (2000) [higher rank(s) implied]
 - 2.1 Order *Brachidiniales* A.R. Loeb. ex Sournia (1984)
 - 2.2.1 Order *Gymnodiniales** Apstein (1909)
 - 2.2.2 Order *Ptychodiscales* Fensome, F.J.R. Taylor, G. Norris, Sarjeant, Wharton & G.L. Williams (1993)
 - 14 Subclass *Peridiniphycidae* Fensome, F.J.R. Taylor, G. Norris, Sarjeant, Wharton & G.L. Williams (1993)
 - 01 ?Genus †*Lobionella* Batten & Lister (1988)
 - 02 ?Genus †*Orobodinium* Gocht & Wille (1990)
 - 03 ?Genus †*Tetranguladinium* Jingxian Yu, Mongrong Sun, Suying Sun & Shaozhi Mao (1983)
 - 04 Genus †*Apiculadinium* Jingxian Yu, Mongrong Sun, Suying Sun & Shaozhi Mao (1981), incertae sedis
 - 05 Genus †*Aquadulcum* Harland & Sarjeant (1970), incertae sedis
 - 06 Genus †*Dodekovia* Dörhöfer & Davies (1980), incertae sedis
 - 07 Genus †*Gorkadinium* Loeb. & A.R. Loeb. (1966), incertae sedis
 - 08 Genus †*Hebecysta* Bujak & Fisher (1976), incertae sedis
 - 09 Genus †*Heibergella* Bujak & Fisher (1976), incertae sedis
 - 10 Genus †*Lunatadinium* Brideaux & McIntyre (1973), incertae sedis
 - 11 Genus †*Mikropithon* Agelopoulos (1967), incertae sedis
 - 12 Genus †*Muiriella* Churchill & Sarjeant (1962), incertae sedis
 - 13 Genus †*Neuffenia* Brenner & Dürr (1986), incertae sedis
 - 14 Genus †*Opaeopsomus* Pocock (1972), incertae sedis
 - 15 Genus †*Palaeoglenodinium* Deflandre (1935), incertae sedis
 - 16 Genus †*Palaeohystrichodinium* Chengquan He, Shenzhao Zhu & Guangxing Jin (1989), incertae sedis
 - 17 Genus †*Palaeosphaerium* Górka (1965), incertae sedis
 - 18 Genus †*Palaeotetradinium* Deflandre (1936), incertae sedis
 - 19 Genus †*Pentafidia* Backhouse (1988), incertae sedis
 - 20 Genus †*Phallocysta* Dörhöfer & Davies (1980), incertae sedis
 - 21 Genus †*Pseudodeflandrea* Alberti (1959), incertae sedis

Systema Naturae 2000

- Phylum Miozoa -

- 22 Genus †*Pseudokomewuia* Chengquan He (1980), incertae sedis
- 23 Genus †*Pseudostephodinium* Jingxian Yu, Mongrong Sun, Suying Sun & Shaozhi Mao (1981), incertae sedis
- 24 Genus †*Stenopyxinium* Deflandre (1968), incertae sedis
- 25 Genus †*Sverdrupiella* Bujak & Fisher (1976), incertae sedis
- 26 Genus †*Vectensia* Batten & Lister (1988), incertae sedis
- 27 Family †*Comparodiniaceae* Vozzhennikova (1979), incertae sedis
- 28 Family †*Stephanelytracae* Stover, Sarjeant & Drugg (1977), incertae sedis
- 29 Family †*Dollidiniaceae* Fensome, F.J.R. Taylor, G. Norris, Sarjeant, Wharton & G.L. Williams (1993), incertae sedis
- 30 Order *Gonyaulacales* F.J.R. Taylor (1980)
- 31 Order *Peridinales** Haeckel (1894)
- 15.1 Family *Tovelliaceae* Moestrup, K.C.R. Lindberg & Daugbjerg (2005), incertae sedis
- 15.2 Family *Woloszynskiaceae* Bourr. ex Starmach (1974), incertae sedis
- 16 Family *Apodiniaceae* Chatton (1920), incertae sedis
- 17 Order *Actiniscales* Sournia (1984)
- 18 Order *Amphilothales* Er. Lindem. (1928)
- 19 Subclass *Dinophysiphycidae** Möhn ex Fensome, F.J.R. Taylor, G. Norris, Sarjeant, Wharton & G.L. Williams (1993)
 - 1 Order †*Nannoceratopsiales* Piel & Evitt (1980)
 - 2 Order *Dinophysales** Er. Lindem. (1928)
- 20 Subclass *Prorocentrophycidae* Fensome, F.J.R. Taylor, G. Norris, Sarjeant, Wharton & G.L. Williams (1993)
 - 1 Order *Prorocentrales** Lemmerm. (1910)
- 21 Order *Blastodiniales* Chatton (1906)
- 2 Infraphylum *Apicomplexa* Levine, 1970
 - 01 Genus *Cristalloidophora* Dehorne, 1934, incertae sedis
 - 02 Genus *Spermatobium* Eisen, 1895, incertae sedis
 - 03 Genus *Toxocystis* Léger & Duboscq, 1910, incertae sedis
 - 04 Genus *Trophosphaera* Le Calvez, 1939, incertae sedis
 - 05 Genus *Globidiellum* Brumpt, 1913, incertae sedis
 - 06 Genus *Joyeuxella* Brasil, 1902, incertae sedis
 - 07 Genus *Rhabdospora* Laguesse, 1895, incertae sedis
 - 08 Genus *Echinococcidium* Porchet, 1978, incertae sedis
 - 09 Genus *Dobellia* Ikeda, 1913, incertae sedis
 - 10 Superclass *Apicomonada* Cavalier-Smith, 1993
 - 1 Class *Apicomonadea** Cavalier-Smith, 1993
 - 1.1 Order *Voromonadida* Cavalier-Smith & Chao, 2004
 - 1.2 Order *Chromerida* Moore et al., 2008
 - 2 Order *Colpodellida* Cavalier-Smith, 1993
 - 11 Superclass *Sporozoa* Leuckart, 1879
 - 1 Order *Blastogregarinida* Chatton & Villeneuve, 1936, incertae sedis
 - 2.1 Class *Paragregarea* Cavalier-Smith, 2014
 - 1 Order *Archigregarinida* Grassé, 1953
 - 2 Order *Velocida* Cavalier-Smith, 2014
 - 3 Order *Stenophorida* Cavalier-Smith, 2014
 - 2.2 Class *Gregarinomorpha* Grassé, 1953
 - 1 Subclass *Histogregarina* Cavalier-Smith, 2014
 - 1 Order *Histogregarida** Cavalier-Smith, 2014
 - 2 Subclass *Cryptogregarina* Cavalier-Smith, 2014
 - 1 Order *Cryptogregarida** Cavalier-Smith, 2014
 - 3 Subclass *Orthogregarinia* Cavalier-Smith, 2014
 - 1 Order *Vermigregarida* Cavalier-Smith, 2014
 - 2 Order *Arthrogregarida* Cavalier-Smith, 2014
 - 3 Class *Coccidiomorpha* Doflein, 1901
 - 1 Subclass *Coccidia* Leuckart, 1879
 - 1.1 Order *Adeleida* Léger, 1911
 - 1.2 Order *Eimeriida* Léger, 1911
 - 2 Order *Ixorheida* Levine, 1984
 - 2 Subclass *Hematozoa* Vivier, 1982
 - 1 Superorder *Haemosporidia* Danilewsky, 1885
 - 1 Order *Haemosporida** Danilewsky, 1885
 - 2 Superorder *Aconoidia* Cavalier-Smith, 2014
 - 1 Order *Nephromycida* Cavalier-Smith, 1993
 - 2 Order *Piroplassmida* Wenyon, 1926
 - 3 Subclass *Coelotrophia* Cavalier-Smith, 2014
 - 1 Order *Coelotrophiida** Vivier, 1982

Citation: Brands, S.J. (ed.), 2017. Classification of Phylum Miozoa (protists) down to Order. In Systema Naturae 2000. *The Taxonomicon*. Universal Taxonomic Services, Zwaag, The Netherlands, 9 Apr 2017. <<http://taxonomicon.taxonomy.nl/TaxonTree.aspx?src=0&id=199107>>

Sources

Adl, S.M., Simpson, A.G.B., Lane, C.E., Lukes, J., Bass, D., Bowser, S.S., Brown, M.W., Burki, F., Dunthorn, M., Hampl, V., Heiss, A., Hoppenrath, M., Lara, E., Le Gall, L., Lynn, D.H., McManus, H., Mitchell, E.A.D., Mozley-Stanridge, S.E., Parfrey, L.W., Pawlowski, J., Rueckert, S., Shadwick, L., Schoch, C.L., Smirnov, A. & Spiegel, F.W. 2012. The Revised Classification of Eukaryotes. *J. Eukaryot. Microbiol.*

Systema Naturae 2000

- Phylum Miozoa -

59 (5), Sep-Oct 2012: 429-493.

Cavalier-Smith, T. 1993. Kingdom Protozoa and Its 18 Phyla. *Microbiological Reviews* **57** (4), Dec 1993: 953-994.

Cavalier-Smith, T. & Chao, E.E. 2004. Protalveolate phylogeny and systematics and the origins of Sporozoa and dinoflagellates (phylum Myzozoa nom. nov.). *Europ. J. Protistol.* **40** (3), 6 Sep 2004: 185-212.

Cavalier-Smith, T., Chao, E.E. & Lewis, R. 2015. Multiple origins of Heliozoa from flagellate ancestors: New cryptist subphylum Corbihelia, superclass Corbistoma, and monophyly of Haptista, Cryptista, Hacrobia and Chromista. *Mol. Phyl. Evol.* **93**, Dec 2015: 331-362.

Gómez, F. 2003. Checklist of Mediterranean Free-living Dinoflagellates. *Botanica Marina* **46**: 215-242.

Gómez, F. 2005. A list of free-living dinoflagellate species in the world's oceans. *Acta Bot. Croat.* **64** (1): 129-212.

Gómez, F. 2012. A checklist and classification of living dinoflagellates (Dinoflagellata, Alveolata). *CICIMAR Océánides* **27** (1): 65-140.

Okolodkov, Y.B. 2011. Dinoflagellata (Bütschli) Fensome, Taylor, Norris, Sarjeant, Wharton et Williams, 1993. In S.A. Karpov (ed.), *Guide-Book on Zoology*, Part 3 *Protista*. KMK Scientific Press Ltd., St. Petersburg/Moscow: [7]-119, 11 pls..

Perkins, F.O., Barta, J.R., Clopton, R.E., Peirce, M.A. & Upton, S.J. 2000. Phylum Apicomplexa Levine, 1970. In Lee, J.J., Leedale, G.F. & Bradbury, P., *An Illustrated Guide to the Protozoa, Second Edition*, vol. 1. Society of Protozoologists, Lawrence, Kansas, U.S.A.: 190-369.

Ruggiero, M.A., Gordon, D.P., Orrell, T.M., Bailly, N., Bourgoin, T., Brusca, R.C., Cavalier-Smith, T., Guiry, M.D. & Kirk, P.M. 2015. Correction: A Higher Level Classification of All Living Organisms. *PLoS ONE* **10** (6), 11 Jun 2015: 1-54.

DISCLAIMER: This document is not published for nomenclatural purposes within the meaning of the International Code of Zoological Nomenclature (ICZN).