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A Preliminary Catalogue of the Names of Fungi above the Rank of Order

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ABSTRACT

This paper lists for the first time many of the names that have been used for fungal groups above the rank of order. Full bibliographic references are provided for the location where the name was first introduced together with comments on ranks, orthography, typification and the provision of descriptions or diagnoses. More general remarks are made about the nomenclature of higher taxa and the need for a more rigorous approach to the use of these names.

INTRODUCTION

The introduction of names for groups of organisms at the higher ranks (Class, Division/Phylum and Kingdom) is traditionally regarded as being outside of the normal requirements of the International Code for Botanical Nomenclature (ICBN). Moreover, in the past many new names have been introduced in tables of classification or in text headings without any description or diagnosis although some descriptive information may be found in the text. Increasingly some authors of names and compilers of classifications have been applying the Articles of the ICBN to higher taxa, citing authors and proposing *combinationes novae* and *status novi* (for example, Cavalier-Smith, 1998). The adoption of a strictly nomenclatural approach to the names of higher taxa will give rise to problems that could require the validation of some well-known names. The absence of a list such as that provided below has resulted in the proposal of names for higher taxa at ranks where names already exist. The compilation of this information has revealed the wide variety of purposes for which such citations are used.

Few names of higher taxa in the fungi are included in Kirk et al. (2001), who have provided publication information for taxa up to and including the rank of order. The following list provides a basis for extending this treatment to all ranks. In presenting this list of published examples of higher taxa in the mycological literature, the present author hopes to indicate how the nomenclatural considerations dealt with by Silva (1980) might be used to apply to taxa of the class-group and higher. A further purpose is to make available a list of published names of fungi in the broadest sense for those who need to cite higher taxa (such as in textbooks, review articles etc.). Some of the groups delineated have long since ceased to be recognized as meaningful or reflecting natural classifications. They are listed here for their historical value. That said, it is not anticipated that this list is complete – if anything, the process of putting it together has revealed the peculiar places in which these names can be found. Since this list must be regarded as an interim compilation, the author would welcome any omissions and corrections. These will be fully acknowledged when added to the list.

Names for higher taxa of fungi were rare in the 18th and 19th centuries. Persoon (1794) appears to be the first to propose classes in the fungi but it is likely that the rank constituted little more than our own idea of Order. His two classes were named ‘Angiothecium’ and ‘Gymnothecium’ corresponding to whether the fruit-bodies were open or enclosed. These subsequently became ‘Angiocarpi’ and ‘Gymnocarpi’ (Persoon, 1801). Elias Fries, the founding father of so much of taxonomic mycology, was the first to provide a classification (Fries, 1821) that included classes along the lines of what we

recognize today. He proposed four classes (Coniomycetes, Hyphomycetes, Gasteromycetes and Hymenomycetes). It is perhaps a tribute to his foresight that three of the four classes continue to have currency (even if they are not phylogenetically natural) up to the present day. It was not until the middle of the nineteenth century that that other great patriarch of mycology, Anton de Bary (in Streinz, 1862), advocated the use of more familiar class names (Ascomycetes, Basidiomycetes etc.) and these became enshrined in the arrangement used by Saccardo (1882 onwards) with few additions. Thus it has been the 20th century that has seen the greatest increase in names of higher taxa, indeed of the ranks themselves. The elevation of fungi to a kingdom in their own right (Whittaker, 1969) has led to a wholesale expansion of the hierarchy with the consequent proliferation of names. A glance at any of the main groups will show the rate of inflation from Class to Subkingdom. Today the impact of molecular biology and cladistics has brought about the recognition of small 'orphan' groups at high levels as well as the introduction of new ranks (infrakingdom, superclass etc.).

NOMENCLATURAL CONSIDERATIONS

The following notes indicate the Articles of the *Code* which are relevant to names of higher taxa. The status of higher taxa is not a primary concern of the *Code* and it could be said that these nomenclatural considerations are an extrapolation of the Articles as they are applied to names at family level and below. Also included is some comment on currently unresolved problems in the nomenclature of higher taxa.

1. Higher taxa constitute names under the ICBN. See Silva (1980: 12). Art. 6.6 states that a 'name' is a name that has been validly published... Art. 6.2 states that valid publication of names is publication in accordance with Art. 32–45.

This means that a name must be:

- a. effectively published; As determined by Art 29–31.
- b. have a form which complies with Art. 16–27; In the case of taxa above the rank of family this is governed by Art. 16 and 17. The proper ending for an order is –ales and sub–order is –ineae; the proper ending for a class of fungi is –mycetes (subclass –mycetidae) and for phyla is –mycota (subphylum –mycotina). Moore (1974) proposed the recognition of super ranks which, for fungi, would have the endings –mycia, for superclasses and –mycotera, for superphyla (superdivisions). These ranks have enjoyed limited use but more recently Barr (1983) used the superdivision; Eriksson and Winka (1997) used the superclass (as –myceta) and Cavalier–Smith (1998) has used a range of ranks including subkingdom, superdivision and superclass (as –mycetia). If these ranks are needed then, for consistency, I suggest that Moore (1974) is followed, as has generally been the case, and the ending –mycetia is adopted for the subkingdom.

The question of standard endings was discussed at the St. Louis Congress and the proposal (Prop. 25) by Reveal (1998) has been referred to the Special Committee on Suprageneric Names. Article 16.3, added in the St. Louis Code (Greuter et al., 2000), makes names of higher taxa with non–Latin terminations invalid; those with incorrect endings are to be treated as orthographic errors and corrected.

A further problem arises when there is a discrepancy between the ending given and the stated rank of the taxon. It is not clear from the ICBN which takes precedence. Current practice seems to favour the ending, with the stated rank being regarded as less important. However, under the Code the rank given by the author must be accepted whereas the ending is correctable as an orthographic error, as long as it is Latin in form.

A more abstruse question is the gender of endings. All taxa above the rank of family are plural and most are adjectives which agree with the kingdom in which the taxon is included. For further information on the implications of this see note (1) at the end of this paper.

Art. 16, Note 2 is also significant: The principle of priority is not mandatory for names of taxa above the rank of family. However, Reveal (1998) proposed (Prop. 26) that, “in choosing among typified names for a taxon above the rank of family, authors should generally follow the principle of priority.” There are problems with a strict application of priority at higher taxon level and this proposal should, at best, be seen as a recommendation of good practice. The St. Louis Congress referred it to the Special Committee on Suprageneric Names.

- c. accompanied by a description or diagnosis or by a reference to a previously .. published description or diagnosis; For higher taxa this is a requirement that is commonly lacking since many such names are introduced in tables of classification without explanation.
- d. comply with the special provisions of Art. 33–45; Those that apply to higher taxa are – Art. 35 (need to state the rank of the name, after 1 Jan. 1953), Art. 36 (need a Latin diagnosis, after 1 Jan. 1935) and Art 45 (date of publication of a name is that when the last condition for valid publication is fulfilled). Recently it has become more common for new taxa to be introduced with a brief Latin diagnosis but Cavalier–Smith (1998) has taken it to an extreme by providing Latin diagnoses of only a few words. While such brevity is not ruled out by the ICBN, it remains to be seen if this is acceptable to the botanical or mycological community.

Reveal (1998) has proposed (Prop. 31) an amendment to Art. 41.1 to cover the requirements for valid publication of names above the rank of family but this was not included in the St. Louis Code (Greuter et al., 2000) but has been referred to the Special Committee for Suprageneric Names.

One further question is the treatment of ambireginal groups: those taxa that can be considered under both the ICZN and the ICBN. This affects groups traditionally included among the fungi but now known to belong in the protozoa. In such cases, if the taxon is described under the ICZN, its validity dates from the point at which it fulfils the requirements of the ICBN (Art. 45.4). Typically this means that a Latin diagnosis is provided. The alteration of zoological endings to the corresponding botanical ending can be considered as an orthographic correction.

- 2. Higher taxa above the rank of family are typified by names that are ultimately based on generic names (Art. 7.1). Arts. 10.7 and 16.1 explicitly state that all taxa at the rank of family or above whose names are formed from generic names are typified by those genera. Silva (1980) also states that descriptive names (ones not ultimately based on generic names) do not have types. This is not apparent in the Tokyo Code (Greuter et al., 1994) where descriptive names are not mentioned. Traub (1971) believed that the earlier custom of not typifying names of taxa above the rank of family was logical as long as the features on which the ranks were based were obscure. However in his his publication he regarded the nomenclatural type of a phylum or any taxon between phylum and family is a family, that of a kingdom or any taxon between kingdom and phylum is a phylum.
- 3. Changing ranks. The practice has grown up of citing a ‘basionym’ where relevant when changing the rank of a suprafamilial taxon. This is not explicitly endorsed by the ICBN. Indeed the rapporteurs to the St. Louis Congress (see Taxon 48: 113, 1999), in discussing Reveal’s proposal to add this principle to the *Code* as an amendment to Art. 49, state that the practice has varied depending upon whether suprageneric names are to be treated as potential basionyms or as potential replaced synonyms. This, too, remains to be resolved. It also needs to be decided if a family can be elevated to a class or phylum in one step or if new diagnoses should be required for critical ranks and that status novi should only be proposed within certain rank–groups.

FORMAT OF ENTRIES

Each name is followed by the rank at which it has been published with a bibliographic reference to either (1) the earliest valid publication of the name or (2) the earliest invalid publication of the name if there is no valid publication. Within square brackets are comments on orthography, typification (**T.:**) and whether a description (**no descr.**) or a Latin diagnosis (**no Lat. diagn.**) are provided. Also given are references to earlier invalid publications if relevant or the historical origin of a particular name. The type genus has been given for those names clearly based on a genus, even though a type may not

have been mentioned in the cited publication. For higher taxa with descriptive names published after 1958 I have marked the type as 'not designated'. Author name abbreviations follow those given in Kirk and Ansell (1992). Journal titles are abbreviated (where possible) according to the World List and book titles follow the shortened (but not abbreviated) titles in Taxonomic Literature.

Entries in **bold** are those which meet the criteria for valid publication under the ICBN. Entries not emboldened fail in one way or many to meet the requirements for valid publication. It is not intended to recommend that these names are not used or should necessarily be validated but to demonstrate the implications of a strict application of the ICBN to higher taxa.

CONSPECTUS TAXORUM SUPRAORDINALIUM FUNGORUM (SENSU LATO)

Acrasiomycetidae, as subclass: *L.S. Olive, Bot. Rev. 36: 74, 1970.*

[As 'Acrasia'. No Lat. diagn. T. *Acrasis*]

Acrasiogymnomycotina, as subdivision: *Alexop. & Mims, Introductory Mycology, ed. 3: 38, 1979.*

[No Lat. diagn. T.: *Acrasis*]

Acrasiomycetes, as class: *Engl., Syllabus der Pflanzenfamilien, ed. 1: 1, 1892.*

[As 'Klasse Acrasieae'. T.: *Acrasis*. The account by Schröter gives the rank on p.2, this was published in June 1889. The correct spelling first given by Arx, J.A. von, *Genera of Fungi sporulating in pure culture: 6, 1970*. See also Traub, H.P., *Plant Life 18(suppl.): 40, 1962*, as class *Acrasimycetes*.]

Acrasiomycota, as phylum: *R.H. Whittaker, Science 163: 155, 10 Jan. 1969*

[No Lat. diagn. T.: *Acrasis*. Introduced as 'New designation at phylum level', p. 159, note 85.]

Acrasiophyta, as phylum: *K.R. Boedijn, The Lower Plants [Lagere Planten], Engl. Ed.: 84, 1968.*

[No Lat. diagn. T.: *Acrasis*]

Acromycotina, as subdivision: *Locq., De Taxia Fungorum: 7, 1974.*

[No dscr. T.: not designated]

Acroxiomycetes, as class: *Locq., Mycologie Générale et Structurale: 194, 1984.*

[No lat. diagn. T.: not designated]

Adelomycetes, as class: *Langeron, Précis de Mycologie: 32, 1945.*

[as 'Adélomycètes' No Lat. diagn. Term originally introduced by Mangin and Vincens, *Bull. Soc. mycol. Fr. 36: 89–97, 1920.*]

Adelomycotina, as subdivision: *Locq., Mycologie Générale et Structurale: 69, 1984.*

[As '(Langeron) Lq.'. No Lat. diagn. T.: not designated]

Aecidiomycetes, ? rank: *Sachs, Lehrbuch der Botanik, ed. 4: , 1874.*

[As 'Aecidiomyceten'. T.: *Aecidium*. Ending corrected by McNabb, *J. Bot. 15: 341, 1877*, no dscr., as Order; also given by Luersson, *Medicinisch–Pharmaceutische Botanik 1: 236, 1879*, no dscr., as Unter–ordnung.]

Agaricomycetidae, as subclass: *Parmasto, Windahlia 16: 16, 1986.*

[As '(Fr.) Parm. comb. nova'. T.: *Agaricus*. Based on *Agaricini Fr., Epicrisis: 2 (1838)*, see also *Locq., ycologie Générale et Structurale: 97, 1984*; as '(Gray) Lq.', no Lat. diagn.]

Agonomycetes, as class: *Ainsw., Bibliography of Systematic Mycology 4: 3, 1966.*

[No dscr. T.: not designated. See Moore, R.T., In: *Hawksworth (ed.), The Identification and Characterization of Pest Organisms: 250, 1994.*]

Allochronomycetidae, as subclass: *R.T. Moore, Botanica mar. 23: 371, 1980.*

[T.: not designated]

Allomyces, as class: *Cavalier–Smith, Biol. Rev. 73: 246, 1998.*

[T.: *Allomyces*. See also Cavalier–Smith In: *Rayner, Brasier, and Moore (eds.), Evolutionary biology of the fungi, BMS Symposium – April 1986: 340, 1987*, no Lat. diagn. See note 2 for comment on orthography]

Allomycota, as phylum: *Cavalier–Smith, BioSystems 14: 465, 1981.*

[No Lat. diagn. T.: *Allomyces*]

Allomycotina, as infraphylum: *Cavalier–Smith, Biol. Rev. 73: 246, 1998.*

[T.: *Allomyces*]

Amastigomycota, as division: Alexop. & Mims, *Introductory Mycology*, ed. 3: 39, 1979.

[No Lat. diagn. T.: not designated]

Amastigomycota, as subphylum: L.S. Olive, *The Mycetozoans*: 4, 1975.

[No Lat. diagn. T.: not designated. Based on “branch Amastigomycota” in Whittaker, *Science* 163: 155, 1969, with descr., no Lat. diagn. This in turn is based on ‘sous-embanchement des Amastigomycètes’ in Moreau, *Les Champignons* 2: 962, 1954, [see note 8](#)]

Amoebidiomycetes, as class: Locq., *Mycologie Générale et Structurale*: 81, 1984.

[No Lat. diagn. T.: *Amoebidium*]

Angiomycetes, as class: Locq., *De Taxia Fungorum*: 7, 1974.

[No descr. T.: not designated]

Anellascmycetes, as class: Locq., *Mycologie Générale et Structurale*: 156, 1984.

[No Lat. diagn. T.: not designated]

Anoteromycetidae, as subclass: M.E. Barr, *Mem. N.Y. bot. Gdn* 28: 5, 1976.

[No Lat. diagn. T.: not designated]

Archemycota, as phylum: Cavalier-Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated. See also Cavalier-Smith in Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987. No Lat. diagn.]

Archiascomycetes, as class: ?

[T.: not designated. First proposed as a ‘major new lineage in the Ascomycota’ by Nishida and Sugiyama (*Mycoscience* 35: 363, 1994) but without any definite statement of rank or a description. Subsequently used in Alexopoulos et al., *Introductory Mycology*, ed. 4 (1996) — but no actual rank is given there, only a reference to its suggested class status — and cited in papers (e.g., Sjamsuridzal et al., *Mycoscience* 38: 267–280, 1997) at class level.]

Archimycetes, as ‘reihe’: A. Fischer, *Rabenhorst's Kryptogamen-Flora*, ed. 2, 1(4): 11, 1892.

[Used at class level by Schaffner, *Ohio Nat.* 9: 447, 449, 1909 (as ‘Archimyetae’); see also Copeland, *Amer. Nat.* 81: 357, 1947, attributed to Fischer, no Lat. or type; see also Gäumann, E., *Die Pilze*: 13, 1949]

Arthoniomycetes, as class: O.E. Erikss. & Winka, *Myconet* 1(1): 4, 1997.

[T.: *Arthonia*]

Ascoblastomycetes, as class: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. Term first proposed by Moore, R.T., *Mycologia* 70: 1019, 1978, without descr.]

Ascohymeniales, ?rank: Nannf., *Nova Acta Soc. Sci. upsal.*, ser. IV, 8(2): 27, 1932.

Ascolichenes, as subclass: Zahlbr., In: Engler, *Syllabus der Pflanzenfamilien*, ed.3: 38, 1903.

Ascolichenes, as class: Mattick, In: Engler's *Syllabus der Pflanzenfamilien*, ed. 12, vol. 1: 209, 1954.

[No Lat. diagn.]

Ascoloculares, ?rank: Nannf., *Nova Acta Soc. Sci. upsal.*, ser. IV, 8(2): 27, 1932.

Ascomycetes, as class: G. Winter, *Rabenhorst's Kryptogamen-Flora*, ed. 2, 1(1): 32, 1881.

[For details on the author citation [see note 3](#)]

Ascomycetia, as subkingdom: R.T. Moore, In: Hawksworth (ed.), *The Identification and Characterization of Pest Organisms*: 250, 1994.

[No descr. T.: not designated]

Ascomycetidae, as subclass: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 27, 1892.

Ascomycota, as phylum: R.H. Whittaker, *Quart. Rev. Biol.* 34: 220, 1959.

[As ‘Ascomycetes’. No descr. T.: not designated. See also Whittaker, *Science* 163: 155, 1969, as ‘Ascomycota’ with ref. to Bold, *Morphology of Plants* (Harper, New York) 1957, as division; and M.E. Barr (*Mycologia* 75: 9, 1983). Introduced by Cavalier-Smith, *Biol. Rev.* 73: 247, 1998 as ‘Berkeley 1857 stat. nov.’, two word Lat. diagn. provided.]

Ascomycotera, as superdivision: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated]

Ascomycotina, as subphylum: Ainsw., *Bibliography of Systematic Mycology* 4: 2, 1966.

[No descr. T.: not designated. Subsequently given with English description by Ainsworth in Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 5: 218, 1971]

Ascosphaeromycetes, as class: M.E. Barr, *Mycologia* 75: 3,9, 1983.

[No Lat. diagn. T.: *Ascosphaera*]

Ascosporomycetes, as class: Bessey, *Univ. Stud. Neb.* 7: 295, 1907.

[As 'Ascosporeae'; This name may be based on Ordo Ascosporeae introduced by F. Cohn, *Hedwigia* 1872 (pt.2): 17, 1872]

Asporomycetes, as class: Locq., *Mycologie Générale et Structurale*: 195, 1984.

[No Lat. diagn. T.: not designated. As 'Marchand, 1896', but the term goes back to Wallroth, *Flora cryptogamica Germaniae*: xiii, 1833, 'as Ordo']

Asterophoromycetes, as class: Locq., *De Taxia Fungorum*: 7, 1974.

[No dscr. T.: not designated]

Autobasidiomycetes, ?subclass: Brefeld, *Untersuchungen aus dem Gesamtgebiete der Mykologie* 7: 25, 1888.

[As 'Hauptabtheilung Autobasidiomyceten']

Aurediomycetidae, as subclass: R.T. Moore, In: Perez–Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971.

[No dscr. T.: not designated]

Auriculariomycetidae, as subclass: Jülich, *Bibl. Mycol.* 85: 50, 1981.

[T.: *Auricularia*]

Auriculariomycetes, as class: R.T. Moore, In: Sneh et al. (eds.), *Rhizoctonia species: Taxonomy, Molecular Biology, Ecology, Pathology and Disease Control*: 19, 1996.

[As '(Jülich) R.T. Moore comb. nov.' T.: *Auricularia*. Based on *Auriculariomycetidae* Jülich (1981), see also *Auriculariei* Schröter (1885), as 'ordnung' but co-ordinate with other recognized classes. Term derived from Tulasne, *Ann. Sci. nat. Bot.* 15: 12, 1872.]

Auromycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[T.: *Auricularia*. ?Nom. superfl., homotypic synonym of *Auriculariomycetidae* Jülich]

Ballistoblastomycetes, as class: Locq., *Mycologie Générale et Structurale*: 89, 1984.

[No Lat. diagn. T.: not designated]

Ballistomycotina: as subdivision: Locq., *Mycologie Générale et Structurale*: 68, 1984.

[No Lat. diagn. T.: not designated]

Basauxarthromycetes, as class: Locq., *Mycologie Générale et Structurale*: 194, 1984.

[No Lat. diagn. T.: not designated]

Basidioblastomycetes, as class: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated]

Basidiolichenes, as class: Mattick, In: Engler's *Syllabus der Pflanzenfamilien*, ed. 12, vol. 1: 217, 1954.

[No Lat. diagn.]

Basidiomycetes, as class: G. Winter, *Rabenhorst's Kryptogamen–Flora*, ed. 2, 1(1): 32, 1881.

[The origin of the term *Basidiomycetes* can be traced back to de Bary (1862: 724, Lat. diagn. but no rank). Copeland (1956: 142) and Kreisel (1969: 135) attribute this name to Sachs (*Lehrbuch der Botanik*, ed. 4: 249, 1874) where the name is given as 'Basidiomyceten' without rank. This then is given the correct ending in the English edition (Bennett and Thistleton–Dyer, 1875) and definitively stated to be at the rank of class by Winter (1881). This is given by Copeland as "(Sachs ex Bennett & Thistleton–Dyer) Winter" and by Kreisel as "Sachs ex Winter".]

Basidiomycetia, as subkingdom: R.T. Moore, In: Hawksworth (ed.), *The Identification and Characterization of Pest Organisms*: 250, 1994.

[No dscr. T.: not designated]

Basidiomycetidae, as subclass: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 36, 1892.

Basidiomycota, as phylum: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. First proposed at this rank by Whittaker, *Quart. Rev. Biol.* 34: 220, 1959. (as 'Basidiomycetes', No dscr.); see also Whittaker, *Science* 163: 155, 1969, with ref. to Bold, *Morphology of Plants* (Harper, New York) 1957, as division. Cited by Cavalier–Smith, *Biol. Rev.* 73: 248, 1998 as 'de Bary 1866 em. auct. stat. nov. Moore 1980']

Basidiomycotera, as superdivision: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated]

Basidiomycotina, as subdivision: Ainsw., *Bibliography of Systematic Mycology* 4: 2, 1966.

[No descr. T.: not designated. Subsequently given with English diagnosis by Ainsworth in Ainsworth & Bisby's Dictionary of the Fungi, ed. 5: 218, 1971]

Basidiosporomycetes, as class: Bessey, *Univ. Stud. Neb.* 7: 305, 306, 1907.

[As 'Basidiosporeae'; This name may be based on Ordo Basidiosporeae introduced by F. Cohn, *Hedwigia* 1872 (pt.2): 17, 1872 or even refer back to 'Division' Basidiosporés in Lévillé, *Considérations mycologiques*: 105, 1846]

Blastocladiomycota, as division: Tehler, *Cladistics* 8: 236, 1988.

[No Lat. diagn. T.: ?*Blastocladia*]

Blastomycetes, as ?class: Brefeld, *Untersuchungen aus dem Gesamtgebiete der Mykologie* 3: 205, 1877.

[As 'Abtheilung Blastomyceten']

Blastomycota, as division: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. Term first used by Moore, R.T., *Mycologia* 70: 1019, 1978, without descr. and as 'form-division']

Boletomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 96, 1984.

[As '(Gray) Lq.' No Lat. diagn. T.: *Boletus*]

Bolomycetes, as class: Cavalier-Smith, *Biol. Rev.* 73: 246, 1998.

[T. *Basidiobolus*, as 'Basidiobolales ordo nov.']

Brachybasidiomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 91, 1984.

[No Lat. diagn. T.: *Brachybasidium*]

Cacumisporomycetidae, as subclass: Locq., *De Taxia Fungorum*: 7, 1974.

[No descr. T.: not designated]

Caliciomazaediomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 175, 1984.

[No Lat. diagn. T.: *Calicium*]

Calycomycetidae, as subclass: Cavalier-Smith, *Biol. Rev.* 73: 247, 1998.

[No Lat. diagn. T.: not designated. Taxon based on *Calicium* and *Coniocybe*]

Cantharellomycetes, as class: Parmasto, *Windahlia* 16: 17, 1986.

[T.: *Cantharellus*]

Cantharellomycetidae, as subclass: Parmasto, *Windahlia* 16: 12, 1986.

[No descr. T.: *Cantharellus*]

Capillimazaediomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 175, 1984.

[No Lat. diagn. T.: *Elaphomyces*]

Carpواسcomycetes, as class: Wehmeyer, *Mycol. Mem.* 6: 9, 26, 1975.

[Rank not entirely certain, on p. 26 given as 'divisional name'. No Lat. diagn. T.: not designated]

Carpomycetes, as phylum: Bessey, *Univ. Stud. Neb.* 7: 249, 1907.

[As 'Carpomyceteae']

Ceratiomyxomycetes, as class: D. Hawksw. et al., In: Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 7: 257, 1983.

[No Lat. diagn. T.: *Ceratiomyxa*. Also used by Kreisel (1988)]

Ceratiomyxomycetidae, as subclass: G.W. Martin, In: Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 5: 497, 1961.

[No Lat. diagn. T.: *Ceratiomyxa*. Farr, In: Martin, Alexopoulos, and Farr, *The Genera of Myxomycetes*: 38 (1983) states that the publication of the name by Martin (1961) is invalid (no reason given) and attribute the place of publication to Martin and Alexopoulos, *The Myxomycetes*: 32 (1969). The latter publication adds nothing nomenclaturally to that provided in 1961. In neither case is a Latin diagnosis provided]

Chaetothyriomycetes, as class: O.E. Erikss. & Winka, *Myconet* 1(1): 5, 1997.

[T.: *Chaetothyrium*]

Chiastrophragmobasidiomycetidae, as subclass: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T. not designated. Term first used by Moore, R.T., *Mycologia* 70: 1019, 1978, without descr.]

Chondrogastromycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 96, 1984.

[No Lat. diagn. T.: *Chondrogaster*]

Chromista, as kingdom: Cavalier–Smith, *BioSystems* 14: 478, 1981.

[T.: not designated. See note 4]

Chytridiomycetes, as class: Cejp, *Houby* 1: 64, 1957.

[As ‘tYída’ (= Class). No Lat. diagn. T.: *Chytridium*. See also Sparrow, F.K., *Mycologia* 50: 811, 1958, without recognized rank (as ‘galaxy’) but subsequently given by Alexopoulos, *Introductory Mycology*, ed. 2: 35, 1962, with rank and description and referring back to Sparrow’s galaxies. Concept based on de Bary and Woronin, *Ber. Verh. Nat. Ges. Freib.* 3(2), 1863 where they introduce the family ‘Chytridieen’ later used by de Bary, *Vergleichende Morphologie und Biologie der Pilze, Mycetozoen und Bacterien* (1884) as a rankless taxon ‘Chytridieae’ and cited by Cavalier–Smith (1998) as the basis of his class Chytridiomycetes, where he provides a Latin diagnosis. For comment on the correct orthography of this name see note 5]

Chytridiomycetidae, as subclass: Scigel *et al.*, *An Evolutionary Survey of the Plant Kingdom*: 34, 1965.

[No Lat. diagn. T.: *Chytridium*]

Chytridiomycota, as phylum: Arx, *Pilzkunde*: 15, 1967.

[No Lat. diagn. T.: *Chytridium*]

Chytridiomycotina, as subphylum: Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, *BMS Symposium – April 1986*: 340, 1987.

[As ‘Chytriomycotina’. No descr. T.: *Chytridium*. For comment on the correct orthography of this name see note 5]

Ciliofungi, as kingdom: Cavalier–Smith, *BioSystems* 14: 465, 1981.

[No Lat. diagn. T.: not designated. Apparently based on Leedale’s informal kingdom ‘Chytrids’, see Leedale, *Taxon* 23: 269, 1974]

Cladomycotina, as subdivision: Locq., *De Taxia Fungorum*: 7, 1974.

[No descr. T.: not designated]

Clavariomycetes, as class: R.T. Moore, In: Sneh *et al.* (eds.), *Rhizoctonia species: Taxonomy, Molecular Biology, Ecology, Pathology and Disease Control*: 18, 1996.

[No Lat. diagn. T.: *Clavaria*]

Clavomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[As ‘Fries 1821 stat. nov.’ No Lat. diagn. T.: not designated, ?*Clavaria*. Based on ‘Ordo Clavati’ Fr., *Systema Mycologicum* 1: 2, 461, 1821]

Clinomycetes, as class: Locq., *De Taxia Fungorum*: 7, 1974.

[No descr. T.: not designated. Possibly based on ‘Division’ Clinosporés Lév., *Considérations Mycologiques*: 121, 1846]

Coelomycetes, as class: Grove, *British Stem– and Leaf–Fungi (Coelomycetes)*, vol. 1: xiii, 1935.

[No Lat. Diagn. The term was first used by Grove in *Kew Bull.* 1917: 51, Aug. 1917 and *J. Bot., Lond.* 56: 287, 1918 but in both places there was no description or rank given]

Communomycota, as phylum: Traub, *Plant Life* 27: 143, 1971.

[T.: *Sappinia*]

Conidimycota, as subphylum [? *Conidimycotina*]: Traub, *Plant Life* 27: 144, 1971.

[No Lat. diagn. T.: not designated]

Coniomycetes, as class: Fr., *Systema Mycologicum* 1: xxxvii, 1821.

[Term originally coined by Martius, *Flora cryptogamica erlangensis*: liii, 1817]

Corticomycetes, as class: Parmasto, *Windahlia* 16: 17, 1986.

[T.: *Corticium*]

Corticomycetidae, as subclass: Parmasto, *Windahlia* 16: 12, 1986.

[No descr. T.: *Corticium*]

Cortinariomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 97, 1984.

[As ‘(Gray) Lq.’ No Lat. diagn. T.: *Cortinarius*]

Dacrymycetidae, as subclass: Jülich, *Bibl. Mycol.* 85: 55, 1981.

[Lat. diagn. T.: *Dacrymyces*. Loquin (1984) attributes the name as ‘(Feltgen) Loquin’. Also introduced by Cavalier–Smith, *Biol. Rev.* 73: 248, 1998 as ‘subcl. nov.’]

- Dangeardiomycota*, as phylum: Moreau, *Les Champignons* 2: 2037, 1954.
[As 'Phylum des Dangeardiomycètes'. No Lat. diagn.]
- Dendromycetidae*, as subclass: Cavalier-Smith, *Biol. Rev.* 73: 248, 1998.
[No Lat. diagn. T.: not designated]
- Deuterobasidiomycetidae*, as subclass: Locq., *De Taxia Fungorum*: 19, 1974.
[No descr. T.: not designated]
- Deuterocladomycetes*, as class: Locq., *De Taxia Fungorum*: 7, 1974.
[No descr. T.: not designated, as 'Gloeohaustoriales Heim']
- Deuterolichenes*, as ?class: H. Gams, *Kleine Kryptogamenflora*: 13, 1966.
[No Lat. diagn. T.: not designated]
- Deuterolichenes***, as subclass: Mameli-Calvino, *Nuovo G. bot. ital.* 37: 369–379, 1930.
[T.: *Chlorocyphella*]
- Deuteromycetes*, as class: Sacc., *Sylloge Fungorum* 14: 3, 4, 1899.
[As 'cohors'. No descr. Saccardo states, "seu Fungi secundarii v. inferiores" and the name is subsequently used by him without further diagnosis. Similarly used at an unspecified supraordinal rank by Clements and Shear, *Genera of Fungi*, ed. 2 (1931)]
- Deuteromycota***, as phylum: R.T. Moore, In: Perez-Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971.
[As 'form-division. T.: not designated. See also Moore, R.T., *Botanica mar.* 23: 371, 1980]
- Deuteromycotera***, as superphylum: R.T. Moore, *Botanica mar.* 23: 371, 1980.
[As 'superdivision'. T.: not designated. Term first used by Moore, R.T., *Mycologia* 70: 1019, 1978, without descr.]
- Deuteromycotina*, as subphylum: Ainsw., *Bibliography of Systematic Mycology* 4: 3, 1966.
[No descr. T.: not designated. See also Talbot, P.H.B. *Principles of Fungal Taxonomy*: 133, 1971]
- Deuteromyxomycetidae*, as subclass: Locq., *De Taxia Fungorum*: 13, 1974.
[No descr. T.: *Reticulomyxa* (Ord. *Reticulomyxales*)]
- Dicaryomycota*, as phylum: W.B. Kendr., *The fifth kingdom*: 33, 1985.
[No Lat. diagn. T.: not designated]
- Dicaryomycotera*, as superphylum: M.E. Barr, *Mycologia* 75: 3, 9, 1983.
[No Lat. diagn. T.: not designated]
- Dicaryomycotina*, as subphylum: Tehler, *Cladistics* 8: 236, 1988.
[No Lat. diagn. T.: not designated]
- Dictyosteliomycetidae*, as subclass: L.S. Olive, *Bot. Rev.* 36: 70, 1970.
[As 'Dictyostelia' No Lat. diagn. T.: *Dictyostelium*. Botanically correct orthography given by Alexopoulos and Mims, *Introductory Mycology*, ed. 3 (1979: 53)]
- Dictyosteliomycotina*, as subphylum: Cavalier-Smith, *Microbiol. Rev.* 57: 971, 1993.
[As 'Dictyostelia' No Lat. diagn. T.: *Dictyostelium*. Given by Cavalier-Smith as 'Lister, 1909 stat. nov.'. This is a reference to Lister, J.J. *Mycetozoa in Lankester* (ed.), *Treatise of Zoology* — vol. 1 (Protozoa), Part 1: 65, 1909; but here the taxon is given as "Order Dictyosteliaceae". Since no families are listed below it is assumed that Lister is using order in the sense of 'Natural Order', that is equivalent to a family. The ending given would seem to confirm this. However, this is not the earliest use of the family name which dates back to 1877. The earliest use of the name at ordinal rank is that of L.S. Olive, *Bot. Rev.* 36: 70, 1970]
- Dictyosteliomychia*, as superclass: Cavalier-Smith, *Biol. Rev.* 73: 232, 1998.
[As 'Dictyostelia'. As 'stat. nov.' T.: *Dictyostelium*]
- Dictyosteliomycetes*, as class: Hawksworth et al., In: Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 7: 121, 1983.
[No Lat. diagn. T.: *Dictyostelium*]
- Dictyosteliomycota*, as phylum: Hawksworth et al., In: Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 8: 132, 1995.
[No Lat. diagn. T.: *Dictyostelium*]
- Dictyomycotina***, as subphylum: Cavalier-Smith, *Biol. Rev.* 73: 246, 1998.
[T.: not designated]
- Dimastigomycota*, as phylum: Moreau, *Les Champignons* 2: 2033, 1954.
[As 'Dimastigomycètes'. No Lat. diagn. T.: not designated]

Dimastigomycota, as subkingdom: R.H. Whittaker, *Science* 163: 155, 1969.

[No Lat. diagn. T.: not designated, as 'Phylum Oomycota'. Based on Phylum Dimastigomycota Moreau]

Diplomastigomycotina, as subphylum: Alexop. & Mims, *Introductory Mycology*, ed. 3: 38, 1979.

[No Lat. diagn. T.: not designated, as 'Class Oomycetes']

Dipodascomycotina, as subphylum: Tehler, *Cladistics* 8: 236, 1988.

[No Lat. diagn. T.: *Dipodascus*]

Dipodasopsidomycotina, as subphylum: Tehler, *Cladistics* 8: 236, 1988.

[No Lat. diagn. T.: *Dipodascopsis*]

Dipomycetidae, as subclass: Cavalier-Smith, *Biol. Rev.* 73: 247, 1998.

[No Lat. diagn. T.: *Dipodascopsis*]

Discolichenes, as subclass: H. Gams, *Kleine Kryptogamenflora*: 15, 1966.

[No Lat. diagn. T.: not designated]

Discomycetes, as class: Ainsw., *Bibliography of Systematic Mycology* 4: 3, 1966.

[No dscr. T.: not designated. See also Ainsworth, In: Ainsworth et al. (eds.), *The Fungi: An Advanced Treatise*. IVA: 6, 1973. Introduced by Cavalier-Smith, *Biol. Rev.* 73: 247, 1998 as 'Fries 1836 stat. nov.' at class rank. Saccardo, *Syll. fung.* 8: 3, 1889, attributes the name to Fries, *Epicrisis*: 1, 1836. Inspection of IMI's copy failed to show this to be the case. However, Fries does introduce the name in *Summa vegetabilium Scandinaviae*: 343, 1849, as 'family' but this is being used at the same rank as Hymenomycetes etc. Saccardo's usage (l.c.: xiv) does not specify the rank. See also Saccardo, *Bot. Zbl.* 18: 213 (1884) where the name is given as 'Discomyceteae Fr.' Without rank.]

Discomycetidae, as subclass: J.H. Mil., *Mycologia* 41: 124, 1949.

[No Lat. diagn. See also Moore, R.T., In: Perez-Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971; no Lat. diagn. T.: not designated; and Locq., *Mycologie Générale et Structurale*: 161, 1984; as '(Fries) Lq.']

Dothideomycetes, as class: O.E. Erikss. & Winka, *Myconet* 1(1): 5, 1997.

[T.: *Dothidea*]

Elaphomycetidae, as subclass: M.E. Barr, *Mem. N.Y. bot. Gdn* 28: 6, 1976.

[No Lat. diagn. T.: *Elaphomyces*]

Endarthromycetes, as class: Locq., *Mycologie Générale et Structurale*: 194, 1984.

[No Lat. diagn. T.: not designated]

Endogasteromycetidae, as subclass: Pilát, *Gasteromycetes. Flora SR* 1: 703, 1958.

[T.: not designated]

Endoidiomycetes, as class: Locq., *Mycologie Générale et Structurale*: 194, 1984.

[No Lat. diagn. T.: not designated]

Endomycetes, as class: Cavalier-Smith, *Biol. Rev.* 73: 247, 1998.

[As 'cl. nov.' with reference to Arx (1967). T.: not designated. See Arx, *Pilzkunde*: 18, 69 (1967), no Lat. diagn.]

Endomycetidae, as subclass: Locq., *De Taxia Fungorum*: 7, 1974.

[No dscr. T.: not designated, as 'Endomycetales']

Endomycota, as phylum: M.E. Barr, *Mycologia* 75: 3, 8, 1983.

[No Lat. diagn. T.: not designated. Also proposed as 'divisio nova' by Cavalier-Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987]

Enteroblastomycetes, as class: Locq., *Mycologie Générale et Structurale*: 195, 1984.

[No Lat. diagn. T.: not designated]

Enteromycetes, as class: Cavalier-Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Entomycetidae, as subclass: Cavalier-Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Entorrhizomycetidae, as subclass: R. Bauer, Oberw., & Vánky, *Can. J. Bot.* 75: 1311, 1997.

[T.: *Entorrhiza*]

Eomycota, as subkingdom: Cavalier-Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Eozygomycetia, as superclass: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Epimycotina, as subdivision: Locq., *De Taxia Fungorum*: 6, 1974.

[No descr. T.: not designated]

Epitheliomazaediomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 175, 1984.

[No Lat. diagn. T.: not designated]

Euascomycota, as phylum: R.T. Moore, *Mycologia* 70: 1019, 1978.

[No Lat. diagn. T.: not designated]

Euascomycotina, as subphylum: Cavalier–Smith, *Biol. Rev.* 73: 247, 1998.

[as ‘Engler 1897 stat. nov.’ T.: not designated. See also Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987. No descr.]

Euascomycetes, as class: Engl., *Syllabus der Pflanzenfamilien*, ed. 3: 28, 1903.

[See also Wehmeyer, *Mycol. Mem.* 6: 10, 101, 1975 (rank not clearly stated)]

Euascomycetidae, as subclass: Engl., In: Engler and Prantl, *Die natürlichen Pflanzenfamilien I(1)*: iv, 1897.

[As ‘Euasci’, see also Schröter, *ibid.*: 62, 1892 and *ibid.*: 142, 1894, as ‘Euasceae’ without stated rank. Correct orthography given by Melchior & Werdermann in Engler’s *Syllabus der Pflanzenfamilien*, ed. 12, vol. 1: 150 (1954)]

Eubasidiomycetidae, as subclass: Engl., In: Engler and Prantl, *Die natürlichen Pflanzenfamilien I(1**)*: iii, 1900

[As ‘Eubasidii’, see also Dietel, *ibid.*: 2, 1897, without stated rank and Schröter, In: Engler and Prantl, *Die natürlichen Pflanzenfamilien I(1)*: 62, 1892, without rank or descr.]

Eufungi, as kingdom: Cavalier–Smith, *BioSystems* 14: 463, 1981.

[No Lat. diagn. T.: not designated]

Eumycetes, as phylum: Schröter, In: Cohn, *Kryptogamen–Flora von Schlesien 3(1)*: 175, 1886.

[As ‘Abteilung’]

Eumycetozoa, as class: L.S. Olive, *The Mycetozoans*: 4, 1975.

[No Lat. diagn. T. not designated]

Eumycophyta, as phylum: Tippon, *Chron. Bot.* 7: 205, 1942.

[No descr.]

Eumycota, as kingdom: D.J.S. Barr, *Mycologia* 84: 8, 1992.

[No descr. T.: not designated. Proposed as an alternative name as the term ‘Fungi’ has been applied to what is now understood to be a polyphyletic assemblage]

Eumycota, as subkingdom: R.H. Whittaker, *Quart. Rev. Biol.* 34: 220, 1959.

[No descr. T.: not designated. See also Whittaker, *Science* 163: 155, 1969, no Lat. diagn. and Tehler, *Cladistics* 8: 236, 1988, no Lat. diagn.]

Eumycotae, as infrakingdom: Traub, *Plant Life* 27: 144, 1971.

[T.: not designated, as ‘Phylum Eumycota’ (attributed to Engler)]

Eumycota, as phylum: Traub, *Plant Life 18(suppl.)*: 40, 1962.

[T.: not designated. See also Ainsworth, C.G. (1966). *General Purpose Classification in Bibliography of Systematic Mycology* 4: 2, no descr.; subsequently given with diagnosis by Ainsworth, In: Ainsworth & Bisby’s *Dictionary of the Fungi*, ed. 5: 218 (1971)]

Eumycotina, as subphylum: G.W. Martin, In: Ainsworth & Bisby’s *Dictionary of the Fungi*, ed. 5: 497, 1961.

[No Lat. diagn. T.: not designated. See also Alexopoulos, C.J., *Introductory Mycology*, ed. 2: 35, 1962. Cejp, K. *Houby* I: 48, 1957, uses the term *Eumycophytina*, at the rank of podkmen (probably subdivision)]

Eumyxa, as subphylum: Cavalier–Smith, *Microbiol. Rev.* 57: 971, 1993.

[as ‘nomen novum pro Plasmodiogramnomycotina Martin, Alexop., & Farr 1983’. No Lat. diagn. T.: not designated]

Eumyxa, as superclass: Cavalier–Smith, *Biol. Rev.* 73: 232, 1998.

[Stat. nov. from Cavalier–Smith (1993)]

Euplasmodida, as subclass: J. Lister, In: Lankester (ed.), *A Treatise on Zoology, vol.1 (Protozoa), Part 1*: 61, 1909.

Eurotiomycetes, as class: O.E. Erikss. & Winka, *Myconet 1(1)*: 6, 1997.

[T.: *Eurotium*]

Eurotiomycetidae, as subclass: Tehler, *Cladistics* 8: 236, 1988.

[No Lat. diagn. T.: *Eurotium*]

Eusporomycetidae, as subclass: Traub, *Plant Life* 18(suppl.): 40, 1962.

[No dscr. T.: not designated]

Exidiomycetes, as class: R.T. Moore, In: Sneh et al. (eds.), *Rhizoctonia species: Taxonomy, Molecular Biology, Ecology, Pathology and Disease Control*: 20, 1996.

[No Lat. diagn. T.: *Exidia*]

Exobasidiomycetidae, as subclass: Jülich, *Bibl. Mycol.* 85: 55, 1981.

[T.: *Exobasidium*. See also Bauer, R., Oberwinkler, F and Vánky, K., *Can. J. Bot.* 75: 1311, 1997; as 'Jülich emend.']

Exogasteromycetidae, as subclass: Pilát, *Gasteromycetes. Flora SR 1*: 703, 1958.

[T.: not designated]

Exosporeae, as 'Cohors': Rostaf., *Versuch eines systems Mycetozen*: 2, 1873.

[T.: *Ceratiium* Alb. & Schwein. (= *Ceratiomyxa*). Stated to be at the rank of subclass by MacBride, *North American Slime-Moulds*: 18, 1922]

Exosporomycetes, as class: Locq., *De Taxia Fungorum*: 6, 1974.

[as '(Hinitikka) Loq.' No Lat. diagn. T.: not designated]

Exosporomycetidae, as subclass: Traub, *Plant Life* 18(suppl.): 40, 1962.

[As 'Exporomycetidae'. No dscr. T.: not designated, ? *Ceratiomyxa*]

Fayodiamycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 96, 1984.

[No Lat. diagn. T.: *Fayodia*, as 'Fayodiales']

Fungi, as Kingdom: R.H. Whittaker, *Quart. Rev. Biol.* 34: 220, 1959.

[No Lat. diagn. T.: not designated. See also Whittaker, *Science* 163: 155, 1969, provides a full English dscr. Bessey, *Morphology and Taxonomy of Fungi* (1950) notes that Martin, G.W. (*Bot. Gaz.* 93: 421-435, 1932) suggested that the Fungi represent a third kingdom although how definitely is uncertain]

Fungi, as subkingdom: R.T. Moore, In: Perez-Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971.

[No Lat. diagn. T.: not designated]

Fungi, as phylum: Melchior & Werdermann, In: Engler's *Syllabus der Pflanzenfamilien*, ed. 12, vol. 1: 138, 1954.

[As 'Abteilung'. No Lat. diagn.]

Fungi, as subphylum: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 23, 1892.

[As 'Unterabteilung']

Fungi, as class: Bartling, *Ordines Naturales Plantarum*: 4, 1830.

Fungi Inferior, as subkingdom: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. Term first used by Moore, R.T., *Mycologia* 70: 1019, 1978, without dscr. '= phycomycetes']

Fungi Superior, as subkingdom: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. Term first used by Moore, R.T., *Mycologia* 70: 1019, 1978, without dscr. '= septomycetes']

Futuromycetes, as class: Locq., *De Taxia Fungorum*: 7, 1974.

[No dscr. T.: not designated, as 'Amorphomycetales']

Gasterobasidiomycetidae, as subclass: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. Term first used by Moore, R.T., *Mycologia* 70: 1019, 1978, without dscr.]

Gasterolichenes, as subclass: Zahlbr., In: Engler and Prantl, *Die natürlichen Pflanzenfamilien I(1*)*: 49, 1907.

[Name not accepted by the author, see l.c. p. 239]

Gasteromycetes, as class: Fr., *Systema Mycologicum I*: xlviii, 1821.

[Based on Link, *Ges. naturf. Freunde Berlin Mag. neuesten Entdeck. Gesammten Naturk.* 3 (1809). Used by Fischer, *Die natürlichen Pflanzenfamilien*, ed. 2 (1933); Pilát, *Flora SR* (1958) and Moore, *Botanica mar.* 23: 371 (1980)]

Gasteromycetidae, as subclass: Kreisel, *Grundzüge eines natürlichen Systems der Pilze*: 148, 1969.

[No Lat. diagn. T.: not designated]

Gastromyxa, as subclass: Cavalier–Smith, *Microbiol. Rev.* 57: 971, 1993.

[as ‘nomen novum pro Myxogastromycetidae’]

Gautieramycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 96, 1984.

[No Lat. diagn. T.: *Gautieria*, as ‘Gauteriales’]

Gelimycetes, as class: Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987.

[No descr. T.: not designated. See also Cavalier–Smith, *Biol. Rev.* 73: 248, 1998; Lat. diagn., ref. to 1987 paper but no type]

Geomycetes, as class: Cavalier–Smith, *Biol. Rev.* 73: 247, 1998.

[T.: *Geosiphon*, as ‘Geosiphonales ord. nov.’]

Glomeromycetes, as class: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[As ‘Glomomycetes’ T.: *Glomus*. For comment on correct orthography of this name [see note 6](#)]

Glomeromycota, as phylum: C. Walker & Schüßler, In: Schüßler, Schwarzrott, and Walker, *Mycological Research* 105: 1416, 2001.

[T.: *Glomus*]

Gynomycetes, rank uncertain: de Bary, In: Streinz, *Nomenclator fungorum*: 723, 1862.

[Term first used by Link, *Species Plantarum*, ed. 4, t. VI, pars I: 4, 1824, as ‘Ordo’; also used by Fries, *Summa vegetabilium Scandinaviae*: 461, 1849, as ‘fam.’]

Gynomycota, as subkingdom: R.H. Whittaker, *Science* 163: 155, 1969.

[No Lat. diagn. T.: not designated]

Gynomycota, as ‘Form –Superphylum’: R.H. Whittaker & Margulis, *BioSystems* 10: 13, 1978.

[No Lat. diagn. T.: not designated]

Gynomycotae, as infrakingdom: Traub, *Plant Life* 27: 143, 1971.

[T.: not designated, as ‘Phylum Myxomycota’]

Gynomyxa, as phylum: L.S. Olive, *The Mycetozoans*: 4, 1975.

[No Lat. diagn. T.: not designated. See also Lankester, 1885 (Protozoa, In: *Encyclopaedia Britannica*, ed. 9, 19: 830–866); as phylum *Gynomycota* (Alexopoulos and Mims, *Introductory Mycology*, ed. 3: 38, 1979)]

Haplomastigomycotina, as subdivision: Alexop. & Mims, *Introductory Mycology*, ed. 3: 38, 1979.

[No Lat. diagn. T.: not designated]

Haplomycetes, rank uncertain (as ‘fam.’): Fr., *Summa vegetabilium Scandinaviae*: 485, 1849.

Hemiascomycetes, as class: Engl., *Syllabus der Pflanzenfamilien*, ed. 3: 28, 1903.

Hemiascomycetidae, as subclass: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 26, 1892.

[As ‘Hemiasci’, see also Schröter, In: Engler and Prantl, *Die natürlichen Pflanzenfamilien* I(1): 62 (1892) and *ibid.*: 142 (1894), as ‘Hemiasceae’]

Hemiascomycota, as phylum: R.T. Moore, *Mycologia* 70: 1019, 1978.

[No Lat. diagn. T.: not designated]

Hemiascomycotina, as subphylum: Cavalier–Smith, *Biol. Rev.* 73: 247, 1998.

[As ‘Brefeldt 1891 stat. nov.’ T.: not designated.]

Hemibasidiomycetidae, as subclass: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 26, 1892.

[As ‘Hemibasidii’, see also Dietel, In: Engler and Prantl, *Die natürlichen Pflanzenfamilien* I(1**): 1 (1897). According to Donk, *Proc. K. ned. Akad. Wet. C*, 75: 365 (1972) and *ibid.* 76: 109 (1973), this name is attributed to Brefeld (*Untersuchungen aus dem Gesamtgebiete der Mykologie* 12 (1895), or *op. cit.* 7: 341–356, *fide* Martin (1945: 529)]

Hemibasidiomycetes, as class: Ainsw., *Bibliography of Systematic Mycology* 4: 2, 1966.

[No descr. T.: not designated. Not taken up in *Dictionary of the Fungi*, ed. 5. (1971)]

Hemibasidiomychia, as superclass: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[As ‘Heteromycetia’. As ‘Engler 1897 stat. nov.’ T.: not designated]

Hemilichenes, as ?class: H. Gams, *Kleine Kryptogamenflora*: 13, 1966.

[No Lat. diagn. T.: not designated]

Heterobasidiomycetes, as class: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. First used by Moore (In: Perez–Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971), without descr.; given a diagnosis by Wells, K., *Mycologia* 86: 42, 1994 (no Lat. or type). Attributed by Loquin, *Mycologie Générale et Structurale* (1984) to Gäumann, *Die Pilze* (1949) but not used as a taxonomic name in that work]

Heterobasidiomycetidae, as subclass: Alexop., *Introductory Mycology*, ed. 2: 438, 1962.

[No Lat. diagn. T.: not designated. The term was, according to Donk, *Proc. K. ned. Akad. Wet., C*, 75: 366 (1972), first introduced by Patouillard, *Les hyménomycètes d'Europe*: 73, 89 (1887), as 'sous-classe Heterobasidiés'. See also Rea, C., *British Basidiomycetae*: 1, 1922, as 'Heterobasidiae', rank not stated, and Donk, l.c., footnote on p. 365, for comment on orthography]

Heterobasidiomychia, as superclass: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. Term first used by Moore, R.T., *Mycologia* 70: 1019, 1978, without descr.]

Heterobasidiomycotina, as subphylum: R.T. Moore, In: *Hawksworth (ed.), The Identification and Characterization of Pest Organisms*: 250, 1994.

[No descr. T.: not designated]

Heterokonta, as phylum: Cavalier–Smith, *Prog. Phycol. Res.* 4: 338, 1986.

[T.: not designated. First proposed as a concept informally by Leedale, *Taxon* 23: 269, 1974, as kingdom heterokonts, no descr.]

Heterokontomycotina, as subdivision: M.W. Dick, In: *Gareth–Jones (ed.), Recent Advances in Aquatic Mycology*: 536, 1976.

[As 'Heterokontimycotina'. T.: not designated]

Heteroplantae, as subkingdom: Traub, *Plant Life* 27: 143, 1971.

[T.: not designated, as 'Phylum Eumycota'. See also Traub, H.P., *Plant Life* 18(suppl.): 39, 1962; as kingdom and without Lat. diagn.]

Holobasidiomycetes, as class: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. See Talbot, P.H.B., *Taxon* 17: 627, 1968; no Lat. diagn.]

Holobasidiomycetidae, as subclass: Gäum., *Die Pilze*: 241, 1949.

[No Lat. diagn.]

Holoblastomycetes, as class: Locq., *Mycologie Générale et Structurale*: 194, 1984.

[No Lat. diagn. T.: not designated]

Homobasidiomycetes, as class: R.T. Moore, In: *Perez–Miravete and Pelaez (eds.), Recent Advances in Microbiology*: 50, 1971.

[No descr. T.: not designated. Introduced by Cavalier–Smith, *Biol. Rev.* 73: 248, 1998 as 'Patouillard 1900', see below.]

Homobasidiomycetidae, as subclass: Alexop., *Introductory Mycology*, ed. 2: 438, 1962.

[No Lat. diagn. T.: not designated. Presumably based on 'Homobasidiés' of Patouillard, *Les Hyménomycètes d'Europe*: 73 (1887), and *Essai taxonomique sur les familles et les genres des Hyménomycètes*: 3, 34 (1900), as 'sous-classe'. (1887, 1900), also used by Rea (*British Basidiomycetae*: 1, 1922, as 'Homobasidiae', rank not given) and Coker, *J. Elisha Mitchell Sci. Soc.* 35: 113–182, 1920. See Martin, G.W., *Mycologia* 37: 527–542, 1945]

Homobasidiomychia, as superclass: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. Term first used at this rank by Moore, R.T., *Mycologia* 70: 1019, 1978, without descr.]

Homobasidiomycotina, as subphylum: R.T. Moore, In: *Hawksworth (ed.), The Identification and Characterization of Pest Organisms*: 250, 1994.

[No descr. T.: not designated]

Hydromyxomycetes, as class: Cejp, *Houby I*: 24, 1957.

[Also used by Ainsworth, *Bibliography of Systematic Mycology* 4: 2 (1966) and Kreisel, *Grundzüge eines natürlichen Systems der Pilze*: 194, 202 (1969); see note 7]

Hydrotophyta, as phylum: Traub, *Plant Life* 34: 130, 1978.

[T.: *Saprolegnia*, as 'Saprolegniales']

Hymenoascomycetidae, as subclass: Alexop. & Mims, *Introductory Mycology*, ed. 3: 256, 1979.

[No Lat. diagn. T.: not designated]

Hymenolichenes, as subclass: Zahlbr., In: Engler and Prantl, *Die natürlichen Pflanzenfamilien I(1*)*: 49, 237, 1907.

Hymenomyces, as class: Fr., *Systema Mycologicum I*: liii, 1821.

[See Moore, R.T., In: Sneh et al. (eds.), *Rhizoctonia species: Taxonomy, Molecular Biology, Ecology, Pathology and Disease Control*: 18 (1996) where he gives an emendation. Also used by Moore (1978 and 1980) at this rank]

Hymenomycia, as superclass: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[As ‘Hymenomycetia’. As ‘Fries 1821 stat. nov. et em.’ T.: not designated]

Hymenomycetidae, as subclass: Alexop., *Introductory Mycology*, ed. 2: 438, 1962.

[No Lat. diagn. T.: not designated. See also Bessey, *Morphology and Taxonomy of Fungi*: 462 (1950), as ‘Hymenomyceteae’, at an unspecified rank between subclass and order]

Hyphochytriomycetidae, as subclass: M.W. Dick, *Straminipilous Fungi*: 330, 2001.

[T.: *Hyphochytrium*. See also Cavalier–Smith, In: Green, Leadbeater, and Diver (eds.), *The Chromophyte Algae*: 385 (1989), as ‘Hypochytridae Sparrow ex Dick (1983) orthogr. emend. et stat. nov.’ and Scagel et al., *An Evolutionary Survey of the Plant Kingdom*: 38 (1965), no descr.]

Hyphochytriomycetes, as class: Alexop., *Introductory Mycology*, ed. 2: 36, 1962.

[No Lat. diagn. T.: *Hyphochytrium*. See Sparrow, *Mycologia* 50: 811, 1958; no rank, as ‘galaxy’ or Lat. diagn.; see also M.W. Dick, In: Buczacki (ed.), *Zoosporic Plant Pathogens, A Modern Perspective*: 285, 1983, ‘validation’ is in fact an orthographic correction, [see note 5](#). Stated to be a class in Alternative orthography: Hypochytrea in Cavalier–Smith, *Prog. Phycol. Res.* 4: 324, 1986]

Hyphochytriomycota, as phylum: R.H. Whittaker, *Science* 163: 154, 1969.

[No descr. T.: *Hyphochytrium*. Based on Class Hyphochytridiomycetes in Alexopoulos, *Introductory Mycology*, ed. 2: 36 (1962); see also Moore, In: Perez–Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50 (1971), as division, no descr.; and Fuller, In: Margulis et al. (eds.), *Handbook of the Protoctista* (1990), *Hyphochytriomycota*; also given as *Hyphochytriomycota* in Tehler, *Cladistics* 8: 236, 1988. Published as *Hypochytrimycota*, phylum nov. by Traub, H.P., *Plant Life* 27: 144, 1971, no Lat. diagn.]

Hyphomycetes, as class: Fr., *Systema Mycologicum I*: xli, 1821.

[Term derived from Martius, *Flora cryptogamica erlangensis*: lvii, 1817, as ‘ordo’]

Hypocreomycetidae, as subclass: O.E. Erikss. & Winka, *Myconet 1(1)*: 6, 1997.

[T.: *Hypocrea*, as ‘Hypocreales Lindau’]

Hysterophyta, rank uncertain: Fr., *Systema Mycologicum I*: 20, 1821.

[See Endlicher, *Gen. Pl.*: 11, 16, 1836, as ‘Sectio’ (a rank between Classis and Regio), with ref. to Fries. Copeland (1956: 119) refers to Link (1808) — reference not yet traced, nothing published by Link in 1808, name not mentioned in Link, *Observationes in ordines plantarum naturalium Diss. 1ma*; could be in ‘Nova plantarum genera e classe Lichenum, Algarum, Fungorum’. Schrader’s *Neues J. Bot.* 3(1): 1 (1809)]

Inocybiomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 97, 1984.

[No Lat. diagn. T.: *Inocybe*, as ‘Inocybales’]

Inophyta, as ‘stamm’: Haeckel, *Generelle Morphologie der Organismen 2*: xxxvi, 1866.

[See also Haeckel, *Systematische Phylogenie 1*: 90, 1894]

Inophyta, as phylum: Copeland, *Amer. Nat.* 81: 358, 1947.

[No Lat. diagn. T.: *Agaricus*. See also Copeland, *The Classification of Lower Organisms*: 119 (1956). Based on stamm *Inophyta* Haeckel]

Laboulbeniomycetes, as class: Engl., *Syllabus der Pflanzenfamilien*, ed. 2: 46, 1898.

[T. *Laboulbenia*]

Laboulbeniomycetidae, as subclass: Alexop., *Introductory Mycology*, ed. 2: 239, 1962.

[No Lat. diagn. T. *Laboulbenia*. See also Barr, M.E., *Mycologia* 68: 4, 1976]

Laboulbeniomycotina, as subphylum: Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi, BMS Symposium – April 1986*: 340, 1987.

[As ‘*Laboulbeniomycetes*’. No Lat. diagn. T.: *Laboulbenia*]

Labyrinthulomycetidae, as subclass: Cavalier–Smith, In: Green, Leadbeater, and Diver (eds.), *The Chromophyte Algae*: 385, 1989.

[As 'Labyrinthulidae'. T.: *Labyrinthula*. Also given as subclass Labyrinthulia in Honigberg et al. A revised classification of the Phylum Protozoa. J. Protozool. 11: 7–20 (1964)]

Labyrinthulomycia, as superclass: Cavalier–Smith, *Prog. Phycol. Res.* 4: 342, 1986.

[As 'Labyrinthista'. T.: *Labyrinthula*]

Labyrinthulomycotina, as subphylum: L.S. Olive, *The Mycetozoans*: 5, 1975.

[As 'Labyrinthulina'. No Lat. diagn. T.: *Labyrinthula*. Also given at this rank by Cavalier–Smith, In: Green, Leadbeater, and Diver (eds.), *The Chromophyte Algae*: 404 (1989) with ref. to superclass Labyrinthista Cavalier–Smith (1986)]

Labyrinthulomycetes, as class: Arx, *The Genera of Fungi sporulating in pure culture*: 6, 1970.

[No Lat. diagn. T.: *Labyrinthula*. Possibly predated by Class Labyrinthulidae J. Lister, In: Encyclopaedia Britannica, eds. 9 and 10 (1891). Alternative orthography – Labyrinthulea, as class, Cavalier–Smith, *Prog. Phycol. Res.* 4: 342, 1986, as 'Olive ex Cavalier–Smith classis nova']

Labyrinthulomycota, as phylum: R.H. Whittaker, *Science* 163: 155, 1969.

[No dscr. T.: *Labyrinthula*. References to other works with this name at other ranks, new designation at phylum level]

Lecanoromycetes, as class: O.E. Erikss. & Winka, *Myconet* 1(1): 7, 1997.

[T.: *Lecanora*, as 'Lecanorales Nannf.']

Lecomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 247, 1998.

[Three word Lat. diagn. T.: not designated]

Leotiomychia, as superclass: O.E. Erikss. & Winka, *Myconet* 1(1): 7, 1997.

[As 'Leotiomyceta'. T.: *Leotia*, as 'Leotiomycetes O.E. Erikss. & Winka']

Leotiomycetes, as class: O.E. Erikss. & Winka, *Myconet* 1(1): 7, 1997.

[T.: *Leotia*, as 'Leotiales Carpenter']

Lepistamycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 97, 1984.

[No Lat. diagn. T.: *Lepista*, as 'Lepistales']

Lichenes, as 'Nebenklasse': Zahlbr., In: Engler, *Syllabus der Pflanzenfamilien*, ed. 3: 38, 1903.

Lichenes, as Phylum: Mattick, In: Engler's *Syllabus der Pflanzenfamilien*, ed. 12, vol. 1: 204, 1954.

[As 'Abteilung' No Lat. diagn.]

Lipsanomazaediomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 175, 1984.

[No Lat. diagn. T.: *Gymnoascus*, as 'Gymnoascales Clements']

Loculoanoteromycetidae: as subclass: M.E. Barr, *Mem. N.Y. bot. Gdn* 28: 5, 1976.

[No Lat. diagn. T.: not designated]

Loculoascomycetes, as class: Ainsw., *Bibliography of Systematic Mycology* 4: 3, 1966.

[No Lat. diagn. T.: not designated. See also Barr, M.E., *Mem. N.Y. bot. Gdn* 28: 7, 1976, for dscr. but no Lat. diagn. or type; also Wehmeyer, *Mycol. Mem.* 6: 9, 29, 1975 (rank not clearly stated)]

Loculoascomycetidae, as subclass: Luttrell, *Mycologia* 47: 512, 1955.

[As 'Loculoascomycetes', correct orthography given by Alexopoulos, *Introductory Mycology*, ed. 2: 239 (1962)]

Loculoedaphomycetidae, as subclass: M.E. Barr, *Mem. N.Y. bot. Gdn* 28: 5, 1976.

[No Lat. diagn. T.: not designated]

Loculomycetes, as class: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[Three word Lat. diagn. T.: not designated]

Loculoplectomycetidae, as subclass: M.E. Barr, *Mem. N.Y. bot. Gdn* 28: 7, 1976.

[No Lat. diagn. T.: not designated]

Lycoperdellomycetidae, as subclass: Locq., *De Taxia Fungorum*: 7, 1974.

[No dscr. T.: *Lycoperdellon*, as 'Lycoperdellales']

Mastigomycetes, as ?subphylum: Moreau, *Les Champignons* 2: 962, 1954.

[No dscr. As 'sous-embranchement des Mastigomycètes', [see note 8](#)]

Mastigomycetia, as subkingdom: R.T. Moore, In: Hawksworth (ed.), *The Identification and Characterization of Pest Organisms*: 250, 1994.

[No dscr. T.: not designated]

Mastigomycota, as 'form–superphylum': R.H. Whittaker & Margulis, *BioSystems* 10: 12, 1978.

[No Lat. diagn. T.: not designated]

Mastigomycota, as phylum: Alexop. & Mims, *Introductory Mycology*, ed. 3: 38, 1979.

[No Lat. diagn. T.: not designated]

Mastigomycotina, as subphylum: Ainsw., *Bibliography of Systematic Mycology* 4: 2, 1966.

[No descr. T.: not designated. Subsequently given description in Ainsworth & Bisby's Dictionary of the Fungi, ed. 5: 218 (1971)]

Mazaediomycetes, as class: Locq., *Mycologie Générale et Structurale*: 156, 1984.

[No Lat. diagn. T.: not designated]

Mazaediomycetidae, as subclass: Locq., *De Taxia Fungorum*: 7, 1974.

[No Lat. diagn. T.: not designated]

Melanogastromycetidae, as subclass: Locq., *De Taxia Fungorum*: 7, 1974.

[No Lat. diagn. T.: *Melanogaster*, as 'Melanogastrales']

Melanomycotina, as subphylum: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Meristemobasidiomycetidae, as subclass: Locq., *De Taxia Fungorum*: 7, 1974.

[No Lat. diagn. T.: not designated, as 'Meristemobasidiales']

Meromycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Mesomycetes, as class: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 26, 1892.

Mesomycetozoa, as 'clade': Herr, R.A., Ajello, L., Taylor, J.W., Arseculeratne, S.N., and Mendoza, L., *J. clin. Microbiol.* 37: 2750, 1999.

[Described as a zoological taxon. T.: not designated]

Metabasidiomycetidae, as subclass: Lowy, *Taxon* 17: 125, 1968.

[T.: not designated. Used again by Lowy, Tremellales in Flora Neotropica, 1971]

Microbotryomycetidae, as subclass: Swann, In: Swann, Frieders, and McLaughlin, *Mycologia* 91: 63, 1999.

[T.: *Microbotryum*, as 'Microbotryales']

Monoblepharidomycetes, as class: Schaffner, *Ohio Nat.* 9: 447, 449, 1909.

[As 'Monoblepharideae'. T.: *Monoblepharis*]

Monocaryomycotera, as superdivision: M.E. Barr, *Mycologia* 75: 3, 8, 1983.

[No Lat. diagn. T.: not designated]

Mucoromycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[No Lat. diagn. T.: not designated, ?*Mucor*; as 'stat. nov.' based on Fries (1832). Reference is presumably to Fries, *Systema mycologicum* 3: 296, 1832, where the ordo Mucorini is introduced in the class Hyphomycetes]

Mycenamycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 96, 1984.

[as '(Gray) Lq.' No Lat. diagn. T.: *Mycena*, as 'Mycenales']

Mycetalia, as kingdom: Conard, *Plants of Iowa*: iv, 1939.

Myceteae, as kingdom: Alexop. & Mims, *Introductory Mycology*, ed. 3: 37, 1979.

[No Lat. diagn. T.: not designated. Concept includes the protistan and chromistan fungi. This is perhaps rooted in de Bary (1862: 722) where the rankless term, co–ordinate with 'Mycetozoa' of Mycetis is given, with a Latin diagnosis]

Mycetozoa, as subphylum: L.S. Olive, *The Mycetozoans*: 4, 1975.

[No Lat. diagn. T.: not designated]

Mycetozoa, as infraphylum: Cavalier–Smith, *Biol. Rev.* 73: 232, 1998.

[No Lat. diagn. T.: not designated. Reference to 'de Bary, 1859']

Mycetozoa, as class: de Bary ex Rostaf., *Versuch Systems Mycetozoen*: 1, 1873.

Mycomycetes, as ?class: Brefeld, *Untersuchungen aus dem Gesamtgebiete der Mykologie* 3: 205, 1877.

[As 'Abtheilung Mycomyceten', a subdivision of the lower fungi. Also used by Zopf in Schrenk, *Handbuch der Botanik* 4: 594 (1890) at the rank of Hauptabteilung and attributed to Brefeld; and by Engler, *Syllabus der Pflanzenfamilien*, ed. 1: 27 (1892) at the rank of class]

Mycophyta, as subkingdom: L.F. Koch, *Taxon* 9: 66, 1960.

[As 'Mycophytae'. No descr. T.: not designated. This term was also used by Cejp, Houby I: 48, 1957, as Mycophyta, with the rank of 'Kmen' (probably division). Possibly based on 'stamm Mycophyta' Pascher, Beih. bot. Zbl. 48, Abt. 2: 330, 1931; term originally coined by Marchand, L., see Bull. Soc. mycol. Fr. 10: 143–156, 1894, as 'classe Mycophytes', with reference back to Marchand (1890).]

Mycophycophytes, as subclass: Marchand, *Bull. mycol. Soc. Fr.* 10: 156, 1894.

Mycota, as phylum: Alexop., *Introductory Mycology*, ed. 2: 35, 1962.

[No Lat. descr. T.: not designated]

Myxochytridiomycetes, as class: Locq., *De Taxia Fungorum*: 6, 1974.

[as '(Kreisel) Loq.' No descr. T.: *Olpidium*, as 'Olpidiales'. Possibly based on Ordnung Myxochytridiales Kreisel, Grundzüge eines natürlichen Systems der Pilze: 53 (1969), nom. inval. Art. 36.1]

Myxogastres, as class: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 1, 1892.

[Also given in the account by Schröter, Die natürlichen Pflanzenfamilien I(1): 8 (1889), as 'Myxogasteres'. See also Masee, Monogr. Myxogastres: 28, 1892, as '(Fries).', no rank given; given in the 'correct' form by Locq., *De Taxia Fungorum*: 6, 1974 as "Myxogastromycetes (Fr.) Schr." but subsequently attributed to Feltgen (1889) by Loquin, *Mycologie Générale et Structurale* (1984). As class 'Myxogastrea Fries 1829 stat. nov.' in Cavalier-Smith, *Microbiol. Rev.* 57: 971, 1993 (ending in accordance with the Zoological Code). Based on Fries, *Systema Mycologicum* 3: 67, 1829, as sub-order]

Myxogastrina, as subclass: L.S. Olive, *Bot. Rev.* 36: 77, 1970.

[No Lat. diagn. T.: not designated. See MacBride, North American Slime-Moulds (1899), as 'sub-class'; based on Fries *Systema Mycologicum* 3: 67, 1829]

Myxogastromycetidae, as subclass: G.W. Martin, In: Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 5: 497, 1961.

[No Lat. diagn. T.: not designated]

Myxomycetes, as class: G. Winter, In: Rabenhorst's *Kryptogamen-Flora*, ed. 2, 1(1): 32, 1881.

[Kreisel, Grundzüge eines natürlichen Systems der Pilze: 198 (1969) cites the authority as 'Link ex Haeckel' – Link (1833: 405) as suborder, Haeckel (*Generelle Morphologie der Organismen* 2: xxvi, 1866) as 'stamm'. Wallroth (*Flora cryptogamica Germaniae* 2: xxv, 1833) introduces the name at the rank of Ordo within the Class Fungi. During the middle of the C18th it is Fries's term, Myxogastres, which predominates. Cooke (*Myxomycetes of Great Britain*: 1, 1877) uses the name at an unspecified supra-ordinal rank based on Wallroth's original coining of the name. Cooke, *Handbook of British Fungi* 1: 377 (1871) gives the Myxogastres as an Ordo in the 'family' Gasteromycetes. Definitely stated to be a class by Winter (1881). Martin, Alexopoulos, and Farr, *The Genera of Myxomycetes* (1983) prefer to base the class on Link, *Handbuch* 3: 405 (1833), although later than Wallroth, the concept is closer to the 'modern' sense of Myxomycetes. Traub, *Plant Life* 27: 144 (1971) attributes Haeckel's name at the rank of phylum and typifies it with the family Liceaceae]

Myxomycota, as subkingdom: R.H. Whittaker, *Quart. Rev. Biol.* 34: 220, 1959.

[No descr. T.: not designated. See also Whittaker, *Science* 163: 159, 1969, based on Division Myxomycota in Bold, *Morphology of Plants*, 1957]

Myxomycota, as phylum: H.P. Traub, *Plant Life* 18(suppl.): 40, 1962.

[T.: not designated. Also published by Arx, J.A. von. *Pilzkunde*: 15, 1967. See also Division Myxomycota in Bold, *Morphology of Plants*, 1957]

Myxomycotina, as subdivision: Cronquist, *Bot. Rev.* 26: 441, 1960.

[No Lat. T.: not designated. See also G.W. Martin in Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 5: 497, 1961 and Alexopoulos, *Introductory Mycology*: 35, 1962]

Myxomycophyta, as phylum: Tippon, *Chron. Bot.* 7: 205, 1942.

Myxostemonomycetes, as class: Locq., *Mycologie Générale et Structurale*: 76, 1984.

[No Lat. diagn. T.: not designated]

Myxothallophyta, as phylum: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 1, 1892.

[As 'Abteilung']

Myxotrichomycetidae, as subclass: Tehler, *Cladistics* 8: 236, 1988.

[No Lat. diagn. T.: *Myxotrichum*]

Nassascomycetes, as class: Locq., *Mycologie Générale et Structurale*: 156, 1984.

[No Lat. diagn. T.: not designated]

Neolectomycetes, as class: O.E. Erikss. & Winka, *Myconet 1(1)*: 8, 1997.

[T.: *Neolecta*; as ‘Order Neolectales Landvik, O.E. Erikss., Gargas, & P. Gustafsson’]

Neomycota, as subkingdom: Cavalier–Smith, *Biol. Rev.* 73: 247, 1998.

[T.: not designated]

Neozygomycetia, as superclass: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Nidulariomycetes, as class: Locq., *De Taxia Fungorum*: 7, 1974.

[No dscr. T.: *Nidularia*]

Oomycetes, as class: G. Winter, *Rabenhorst’s Kryptogamen–Flora*, ed. 2, 1(1): 32, 1881.

Oomycetidae, as subclass: Martin, In: Ainsworth & Bisby’s *Dictionary of the Fungi*, ed. 5: 500, 1961.

[No Lat. diagn. T.: not designated. See also Cavalier–Smith in Green, Leadbeater, and Diver (eds.), *The Chromophyte Algae*: 385 (1989), as ‘stat. nov.’, attributed to Winter in Rabenhorst, 1879 but this reference has not been traced]

Oomycota, as phylum: Arx, *Pilzkunde*: 16, 1967.

[No Lat. diagn. T.: not designated. See also Whittaker, *Science* 163: 155, 1969, no dscr.; Traub, *Plant Life* 27: 144, 1971, as ‘phylum nov.’, no Lat. diagn. T.: *Saprolegnia*]

Opisthokonta, as phylum: H.F. Copel., *The Classification of Lower Organisms*: 110, 1956.

[No Lat. diagn. T.: *Chytridium*]

Opisthomastigomycota, as phylum: Moreau, *Les Champignons 2*: 2033, 1954.

[No Lat. diagn. As ‘Opisthomastigomycètes’]

Opisthomastigomycota, as “branch”: R.H. Whittaker, *Science* 163: 155, 1969.

[No Lat. diagn. T.: not designated. Based on phylum Opisthomastigomycota Moreau]

Opisthomastigomycota, as subphylum: L.S. Olive, *The Mycetozoans*: 4, 1975.

[No Lat. diagn. T.: not designated. Based on ‘branch Opisthomastigomycota’ in Whittaker (1969)]

Orthomycotina, as subphylum: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[T.: not designated. See also Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986. CUP; no dscr. T.: not designated]

Ostiomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[?Lat. diagn. T.: not designated]

Pantonemomycota, as subphylum: L.S. Olive, *The Mycetozoans*: 5, 1975.

[No Lat. diagn. T.: not designated]

Parenchemycetidae, as subclass: M.E. Barr, *Mem. N.Y. bot. Gdn* 28: 5, 1976.

[No Lat. diagn. T.: not designated]

Pedomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 247, 1998.

[T.: not designated]

Periascomycetes, rank not stated: Moreau, *Les Champignons 2*: 2036, 1954.

[No Lat. diagn. As “Périascomycètes” at a similar textural level as the other phyla]

Perimycotina, as subdivision: Locq., *De Taxia Fungorum*: 7, 1974.

[No dscr. T.: not designated, as ‘Propagomycetes’]

Peronosporomycetes, as class: M.W. Dick, *Straminipilous Fungi*: 289, 2001.

[T. *Peronospora*. See also Locq., *De Taxia Fungorum*: 6, 1974, No dscr.; ‘Peronospori’, rankless taxon in de Bary (1862: 722); and Moore, In: Hawksworth (ed.), *The Identification and Characterization of Pest Organisms*: 250 (1994). Discussed by Dick in *Can. J. Bot.* 73, suppl. 1: S712–724 (1995)]

Peronosporomycetidae, as subclass: M.W. Dick, *Straminipilous Fungi*: 290, 2001.

[T. *Peronospora*. See also Dick, M.W., Wong, P.T.W. and Clark, G., *Bot. J. Linn. Soc.* 89: 192, 1984, no Lat. diagn. and Dick (1990), *Phylum Oomycota*, In: Margulis, Corlis, Melkonian, and Chapman (eds.), *Handbook of Protoctista*. Boston: Jones & Bartlett; no Lat. diagn.]

Peronosporomycota as phylum: M.W. Dick, *Can. J. Bot.*, suppl. 1: S712, 1995.

- [No Lat. diagn. T.: *Peronospora*; as 'Peronosporomycotina']
Peronosporomycotina as subphylum: M.W. Dick, *Straminipilous Fungi*: 288, 2001.
 [T.: *Peronospora*]
- Pezizomyceta***, as superclass: O.E. Erikss. & Winka, *Myconet 1(1)*: 8, 1997.
 [T.: *Peziza*; as 'Pezizomycetes O.E. Erikss. & Winka']
- Pezizomycetes***, as class: O.E. Erikss. & Winka, *Myconet 1(1)*: 8, 1997.
 [T.: *Peziza*; as 'Pezizales C. Bessey']
- Pezizomycetidae*, as subclass: Locq., *De Taxia Fungorum*: 7, 1974.
 [No dscr. T.: *Peziza*]
- Pezizomycotina***, as subphylum: O.E. Erikss. & Winka, *Myconet 1(1)*: 8, 1997.
 [T.: *Peziza*; as 'Pezizomycetes O.E. Erikss. & Winka']
- Pezomycetidae*, as subclass: Cavalier-Smith, *Biol. Rev.* 73: 247, 1998.
 [?Lat. diagn. T.: not designated]
- Phallomycetidae*, as subclass: Locq., *Mycologie Générale et Structurale*: 96, 1984.
 [as '(Fr.) Lq.' No Lat. diagn. T.: *Phallus*]
- Phialomycetes*, as class: Locq., *Mycologie Générale et Structurale*: 195, 1984.
 [No Lat. diagn. T.: not designated]
- Phoromycotina*, as subdivision: Locq., *De Taxia Fungorum*: 6, 1974.
 [No dscr. T.: not designated, as 'Class Phoromycetes']
- Phoromycetes*, as class: Locq., *De Taxia Fungorum*: 6, 15, 1974.
 [No dscr. T.: not designated, as 'Ord. Mucedinales']
- Phragmobasidiomycetes***, as class: Moore, *Botanica mar.* 23: 361, 1980.
 [T.: not designated. See also P.H.B. Talbot, P.H.B., *Taxon* 17: 627, 1968, no dscr. T.: not designated]
- Phragmobasidiomycetidae*, as subclass: Gäum., *Die Pilze*: 241, 1949.
 [No Lat. diagn. T.: not designated. Correct orthography given by Kreisel, *Grundzüge eines natürlichen Systems der Pilze*: 178 (1969)]
- Phycolichenes*, as class: Mattick, In: Engler's *Syllabus der Pflanzenfamilien*, ed. 12, vol. 1: 209, 1954.
 [No Lat. diagn. T.: *Geosiphon*]
- Phycomycetes***, as class: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 23, 1892.
 [See also Schröter, In: Engler and Prantl, *Die natürlichen Pflanzenfamilien I(1)*: 62–63 (1897). Term used by Saccardo, *Syll. fung.* 14: 3, 4 (1899), as 'cohors' and subsequently used at an unspecified supra-ordinal rank by Clements, *The Genera of Fungi*, ed. 1: 1 (1909). Martin (*Mycologia* 37: 527, 1945) attributes the name to Sachs, *Lehrbuch* (1873). However, the name was not introduced by Sachs (l.c.) but in the English edition (1875). The term was introduced by de Bary, *Morphologie und Physiologie der Pilze, Flechten und Myxomyceten*: vi (1866), as 'Ordnung'.]
- Phycomycotina*, as subphylum: Cavalier-Smith, *BioSystems* 14: 467, 1981.
 [No dscr. T.: not designated]
- Physaromycetidae*, as subclass: Locq., *De Taxia Fungorum*: 6, 1974.
 [No dscr. T.: *Physarum*]
- Physomycetes*, rank not stated: Berk., *Intr. Crypt. Bot.*: 269, 294, 1857.
- Phytomixini***, as class: Engl., In: Engler and Prantl, *Die natürlichen Pflanzenfamilien I(1)*: iii, 1897.
 [As 'Phytomyxinae' in Schröter, In: Engler and Prantl, *Die natürlichen Pflanzenfamilien I(1)*: 1, 5 (1889), without rank. Revived by Cavalier-Smith, *Microbiol. Rev.* 57: 970 (1993), as 'Class Phytomyxea Engler and Prantl, 1897, orthogr. emend.']
- Pileomycetidae*, as subclass: Cavalier-Smith, *Biol. Rev.* 73: 248, 1998.
 [as 'Fries 1821 stat. nov.' No Lat. diagn. T.: not designated]
- Plasmodiogymnomycotina***, as subphylum: Alexop. & Mims, *Introductory Mycology*, ed. 3: 38, 1979.
 [No Lat. diagn. T.: not designated. See also Martin, In: Alexopoulos and Farr, *The Genera of Myxomycetes*: 36, 1983]
- Plasmodiophoromycetidae***, as subclass: L.S. Olive, *The Mycetozoans*: 5, 1975.
 [As 'Plasmodiophorina'. No Lat. diagn. T.: *Plasmodiophora*]

Plasmodiophoromycetes, as class: Engl., *Syllabus der Pflanzenfamilien*, ed. 1: 1, 1892.

[As 'Klasse Plasmodiophorales'. T.: *Plasmodiophora*. See also Cejp, *Houby* I: 48, 1957, as Class; Sparrow, F.K. *Mycologia* 50: 811, 1958 (as 'galaxy') and Alexopoulos, *Introductory Mycology*, ed. 2: 36, 1962 (with rank and referring back to Sparrow's galaxies). *Plasmodiophori* Fuckel, *Jb. Nassau. Ver. Naturk.* 23/24: 10 (1869) was introduced as an alternative name for *Myxomycetes*]

Plasmodiophoromycota, as phylum: R.H. Whittaker, *Science* 163: 154, 1969.

[No descr. T.: *Plasmodiophora*. 'New designation at phylum level, based on Class *Plasmodiophoromycetes*']

Plectoascomycetidae, as subclass: R.T. Moore, In: Perez–Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971.

[No descr. T.: not designated. See also Barr, *Mem. N.Y. bot. Gdn* 28: 4 (1976), no Lat. diagn.]

Plectobasidiomycetidae, as subclass: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated]

Plectomazaediomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 175, 1984.

[No Lat. diagn. T.: *Warcupiella*; as 'Warcupiellales Locquin']

Plectomycetes, as class: Ainsw., *Bibliography of Systematic Mycology* 4: 3, 1966.

[No descr. T.: not designated. See also Miller, J.H., *Mycologia* 41: 106, 123 (1949), as 'subclass'. Term introduced at an unspecified rank by Gwynne–Vaughan, *Fungi — Ascomycetes, Ustilaginales, Uredinales*: 6 (1922). Cited by Cavalier–Smith, *Biol. Rev.* 73: 248, 1998 as 'Gwynne–Vaughan stat. nov.' with ref. to Ainsworth (1966)]

Pneumocystidomycetes, as class: O.E. Erikss. & Winka, *Myconet* 1(1): 8, 1997.

T.: *Pneumocystis*; as 'Pneumocystidiales O.E. Erikss.']

Promycetes, as class: Clements & Shear, *Genera of Fungi*, ed. 2: 23, 1931.

Propagomycetes, as class: Locq., *De Taxia Fungorum*: 7, 1974.

[No Lat. diagn. T.: not designated]

Protoascomycetes, as ?class: Wehmeyer, *Mycol. Mem.* 6: 9, 17, 1975.

[No clear statement of rank. No Lat. diagn. T.: not designated]

Protoascomycetidae, as subclass: Melchior & Werdermann, In: Engler's *Syllabus der Pflanzenfamilien*, ed. 12: 150, 1954.

[No Lat. diagn. ?Based on "Unterklasse Protascales" in Gäumann, *Die Pilze*: 84 (1949)]

Protobasidiomycetes, as class: Tehler, *Cladistics* 8: 236, 1988.

[No Lat. diagn. T.: not designated. Used at ?subclass level by Brefeld, *Untersuchungen aus dem Gesamtgebiete der Mykologie* 7: 25 (1888), as 'Hauptabtheilung Protobasidiomyceten'. As 'Ordnung' in Zopf, In: Schenk, *Handbuch der Botanik* 4: 596, 1890, with reference to Brefeld, l.c.]

Protomycetei, a rankless term introduced by de Bary, In: Streinz, *Nomenclator Fungorum*: 722, 1862.

Protosteliomycetes, as class: Alexop. & Mims, *Introductory Mycology*, ed. 3: 47, 1979.

[No Lat. diagn. T.: *Protostelium*. See also Cavalier–Smith (1993) as 'Olive & Stoianovitch (1966)']

Protosteliomycotina, as subclass: L.S. Olive, *Bot. Rev.* 36: 62, 1970.

[As 'Protostelia' No Lat. diagn. T.: *Protostelium* Olive & Stoianovitch]

Pseudofungi, as subphylum: Cavalier–Smith, *Prog. Phycol. Res.* 4: 341, 1986.

[As 'subdivisio novum pro Heterokontimycotina Dick 1976 p. 536.' No Lat. T.: not designated. See also Cavalier–Smith, In: Green, Leadbeater, and Diver, (eds.), *The Chromophyte Algae*: 404 (1989). Diagnosis based on superclass *Pythiista* Cavalier–Smith]

Pseudomycotina, as subphylum: D.J.S. Barr, *Mycologia* 84: 8, 1992.

[No Lat. diagn. T.: not designated. Introduced as an alternative name for *Pseudofungi* Cavalier–Smith]

Pyrenomycetes, as class: Schwein., *Synopsis Fungorum in America Boreali media degentium*: 143, 1832.

[See also Fries, *Systema Mycologicum* I: li, 1821, as 'subord.'; subsequently raised to the rank of Ordo (*Systema Mycologicum* II: 312, 1823) and then 'cohors' in *Systema orbis vegetabilis*: 97, 1825. Saccardo (*Syll. fung.* 1: 1, 1882) states that De Notaris (*G. bot. ital.* 1: 322, 1844) emended the concept but the rank given there is "Tribù".

Introduced as class by Cavalier–Smith, *Biol. Rev.* 73: 248, 1998 as 'Fries 1821 stat. nov.' with reference to Ainsworth (1966)]

Pyrenomycetidae, as subclass: R.T. Moore, In: Perez–Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971.

[No Lat. diagn. T.: not designated. Given as subclass Pyrenomycetes by Miller, J.H., *Mycologia* 41: 108, 123 (1949); see also Locqin, *Mycologie Générale et Structurale*: 161 (1984), as “(Fr.) Lq.”]

Pythiista as superclass: Cavalier–Smith, *Prog. Phycol. Res.* 4: 342, 1986.

[T.: *Pythium*]

Pythiistea, as class as subclass: Cavalier–Smith, In: Green, Leadbeater, and Diver (eds.), *The Chromophyte Algae*: 404, 1989.

[As ‘Cavalier–Smith 1986 stat. nov.’ T.: *Pythium*. Based on superclass Pythiista Cavalier–Smith]

Repetobasidiomycetes, as class: Locq., *Mycologie Générale et Structurale*: 89, 1984.

[No Lat. diagn. T.: *Repetobasidium*, as ‘Repetobasidiales’]

Repetobasidiomycetidae, as subclass: Locq., *De Taxia Fungorum*: 7, 1974.

[No Lat. diagn. T.: *Repetobasidium*]

Reticulomycota, as phylum: H.P. Traub, *Plant Life* 27: 143, 1971.

[T.: *Labyrinthula*, as ‘Labyrinthulaceae’]

Rhipidiomycetidae, as subclass: M.W. Dick, *Straminipilous Fungi*: 305, 2001.

[T.: *Rhipidium*. See also Dick, *Can. J. Bot.*, suppl. 1: S713, 1995, no Lat. diagn.]

Rhodogoniomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 96, 1984.

[No Lat. diagn. T.: not designated]

Rhynchophoromycetes, as class: Locq., *De Taxia Fungorum*: 7, 1974.

[No Lat. diagn. T.: *Rhynchophoromyces*, as ‘Rhynchophoromycetales’]

Rumpomycetes, as class: Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987.

[No dscr. T.: not designated]

Rumpomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Russulomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 97, 1984.

[As ‘Russulamycetidae’. No Lat. diagn. T.: *Russula*, as ‘Russulales’]

Saccharomycetes, as class: G. Winter, *Rabenhorst’s Kryptogamen–Flora*, ed. 2, 1(1): 32, 1881.

[T.: *Saccharomyces*. See also Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987; and O.E. Eriksson and Winka, *Myconet* 1(1): 10, 1997. See note 2 on the orthography of this name]

Saccharomycetidae, as subclass: Tehler, *Cladistics* 8: 236, 1988.

[No Lat. diagn. T.: *Saccharomyces*. See also Cavalier–Smith, *Biol. Rev.* 73: 247, 1998, as ‘de Bary 1866 stat. nov.’]

Saccharomycotina, as subphylum: O.E. Erikss. & Winka, *Myconet* 1(1): 8, 1997.

[T.: *Saccharomyces*]

Saprolegniomycetes, as class: R.T. Moore, In: Hawksworth (ed.), *The Identification and Characterization of Pest Organisms*: 250, 1994.

[No dscr. T.: *Saprolegnia*]

Saprolegniomycetidae, as subclass: M.W. Dick, In: Dick, M.W., Wong, P.T.W. and Clark, G., *Bot. J. Linn. Soc.* 89: 193, 1984.

[No Lat. diagn. T.: *Saprolegnia*. See also Margulis, *Evolution*, Lancaster 25: 242–245, 1971]

Schizosaccharomycetes, as class: O.E. Erikss. & Winka, *Myconet* 1(1): 10, 1997.

[T.: *Schizosaccharomyces*, as ‘Schizosaccharomycetales O.E. Erikss., Svedskog, & Landvik’. See note 2 on the orthography of this name]

Septomycetes, as class: Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987.

[No dscr. T.: not designated. See also Cavalier–Smith, *Biol. Rev.* 73: 248, 1998, as ‘cl. nov.’]

Septomycotera, as superdivision: R.T. Moore, In: Perez–Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971.

[No descr. T.: not designated]

Septomycotina, as subphylum: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[T.: not designated]

Sirobasidiomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 91, 1984.

[No Lat. diagn. T.: *Sirobasidium*, as ‘Sirobasidiales’]

Sordariomycetes, as class: O.E. Erikss. & Winka, *Myconet 1(1)*: 10, 1997.

[T.: *Sordaria*, as ‘Sordariales’ Chadeff. ex D.L. Hawksw. & O.E. Erikss.’]

Sordariomycetidae, as subclass: O.E. Erikss. & Winka, *Myconet 1(1)*: 10, 1997.

[T.: *Sordaria*, as ‘Sordariales Chadeff. ex D.L. Hawksw. & O.E. Erikss.’ See also Locquin, *De Taxia Fungorum*: 7, 1974, no descr.]

Spathulosporomycetidae, as subclass: Locq., *Mycologie Générale et Structurale*: 159, 1984.

[No Lat. diagn. T.: *Spathulospora*, as ‘Spathulosporales’]

Spermophthoromycetes, as class: Locq., *Mycologie Générale et Structurale*: 156, 1984.

[No Lat. diagn. T.: *Spermophthora*, as ‘Spermophthorales’]

Spizomycetes, as class: Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi, BMS Symposium – April 1986*: 340, 1987.

[No descr. T.: *Spizellomyces*]

Spizomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[T.: *Spizellomyces*]

Sporangimycotina, as subphylum: H.P. Traub, *Plant Life* 27: 144, 1971.

[No Lat. diagn. T.: not designated, as ‘Sporangiomycota’. Previously published in Traub, *Lineagics*: 1964]

Sporidiomycetes, as class: R.T. Moore, *Botanica mar.* 23: 361, 1980.

[T.: not designated, ?*Sporidiobolus*]

Sporidiomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[as ‘Moore 1980 stat. nov.’ T.: not designated]

Sporomycetes, rank not stated: Schwein., *Synopsis Fungorum in America Boreali media degentium*: 143, 1832.

[rank is above class as it contains the classes Gasteromycetes, Hyphomycetes and Gymnomycetes]

Stemonitomycetidae, as subclass: I.K. Ross, *Mycologia* 65: 483, 1973.

[T.: *Stemonitis*. Alternative orthography given by Cavalier–Smith, *Microbiol. Rev.* 57: 971, 1993, as ‘Stemonitia Ross, 1973 orthogr. emend.’; see also Locquin, *De Taxia Fungorum*: 6, 1974; as ‘Stemonomycetidae’, no descr.]

Stichophragmobasidiomycetidae, as subclass: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated]

Stramenipila, as kingdom: M.W. Dick, *Straminipilous Fungi*: 275, 2001.

[T.: not designated, as ‘Heterokonta T. Cavalier–Smith [phylum] {Peronosporomycotina M.W. Dick [subphylum]}’. See note 4]

Synascomycetes, as class: Locq., *Mycologie Générale et Structurale*: 156, 1984.

[No Lat. diagn. T.: not designated. Attributed to Gäumann, *Die Pilze*: 105, 1949, but used as an informal group name there]

Synascomycetidae, as subclass: Luttrell, *Taxonomy of the Pyrenomycetes*: 107, 1951.

[No Lat. diagn. As ‘Synascomycetes’]

Synchronomycetidae, as subclass: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated]

Taphrinomycetes, as class: O.E. Erikss. & Winka, *Myconet 1(1)*: 11, 1997.

[T.: *Taphrina*. See also M.E. Barr, *Mycologia* 75: 3, 9, 1983, no Lat. diagn.; Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi, BMS Symposium – April 1986*: 340, 1987, no descr.; Cavalier–Smith, *Biol. Rev.* 73: 247, 1998, as ‘cl. nov.’ a validation of Cavalier–Smith (1987)]

Taphrinomycetidae, as subclass: Tehler, *Cladistics* 8: 236, 1988.

[No Lat. diagn. T.: *Taphrina*]

Taphrinomycota, as division: M.E. Barr, *Mycologia* 75: 3, 9, 1983.

[No Lat. diagn. T.: *Taphrina*]

Taphrinomycotina, as subphylum: O.E. Erikss. & Winka, *Myconet 1(1): 11, 1997.*

[T.: *Taphrina*, as 'Taphrinomycetes O.E. Erikss. & Winka']

Teliobasidiomycetes, as class: Locq., *Mycologie Générale et Structurale: 89, 1984.*

[No Lat. diagn. T.: not designated]

Teliomycetes, as class: P.H.B. Talbot, *Taxon 17: 626, 1968.*

[No Lat. diagn. T.: not designated. See also Ainsworth in Ainsworth & Bisby's Dictionary of the Fungi, 5 ed.: 62, 1971 and Khan and Kimbrough, *Mycotaxon 15: 103, 1982*]

Teliomycetidae, as subclass: Alexop. & Mims, *Introductory Mycology, ed. 3: 40, 1979.*

[No Lat. diagn. T.: not designated]

Teliomycotina, as subdivision: K. Wells, *Mycologia 86: 42, 1994.*

[No Lat. diagn. T.: not designated]

Teliosporeae, as class: Bessey, *Univ. Stud. Neb. 7: 305, 306, 1907.*

Tilletiomycetidae, as subclass: Tehler, *Cladistics 8: 236, 1988.*

[No Lat. diagn. T.: *Tilletia*]

Thelephoromycetidae, as subclass: Locq., *Mycologie Générale et Structurale: 97, 1984.*

[as '(Gray) Lq.' No Lat diagn. T.: *Thelephora*, as 'Thelephorales']

Thraustochytriomycetidae, as subclass: Cavalier-Smith, In: Green, Leadbeater and Diver (eds.), *The Chromophyte Algae: 404, 1989.*

[As 'Thraustochytridae', as 'Sparrow 1973 stat. nov.' No Lat. diagn. T.: *Thraustochytrium*. Based on order Thraustochytriales Sparrow]

Tremellomycetidae, as subclass: Locq., *Mycologie Générale et Structurale: 91, 1984.*

[As '(Feltgen) Lq.' No Lat. diagn. T.: *Tremella*. See also Wells, K., *Mycologia 86: 44, 1994*, no Lat. diagn.; and Cavalier-Smith, *Biol. Rev. 73: 248, 1998*, as 'Fries 1821 stat. nov.']

Trichomycetes, as class: Alexop., *Introductory Mycology: 37, 1962.*

[No Lat. diagn. T.: not designated. Term introduced by Duboscq, O., Léger, L., and Tuzet, O., *Arch. Zool. exp. gén. 86: 29–144, 1948*. In this paper the rank is indefinite but co-ordinate with Ascomycetes and Laboulbeniomycetes. In Manier (1955) the term is used at the rank of 'embranchement' ([see note 8](#)) which is above a class. Two classes are then introduced: Protrichomyceta and Eutrighomyceta (p. 396) without a diagnosis.]

Trichomycetidae, as subclass: G.W. Martin, In: Ainsworth & Bisby's Dictionary of the Fungi, ed. 5: 499, 1961.

[No Lat. diagn. T.: not designated]

Trichomycota, as phylum: R.T. Moore, In: Hawksworth (ed.), *The Identification and Characterization of Pest Organisms: 250, 1994.*

[No dscr. T.: not designated. See Manier (1955) where the Trichomycetes are introduced at the rank of embranchement (= Phylum), [see note 8](#)]

Tulasnellomycetidae, as subclass: Jülich, *Bibl. Mycol. 85: 56, 1981.*

[T.: *Tulasnella*. See also Parmasto, *Windahlia 16: 17, 1986*; as '(Rea) Parm. comb. nova']

Tulostomomycetidae, as subclass: Locq., *De Taxia Fungorum: 7, 1974.*

[No Lat. diagn. T.: *Tulostoma*, as 'Tulostomatales']

Uredinei, rankless term: de Bary, In: Streinz, *Nomenclator Fungorum: 723, 1862.*

[Term derived from Tulasne and Tulasne, *Ann. Soc. Sci. nat., sér. 3, 7 (1847)*. Goebel, *Outlines in classification and special morphology of plants, 1882 (English translation, 1887)* introduced the Uredineae at the same level as the Ascomycetes and Basidiomycetes (i.e., class) and this was also the case in de Bary *Vergleichende Morphologie und Biologie der Pilze, Mycetozoen und Bacterien (1884)*. See Martin, *Mycologia 37: 528 (1945)*]

Urediniomycetes, as class: Hawksworth et al., In: Ainsworth & Bisby's Dictionary of the Fungi, ed. 7: 47, 394, 1983.

[No Lat. diagn. T.: not designated. See also Kreisel, *Biol. Rundsch. 26: 70, 1988*]

Uredinomycetidae, as subclass: Locq., *Mycologie Générale et Structurale: 94, 1984.*

[No Lat. diagn. T.: not designated, as 'Uredinamycetidae (Feltgen) Lq.'. See also Tehler, *Cladistics 8: 236, 1988 (correct orthography)*]

Uredomycetes, as class: Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987.

[No descr. T.: *Uredo*]

Uredomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[As ‘Brogniart 1824 stat. nov.’ T.: *Uredo*]

Uredomycota, as phylum: Cavalier–Smith, *BioSystems* 14: 463, 1981.

[No Lat. diagn. T.: *Uredo*]

Uredomycotina, as subphylum: Cavalier–Smith, In: Rayner, Brasier, and Moore (eds.), *Evolutionary biology of the fungi*, BMS Symposium – April 1986: 340, 1987.

[No Lat. diagn. T.: *Uredo*]

Ustilaginomycetidae, as subclass: R.T. Moore, In: Perez–Miravete and Pelaez (eds.), *Recent Advances in Microbiology*: 50, 1971.

[No descr. T.: *Ustilago*]

Ustilaginei, rankless term: de Bary, In: Streinz, *Nomenclator Fungorum*: 723, 1862.

[Term derived from Tulasne and Tulasne, *Ann. Soc. Sci. nat.*, sér. 3, 7 (1847)]

Ustilaginomycetes, as class: R. Bauer, Oberw., & Vánky, *Can. J. Bot.* 75: 1311, 1997.

[T.: *Ustilago*. See also Hawksworth et al. in Ainsworth and Bisby’s *Dictionary of the Fungi*, ed. 7: 47, 398, 1983; no Lat. diagn. Doweld (pers. comm.) states that this name is predated by Campbell, D.H., *Elements of Structural and Systematic Botany*: 64 (1891), as ‘Ustilagineae’. This reference has not been checked to determine if the rank is stated]

Ustilaginomycetidae, as subclass: Jülich, *Bibl. Mycol.* 85: 54, 1981.

[T.: *Ustilago*. See Bauer, Oberwinkler, and Vánky, *Can. J. Bot.* 75: 1311, 1997 ; as ‘Jülich emend’. See also Locquin, *De Taxia Fungorum*: 7, 1974; no descr., as ‘Ustilaginomycetidae’]

Ustomycetes, as class: R.T. Moore, *Botanica mar.* 23: 371, 1980.

[T.: not designated. Attributed by Cavalier–Smith (1987: 340) to von Arx et al. (*Mycologia* 74: 285–296, 1982) but there they support the concept but refer to Moore’s papers (1980 and 1972)]

Ustomycota, as phylum: R.T. Moore, *Antonie van Leeuwenhoek* 38: 582, 1972.

[No descr. T.: not designated]

Uteromycotina, as subdivision: Locq., *De Taxia Fungorum*: 7, 1974.

[No descr. T.: not designated]

Verrucomycetidae, as subclass: Cavalier–Smith, *Biol. Rev.* 73: 248, 1998.

[T.: not designated]

Xylariomycetidae, as subclass: O.E. Erikss. & Winka, *Myconet* 1(1): 12, 1997.

[T.: *Xylaria*, as ‘Xylariales Nannf.’]

Zoomycetes, as class: Cavalier–Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated]

Zoomycotina, as subdivision: Locq., *De Taxia Fungorum*: 6, 1974.

[No descr. T.: not designated]

Zygomycetes, as class: G. Winter, *Rabenhorst’s Kryptogamen–Flora*, ed. 2, 1(1): 32, 1881.

[This term was used without rank by Brefeld (*Botanische Untersuchungen über Schimmelpilze* I: 53, 1872). Copeland (1956: 121) and Kreisel (1969: 75) attribute this name to Sachs (*Lehrbuch der Botanik*, ed. 4: 248, 1874) where the name is given as ‘Zygomyceten’ without rank but given the correct ending in the English edition (Bennett and Thistleton–Dyer, 1875). This is given by Copeland as “(Sachs ex Bennett & Thistleton–Dyer) Winter” and by Kreisel as “Sachs ex Winter”. Cavalier–Smith, *Biol. Rev.* 73: 246, 1998 introduces the name as ‘cl. nov.’ and comments that it does not appear to have been validly published elsewhere]

Zygomycetia, as subkingdom: R.T. Moore, In: Hawksworth (ed.), *The Identification and Characterization of Pest Organisms*: 250, 1994.

[No descr. T.: not designated]

Zygomycetidae, as subclass: G.W. Martin, In: Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 5: 500, 1961.

[No Lat. diagn. T.: not designated]

Zygomycota, as phylum: Moreau, *Les Champignons* 2: 2035, 1954.

[As 'Phylum des Zygomycètes' No Lat. diagn. See also Whittaker, *Science* 163: 155, 1969; correct orthography, no Lat. diagn.; and Cavalier-Smith, *BioSystems* 14: 463, 1981; no descr.]

Zygomycotina, as subdivision: Ainsw., *Bibliography of Systematic Mycology* 4: 2, 1966.

[No descr. T.: not designated. See also Ainsworth in Ainsworth & Bisby's *Dictionary of the Fungi*, ed. 5: 218, 1971; no Lat. diagn.]

Zygomycotina, as infraphylum: Cavalier-Smith, *Biol. Rev.* 73: 246, 1998.

[T.: not designated. Two word Lat. diagn.]

NOTES

(1) On the gender of taxa: Saccardo in his compilation *Sylloge fungorum* favours the use of *-ae* for the endings of higher taxa but in a footnote (*Syll. fung.* 8: 3, 1889) he comments thus, "Beat. DE BARY (Bot. Zeit. 1887, p. 176) queritur quod dicamus *Pyrenomyceteae*, *Discomyceteae* etc. nec, more solito, *Pyrenomycetes*, *Discomycetes* etc. Respondo: quia universim classes, familiae etc. plantarum e genere feminino habentur (*Ranunculaceae* nec *Ranunculacei*). Hinc male audiret e.g., *Cohors Pyrenomycetes*, Fam. *Perisporiaceae*." This scholarly argument was taken up by Copeland (1956: 9) where he comments that, "Names of groups higher than genera are in the plural. Some are proper nouns; the remainder are adjectives used as proper nouns, agreeing in gender with the names of the kingdoms in which they are included". On the strength of this Copeland changed the endings of all families and orders in his phylum *Inophyta* (which included fungi) to *-alea* and *-acea*, to agree with the neuter gender of kingdom *Protocista*. The earlier mycological authors certainly were aware of this as the endings of their higher taxa were all masculine plurals to agree with *Fungi* (masc. nom. pl.). For instance in Fries (1821) most of the taxa end in *-i*, with a few exceptions, thus "Classis *Gasteromycetes*; Ord. *Uterini Veri*; subord. *Pyrenomycetes*; *Xylomacei*, *Cytispori*, *Sphaeriacei*, *Phacidacei*". These forms have subsequently been corrected to end in *-ae*, in agreement with Kingdom *Plantae*, to which fungi were considered to belong. The recognition of the Kingdom *Fungi* should theoretically result in all the endings being changed back to *-i*.

(2) Class names of fungi derived from genera ending in *-myces*. The class *Saccharomycetes*, based on the genus *Saccharomyces*, was introduced prior to the standardization of rank endings in the ICBN, which requires that class names of fungi take the termination *-mycetes*. Thus the class name for *Saccharomyces* should technically be 'Saccharomycomycetes' and similar cases arise for classes based on *Allomyces* and *Schizosaccharomyces*. This form is clumsy and not euphonious. When discussed recently it was suggested that Art. 16.4 (shortened names) could be expanded to cover these cases. In anticipation of a proposal to be made to the next Congress, these names are retained here in their original form. This also applies to other terminations derived from *-myces*, namely *-mycotina* and *-mycota*.

(3) Author citation of Class *Ascomycetes*: The earliest mention of the name (at an unspecified rank but above class) is von Schweinitz (1832: 143) but his concept included both basidiomycetes and ascomycetes although the diagnosis is quite clear, "Gerentes Sporidia *ascis* inclusa, nempe". The concept of a group of fungi with the shared characteristic of spores borne in asci is attributed to L veill  (1846: 105–133) but there the term 'Th caspor s' is used. The first clear usage of the term corresponding to a modern interpretation of the name occurs in Berkeley (1857: 269, 270) but the rank is not stated but is given as a subdivision of fam. *Fungales*. De Bary (1862: 724) uses the term, but again without rank in a classification that has been regarded as the origin of many of the modern groups of the fungi. However, Copeland (1956: 125) and Kreisell (1969: 84) attribute this name to Sachs (*Lehrbuch der Botanik*, ed. 4: 248, 1874) where the name is given as 'Ascomyceten' without rank as a subdivision of Klasse *Carposporeen*. This then is given in the English edition (Bennett and Thistleton-Dyer, 1875; as Group IV. *Ascomycetes*, although it should be noted that the classification given

there is explicitly stated to be based on that of De Bary (1862) and definitively stated to be at the rank of class by Winter (1881). Winter (1879) does not state the rank of Ascomycetes. This is given by Copeland as “(Sachs ex Bennett & Thistleton–Dyer) Winter” and by Kreisel as “(Sachs) Winter”. Winter (1881) does refer back to de Bary as well and so it could be argued that de Bary should be cited as the author of the basionym but, given that Berkeley was earlier and it could be argued that von Schweinitz has priority, either of these could be cited in stead. It is therefore simpler to base the name on Winter (1881) alone since only there do all the requirements for valid publication at that rank occur.

(4) On the name for the kingdom of heterokont organisms.

- i. Chromista, as Kingdom: first proposed by Cavalier–Smith (1981), but also as Kingdom Chromophyta on p. 467 where the name ‘Chromista’ is not mentioned. The name Chromophyta was first introduced by Bourrelly (1957: 106). The name is introduced without a given rank, “l’idée d’un grande ensemble des Chromophytes opposé aux Chlorophytes s’est scindé en phylums indépendants ne descendant pas les uns des autres par filiation directe.”
- ii. Stramenopila, as Kingdom: Alexopoulos et al. (1996: 62). This name, incorrect in form, is derived from the original proposal of the term ‘Stramenopile’ for a group of protists with tubular hairs on their flagella, by Patterson (1989: 358). The form of the term was corrected by Vørs (1993) *fide* Corliss (1994) to ‘straminopile’. This was further corrected in Hawksworth et al. (1995: 442) to straminipila and straminipile ; where Dick’s proposal to recognize it as the name for the kingdom Chromista is noted. This correction is based on the fact that the genitive of stramen (required for the correct formation of a compound) is ‘straminis’ and the connective used, since both parts are latin is ‘i’. The use of the kingdom name in Alexopoulos et al. (1996) refers back to a presumed reference to the Dictionary of the Fungi (as ‘Hawksworth et al., 1994’) anticipating the acceptance of the name in that work and Dick’s publication of it in a Mycological Paper. The name has been formally published by Dick, Straminipilous Fungi: 275 (2001). Patterson and Sogin (1992) delineate a natural lineage which they refer to as Stramenopiles, broadly similar to the Chromista but also including some taxa more commonly included in the Protista.

(5) On the spelling of higher taxa based on *Chytridium* A. Braun and *Hyphochytrium* Zopf. The latter name has been incorrectly formed into the Class name ‘Hyphochytridiomycetes’, presumably by analogy to the Chytridiomycetes. However, the stem is Hyphochytri– and not Hyphochytridi–. The class Chytridiomycetes is based ultimately on *Chytridium* and is therefore correctly formed with the –di– as the third syllable. The apparent correction to Chytriomycotina by Cavalier–Smith, T. (1987: 340), possibly based on the correction of Hyphochytridiomycetes by Dick (1983), is ill–founded.

(6) The correct form of names of higher taxa based on the generic name *Glomus*. The paper by Schüßler *et al.* (2001) corrected the orthography of names based on *Glomus* which had hitherto been spelled as if the stem were Glom– rather than Glomer–. The latter stem should be used since *Glomus* is a neuter noun with a genitive singular ‘Glomeris’. To adopt the former stem would imply that *Glomus* is a masculine noun with a genitive singular ‘Glomi’ and consequently many of the species epithets in the genus would have to be altered.

(7) The Hydromyxomycetes/Hydromyxales are based on the Vampyrellaceae, now considered to be a protistan group.

(8) Copeland (1956: 8) notes that the next category below that of kingdom was originally termed ‘embranchement’ by Cuvier in 1812. More recent usage of this term can be found in past editions of the International Code of Botanical Nomenclature where they have been translated into French. While the 1910 Code (Briquet, 1912) cites in Article 10 that the rank between Kingdom and Class is ‘un division’ (= Divisio), the 1930 Code (Briquet, 1935) gives the rank name in French as ‘embranchement’ and this is continued through subsequent Codes. Effectively, then, the more modern use of the term is for a division or phylum and it is in this sense that its use by Moreau (1953) and Manier (1955) should be interpreted. Certainly both use the term for a rank above that of class.

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