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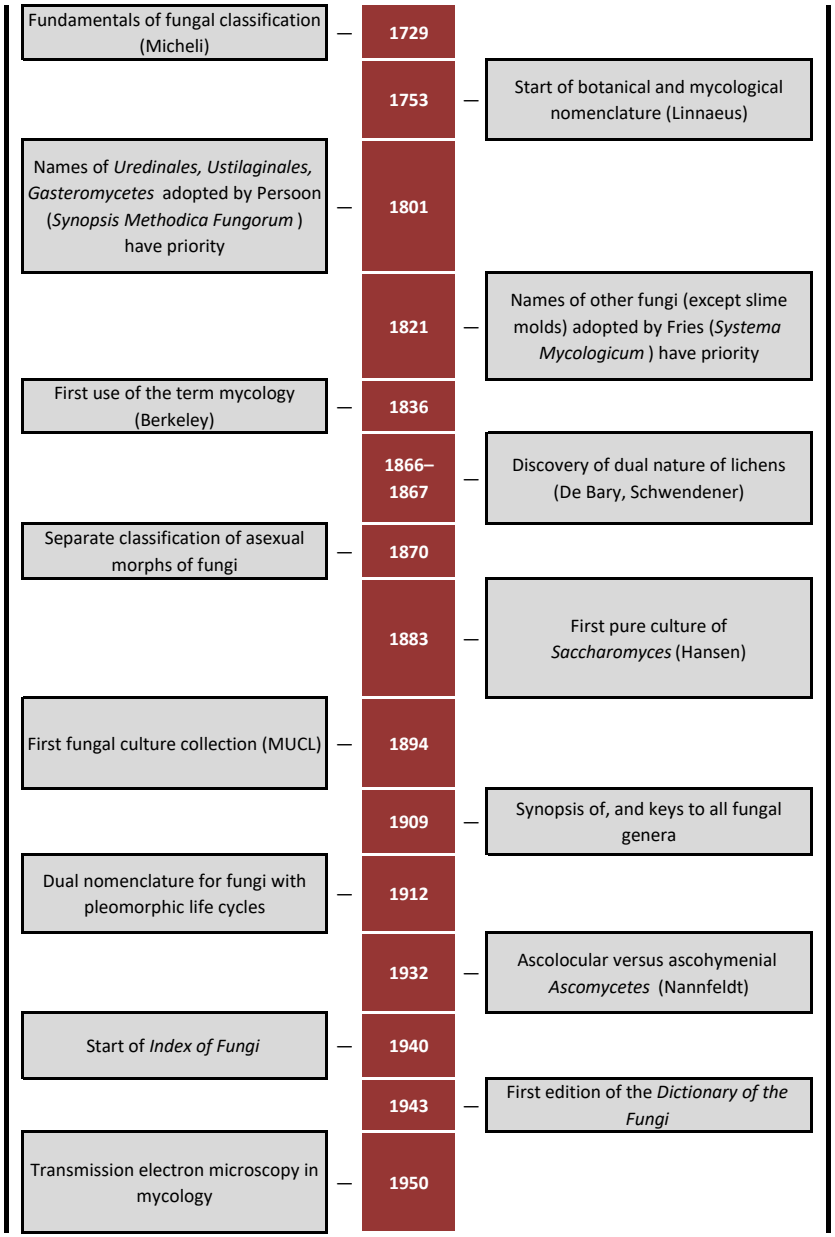
Supplementary information

Fungal taxonomy and sequence-based nomenclature

In the format provided by the authors and unedited

Supplementary File S1: References for timeline events depicted in Fig. 2.



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First proposal for registration of fungi	1955		Ainsworth, G. C. & Cifferi, R. Mycological taxomic literature and publication. *Taxon* **4**, 3-6 (1955).
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Species pairs in lichen fungi (Poelt)	1970		Poelt, J. Das Konzept der Artenpaare bei den Flechten. *Dtsch. Bot. Gesellsch., N.F.* **4**, 187-198 (1970).
	1971	*International Mycological Association* founded	
API 20 system for microbe identification (later including fungi)	1972		Smith, P. B. et al. API system: a multitube micromethod for identification of Enterobacteriaceae. *Appl. Microbiol.* **24**, 449-452 (2972); de Louvois, J., Mulhall, A. & Hurley, R. Biochemical identification of clinically important yeasts. *Journal of Clinical Pathology* **32**, 715-718 (1979); Bridge, P. D. & Hawksworth, D. L. The API ZYM enzyme testing system as an aid to the rapid identification of Penicillium isolates. *Microbiological Sciences* **1**, 232-234 (1984).
	1981	End of separate starting points for fungal nomenclature	Thirteenth International Botanical Congress, Sydney, August, 1981 (effective immediately voted through).
International Commission on the Taxonomy of Fungi (ICTF)	1982		Twelfth International Microbiological Congress, Boston, USA, 1982.
	1981/ 1983	Sanctioning of fungal names adopted by Persoon (*Synopsis Methodica Fungorum*) and Fries (*Systema Mycologicum*)	*Thirteenth International Botanical Congress, Sydney, August, 1981* ; Voss, E. G., et al. *International Code of Botanical Nomenclature: Adopted by the Thirteenth International Botanical Congress, Sydney, August, 1981* . Bohn, Scheltema and Holkema, Utrecht & W. Junk, Boston (Regnum Veg. 111) (1983).
First concept of molecular taxonomy of fungi	1985		Kurtzman, C. P. Molecular taxonomy of the fungi. In: Bennett, J. W. & Lasure, L. L. (eds.), *Gene Manipulations in Fungi* , 35-63. Academic Press, New York (1985).
	1986	Launch of *Systema Ascomycetum*	Eriksson, O. E. Revision of "Outline of the ascomycetes – 1982". *Systema Ascomycetum* **1**, 1-16 (1982); Eriksson, O. E. Systema Ascomycetum (1982–1998). *IMA Fungus* **6(1)**, (25)-(27).
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	1991	First proposal to abandon dual nomenclature	Reynolds, D. R. & Taylor, J. W.Nucleic acids and nomenclature: name stability undert Article 59. In: *Improving the Stability of Names: Needs and Options* (Hawksworth, D.L., ed.), 171-177. [Regnum Veget. Vol. 123] Koeltz Scientific Books, Koenigstein (1991).
First DNA barcoding in fungi	1994		
	1996	First eukaryote genome (*Saccharomyces cerevisae*)	Johnston, M. Genome sequencing: The complete code for a eukaryotic cell. *Curr. Biol.* **6**, 500-503 (1996).
VITEK 2 system for identification of microbes including fungi	1997		Gayral, J.-P. et al., VITEK 2 automated antimicrobial susceptibility test system. *8th European Congress of Clinical Microbiology & Infectious Diseases, Lausanne, Switzerland, Clinical Microbiology and Infection (1997).*
	2000	*Index Fungorum* online	Kirk, P. M. World catalogue of 340K fungal names on-line. *Mycological Research* **104**, 516-517 (2000).
Genealogical concordance to delimit fungal species	2000		Taylor, J. W. et al. Phylogenetic species recognition and species concepts in fungi. *Fung. Gen. Biol.* **31**, 21-32 (2000).

	2001	*Oomycota* placed in *Straminipila*	Cavalier-Smith, T. What are fungi? In: McLaughlin, D. M. et al. (eds.), *Systematics and Evolution, Part A* (The Mycota VII), 3-37. Springer, Berlin, Heidelberg (2001).
First filamentous fungus genome (*Neurospora crassa*)	2003		Galagan, J. E. et al. The genome sequence of the filamentous fungus *Neurospora crassa* . *Nature* **422**, 859-868 (2003).
	2004	*MycoBank* launched	Crous, P. W. et al. MycoBank: an online initiative to launch mycology into the 21st century. *Stud. Mycol.* **50**, 19-22 (2004).
Oldest unambiguous fungal fossil with sexual morph (*Paleopyrenomycites devonicus*)	2004		Taylor, T. N. et al. Perithecial ascomycetes from the 400 million year old Rhynie chert: an example of ancestral polymorphism. *Mycologia* **96**, 1403-1419 (2004).
	2006	Introduction of MALDI-TOF system for identification of microbes including fungi	Maier, T. et al. Fast and reliable MALDI-TOF MS–based microorganism identification. *Nature Meth.* **3**, i-ii (2006).
Integrated formal higher taxonomy of *Fungi*	2007		Hibbett, D. S. et al. A higher-level phylogenetic classification of the Fungi. *Mycol. Res.* **111**, 509-547 (2007).
	2011	Amsterdam Declaration on Fungal Nomenclature ("One fungus = one name")	Taylor, J. W. One Fungus = One Name: DNA and fungal nomenclature twenty years after PCR. *IMA Fungus* **2**, 113-120 (2011); Hawksworth, D. L. et al. Amsterdam Declaration on Fungal Nomenclature. IMA Fungus 2, 105-112 (2011).
Abandonment of dual nomenclature for fungi with pleomorphic life cycles	2011		*Eighteenth International Botanical Congress, Melbourne, 2011* ; McNeill, J. & Turland, N. J. Major changes to the Code of Nomenclature - Melbourne, July 2011. *Taxon* **60**, 1495-1497 (2011); McNeill, J., et al. *International Code of Nomenclature for algae, fungi and plants (Melbourne Code)* (Regnum Vegetabile 154). Koeltz Scientific Books, Königstein (2012).
	2012	ITS designated as universal barcode for fungi	Schoch, C.L. et al. Nuclear ribosomal internal transcribed spacer (ITS) region as a universal DNA barcode marker for Fungi. *Proc. Natl. Acad. Sci. U. S. A.* **109**, 6241-6246 (2012).
NCBI RefSeq Targeted Loci project for ITS initiated	2012		Schoch, C. L. et al. Finding needles in haystacks: linking scientific names, reference specimens and molecular data for Fungi. *Database* **2014**, bau061 (2014).
	2012	Electronic publication of valid names	*Eighteenth International Botanical Congress, Melbourne, 2011* ; McNeill, J., et al. *International Code of Nomenclature for algae, fungi and plants (Melbourne Code)* (Regnum Vegetabile 154). Koeltz Scientific Books, Königstein (2012).
Obligate registration for valid publication of new fungal names	2013		*Eighteenth International Botanical Congress, Melbourne, 2011* ; McNeill, J., et al. *International Code of Nomenclature for algae, fungi and plants (Melbourne Code)* (Regnum Vegetabile 154). Koeltz Scientific Books, Königstein (2012).
	2017	Separate governance by the IMC for nomenclatural rules specific to fungi	*Nineteenth International Botanical Congress, Shenzhen, China, 2017* ; Turland, N. J., et al. *International Code of Nomenclature for algae, fungi and plants (Shenzhen Code)* [Regnum Vegetabile 159]. Koeltz Scientific Books, Glashütten (2018).
Panel debates formal nomenclature of fungi known from DNA sequences only at the IMC11	2018		May, T. W. et al. XI International Mycological Congress: report of Congress action on nomenclature proposals relating to fungi. *IMA Fungus* **9(2)**, xxii-xxvii (2018).
	2019	Obligate registration for valid designation of new typifications	Eleventh International Mycological Congress, San Juan, Puerto Rico*, 2018* ; May, T. W. et al. 2019. Chapter F of the International Code of Nomenclature for algae, fungi, and plants as approved by the 11th International Mycological Congress, San Juan, Puerto Rico, July 2018. *IMA Fungus* **10(1)**, 21.