

International Code of Nomenclature for algae, fungi, and plants

The *International Code of Nomenclature for algae, fungi, and plants* is the set of rules and recommendations that govern the scientific naming of all organisms traditionally treated as algae, fungi, or plants, whether fossil or non-fossil, including blue-green algae (*Cyanobacteria*), chytrids, oomycetes, slime moulds, and photosynthetic protists with their taxonomically related non-photosynthetic groups (but excluding *Microsporidia*). Before 2011 it was called the *International Code of Botanical Nomenclature* (ICBN).

This edition of the *Code* embodies the decisions of the Nomenclature Section of the XIX International Botanical Congress (IBC), which took place in Shenzhen, China in July 2017. This *Shenzhen Code* supersedes the *Melbourne Code* (McNeill & al. in *Regnum Veg.* 154. 2012), published after the XVIII IBC in Melbourne, Australia in 2011. The rules of the *Shenzhen Code* became effective immediately upon acceptance of the resolution at the closing plenary session of the XIX IBC on 29 July 2017, that the decisions and appointments of its Nomenclature Section be approved. The *Shenzhen Code* in its final form was published on 26 June 2018 (printed version). This electronic version was made available on 27 June 2018. A [PDF version](#) was made available to members of the International Association for Plant Taxonomy on 27 January 2019.

Provisions of the *Code* relating solely to names of fungi are gathered together in its [Chapter F](#). The content of Chapter F may be modified by action of the Fungal Nomenclature Session of an International Mycological Congress (IMC). Chapter F was revised as a result of decisions approved on 21 July 2018 by the closing plenary session of the IMC in San Juan, Puerto Rico. The resulting [San Juan Chapter F](#) was...

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Bernard Goffinet – Bryology (and Lichenology)

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Seminar on Botanical Nomenclature (Fall 22)

Weekly seminar to discuss articles of the Botanical Code of Nomenclature, which is available [on-line](#).

When: Fridays 9.05–9.55AM

Where: PharmBio 303

We will rotate leadership of discussion, and depending on enrollment student may each present at least three topics (i.e., articles of the code).

Grade:

Discussion leadership: 3 * 20 pts (preparation, presentation and discussion)

Discussion participation: 11 * 3 pts + 1 bonus!

Based on your score (Y) you would earn: **A** = 90%<Y≤100%; **B** = 80%<Y≤89%; **C** = 70%<Y≤79%; **D** = 60%<Y≤69%; **F** = Y≤59%

Schedule of topics

Date	Topic	Leader
Sept. 2	Preamble and Principles	BG
Sept. 9	Chapter I (Art. 1–5) Taxa and their ranks	
Sept. 16	Chapter II (Art. 6–15) Status: article 6	
Sept. 23	Chapter II (Art. 6–15) Typification: article 7 article 8	
Sept.30	Chapter II (Art. 6–15) Typification: article 9 article 10	
Oct. 7	Chapter II (Art. 6–15) Priority: article 11 and article 12	

Screenshot

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Nomenclature

A set of mandatory rules and voluntary recommendations that determine the structure and formation of names of organisms, for use in scientific communication.

Purpose of plant names?

Nomenclature versus taxonomy & systematics

Nomenclature does NOT infringe upon taxonomic judgment

i.e., It does NOT determine inclusiveness or exclusiveness of any taxon

i.e., It does NOT determine the rank accorded to any assemblage of taxa

It DOES provide the name to be used for a taxon

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Nomenclature

“Biology requires a precise and simple system of nomenclature that is used in all countries, dealing ... with the terms that denote the ranks of taxonomic groups or units, and ... with the scientific names that are applied to the individual taxonomic groups.

The purpose of giving a name to a taxonomic group is not to indicate its characters or history, but to supply a means of referring to it and to indicate its taxonomic rank.

This Code aims at the provision of a stable method of naming taxonomic groups, avoiding and rejecting the use of names that may cause error or ambiguity or throw science into confusion. Next in importance is the avoidance of the useless creation of names.

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Nomenclature

The Principles form the basis of the system of nomenclature governed by this Code.

The detailed provisions are divided into rules, which are set out in the Articles (Art.) (sometimes with clarification in Notes), and Recommendations (Rec.). Examples (Ex.)² are added to the rules and recommendations to illustrate them. A Glossary defining terms used in this Code is included.

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Principles

1. Botanical nomenclature is independent of zoological nomenclature.
It covers plants, algae, fungi,....
2. The application of names to taxonomic groups is determined by means of nomenclatural types (we will talk about different types (i.e, type specimens).
3. The nomenclature of taxonomic groups is based upon priority of publication.
4. Each taxon can only bear one correct name, the earliest that is in accordance with the rules, except in specific cases.
5. Scientific names are Latin or treated as Latin regardless of their derivation.
6. The rules of nomenclature are retroactive unless expressly limited.

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Taxonomic ranks (Latinized scientific names)		
Category	Standard suffix	Example
Kingdom	-bionta	Chlorobionta (green plants)
Phylum (or Division)	-phyta	Embryophyta (land plants)
Subphylum (subdivision)	-phytina	Bryophytina (bryophytes)
Class	-opsida	Bryopsida (mosses)
Subclass	-idea	
Superorder	-anae	
Order	-ales	Bryales
Suborder	-ineae	
Superfamily	-ariae	
Family	-aceae (pl.)	Bryaceae
Subfamily	-oideae	
Tribe	-eae	
Subtribe	-inae	
Genus (pl. genera)	None, italicized, initial capital letter	<i>Bryum</i>
Species	None, italicized, genus name plus specific epithet	<i>Bryum argenteum</i>

The ranks are stable, hierarchical.

The hierarchy reflects general relationships: "closely related" species are placed the same genus, "closely related" genera in a family etc.

A species should only bear one name and can only belong to one genus. A name can only refer to one species (not an association, such as a lichen).

The classification is not stable, concepts change: what should be included in a taxon, how taxa are related and hence how they should be organized at the next rank,...

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Justification for a code

Species names are binomials, composed of two words, the generic and the species name.

A species can only bear one name

What happens if a species was described twice and given different names?

Which one should be used?

A name can only belong to one species

What happens when a species is split?

What happens when the same name was used for two different species?

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Justification for a code

Can we name taxa what ever we want?

Botanical scientific names...



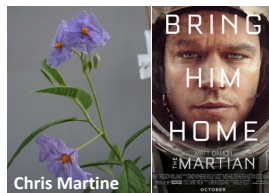
- A. May honor people only if they are botanists
- B. May honor your favorite singer**
- C. Must mean something
- D. Must be in Latin



Duke University



Gaga germanotta (A fern named after Lady Gaga)



Chris Martine

Solanum watneyi (named after Mark Watney)



Vachellia karroo

Meaning "dry" in khoikhoi

Meaning is not essential. E.g.: anagrams are allowed:

Orcuttia (genus of grasses after the town Orcutt, CA)

Tuctoria (another genus, split from *Orcuttia*)

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Justification for a code

Exceptions occur, such as tautonyms, which are....?



Tautonyms in zoology: back in I do not know, nearly 400 tautonyms from *Aptos aptos* (a kind of sponge) to *Zingel zingel* (a type of fish).

<https://digitalcommons.butler.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=4073&context=worldways>



Leo leo



Buteo buteo



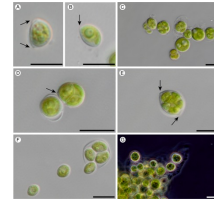
Buffo buffo

No tautonyms in botany (fungi, algae and plants).

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Names come with authorities

Tetrademus adustus Terlova & L. A. Lewis



Phlyctis petraea R.C. Harris, Muscavitch, Ladd & Lendemer



When do description start to matter? Starting date differs by group. Most plants with Linneaus 1753!

The authority is the (set of) person(s) that described (or renamed...) the species, or....

Dendricosticta yatabeana (Müll.Arg.) Ant.Simon, Goffinet & Sérus.
 ≡ *Sticta yatabeana* Müll.Arg. in Flora 74: 111. 1891



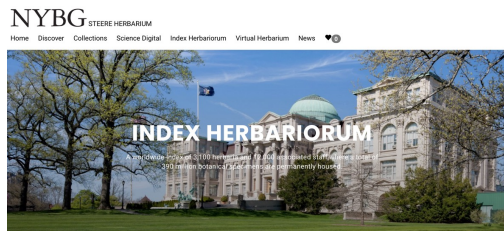
That moved a species a new genus.

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Herbarium: its role

What are herbaria?

Index herbariorum: <http://sweetgum.nybg.org/science/ih/>



Learn more: EEB 5500 Introduction to Natural History Collections
<https://biodiversity.uconn.edu/collection-course-eeb-5500/>

Should we have a tour of the CONN herbarium?



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History of the code of nomenclature

Prior to Linnaeus: taxa were named by diagnostic phrases.

The Linnaean nomenclature (binomial) system has two facets: divorcing the name from the diagnosis and minimizing classification.

A HISTORY OF BOTANICAL NOMENCLATURE¹ *Dan H. Nicolson*²

ABSTRACT

I divide botanical nomenclature into three partly overlapping periods: the schismatic period (1840–1930), the dark ages (1915–1950), and the IAPT renaissance (1950–date). The schisms began with the 1843 British Association for the Advancement of Science approval of zoological rules and became manifest with the 1867 Paris Congress approval of Alphonse de Candolle's botanical "laws." Reunification efforts, such as those by Dall (1877.12), failed. The contemporary rise of "Darwinism" added to the divisiveness. By the late 1800s, various botanical centers had or were evolving modified or different Codes from the Candollean, not to mention fully formed Codes from "outsiders" like Saint-Lager (1880.03?, 1881.04) and Kuntze (1891.10). The 1905 Vienna Congress eliminated all but the Brittonian (American) schism, which continued until the 1930 Cambridge Congress compromises. A nomenclatural "dark age" descended when the 1915 London Congress was cancelled because of a subsequent engagement, World War I. The next congress (Ithaca, 1926) declared itself incompetent due to insufficient international representation. The 1930 Cambridge Congress revised the 1912 Brussels Code but, largely because of the death of Briquet in 1931, its Code appeared only a few months before the 1935 Amsterdam Congress that amended it. Again a World War struck and no official Amsterdam Code was ever produced. The 1950 Stockholm Congress saw the establishment of the International Association for Plant Taxonomy, its journal, *Taxon*, in which all Code amendment proposals now appear, and its serial publication, *Regnum Vegetabile*, in which all subsequent Codes appear at the remorseless six-year pace of the congresses.

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International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code)

adopted by the Nineteenth International Botanical Congress, Shenzhen, China, July 2017

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Code is always changing

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Volume 71, Issue 4
Pages: 44v, 721-929
August 2022

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(2902) Proposal to conserve the name *Leptomitium* with a conserved type (*Leptomitales*, *Peronosporophyceae*, *Saprolegniophyta* (Algae s.l.))

Alexander B. Doweld

Pages: 904 | First Published: 02 August 2022

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International Botanical Congress

From Wikipedia, the free encyclopedia

The **International Botanical Congress (IBC)** is an international meeting of **botanists** in all scientific fields, authorized by the **International Association of Botanical and Mycological Societies (IABMS)** and held every six years, with the location rotating between different continents. The current numbering system for the congresses starts from the year 1900; the XVIII IBC was held in Melbourne, Australia, 24–30 July 2011,^[1] and the XIX IBC was held in Shenzhen, China, 23–29 July 2017.^[2]

The IBC has the power to alter the ICN (*International Code of Nomenclature for algae, fungi, and plants*), which was renamed from the *International Code of Botanical Nomenclature* (ICBN) at the XVIII IBC. Formally the power resides with the Plenary Session; in practice this approves the decisions of the Nomenclature Section. The Nomenclature Section meets before the actual Congress and deals with all proposals to modify the Code; this includes ratifying recommendations from sub-committees on *conservation*. To reduce the risk of a hasty decision the Nomenclature Section adopts a 60% majority requirement for any change not already recommended by a committee.

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