

their equivalents, is not the holotype. As long as the holotype is extant, it fixes the application of the name concerned (but see Art. 9.15)."

Article 40.3 states that "mention of a single specimen or gathering (Art. 40.2) or illustration, even if that element is not explicitly designated as type, is acceptable as indication of the type". In contrast, Art. 9.1 currently provides that the holotype must be "indicated", although Prop. 007 (Turland & al., l.c. 2020) proposes that it must be designated, which was the long-standing rule before the *Shenzhen Code*. The phrase "explicitly designated" in Art. 40.3 suggests that there is some unknown distinction between explicit designations and other designations.

(368) Delete the word "explicitly" in the second sentence of Art. 40.3 as follows (deleted text in strikethrough):

"40.3. [...]. For the purpose of Art. 40.1, mention of a single specimen or gathering (Art. 40.2) or illustration, even if that element is not ~~explicitly~~ designated as type, is acceptable as indication of the type of the name of a new species or infraspecific taxon (but see Art. 40.6)."

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(369–373) Proposals to eliminate the future application of Article 20.2 to generic names matching technical terms in morphology

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Article 20.2 of the *Shenzhen Code* (Turland & al. in *Regnum Veg.* 159. 2018) dates back to the earliest international rules of botanical nomenclature (*Règles internationales de la nomenclature botanique adoptées par le Congrès international de botanique de Vienne, 1905*; Briquet, *Règles Int. Nomencl. Bot.* 1906), the so-called Vienna Rules, where the first part of Art. 54 reads as follows:

"Art. 54. Names of genera must be rejected in the following special cases:

1. When they are formed from a technical term borrowed from morphology, unless they are accompanied by specific names."

This was slightly modified (as shown in underscore) in the ensuing Brussels Rules (Briquet, *Règles Int. Nomencl. Bot.*, ed. 2. 1912), to read:

"Art. 54. Names of genera must be rejected in the following special cases:

1. When they coincide with a technical term concurrently used in morphology, unless they are accompanied by specific names."

This passage, with further modifications, later became part of Art. 67 of the *Cambridge Rules* (Briquet, *Int. Rules Bot. Nomencl.*, ed. 3. 1935):

"Art. 67. Names of genera are illegitimate in the following special cases and must be rejected.

(2) When they coincide with a technical term currently used in morphology unless they were accompanied, when originally

published, by specific names in accordance with the binary method of Linnaeus. On and after Jan. 1, 1912, all new generic names coinciding with such technical terms are unconditionally rejected."

Without further change, it became part of Art. 78 of the *Stockholm Code* (Lanjouw & al. in *Regnum Veg.* 3. 1952), and then Art. 68 of the subsequent *Paris Code* (Lanjouw & al. in *Regnum Veg.* 8. 1956), before landing, with considerable restructuring, in its current place under Art. 20 of the *Montreal Code* (Lanjouw & al. in *Regnum Veg.* 23. 1961):

"The name of a genus may not coincide with a technical term currently used in morphology unless it was published before 1 Jan. 1912 and was accompanied, when originally published, by a specific name published in accordance with the binary method of Linnaeus."

where it remained unchanged until becoming Art. 20.2 in the *Leningrad Code* (Stafleu & al. in *Regnum Veg.* 97. 1978):

"20.2 The name of a genus may not coincide with a technical term currently used in morphology unless it was published before 1 Jan. 1912 and was accompanied, when originally published, by a specific name published in accordance with the binary system of Linnaeus."

Thereafter, it remained stable until the Vienna Nomenclature Section of 2005, where considerable discussion ensued, stimulated by the then-controversial case of whether to adopt the name *Cleistogenes* vs. *Kengia* and leading to a floor proposal by Zijlstra (see Flann

& al. in *PhytoKeys* 45: 78–79, 80–82. 2015), which resulted in two further changes to the Article in the *Vienna Code* (McNeill & al. in *Regnum Veg.* 146. 2006):

“20.2. The name of a genus may not coincide with a Latin technical term in use in morphology at the time of publication unless it was published before 1 January 1912 and accompanied by a specific name published in accordance with the binary system of Linnaeus.”

with the addition of this case as one of five Examples (Ex. 5) under it.

No proposals or discussion of this Article arose at the Melbourne Nomenclature Section of 2011, but at the subsequent Shenzhen Nomenclature Section the discussion of this Article was revived via a proposal by Linda in Arcadia & Lücking (in *Taxon* 65: 903–905. 2016) to sunset this provision after 31 December 2011. The proposers argued at length that “Art. 20.2 is both unnecessary and subject to a broad range of interpretations” but acknowledged that “removing it entirely is impractical, as some names that have long been considered not validly published would become validly published, which would lead to instability”, leading them to propose the 2011 end date. After extensive discussion of this proposal (Art. 20 Prop. A) in Shenzhen (see Lindon & al. in *PhytoKeys* 150: 101–106. 2020), including some friendly amendments to delete the Article altogether, it was rejected.

However, the resulting discussion gave rise later that week to Floor Prop. 7, by Funk & al., to delete Art. 20.2 outright and, by adding a new clause (c) to Art. 20.4 (“The following are not to be regarded as generic names”), to prohibit use of the words mentioned in Ex. 4 and Ex. 6 together with a list of other specified words widely used in pharmacopoeia or as descriptive morphological terms. The addition of some of these words was considered necessary because Art. 20.2 had likely originated out of “a concern that several terms used in the pharmacopoeia generally, and used in designation of species of drugs in the form of Latin polynomials, might be considered to have become accidentally but validly published generic names” (Greuter in Lindon & al., l.c.: 241). Nonetheless, Floor Prop. 7 was also rejected.

The failure of the proposals to eliminate Art. 20.2 entirely or sunset it was understandable, owing to limited evidence on the impact this might have on nomenclatural stability. Names formerly disregarded as being not validly published under this Article, were it to be eliminated, would now become validly published and could threaten currently accepted names. To have any chance for success, a proposal to remove this Article must undertake a complete analysis of the impact of such an action. Such an analysis is carried out here in furtherance of this objective.

Because, as pointed out above, this provision has existed since the earliest *Codes*, it is necessary to locate those situations where it has been applied for over a century. While this might seem difficult or even impossible to achieve, especially in the early 20th century literature, it is no longer so, for two principal reasons. One relates to the extensive electronic indexing of nearly all scientific literature over this period by internet search engines; the second to the unvarying use of the phrase “technical term” in the relevant Article of every *Code* since the 1905 Vienna Rules. It is now possible to methodically search the literature for this phrase and other useful keywords and isolate most, if not all, applications of this Article to generic “names”. Searches of comments in nomenclatural databases like Index Nominum Genericorum (ING: <https://naturalhistory2.si.edu/botany/ing/>), the International Plant Names Index (IPNI: <https://www.ipni.org/>),

and the International Fossil Plant Names Index (IFPNI: <http://ifpni.org/>) for these terms have also proven useful. A further review of all generic names in IFPNI, Index Fungorum (IF: <https://www.indexfungorum.org/>), and many in AlgaeBase (<https://www.algaebase.org/>) has uncovered many additional examples of potential “names” where this provision could have been applied. With this information in hand, we begin by proposing a change to Art. 20.2. In order to mitigate any negative nomenclatural consequences that might result from this change, some additional actions dependent on the results of our analysis will also be required, as proposed below.

(369) Rearrange and amend Art. 20.2 as follows (new text in bold, deleted text in strikethrough):

“20.2. The name of a genus **published before 1 January 1912** may not coincide with a Latin technical term in use in morphology at the time of publication unless it was ~~published before 1 January 1912~~ **and was** accompanied by a species name published in accordance with the binary system of Linnaeus.”

Data from the analysis are detailed in Table 1. The “names” (hereafter also called designations when considered not validly published) involved can be organized into four categories. The first (Table 1A) concerns those designations published before 1912 and not accompanied by a species name. One of these, “*Radicula*” (Hill, Brit. Herb.: 264. 1756), has exemplified this group in every *Code* since the 1935 Cambridge Rules. Several others have also been uncovered. Given the limited number of such cases detected, with over a century of elapsed time, no disruption to nomenclature would be expected by retaining this portion of the provision. Table 1B lists names and/or designations published after 1911 to which this Article has been applied at least by some, or could potentially be applied if the Article remained intact, to consider them as not validly published. Those cases mentioned in Ex. 4–6 or where substitute names have been published to replace earlier designations thought to be not validly published are underscored. For some “names” (e.g. *Cleistogenes*, *Colleteria*, *Scandentia*) the application of this rule to such cases has been challenged, and in the former case the rule itself was changed at the 2005 Vienna Nomenclature Section to support this challenge. Nevertheless, a binding decision on the valid publication status of all underscored names or designations in Table 1B, or any others at the discretion of the relevant Permanent Nomenclature Committees, would promote nomenclatural stability.

(370) Submit the generic names or designations in Table 1B to the General Committee, which will refer them for examination to the specialist committee for the appropriate taxonomic group (see Div. III Prov. 2.2, 7.9 and 7.10). In order to retain those names that best serve stability of nomenclature, a Committee recommendation as to whether or not any of these “names” or any spelled exactly alike should be treated as validly published may then be put forward to an International Botanical Congress and, if ratified, will become a binding decision with retroactive effect.

To account for the binding decisions under Prop. 370 above, which relate to a provision no longer present in the *Code* if Prop. 369 is accepted, a Note patterned after Art. F.8 Note 2 of the “San Juan Chapter F” (May & al. in *IMA Fungus* 10(21). 2019), which clarifies cases formerly considered under deleted Art. 59 of the *Vienna Code*, should be added to Art. 20:

Table 1. Actual (marked by underscore) or potential rejections of generic names/designations matching technical terms due to application of Article 20.2 and its precursors.

A. Generic designations published before 1912			
Designation	Publication	First validly published name	References
“ <u>Medium</u> ” Opiz [Angiosp.]	Berchtold & Opiz, Oekon.-Techn. Fl. Böhm. 2(2): 9. 1839 (https://babel.hathitrust.org/cgi/pt?id=uc1.31175016190921)		ING
“ <u>Mucilago</u> ” Battarra [Fungi]	Fungi Arimin.: 76. 1755 (https://bibdigital.rjb.csic.es/idviewer/10884/86)	<u>Mucilago</u> Haller ex F.H. Wigg., Prim. Fl. Holsat.: 112. 1780 (https://archive.org/details/primitiaeflorae00webegoog/mode/2up)	ING; see Taxon 47: 110. 1998 (https://doi.org/10.2307/1224025)
“ <u>Mucilago</u> ” Adans. [Fungi]	Fam. Pl. 2: 7. 1763 (https://doi.org/10.5962/bhl.title.271)	<u>Mucilago</u> Haller ex F.H. Wigg., Prim. Fl. Holsat.: 112. 1780 (https://archive.org/details/primitiaeflorae00webegoog/mode/2up)	
“ <u>Ocellis</u> ” Clem. [Fungi]	Gen. Fungi: 80, 175. 1909 (https://doi.org/10.5962/bhl.title.3602)		see Phytotaxa 189: 69. 2014 (https://doi.org/10.11646/phytotaxa.189.1.6)
“ <u>Radicula</u> ” Hill [Angiosp.]	Brit. Herb.: 264. 1756 (https://doi.org/10.5962/bhl.title.51133)	<u>Radicula</u> Moench, Methodus: 262. 1794 (https://doi.org/10.5962/bhl.title.304)	see Sida 4: 280. 1972 (https://www.jstor.org/stable/41966420) & Shenzhen Code: Art. 20 Ex. 2 (https://www.iapt-taxon.org/nomen/pages/main/art_20.html)
“ <u>Unifolium</u> ” Zinn [Angiosp.]	Cat. Pl. Hort. Gott.: 104. 20 Apr–21 Mai 1757 (https://catalog.hathitrust.org/Record/011537260)	<u>Unifolium</u> All., Fl. Pedem. 1: 124. 1785 (https://bibdigital.rjb.csic.es/idurl/1/13173)	ING
“ <u>Volva</u> ” Adans. [Fungi]	Fam. Pl. 2: 12. 1763 (https://doi.org/10.5962/bhl.title.271)		
B. Generic names or designations published after 1911			
Name/designation	Publication	Substitute name	Source where rejected
“ <u>Aculeata</u> ” W. Dong & al. [Fungi]	Mycol. Progr. 17: 622. 2018		
“ <u>Agamus</u> ” Vologdin [Foss.]	Dokl. Akad. Nauk S.S.S.R. 193: 1165. 1970		
“ <u>Ala</u> ” Szlach. [Angiosp.]	Fragm. Florist. Geobot. Suppl. 3: 113. 1995	<u>Alinorchis</u> Szlach.	Polish Bot. J. 46: 129. 2002 (http://maxbot.botany.pl/cgi-bin/pubs/data/article_pdf?id=731)
“ <u>Apodus</u> ” Malloch & Cain [Fungi]	Canad. J. Bot. 49: 872. 1971		
“ <u>Arbuscula</u> ” H.A. Crum & al. [Bryoph.]	Bryologist 67: 163. 1964	≡ <u>Thamnobryum</u> Nieuwl. 1917	ING [but as a “Superfluous substitute name for <u>Thamnium</u> W. P. Schimper 1852”]
“ <u>Arbuscula</u> ” Bat. & Peres [Fungi]	Mycopathol. Mycol. Appl. 25: 162. 1965	<u>Neoarbuscula</u> B. Sutton	Trans. Brit. Mycol. Soc. 81: 407. 1983 (www.cybertruffle.org.uk/cyberliber/59351/0081/002/0407.htm), ING & IF (but as later homonym of “ <u>Arbuscula</u> ” H.A. Crum)
“ <u>Arcus</u> ” Olshtynskaja [Algae]	Paleontol. Sborn. (Moscow & Leningrad) 15: 77. 1978	<u>Fossilarcus</u> S. Blanco	Notul. Algarum 139: 1. 2020 (https://notulaealgarum.org/2020/documents/Notulae%20algarum%20No.%20139.pdf)
“ <u>Armata</u> ” W. Yamam. [Fungi]	Sci. Rep. Hyogo Univ. Agric., Ser. Agric. 3: 89. 1958		

(Continues)

Table 1. Continued.

B. Generic names or designations published after 1911			
Name/designation	Publication	Substitute name	Source where rejected
“Bacca” Engelh. [Foss.]	Abh. Hess. Geol. Landesanst. Darmstadt 7(4): 77. 1922		ING, IFPNI
“Bicornis” J. Fenner [Algae]	Aarhus Geosci. 1: 109. 1994	Fennerbicornis S. Blanco	Notul. Algarum 139: 1. 2020 (https://notulaealgarum.org/2020/documents/Notulae%20algarum%20No.%20139.pdf)
“Bicuspidata” E.A. Assejeva [Foss.]	Teslenko, Sist. Evol. Drevn. Rast. Ukrainy: 11. 1982		ING
“Bracteola” Swallen [Angiosp.]	Amer. J. Bot. 20: 118. 1933	Chrysoschloa Swallen	Proc. Biol. Soc. Wash. 54: 44. 1941 (https://www.biodiversitylibrary.org/page/34599197)
“Bulbilla” Diederich & al. [Fungi]	Lichenologist 46: 340. 2014	“Adamflakia” Diederich & Lawrey	Bryologist 119: 347. 2016 (https://doi.org/10.1639/0007-2745-119.4.341) [but fide ING, the “replacement name” violates Art. 38.5, 40.3 & 40.6]
“Bulbulus” Swallen [Angiosp.]	Phytologia 11: 154. 1964	Rehia Fijten	Blumea 22: 416. 1975 (https://repository.naturalis.nl/pub/525810)
“Caeruleum” K. Knudsen & Arcadia [Fungi]	Opusc. Philolichenum 11: 24. 2012		see Taxon 65: 903–905. 2016 (https://doi.org/10.12705/654.35)
“Calyptra” Theiss. & Syd. [Fungi]	Ann. Mycol. 15: 478. 1918		
Candida Berkhout, nom. cons. [Fungi]	Schimmelgesl. Monilia: 41. 1923		
“Capillus” T.A. Caires & al. [Algae]	Algae 33: 295. 2018	Capilliphycus T.A. Caires & al.	Notul. Algarum 95: 1. 2019 (http://notulaealgarum.org/documents/Notulae%20algarum%20No.%2095.pdf)
“Carbonicola” Bendiksby & Timdal [Fungi]	Taxon 62: 950. 2013		see Taxon 65: 903–905. 2016 (https://doi.org/10.12705/654.35)
“Caulorhiza” Lennox [Fungi]	Mycotaxon 9: 154. 1979		
“Cavernosa” Stidolph [Algae]	Nova Hedwigia 50: 99. 1990	Phycavernosa S. Blanco	Notul. Algarum 139: 5. 2020 (https://notulaealgarum.org/2020/documents/Notulae%20algarum%20No.%20139.pdf)
“Clavata” Stanevich [Foss.]	Jankauskas & al., Mikrofoss. Dokembr. S.S.S.R.: 56. 1989		
Cleistogenes Keng [Angiosp.]	Sinensia 5: 147. 1934	Kengia Packer, nom. illeg.	Bot. Not. 113: 291. 1960 [see Shenzhen Code Art. 20 Ex. 5: https://www.iapt-taxon.org/nomen/pages/main/art_20.html]
Colleteria David W. Taylor [Angiosp.]	Syst. Geogr. Pl. 73: 203. 2003	Wandersong David W. Taylor, nom. illeg.?	J. Bot. Res. Inst. Texas 8: 530. 2014 (https://www.jstor.org/stable/26549402)
“Coma” Nag Raj & W.B. Kendr. [Fungi]	Canad. J. Bot. 50: 614. 1972		
“Constricta” R. Heim & Mel.- Howell [Fungi]	Rev. Mycol. (Paris) 29: 324. 1965		

(Continues)

Table 1. Continued.

B. Generic names or designations published after 1911			
Name/designation	Publication	Substitute name	Source where rejected
“Contexta” M.B. Gnilovsk. [Foss.]	Izvestk. Vodor. Ordov. Vost. Kazakhst.: 108. 1972		
“Corollina” Maljavkina [Foss.]	Trudy Vsesoyuzn. Neft. Nauchno-Issl. Geol.-Razved. Inst., ser. 2, 33: 120. 1949		
“Corona” P. Leféb. & Chenev. [Algae]	Bull. Soc. Franç. Microscop. 7: 9. 1938	Phycorona S. Blanco	Notul. Algarum 139: 5. 2020 (https://notulaealgarum.org/2020/documents/Notulae%20algarum%20No.%20139.pdf)
“Crassa” Gurgel & al. [Algae]	Phytotaxa 374: 10. 2018	Crassiphycus Guiry & al.	Notul. Algarum 82: 1. 2018 (https://www.notulaealgarum.com/documents/Notulae%20algarum%20No.%2082.pdf)
“Crassinervia” Neuburg [Foss.]	Trudy Vsesoyuzn. Geol.-Razved. Ob’jed. S.S.S.R. 348: 37. 1934		[but see Taxon 62: 1351–1353. 2013 (https://doi.org/10.12705/626.38), a nom. cons. prop. involving this name]
“Decussata” (R.M. Patrick) Lange-Bert. [Algae]	Iconogr. Diatom. 9: 670. 2000	Decussiphycus Guiry & Gandhi	Notul. Algarum 94: 1. 2019 (http://notulaealgarum.org/documents/Notulae%20Algarum%20No.%2094.pdf)
“Delicata” Krammer [Algae]	Lange-Bertalot, Diatoms Eur. 4: 164. 2003	Delicatophycus M.J. Wynne	Notul. Algarum 97: 1. 2019 (https://www.notulaealgarum.org/documents/Notulae%20algarum%20No.%2097.pdf)
“Dilatata” J.M. Anderson & H.M. Anderson [Foss.]	Palaeofl. S. Africa, Prodr., Devon.: 154. 1985		ING
“Exarata” A.H. Gentry [Angiosp.]	Syst. Bot. 17: 503. 1992		IPNI (https://www.ipni.org/n/300319-2)
“Flagellis” E.A. Assejeva [Foss.]	Teslenko, Sist. Evol. Drevn. Rast. Ukrainy: 10. 1982		
“Folium” E. Hoffm. [Foss.]	Nova Acta Leop., ser. 2, 1: 61. 1932		ING [see <i>Shenzhen Code</i> Art 20 Ex. 6: https://www.iapt-taxon.org/nomen/pages/main/art_20.html]
“Fossula” Hasle & al. [Algae]	Diatom Res. 11: 296. 1996	Fossulaphycus S. Blanco	Notul. Algarum 139: 2. 2020 (https://notulaealgarum.org/2020/documents/Notulae%20algarum%20No.%20139.pdf)
“Funiculus” V.P. Shuysky & D.I. Schirschova [Foss.]	Trudy Inst. Geol. Geofiz. Akad. Nauk SSSR, Sibirsk. Otd. 674: 100. 1987 (https://books.google.at/books?id=XvrRr3kAlhMC)		ING
“Funiculus” Moreira-Fern. & al. [Algae]	J. Phycol. 57: 1575. 2021		
“Gemma” V.A. Luchinina [Foss.]	Trudy Inst. Geol. Geofiz. Akad. Nauk S.S.S.R., Sibirsk. Otd. 510: 100. 1982		ING
“Hirsutum” Plumst. [Foss.]	Trans. Geol. Soc. South Africa 61: 60. 1958	Gladiopomum Adendorff & al.	Palaeont. Afr. 38: 4. 2002 (https://wiredspace.wits.ac.za/bitstreams/679c7745-6f63-4f55-86d4-48b8d63a825f/download)
“Involucrum” Velen. & Viniklár [Foss.]	Rozpr. Státního Geol. Ústavu 5: 15, 75. 1931		ING
“Lanceolata” Ekanayaka & K.D. Hyde [Fungi]	Mycosphere 10: 422. 2019 (https://www.mycosphere.org/pdf/MYCOSPHERE_10_1_7.pdf)		[see <i>Shenzhen Code</i> Art. 20 Ex. 4: https://www.iapt-taxon.org/nomen/pages/main/art_20.html]

(Continues)

Table 1. Continued.

B. Generic names or designations published after 1911			
Name/designation	Publication	Substitute name	Source where rejected
“<i>Lanceolatus</i>” Plumst. [Foss.]	Trans. Geol. Soc. South Africa 55: 299. 1952		ING [see Shenzhen Code Art. 20 Ex. 4: https://www.iapt-taxon.org/nomen/pages/main/art_20.html]
“<i>Latibractea</i>” Hai-Ming Liu & al. [Foss.]	Chin. Sci. Bull. 58(Suppl. 1): 203. 2013		
“<i>Laticaulina</i>” Krassilov [Foss.]	Paleontol. Zhurn. 1970(3): 141. 1970		
“<i>Lignum</i>” Y.-S. Xing [Foss.]	Acta Geol. Sin. 1973(1): 28. 1973		IFPNI [see Table 1D and Prop. 373 above]
“<i>Lobata</i>” V.J. Chapm. [Algae]	Trans. Roy. Soc. New Zealand 80: 48. 1952		ING [see Shenzhen Code Art. 20 Ex. 4: https://www.iapt-taxon.org/nomen/pages/main/art_20.html]
“<i>Lobifolia</i>” Rassk. & Lebedev [Foss.]	Trudy Geol. Inst. Akad. Nauk S.S.S.R., ser. 2, 191: 61. 1968		ING, IFPNI
“<i>Multifurcatus</i>” Yi Wang [Foss.]	Alcheringa 27: 51. 2003 (https://doi.org/10.1080/03115510308619544)		ING
“<i>Obtusifolium</i>” S.W. Arnell [Bryoph.]	Ill. Moss Fl. Fennoscandia. I. Hepat.: 133. 1956		ING
“<i>Ovulum</i>” Jankauskas [Foss.]	Paleontol. Zhurn. 1975(1): 96. 1975		ING
“<i>Parallela</i>” E.A. Flint [Algae]	New Zealand J. Bot. 12: 358. 1974	<i>Flintia</i> Molinari & Guiry	Notul. Algarum 168: 1. 2020 (https://www.notulaealgarum.com/documents/Notulae%20algarum%20No.%20168.pdf)
“<i>Paraphysis</i>” (DC.) Dostál [Angiosp.]	Acta Bot. Acad. Sci. Hung. 19: 76. 1973		ING
“<i>Pellucida</i>” Dulym. & al. [Fungi]	Mycol. Res. 105: 250. 2001		
“<i>Petalum</i>” G.V. Djupina [Foss.]	Trudy Inst. Geol. Geochim. Uralsk. Nauchn. Centr. Akad. Nauk S.S.S.R. 109: 136. 1974 (https://books.google.at/books?id=qORvDwAAQBAJ)	<i>Dyupetalum</i> Janson. & Hills	Genera File Fossil Spores Suppl. 3: 3551. 1979, ING
“<i>Podocarpium</i>” (Benth.) Y.C. Yang & P.H. Huang [Angiosp.]	Bull. Bot. Lab. N. E. Forest. Inst. Harbin 4: 4. 1979	<i>Hylodesmum</i> H. Ohashi & R.R. Mill	Edinburgh J. Bot. 52: 173. 2000 (https://doi.org/10.1017/S096042860000123) [See discussion on p. 172 regarding the morphological term “podocarpium”. Is a post-1911 later homonym that does not satisfy Art. 20.2 of a pre-1912 generic name that does satisfy the Article validly published? It is treated as such in App. IV, where <i>Podocarpium podocarpum</i> (DC.) Y.C. Yang & P.H. Huang is listed.]
“<i>Principia</i>” P.L. Brenckle [Foss.]	Geol. Palaeontol. (Marburg) 15: 59. 1982		
“<i>Pulvinata</i>” Ekanayaka & K.D. Hyde [Fungi]	Mycosphere 10: 350. 2019		

(Continues)

Table 1. Continued.

B. Generic names or designations published after 1911			
Name/designation	Publication	Substitute name	Source where rejected
“Pulvinus” J.A. West & al. [Algae]	Phycologia 46: 249. 2007	Pulvinaster J.A. West & al.	Phycologia 46: 478. 2007 (https://www.researchgate.net/publication/256441611_2007_Pulvinaster_Corrigendum_Phycologia)
“Pumilus” Viala & Marsais [Fungi]	Compt. Rend. Hebd. Séances Acad. Sci. 198: 1557. 1934		
“Purpurea” F.F. Cai & Renhui Li [Algae]	Fottea 20: 87. 2020 (https://doi.org/10.5507/fot.2019.018)	Purpureonostoc F.F. Cai & Renhui Li	Fottea 20: 111. 2020 (https://doi.org/10.5507/fot.2020.007)
Scandentia E.L. Cabral & Bacigalupo [Angiosp.]	Darwiniana 39: 30. 2001	Denscantia E.L. Cabral & Bacigalupo, nom. illeg.	Darwiniana 39: 353. 2001 (https://www.redalyc.org/pdf/669/66939412.pdf)
“Scutum” Plumst. [Foss.]	Trans. Geol. Soc. South Africa 55: 285. 1952		ING, IFPNI
“Semen” Velen. & Viniklár [Foss.]	Fl. Cret. Bohem. 2: Czech 15, German 43. 1927 (https://www.digitalniknihovna.cz/knav/view/uuid:5b54fbf4-46c7-4ef9-993a-2abe167d015b)		ING
“Serialis” E.M. Friis & al. [Foss.]	Int. J. Pl. Sci. 180: 95. 2019		IFPNI
“Setacea” (De Toni) Necchi & Rossignolo [Algae]	Phycologia 55: 343. 2016	Atrophycus Necchi & Rossignolo	Notul. Algarum 26: 1. 2017 (http://notulaealgarum.org/documents/Notulae%20algarum%20No.%2026.pdf)
“Solitaria” Arup & al. [Fungi]	Nordic J. Bot. 31: 55. 2013		
“Solitaria” (McNeill) Sadeghian & Zarre [Angiosp.]	Bot. J. Linn. Soc. 178: 667. 14 Jun 2015 (https://doi.org/10.1111/boj.12293)	Shivparvatia Pusalkar & D.K. Singh	J. Jap. Bot. 90: 81. 20 Apr 2015 (https://doi.org/10.51033/jjapbot.90_2_10562) [Both names are based on <i>Arenaria</i> subg. <i>Solitaria</i> McNeill in Notes Roy. Bot. Gard. Edinburgh 24: 128. 1962, with different types but including the same 3 species.]
“Spathulata” (Boriss.) Á. Löve & D. Löve [Angiosp.]	Taxon 34: 163. 1985 (https://doi.org/10.1002/j.1996-8175.1985.tb04413.x)		ING
“Spongiosus” Lloyd ex Torrend [Fungi]	Brotéria, Sér. Bot. 18: 121. 1920		
“Stilus” Paddock [Algae]	Biblioth. Diatomol. 16: 95. 1988	Phycostilus S. Blanco	Notul. Algarum 139: 5. 2020 (https://notulaealgarum.org/2020/documents/Notulae%20algarum%20No.%20139.pdf)
“Stipella” L. Léger & M. Gauthier [Fungi]	Compt. Rend. Hebd. Séances Acad. Sci. 194: 2263. 1932	“Stypomyces” Doweld	Index Fungorum 112. 2014 (http://www.indexfungorum.org/Publications/Index%20Fungorum%20no.112.pdf) [Published as a replacement name for <i>“Stipella”</i> L. Léger & M. Gauthier (non <i>Stypella</i> Möller), but only with reference to its earlier non-Latin description, also with two species combinations but no indication of type.]

(Continues)

Table 1. Continued.

B. Generic names or designations published after 1911			
Name/designation	Publication	Substitute name	Source where rejected
“<i>Stipella</i>” (Tzvelev) Röser & Hamasha [Angiosp.]	Pl. Syst. Evol. 298: 365. 2012 (https://doi.org/10.1007/s00606-011-0549-5)	<i>Stipellula</i> Röser & Hamasha	Schlechtendalia 24: 91. 2012 (https://doi.org/10.25673/90109) [Not a replacement name, but nonetheless replaced the earlier invalid name, which was wrongly considered a later homonym of the similarly invalid “ <i>Stipella</i> ” L. Léger & M. Gauthier.]
“<i>Sympodia</i>” (R. Heim) W.B. Cooke [Fungi]	Gen. Homobasidiom.: 93. 1953		[see Donk, Generic Names Proposed for Agaricaceae: 280. 1962]
“<i>Tertiarius</i>” Håk. & Khursevich [Algae]	Diatom Res. 12: 21. 1997	<i>Paleotertiarius</i> S. Blanco	Notul. Algarum 139: 2. 2020 (https://notulaealgarum.org/2020/documents/Notulae%20algarum%20No.%20139.pdf)
“<i>Tribrachiatum</i>” Shamrai [Foss.]	Izv. Vyssh. Uchebn. Zaved., Geol. & Razvedka 1963(4): 38. 1963		
“<i>Trilobata</i>” S.N. Naumova [Foss.]	Amiraslanov, Trudy XVII Sess. Mezhdunar. Geol. Kongr. 1: 358. 1940		
“<i>Trilobatum</i>” Xiaosi Fang [Foss.]	Bull. Inst. Geol., Chin. Acad. Geol. Sci. 14: 156. 1987		
“<i>Tubercularis</i>” Clem. & Shear [Fungi]	Gen. Fung., ed. 2: 221. 1931		
“<i>Tubulosa</i>” E.A. Assejeva [Foss.]	Teslenko, Sist. Evol. Drevn. Rast. Ukrainy: 13. 1982		ING
“<i>Umbella</i>” Maslov [Foss.]	Trudy Vsesoyuzn. Neft. Nauchno-Issl. Geol.- Razved. Inst., ser. 2, 87: 37. 1956		
“<i>Umbellula</i>” E.F. Morris [Fungi]	Mycologia 47: 602. 1955		
“<i>Umbellula</i>” Korde [Foss.]	Trudy Paleontol. Inst. Akad. Nauk SSSR 139: 135. 1973	<i>Palaeoumbellula</i> Molinari & Guiry	Notul. Algarum 183: 5. 2021 (https://www.notulaealgarum.com/2021/documents/Notulae%20algarum%20No.%20183.pdf) [Published as a replacement name for “ <i>Umbellula</i> ” Korde (non E.F. Morris), but because the type of the single species, also considered a replacement name, was not indicated (Art. 40) it was not validly published and thus the type of this genus was not indicated under Art. 40.3.]
“<i>Univiscidiatus</i>” (Kores) Szlach. [Angiosp.]	Polish Bot. J. 46: 20. 2001	<i>Acianthopsis</i> Szlach., nom. illeg. (non M.A. Clem. & D.L. Jones 20 Jan 2002)	Polish Bot. J. 46: 143. 20 Feb 2002 (http://maxbot.botany.pl/cgi-bin/pubs/data/article_pdf?id=734)
“<i>Vesicula</i>” Chlonova [Foss.]	Trudy Inst. Geol. Geofiz. Sibirsk. Otdel. Akad. Nauk S.S.S.R. 1976(312): 65. 1977		IFPNI
<i>Xenia</i> Gerb. [Angiosp.]	Bot. Jahrb. Syst. 113: 552. 1992		[see Bradleya 12: 108. 1994 (https://doi.org/10.25223/brad.n12.1994.a8)]
C. Generic names at new rank not published after 1911			
Subdivisional Name	Publication	Replacement name	Source where replaced
<i>Plagiochila</i> sect. <i>Connatae</i> Lindenb.	Monogr. Hepat. Gen. Plagiochilae: XXIX. 1843	<i>Cryptolophocolea</i> L. Söderstr.	Phytotaxa 97: 39. 2013 (https://doi.org/10.11646/phytotaxa.97.2.3)

(Continues)

Table 1. Continued.

C. Generic names at new rank not published after 1911			
Subdivisional Name	Publication	Replacement name	Source where replaced
<i>Pallavicinia</i> sect. <i>Dentigeræ</i> R.M. Schust.	J. Hattori Bot. Lab. 70: 146. 1991	<i>Prionoethallus</i> Mamontov & al.	Arctoa 30: 167. 2021 (https://doi.org/10.15298/arctoa.30.17)
<i>Typhonium</i> sect. <i>Diversifolia</i> Srib. & J. Murata	J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot. 15: 294. 1994	<i>Diversiarum</i> J. Murata & Ohi-Toma	Syst. Bot. 36: 254. 2011 (https://doi.org/10.1600/036364411X553333)
<i>Caladenis</i> subg. <i>Elevata</i> Hopper & A.P. Br.	Lindleyana 15: 124. 2000	<i>Caladeniastrum</i> (Szlach.) Szlach.	Ann. Bot. Fenn. 40: 144. 2003 (https://www.jstor.org/stable/23726890)
<i>Typhonium</i> sect. <i>Hirsuta</i> Srib. & J. Murata	J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot. 15: 293. 1994	<i>Hirsutiarum</i> J. Murata & Ohi-Toma	Syst. Bot. 36: 254. 2011 (https://doi.org/10.1600/036364411X553333)
<i>Typhonium</i> sect. <i>Pedata</i> Srib. & J. Murata	J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot. 15: 296. 1994	<i>Pedatyphonium</i> J. Murata & Ohi-Toma	Syst. Bot. 36: 254. 2011 (https://doi.org/10.1600/036364411X553333)
<i>Arenaria</i> subg. <i>Solitaria</i> McNeill	Notes Roy. Bot. Gard. Edinburgh 24: 128. 1962	<i>Shivparvatia</i> Pusalkar & D.K. Singh	J. Jap. Bot. 90: 81. 20 Apr 2015 (https://doi.org/10.51033/jjapbot.90_2_10562)
		<i>“Solitaria”</i> (McNeill) Sadeghian & Zarre	Bot. J. Linn. Soc. 178: 667. 14 Jun 2015 (https://doi.org/10.1111/boj.12293)
D. Other generic designations not now validly publishable			
Designation	Source where rejected		
“Balsamum”	PhytoKeys 150: 264. 2020 (https://doi.org/10.3897/phytokeys.150.50687)		
“Bulbus”	PhytoKeys 150: 264. 2020 (https://doi.org/10.3897/phytokeys.150.50687)		
“Caulis”	see <i>Shenzhen Code</i> Art. 20 Ex. 6 (https://www.iapt-taxon.org/nomen/pages/main/art_20.html)		
“Cortex”	PhytoKeys 150: 264. 2020 (https://doi.org/10.3897/phytokeys.150.50687)		
“Flos”	PhytoKeys 150: 264. 2020 (https://doi.org/10.3897/phytokeys.150.50687)		
“Folium”	see <i>Shenzhen Code</i> Art. 20 Ex. 6 (https://www.iapt-taxon.org/nomen/pages/main/art_20.html) [but see Table 1B]		
“Herba”	PhytoKeys 150: 264. 2020 (https://doi.org/10.3897/phytokeys.150.50687)		
“Lignum”	see Vienna & Brussels Rules (https://www.iapt-taxon.org/historic/1906.htm ; https://www.iapt-taxon.org/historic/1912.htm) [but see Table 1B]		
“Oleum”	PhytoKeys 150: 264. 2020 (https://doi.org/10.3897/phytokeys.150.50687)		
“Radix”	see <i>Shenzhen Code</i> Art. 20 Ex. 6 (https://www.iapt-taxon.org/nomen/pages/main/art_20.html) [but see Fritsch, <i>Problematica Silurica</i> : 8. 1908; https://doi.org/10.5962/bhl.title.14914]		
“Spina”	see <i>Shenzhen Code</i> Art. 20 Ex. 6 (https://www.iapt-taxon.org/nomen/pages/main/art_20.html)		

(371) Add the following Note under Art. 20:

“*Note n.* Editions of the *Code* prior to the *Madrid Code* of 2025 included a provision precluding the valid publication after 1911 of the name of a genus that coincided with a technical term in use in morphology at the time of publication. While publication of such names is not recommended (see Rec. 20A.1(n)), in the interest of nomenclatural stability under the current *Code* binding decisions on the valid publication status for each case or any with identical spelling where this former provision applied are listed in App. VI and take retroactive effect.”

Table 1C lists validly published names of subdivisions of genera for which a replacement name in lieu of a name at new rank has been published to avoid their transfer to generic rank in violation of Art. 20.2. With elimination of part of Art. 20.2, a new Recommendation against such transfers is desirable to guard against any future infringements of this type.

(372) Add the following new clause to Rec. 20A.1 (new text in bold):

“20A.1. Authors forming generic names should comply with the following:

[...]

(n) Not publish names for genera that coincide with technical terms currently in use in morphology.”

And finally, Table 1D lists several words derived from various sources (*Shenzhen Code* Art. 20 Ex. 6; Vienna Rules Art. 54 Ex. 1; Floor Prop. 7 in *Shenzhen* [Lindon & al. in *PhytoKeys* 150: 264. 2020]) that should continue to be protected against their inadvertent valid publication as generic names with elimination of part of Art. 20.2. A mechanism similar to that advocated by Floor Prop. 7 in *Shenzhen* is proposed.

(373) Delete Art. 20 Ex. 4–6; insert a new clause in Art. 20.4 (new text in bold):

“20.4. The following are not to be regarded as generic names: [...]

(n) **Some words that have been widely used in pharmacopoeia or as descriptive morphological terms: *Balsamum, Bulbus, Caulis, Cortex, Flos, Herba, Lignum, Oleum, Radix, Spina.*”**

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We are grateful to Emma Wrangmore for providing feedback on generic designations associated with Art. 20.2 in IPNI, and to Michael Guiry, Paul Kirk and Alexander Doweld for their primary roles in providing to the scientific community data on algal, fungal and fossil names through AlgaeBase, Index Fungorum and the International Fossil Plant Names Index, respectively.

(374) Proposal to amend Article 38.3 to clarify what local, indigenous or traditional information is to be accepted in a validating description or diagnosis

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Information obtained from traditional knowledge of various peoples of the world was, and still is, widely used in taxonomy of plants and fungi. Ethnobotany and ethnobotanical linguistics are also important for exploration and conservation of biodiversity (e.g. Young, Ethnobotany. 2007; Berlin, Ethnobiological Classification: Principles of Categorization of Plants and Animals in Traditional Societies. 2014). Vernacular, folk and traditional plant names are often condensed forms of traditional knowledge, reflecting morphology, ecology, utility and other qualities of the plant taxa (see, e.g., Hidayati & al. in Franco & al., Case Studies in Biocultural Diversity from Southeast Asia: Traditional Ecological Calendars, Folk Medicine and Folk Names: 167–225. 2022, https://doi.org/10.1007/978-981-16-6719-0_7), and thus they can be reflected also in scientific names of organisms.

Hayova & al. (Prop. 221 in Taxon 72: 455. 2023) proposed “to add a new Recommendation after Article 38, with the advice to report local/indigenous vernacular names (if available) of new taxa and to use such names, if appropriate, in scientific nomenclature”. If the proposal of Hayova & al. (l.c.) is accepted, protologues of new taxa might therefore contain vernacular names and/or cite publications containing traditional knowledge. Actually, Art. 6.13 footnote of the *Shenzhen Code* (Turland & al. in Regnum Veg. 159. 2018) provides no restriction on the kind of information already allowed to be included in the protologue, but if the proposal of Hayova & al. (l.c.) is accepted, such inclusions may become far more common. This kind of information from the protologue might appropriately be used for various purposes related to plant taxonomy and nomenclature.

However, not all information in the protologue can be used in a “description or diagnosis” required by Art. 38.1 for valid publication of a new name. The current proposal is to make it clear that any “description or diagnosis” mandated by Art. 38.1 is limited to

morphological characteristics (and possibly, in future, DNA sequences, see Thiele & al. in Taxon 72: 965–973. 2023) of the taxon itself, and does not include any reference to any other human cognizance of the taxon, whether that be scientific (“geographical origin, or geological age”, see Art. 38.3) or traditional/cultural.

There could be a situation when the local or indigenous name is in fact descriptive (e.g. meaning “white-flowering tall shrub” or “prickly wide-leaved weed”). A mere citation of such descriptive names, in the past or in the future, should not be sufficient to constitute a description or diagnosis under Art. 38.1. If such names are in a language other than those permitted by Art. 39, they might arguably not be considered part of the validating “description or diagnosis” anyway, but this proposal makes that clear and avoids any such arguments.

On the other hand, there could be a situation when an author of a name refers to some earlier publication on traditional knowledge, which contains a morphological description of the taxon, i.e. a description not relying on properties ruled out by Art. 38.3. In that case, it can be accepted as the validating “description or diagnosis”; there is no good reason why such a morphological description should not be cited.

An addition to Art. 38.3 is therefore proposed.

(374) Amend Art. 38.3 as follows (new text in bold):

“38.3. The requirements of Art. 38.1(a) are not met by statements describing properties such as purely aesthetic features, economic, medicinal or culinary use, cultural significance, cultivation techniques, geographical origin, or geological age; **or by statements indicating local or indigenous vernacular names (even descriptive ones); or by statements citing non-descriptive traditional knowledge.**”