

(084) Proposal to amend Art. 9.10**Mithilesh K. Pathak & Subir Bandyopadhyay***Botanical Survey of India, P.O.: Botanic Garden, Howrah—711103, West Bengal, India*
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In the Art. 9.10 of *Vienna Code* the words ‘must be chosen’ denote that the choice for lectotypification is compulsorily required to be made in a given sequence but in countries with humid weather conditions the specimens are often found to be considerably damaged by insects. In such cases it may be the case that an isotype is not suitable as a choice for lectotype because it would not serve in any way for typifying a name. In that case the lectotype should be chosen from the rest of the material specified in Art. 9.10 in spite of the fact that an isotype is present. This case may also be true for other types. To overcome the problem that arises in such situations we propose the following:

(084) Insert the italicized sentence in Art. 9.10 as indicated:
9.10. In lectotype designation, an isotype must be chosen if such

exists, or otherwise a syntype if such exists. If no isotype, syntype or isosyntype (duplicate of syntype) is extant, the lectotype must be chosen from among the paratypes if such exist. If no cited specimens exist, the lectotype must be chosen from among the uncited specimens and cited and uncited illustrations which comprise the remaining original material, if such exist. *This sequence must be followed unless it can be shown that a specimen which should have priority in selection is not suitable in any way for typifying the name, in which case a specimen next in the sequence may be chosen.*

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(085) Proposal to include a Note under Art. 9.10**Subir Bandyopadhyay & Mithilesh K. Pathak***Botanical Survey of India, P.O.: Botanic Garden, Howrah—711103, West Bengal, India*
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Dr. John McNeill, while editing one of our manuscripts, commented that a lectotype designation contrary to Art. 9.10 does not constitute an effective lectotypification. He also said that a clarification could be proposed in the form of a Note if we thought that what he said is not clearly understandable in the *Code*. We feel that a clarification is necessary and so propose the following Note that should be included under Art. 9.10.

(085) Add the following Note in Art. 9, following Art. 9.10

Note 4bis. A choice contrary to Art. 9.10 does not constitute an effective lectotypification.

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(086–087) Proposals to amend Arts. 7.11 and 9.21**Richard K. Rabeler¹ & Kanchi N. Gandhi²**¹ *University of Michigan Herbarium, 3600 Varsity Drive, Ann Arbor, Michigan, 48108-2228, U.S.A.*² *Harvard University Herbaria, 22 Divinity Avenue, Cambridge, Massachusetts, 02138, U.S.A.*Author for correspondence: *Richard K. Rabeler, rabeler@umich.edu*

(086) Amend Art. 9.21 by adding this statement at the end:
“and if the typification statement includes the phrase ‘designated here’ (hic designatus) or an equivalent.”

(087) Amend Art. 7.11 as follows

Replace the final clause starting “and, on or after 1 January 2001,” by: “and if the requirements of Arts. 9.20 and 9.21 are met.”

Articles 7.11 and 9.21 both cover the requirements for lectotypification after 2001 but, in the current *Code*, do not contain all of the same elements. Specifically, the phrase “designated here” is present only in Art. 7.11. Thus, a lectotypification published today without that phrase would meet the requirements of Art. 9.21, but not Art. 7.11. An example are those published by Patrick McMillan (*Rhynchospora* (*Cyperaceae*) of S. Carolina and the E. U.S. Biota

S. Carol. 5. 2007); since they contravene one Article of the *Code*, are these typifications validly published?

This proposal would correct that inconsistency by adding the phrase from Art. 7.11 to Art. 9.21 as well as adding a direct reference to both Arts. 9.20 and 9.21 into Art. 7.11

Acknowledgement

We thank John McNeill for his suggestion of expanding our ideas to include amending Art. 7.11.

(088) Proposal to modify Recommendation 9A.4 of the *Vienna Code*

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During a taxonomic revision of the fern genus *Megalastrum* (*Dryopteridaceae*), we encountered a problem with Recommendation 9A.4 of the *Code* (McNeill & al. in Regnum Veg. 146. 2006). This Recommendation concerns the citation of a holotype when a single gathering was cited in the protologue and a particular herbarium housing that gathering was not designated. In such cases, the Recommendation says that the specimen housed in the institution where the author worked should be assumed to be the holotype, unless evidence suggests otherwise. This Recommendation now runs contrary to changes that have occurred to the *Code* over the past 20 years, especially those changes concerning the definitions of types and of certain practices of typification. Before suggesting a re-wording for Recommendation 9A.4, we think it helpful to give a historical review of changes to the *Code* that have made this re-wording necessary.

On or after 1 January 1958, the indication of a type was made mandatory in the *Code* for valid publication of a name at the rank of genus or below. The type could consist of an entire gathering or part thereof, or consist of two or more specimens of a single gathering as defined in Art. 8 of the current *Code* (see also Art. 37.2). Before 1 January 1958, it was not necessary to cite the particular herbarium where the type was housed, and what constituted a “specimen” was not precisely defined.

Since mandating indication of a type for valid publication of a name, there have been three important changes to the *Code* concerning the selection of type specimens. First, the *Tokyo Code* (Greuter & al. in Regnum Veg. 131. 1994, footnote 1 of Art. 9.7) introduced a definition of “original material” that included duplicates of specimens cited in the protologue, even if those duplicates were not seen by the describing author (now Art. 9 Note 2 of the *Vienna Code*). This definition of “original material” is broader than that presumed by many previously. Commonly, only those specimens seen by the describing author were thought to qualify as original material from which a type could be selected; nowadays, any duplicate specimen of the type, even if not seen by the describing author, qualifies as original material from which the nomenclatural type may be designated.

Second, the *St. Louis Code* (Greuter & al. in Regnum Veg. 138. 2000) defined a “specimen” as “a gathering, or part of a gathering, of a single species or infraspecific taxon made at one time, disregarding admixtures (see Art. 9.12). It may consist of a single plant, parts of one or several plants, or of multiple small plants. A specimen is usually mounted on a single herbarium sheet or in an equivalent preparation, such as a box, packet, jar or microscope slide.” The related Art. 8.3 stated that “a specimen may be mounted as more than one

preparation, as long as the parts are clearly labelled as being that same specimen. Multiple preparations from a single gathering that are not clearly labelled as being part of a single specimen are duplicates, irrespective of whether the source was one plant or more than one (but see Art. 8.5).” Thus, for example, three herbarium sheets of the same collection qualify as a single specimen if they are numbered on each sheet “1 of 3,” “2 of 3,” “3 of 3.” These sheets, however, would not qualify as one specimen if they were not numbered as such; they would be considered three separate specimens, or duplicates of the same collection. The distinction is important because a nomenclatural type, by definition, can only consist of a *single* specimen.

Third, the *Tokyo Code* (Greuter & al. in Regnum Veg. 131. 1994) also required that on or after 1 January 1990, the herbarium or collection in which the holotype was preserved must be specified (Art. 37.5 of that *Code*; Art. 37.7 of the *Vienna Code*). Thus, on or after 1 January 1990, a name at the rank of genus or below cannot be validly published unless a single holotype specimen and the herbarium in which it is housed is indicated. The implication of this change is that, before 1990, a holotype could exist only if either of two conditions are met: either (1) a single gathering was cited in the protologue along with the particular herbarium housing a single specimen of that gathering; or (2) if a single gathering was cited in the protologue and no duplicates of it exist (i.e., the only specimen that exists is that seen by the describing author). In the second case, the single specimen studied by the author is usually the one housed in the herbarium where the author worked (Recommendation 9A.4). This second situation often applies to names published before 1958, the date after which a type must be indicated. For many of these names, the only original material known to exist is the one specimen in the herbarium where the author worked. As specified in Art. 9.1, that specimen is the “holotype.”

If, however, duplicates are later found of a supposed holotype identified under this second condition, then a problem arises. The “holotype” and its duplicates must now be considered syntypes (Art. 37 Note 1). They cannot, as was formerly done, be considered a holotype with isotypes. It is this difference that needs to be taken into account in the wording of Recommendation 9A.4.

The problem with Recommendation 9A.4 is illustrated by the following hypothetical example. If, say, French pteridologist A.A. Fée, working in the middle of the 19th century, cited only *Glaziou 5128* in the protologue and did not cite a herbarium in which that specimen was housed, then Recommendation 9A.4 says we should assume that *Glaziou 5128* at P is the holotype (although Fée worked