

## (366–369) Two proposals on original material and two on superseding type selection

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DOI <http://dx.doi.org/10.12705/655.34>

It has long been assumed that an illustration published as part of the protologue represents original material and, judging from correspondence, most people continue to hold that view. Indeed this view was explicitly accepted at the Tokyo Congress (Greuter & al.

in Englera 14: 52–53. 1994) on the basis of one of two alternative proposals by Silva (in Taxon 42: 167–168. 1993), the successful one being discussed as Art. 7 Prop. S, the Rapporteur-général commenting that “it made no sense to exclude the published illustration from

the original material”. However, as pointed out by Ross (in Taxon 51: 523–524. 2002), the wording that appears in Art. 9.3, if taken literally, would exclude the vast majority of such illustrations. This is because it restricts illustrations as original material to those “upon which it can be shown that the description or diagnosis validating the name was based”. As Ross pointed out with respect to his monograph of the genus *Rutilaria*, the drawings and photomicrographs accompanying each protologue were all of specimens available to him as he wrote the descriptions of the new taxa, but, in doing so, he examined these specimens and not the illustrations of them, many of which were not drawn or photographed until after the descriptions had been written. This is certainly a common situation.

The comment has been made that the need to have restrictive wording in the definition of which illustrations represented original material was to prevent, for example, habitat photographs being treated as original material. That issue was, however, resolved at the Melbourne Congress with acceptance of what is now the footnote to Art. 8.1 defining the term illustration for the purposes of the *Code* as “a work of art or a photograph depicting a feature or features of an organism, e.g. a picture of a herbarium specimen or a scanning electron micrograph.” This was the result of a proposal by Perry (Prop. 216 in Taxon 59: 1909–1910. 2010), who also proposed to make explicit that all such illustrations included in the protologue were indeed original material. That proposal (Prop. 215) was surprisingly defeated on a card vote, perhaps because it was seen as an extension of the provision of illustrations as types rather than a clarification of current practice (Flann & al. in PhytoKeys 41: 49–50. 2014).

Accordingly a slightly modified proposal is made here to achieve the same goal.

**(366) Amend the first part of Art. 9.3 to read (new text in bold, deleted text in strikethrough):**

“9.3. For the purposes of this *Code*, original material comprises the following elements: (a) those specimens and illustrations (both unpublished and published ~~either prior to or together with publication~~ of the protologue) upon which it can be shown that the description or diagnosis validating the name was based; (b) **any illustrations published as part of the protologue**; [and otherwise unaltered except for re-lettering the existing clauses as (c) and (d)].”

If Prop. 367 is also accepted, simpler rewording may be achieved editorially, but as the issues involved are very different, the proposals are presented independently.

We have recently been made aware that another part of the wording of the current definition of original material is open to a very different interpretation from that which has generally been assumed to be the case. This relates to specimens and again involves the phrase “upon which it can be shown that the description or diagnosis validating the name was based”. It is customary practice to regard as original material any specimen associated by the author with the named taxon and that can be shown to have been available to the author prior to publication of the name. For example, as Jarvis (Order out of Chaos: 44–46. 2007) noted, the presence of the 1753 *Species plantarum* number on a sheet in the Linnaean Herbarium in London (LINN) has been taken as evidence that the specimen was in Linnaeus’s possession in 1753 and thus is original material.

However, it has been suggested (Sennikov in Taxon 65: 1178–1179. 2016) that only if such a specimen also exhibits some character included in the description or diagnosis can it be “shown” to be part of

the basis for that description or diagnosis. In the case of a protologue that includes a description, it is virtually certain that any specimen that the author considered to belong to the new taxon will exhibit some described features, but this is not necessarily the case for new taxa for which only a diagnostic phrase-name is provided – that is for the vast majority of species given a binomial for the first time by Linnaeus in *Species plantarum* (1753).

For example, in the genus *Myriophyllum*, Linnaeus (Sp. Pl.: 992. 1753) recognized only two species, distinguished as “*Myriophyllum floribus masculis interrupte spicatis*” and “*Myriophyllum floribus omnibus verticillatis*”. Sennikov has argued that only specimens in flower can be considered original material, because only they could be the basis for the diagnosis. While this would appear to be a misrepresentation of the role of the nomen specificum legitimum, designed to diagnose a species that might have been recognized on many features with the minimum number of characters (indeed just one when only two species needed to be distinguished), it is nevertheless true that this is a possible interpretation of the current wording of the definition that places the emphasis on the link with the description or diagnosis, rather than on evidence of the author’s possession of the specimen and the identification of it with the named taxon.

The first designated lectotype of *Myriophyllum spicatum*, the first of Linnaeus’s two species, is the specimen Herb. Linn. No. 1123.1 at LINN (Jarvis, l.c.: 687 and <http://linnean-online.org/11673/>). There are four separate plant parts on the sheet, only one of which is in flower, and so Sennikov has argued that only that part represents original material, although it would seem clear from the sheet itself that Linnaeus made no such distinction. Indeed, noting that only the two right-hand plant parts that are not in flower represent *M. spicatum* as currently understood, Jarvis (l.c.: 687) suggested that this portion be selected in a second-step lectotypification (as has since been done by Ericsson in Nordic J. Bot. 27: 139. 2009), but, under Sennikov’s reading of Art. 9.3, these parts are not part of the original material. [Like all workers for the following 160 or so years, Linnaeus recognized only one species for what is now considered to be two: one, *M. spicatum*, a widespread aggressive aquatic weed of the Northern Hemisphere and the other, *M. sibiricum* (= *M. exalbescens*), a circumpolar species characteristic of cooler regions (Aiken & McNeill in Bot. J. Linn. Soc. 80: 216–218. 1980; Scribailo & Alix, *Haloragaceae*, Fl. N. Amer. Provis. Publ. 2014. [http://floranorthamerica.org/files/Haloragaceae.provisional.Gal\\_.pdf](http://floranorthamerica.org/files/Haloragaceae.provisional.Gal_.pdf)].

It might be argued that relaxing the link with the wording of the description or diagnosis might lead to uncited material that was quite contrary to the author’s concept being treated as original material. But this does not follow logically. If an uncited specimen is in serious conflict with the description or diagnosis (and does not merely lack features included in the description or diagnosis) then it can be argued that it is not original material; moreover, if a lectotype selection were to be made on such a specimen, it could be superseded under Art. 9.19(b), so long as other material was available (see below). However, unlike the situation with *Coronilla coronata* L. and *Ononis arvensis* L. (cf. Turland & Jarvis in Taxon 46: 467, 477. 1997), it may be that the only surviving original material, although in serious conflict with the protologue, seems in fact to be original material that was misinterpreted by the author or perhaps just examined superficially. In such a situation, having to select or maintain it as the lectotype would be nomenclaturally disruptive, so that selecting a neotype would be the most satisfactory procedure. To this end it would be well to revisit Art. 9.19(b) – see Prop. 368 below.

**(367) Amend Art. 9.3(a) to read (new text in bold, deleted text in strikethrough):**

“9.3. For the purposes of this *Code*, original material comprises the following elements: (a) those specimens and illustrations (both unpublished and published either prior to or together with the protologue) ~~upon which it can be shown that the author associated with the taxon, and that were available to the author prior to, or at the time of, preparation of~~ the description or diagnosis validating the name ~~was based; [...].”~~

The provision that allows a lectotypification or neotypification to be superseded on the grounds of serious conflict with the protologue was introduced at the Sydney Congress in 1981 (previously the criterion had been if it could “be shown that the choice was based on a misinterpretation of the protologue”). The new wording, now “9.19. The author who first designates (Art. 7.9 and 7.10) a lectotype or a neotype in conformity with Art. 9.11–9.13 must be followed, but that choice [...] may also be superseded if (b) it is in serious conflict with the protologue and another element is available that is not in conflict with the protologue [...]”, stemmed from a proposal from the floor by Brummitt, Meikle, and McNeill, and although there was considerable discussion of the proposal, much of it relating to whether “protologue” or “description” was the more appropriate term, no reason for the inclusion of the phrase “and another element is available that is not in conflict with the protologue” was given (Greuter & Voss in Englera 2: 27–29. 1983). Moreover, the first author has no recollection of why such a phrase was thought desirable at the time; although not explicitly stated, it seems to imply an element of the same sort (e.g., original material), and would therefore only have relevance to lectotypification, whereas Art. 9.19 applies to both lectotypes and neotypes.

If a lectotype is in serious conflict with the protologue (necessarily, therefore, an uncited specimen or uncited illustration) and is the only surviving element of original material, supersession is currently precluded – unless one can argue that the element cannot in fact be original material (as was done for *Coronilla coronata* and *Ononis arvensis* – see above), in which case a neotype can be designated. But there are cases in which evidence exists that a conflicting element is indeed original material and the author was just careless. It seems only reasonable that any lectotype in serious conflict with the protologue should be supersedable, regardless of what other material is available. Consequently we are proposing a rewording of Art. 9.19.

In preparing the rewording, it became clear that a switch in the sequence of clauses (b) and (c) would be more accurate and this transposition is incorporated in the proposal together with necessary cross-referencing from Art. 9.1 and 9.13:

**(368) Restructure and amend Art. 9.19 to read (new text in bold, text moved to new position in italic, deleted text and moved text in original position in strikethrough):**

“9.19. The author who first designates (Art. 7.9 and 7.10) a lectotype or a neotype in conformity with Art. 9.11–9.13 must be followed, but that choice is superseded if (a) the holotype or, in the case of a neotype, any of the original material is rediscovered; the choice may also be superseded if ~~one it can be shown that~~ (b) *it is contrary to Art. 9.14 or (c) it is in serious conflict with the protologue and another, in which case an element is available that is not in conflict with the protologue is to be chosen; a lectotype may only be superseded by a non-conflicting element of the original material, if such exists; otherwise it may be superseded by a neotype; or that (c) it is contrary to Art. 9.14.*”

**and add to the parentheses at the end Art. 9.7:** “and 9.19(c)”

**and add at the end of Art. 9.13:** “and 9.19(c)”.

The current wording of Art. 9.14(b), referring to serious conflict with the protologue and not with the description or diagnosis as had been originally suggested, was a very deliberate decision of the Nomenclature Section in Sydney (Greuter & Voss, l.c.). This has the important effect, not apparently always realized, that if a specimen or illustration is cited in the protologue it is part of that protologue and cannot logically be in any sort of conflict with the protologue, although it might possibly be in conflict with at least some aspects of the description or diagnosis. A Note to clarify this seems desirable and is now proposed.

**(369) Add a Note following Art. 9.19 to read:**

“*Note 6bis.* Only a choice of uncited material as lectotype may be superseded under Art. 9.19(b); cited specimens and illustrations are part of the protologue and cannot therefore be in serious conflict with it.”

**Acknowledgements**

We are very grateful to Nicholas Turland, Berlin, for insightful comments and suggestions on earlier drafts of these proposals and for his patience with the later ones.