

(267–269) Proposals to define description and amend the definition of diagnosis in Article 38

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The word description as used in Art. 38.1 is not explicitly defined in the *Code* (Turland & al. in Regnum Veg. 159. 2018). Therefore, it is a daily struggle for indexers and users of algal, fungal and plant names to assess whether names are validly published with the descriptive text provided. This is made worse because direction from specialist committees that provide a decision on whether a descriptive statement satisfies the requirements of a description, as provided for in Art. 38.4, is increasingly contradictory. This is partly the result of strong opposing opinions that have taken hold because of a lack of guidance in the *Code*. Description is by some defined in a strict sense that any descriptive statement is sufficient for valid publication. This results from the statement in Art. 38 Note 2 that a description need not be diagnostic. However, as the committees under Art. 38.4 regularly considered names that have a descriptive statement as not validly published, this cannot be the only guiding principle. We therefore propose to add a new Article defining description similar to how Art. 38.2 defines diagnosis, making it clear which kinds of descriptive statements are insufficient for valid publication. There are three main issues the editors of the International Plant Names Index (IPNI; <https://www.ipni.org/>) regularly encounter and which invariably cause opposing opinions.

The first issue that is occasionally encountered is new species names within the same genus or infraspecific names within the same species that have exactly the same description. A recent example is *Triticum durum* f. *tristepseudoalbiprovinciale* Lyapunova (in Vavilov J. Genet. Breed. 21: 156. 2017), which has exactly the same description “albo in combinatio cum nigro gluma color nigromarginata” as *T. durum* f. *tristeboeufii* Lyapunova and *T. durum* f. *tristemuticoboefii* Lyapunova published as new in the same paper. Strictly speaking, all three taxa have a description but it seems undesirable that new taxa published under the same taxon in the same paper have the same description and suggests the statement was not intended to describe the taxa.

We encounter similar cases with diagnoses, such as a recent find that was an assumed earlier publication of *Nepenthes macfarlanei* Hemsl. (in Nature 71(1851): 599. 1905), with the descriptive statement that it “differs from all other known species, except *N. Lowii*, in the underside of the lip being thickly beset with stiff bristles, interspersed with honey-glands”. Although this diagnosis distinguished the new taxon “from other taxa” (Art. 38.2), it did not distinguish the new taxon from all taxa being compared to it. We therefore propose to add a qualification to the words “other taxa” in Art. 38.2.

(267) Amend Art. 38.2 as follows (new text in bold):

“38.2. A diagnosis of a taxon is a statement of that which in the opinion of its author distinguishes the taxon from **all other taxa being compared to it.**”

The second issue is single words or a combination of these words that only describe habit, height, stem width or stem circumference of taxa, mostly trees. These statements often come from notes on herbarium labels or are part of the description of economic features. Although economic features on their own are not considered sufficient under Art. 38.3, the height, width and circumference of a tree trunk can serve both economic and taxonomic descriptive purposes. Other statements that have been deemed sufficient are absolute statements of length, e.g. *Alsophila brunoniana* Wall. (Numer. List: 241, n. 7073. 1832) has a statement “Hujus filicis arborea caudex ped. 45 altus ab ampliss. Procuratione Brit. Ind. Orient Museum Britanico anno 1831 donatio”, which we consider a description of a single specimen rather than “of the taxon” as specified in Art. 38.1 (a) and therefore not in compliance with that Article. Another example which is widely considered not to be validly published is *Hydnocarpus anthelminthicus* Pierre ex Laness. (Pl. Util. Col. Franç.: 303. 1886), for which, apart from economic information on the wood, the height and width are given: “Arbre de 8 à 15 mètres de hauteur sur 20 à 25 centimètres de diamètre.”

(268) Add a new Article to Art. 38 to define description:

“38.1.bis. A description of a taxon is a statement describing a feature or features of an individual taxon. A validating description (Art. 38.1) need not be diagnostic. A description is considered insufficient for the requirements of Art. 38.1 if (a) an identical statement is used in the same work (publication as a whole, see Art. 37.5) for a species description within the same genus or for an infraspecific taxon description within the same species, (b) the description applies only to a single individual plant or specimen rather than the taxon, or (c) the description is limited to habit, height, stem width, stem circumference, or a combination of these. Statement (c) could however be sufficient as a diagnosis under Art. 38.2.”

The third issue is so-called negative descriptions, i.e. only a statement on how an existing taxon differs from the new taxon. Although it seems obvious to us that Art. 38.2 clearly defines diagnosis as “distinguishes the taxon from other taxa” and not the other way round, this has recently been challenged. The Nomenclature Committee for Vascular Plants recently deemed such a statement as sufficient under Art. 38.4 for *Agave gustaviana* J.N. Haage & E. Schmidt (in Pflanzen-Verzeichnis 1874: 1. 1874), the description of which is “nähert sich in der Form der Blätter und im Habitus einigermassen der prächtigen *A. Verschaffeltii*; bei letzterer sind jedoch die Blätter kürzer, gedrängter, eine dichtere Rosette bildend und von starker blaugrauer Färbung”. [In the form of the leaves and in the habit somewhat approaches the splendid *A. Verschaffeltii*; in the latter, however, the leaves are shorter, more crowded, forming a

denser rosette, and of a strong bluish-grey colour.] If a descriptive statement indicates that an existing taxon differs from the new species because the existing one has yellow flowers, we do not know the colour of the flowers of the new taxon and therefore in our opinion this cannot be considered a description. The name *Agave gustaviana* is now rejected, so the addition of a Note will not change existing nomenclature but will prevent such names being accepted in the future because indexers like IPNI have always considered those not to be validly published.

(269) Amend Art. 38 Note 2 (new text in bold, deleted text in strikethrough):

“~~Note 2. Whereas a~~ A diagnosis must comprise one or more descriptive statements **on how the new taxon differs from one or more other taxa** (Art. 38.2 and 38.3), ~~a validating description (Art. 38.1) need not be diagnostic.~~ **A statement on how one or more existing taxa differ from the new taxon is not sufficient to satisfy Art. 38.2.”**

(270) Proposal to add a Note after Article 40.1 to clarify that elements that cannot serve as types on their own should not be considered as part of a type indication

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It is now commonplace for authors to supplement the holotype by citing illustrations, mostly digital images of specimens. Digital images with a caption stating that they are the holotype are also sometimes included when a nomenclatural novelty is published. For orchids in particular, it is common to cite the wild-collected plants that were cultivated and from which a specimen was subsequently made. There has been debate as to whether such names should be considered validly published, because more than one element is cited as the holotype (contrary to Art. 8.1 of the *Shenzhen Code*, Turland & al. in *Regnum Veg.* 159. 2018). Even though this should be discouraged, it is now common practice, so we propose a new Note

to make it clear that elements cited as part of the type indication that, on their own, cannot serve as a type under Art. 8 and 40 should not be taken into account when assessing whether a name is validly published.

(270) Add a new Note after Art. 40.1:

“*Note n.* When elements are cited as part of the type indication that cannot on their own serve as types as defined under Art. 8 and 40 (e.g. living organisms cited contrary to Art. 8.4 or illustrations cited contrary to Art. 40.4), they should not be taken into account and do not affect valid publication of the name.”