

PROPOSED ADDITIONS TO THE INTERNATIONAL RULES OF BOTANICAL NOMENCLATURE.

SUGGESTED BY BRITISH PALÆOBOTANISTS.

A MEETING of palæobotanists was held on October 27, 1934, at the British Museum (Natural History), at which it was agreed to propose the following additions to the International Rules. The proposals have subsequently been approved by other workers not present at the meeting, and have received the general approval of many American palæobotanists. With the exception of the third paragraph, they have been adopted in essentials by our continental colleagues, Professors Jongmans, Halle, and Gothan, who have recently issued a pamphlet of proposed additions to the Rules (Harlem, Jan. 1935):—

After Art. 11. Add: Since most of the names of fossil plants are founded on specimens of detached organs, and uncertainty is thus involved in the complete reconstruction of many fossil species, organ genera and artificial genera may be distinguished as categories within which species are recognised.

Add to footnote of Art. 16: In organ genera and artificial genera of fossil plants the valid name is the earliest published name used for a specimen or group of specimens with the same limited circumscription, position, and rank, and this must be applied only to those organs of the plant for which the name was originally used; isolated organs of a different category must be placed in a different organ genus or artificial genus.

Add to Recommendations, Chapter III., Sect. 2: The type of the name of an organ genus is the first species described as showing all the characters on which the group was founded. The type of the name of a species is the first specimen described as showing all the essential diagnostic characters; if the specimen has been lost, the first description accompanied by a clear and satisfactory figure should be taken as the type. Where several specimens have been simultaneously described and figured without indication as to which is to be regarded as the type, the example or figure which shows most clearly and fully the essential characters should be taken.

Add to Section 4 of Chapter III. an additional subsection:—

§ 8. *Names of Artificial Genera of Fossil Plants.*

Art. . An artificial genus is an organ genus, sanctioned by long usage, which is known to contain unrelated species grouped together for convenience and to which specimens may be provisionally referred in the absence of characters indicating their taxonomic relationship. The names of such groups must be used only with their original circumscription and no subsequent alteration of the diagnostic characters is permissible. They are to be regarded as having no type-species. Owing to the mixed and uncertain nature of these artificial genera they should not be associated in larger groups comparable to families.

Note.—A list of artificial genera will be provided.

Chapter III. Add after Art. 57 a new article:—

Art. . Among extinct fossil forms a plant which has been reconstructed by the association of fragments referable to different organ genera and bearing different names must be given a distinct binary name to designate the plant as a whole. A generic name permanently associated with an organ genus must not be used for this purpose.

Note on Recommendation to be added to Section 2, Chapter III. :—

The wording and intention of our proposal differ somewhat from that of our continental colleagues. The object of Art. 18 of the Rules seems to be the permanent attachment of a name to a particular specimen (description or figure). It is especially designed to cover the cases where a genus including more than one species is subsequently divided into two or more genera, and the question arises as to which of these should bear the original generic name. The solution proposed is that the name goes with a particular specimen, preparation, figure, or description. "The nomenclatural type is not necessarily the most typical or representative element of the group; it is merely that element with which the name of the group is permanently associated."

The question at issue is the framing of a rule for fossil plants which fulfils the object of Art. 18, without giving rise to confusion. The problem of the palæobotanist is quite different from that confronting the student of modern plants. He has not merely to link on a name to a particular plant, but also to make sure that the specimen with which the name is associated can be subsequently used for useful comparison.

The Article proposed by the English palæobotanists associates the name permanently with the specimens used by the original author of the name so long as they show all the characters which he used to differentiate them from other forms. If his diagnosis is emended by a later author a new type may be substituted as the basis of the altered diagnosis which varies the sense in which the name was originally used.

Para. *a* of the article proposed by the continental palæobotanists seems to aim rather at the choice of a species or specimen by reference to which new material may be identified. This involves the selection of a type of a genus or a type of a species which generally is to be the first described species or specimen showing all the characters necessary for distinguishing the species or specimen from other groups. Such a course would be very desirable, but it would leave a very large number of fossil plants without types. If applied to Cretaceous and Tertiary leaf-impressions it could scarcely be said that many of them show *all* the characters necessary for distinguishing the species from other groups, and at the same time many workers would hesitate before regarding their names as invalid or their genera as artificial.

In view of the difficulties involved, we do not suggest that the recommendation printed above is superior to that of our continental colleagues, but we think that alternative forms of wording are worthy of the serious consideration of all concerned.

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