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Nomenclature Proposals by British Botanists

Author(s): A. A. Bullock, R. Ross, J. E. Dandy and F. C. Deighton

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or after 1 Jan. 1912. Art. PB. 3 does not make things better, for from it one gets the impression indeed that *nomina generica nuda*, published before 1 Jan. 1953, are validly published!

148. *Article 45*: In the second paragraph, delete the words "published in legitimate combinations".

*Comment*: The present wording seems irreconcilable with Art. 70, Note 3.

149. *Article 68*: Add (5): When they coincide with names of taxa of higher rank. Example: *Myxomycetes* Renault, Fl. Foss. Autun et Épinac 2: 422. 1896.

*Comment*: Generic names like *Algae* or *Rosaceae* are certainly not desirable.

150. *Article 69*: Delete Note 1.

*Comment*: The Note does not seem reconcilable with Art. 70, Note 3.

## XVI. NOMENCLATURE PROPOSALS BY BRITISH BOTANISTS

The series of amendments to the Code proposed below have been discussed and generally approved at a series of informal meetings of British botanists before being submitted for publication by their authors. Those present at one or more of the meetings were: J. P. M. BRENNAN; A. A. BULLOCK; J. E. DANDY; F. C. DEIGHTON; J. S. L. GILMOUR; I. C. HEDGE; A. C. HOYLE; C. E. HUBBARD; J. LEWIS; R. ROSS; N. Y. SANDWITH; W. T. STEARN; E. F. WARBURG.

They are not necessarily all in complete agreement with every detail of what is proposed, but no serious objections to any of it have been raised, except where noted.

Those responsible for the individual proposals wish to record their thanks to their colleagues for their suggestions, which have led to many improvements.

### PRINCIPLES (A. A. BULLOCK)

The wording of Principles III and V could be improved, and the following new versions are put forward:

151. *Principle no. III* to read: "The correct name of a taxonomic group is determined by priority of publication."

152. *Principle no. V* to read: "Scientific names of plants are treated as Latin even if they are taken wholly or partly from other languages or are without meaning."

### TYPIFICATION (A. A. BULLOCK and R. ROSS).

Chapter 2, Section 2 of the Code contains a number of anomalies and ambiguities and we have, by rearrangement, rewriting and additions, endeavoured to remove most of these. Article 7 has been extended to include Article 8, and Articles 9 and 10 have been reversed and largely rewritten. More com-

plete and, we think, more accurate definitions of terms have been incorporated in Article 7 and the anomaly of the expression "neotype" has been removed because we consider it to be a somewhat useless concept entirely subject to taxonomic opinion. A new term "protologue" is introduced and is intended to include all the evidence adduced by the original author of a new name, whether it be in the form of description, statement of distribution or other annotations, all of which must be taken into account in the selection of lectotypes.

153. *Article 7* refers to a particular element of a taxon which constitutes the type, but it is not defined. We therefore suggest the following addition:

"It is the element or one of the elements upon which the description (and/or illustration) giving the name valid publication (see Art. 32-45) is based."

154. We regard *Note 3* of *Article 7* as inaccurate and ambiguous, and suggest that it should be rewritten as follows:

"*Note 3*. If no holotype was indicated by the author who described a taxon, a lectotype as a substitute for it may be designated. When a syntype or paratype exists the lectotype must be chosen from one of these. If the holotype is lost or destroyed, an isotype, if such exists, must be chosen, or failing this, a paratype.

"A lectotype (*lectotypus*) is either (a) a specimen or other element selected from the original material available to the describer of a taxon (whether cited in the protologue or not) up to the time of publication of the name concerned, when no holotype was

designated, or (b) a duplicate <sup>1)</sup> of the holotype when the latter is lost or destroyed. When two or more specimens have been designated as "types" by the author of a specific or infra-specific name (e.g. male and female, flowering and fruiting, etc.) one of them must be chosen as lectotype."

155. The word neotype was defined in *Article 7, Note 3* but we find that this is an unnecessary complication, since in the absence of a holotype, the lectotype must be represented by either another specimen used by the author or by the description and/or illustration as indicated in the note to Art. 10. We therefore propose the deletion of the paragraph beginning "A neotype is a specimen . . . ."

It is naturally expected that any monographer will indicate a specimen or specimens which he regards as a good standard of reference for any particular name, but such choices are entirely subject to taxonomic opinion.

156. Add further to *Article 7, Note 3*, the definitions of isotype, paratype and syntype, at present incorporated in Art. 8, Rec. 8A, with modifications as follows:

"An isotype (*isotypus*) is a duplicate of the holotype; it is always a specimen, and may become a lectotype when the holotype is lost or destroyed."

"A syntype (*syntypus*) is any one of the two or more specimens or other elements cited or indicated in the protologue when the author failed to designate a holotype, or when two or more specimens or other elements were simultaneously designated as types.

"The choice of a lectotype may be superseded only if it can be shown that it was based upon a misinterpretation of the protologue <sup>2)</sup>, or if the holotype is rediscovered."

<sup>1)</sup> The word duplicate is here given its usual meaning in herbarium curatorial practice. It is part of a single gathering made by a collector at one time.

<sup>2)</sup> Protologue (from *πρωτος*, first, *λογος*, discourse) "the printed matter accompanying the first publication of the name [or epithet]" (Wilmott MS.); this term was proposed by A. J. Wilmott (1888-1950) to cover everything associated with a name at its first publication, i.e. diagnosis, description, ref-

157. The typification of superfluous names has always been a source of argument and difficulty; we propose, therefore, an addition to *Article 7, Note 4* which will clarify the procedure intended by the Code:

"The type of a name or epithet which was nomenclaturally superfluous when published (see Art. 64(1)) is the type of the name or epithet which ought to have been adopted under the Code."

158. Some difficulties have been experienced in the interpretation of the Code relative to typification in groups for which starting points later than 1753 have been agreed. We propose a clarification here by the addition to *Article 7* of a *new Note*:

"Note 6. For those groups with nomenclatural starting points later than 1753 (see Art. 13) the type is to be determined by the protologue given by the author validly publishing (see Art. 32-45) the name, or when valid publication is by reference to a pre-starting point protologue, the latter must be used as though newly published."

It is realized that this proposal conflicts with that given by Donk in *Taxon* 6: 245-256. 1957.

In order to complete the incorporation of Art. 8 into Art. 7, the following transfers are necessary:

159. *Recommendation 8B* to become *Recommendation 7B*.

160. *Recommendation 8C* to become *Recommendation 7C*, and in line 1 for "type material" read "original material". This is a form of words designed to remove an ambiguity. "Type material" may be thought to mean the specimens used by the author, though in fact there may be no specimens available to him and his "original material" may have consisted only of earlier published material (letter-press and figures).

161. *Recommendation 8D* to become *Recommendation 7D*.

162. *Recommendation 8E* has led to some controversy. It is clear that the force of the

ferences, synonymy, geographical data, citation of specimens, discussion, comments, illustration. — See Stearn, *Intr. Linn. Sp. Pl. Facs. Ed. Ray Soc.* 126, *adnot.* 1957.

list of *nomina conservanda* will be impaired unless the listed type-species are maintained; it is proposed therefore, that Rec. SE should become *Note 7 to Article 7*, and amended to read:

"The listed type-species of a conserved generic name (see Art. 14 and App. III) may be changed only by a procedure similar to that adopted for the conservation of generic names."

"Example. In the interests of stability and taxonomic accuracy Bullock and Killick (*Taxon* 6: 239. 1957) proposed that the type species of *Plectranthus* L'Hérit. should be changed from the listed *P. punctatus* (L.f.) L'Hérit. to *P. fruticosus* L'Hérit. This was approved by a majority vote of the appropriate committees, and sanctioned by an International Botanical Congress.

163. *Article 9* seems to be out of place and it is proposed that it should follow Art. 10. The order of its content is also reversed and it should be written as follows:

"The nomenclatural type of a genus or of any taxon between genus and species is a species, that of a family or of any taxon between family and genus is the genus on whose present or former (legitimate or illegitimate) name that of the taxon concerned is based (see also Art. 18); and that of an order or of any taxon between order and family is the family whose name is based on the same generic name.

*Note 1.* The types of the names of families not based upon generic names are the types of their alternative names (see Art. 18).

164. *Article 10*, as indicated above, should precede Art. 9 and may be renumbered Art. 8.

#### THE STATUS OF NAMES OF IMPROPER FORM (R. Ross)

Whilst Chapter III of the Code lays down the forms which names of taxa shall take according to their rank, the status of names which contravene these provisions is not at all clear, except in a few particular cases. Names of families, subfamilies, tribes, and subtribes with improper terminations are to be corrected (Art. 18<sup>1</sup>), 19) and single specific

<sup>1</sup>) The Editorial Committee inserted Note 1 to Art. 18, extending this provision to families, without any authority from the Congress. It should be struck out. However, a proposal on this point will appear elsewhere.

or infraspecific epithets consisting of two or more words not united or hyphenated are to be united or hyphenated (Art. 23), it being implied in both cases that the name, when corrected, is to be regarded as legitimate. The only other case where any definite statement is made is in the last para. of Art. 23, which reads: "Binary combinations of a specific epithet with the word *Anonymos* (or similar token words) are illegitimate, since the word *Anonymos* is not a generic name (see Art. 68(1)). Such combinations are not taken into consideration for purposes of priority of the epithet concerned."

*Article 68*, however, reads: "Names of genera are illegitimate and must be rejected in the following special cases:

1) When they are merely words not intended as names."

If *Anonymos* and similar token words are not generic names, then presumably Art. 42 applies to epithets published in combination with them, and such epithets are not only illegitimate but not validly published. On the other hand, if *Anonymos* and similar token words have the status of validly published but illegitimate generic names, then the last para. of Art. 23 is an exception to Art. 70, Note 3.

There is a further series of provisions limiting the forms which names for genera and taxa of lower rank can take in Chapter V, Sect. 6, and here names of the forbidden forms are said to be illegitimate, thereby implying that they are to be treated as validly published. One might from this draw the conclusion that names contravening Chapter III are also to be regarded as illegitimate.

For the most part it makes no difference whether names of improper form are treated, like names not validly published, as having no status under the Code or are regarded as validly published but illegitimate. Where the names of genera and species are concerned, however, Art. 42 will apply to epithets of subordinate taxa published in combination with them if they are treated as not validly published, and Art. 68, Note 3, if they are treated as validly published but illegitimate. Also, if names covered by Art. 70 (5) are to be regarded as validly published but illegitimate, as the wording of the article suggests, the existence of such a descriptive name reduced to two words will make illegitimate under Art. 64 (2) the use of the same name with the second word used as a true specific epithet.

It has been the normal custom of botanists to regard names contravening the provisions of Chapter III as having, like names not validly published, no status under the Code. Moreover, they have so treated names contravening some of the provisions of Chapter V, Sect. 6. This is contrary to the letter of the present Code, a situation which has arisen mainly because the Stockholm Code, in which the words "legitimate", etc., were used with much more precision than formerly, was not so edited, in this particular series of provisions, as to reflect established custom. This should now be put right, and to do so Art. 68, Art. 69 (3), Art. 70 (2), (3), (4), (5), and Art. 71, should be transferred to Chapter III, and a provision that names, to be validly published, must comply with Chapter III should be inserted in Chapter IV, Section 2. This will have the advantage of bringing together in one chapter all the rules about the forms of names. It will necessitate considerable amendments to Chapter III, and at the same time it would improve the arrangement of Code if Art. 21, third para., and Art. 27, which are special provisions about homonyms, were removed to Art. 64 (2). In addition, the last paragraph of Art. 23, dealing with specific epithets published under token words that are not generic names, should be transferred to Art. 42. The amendments below are proposed to effect all this, and the opportunity is taken of adding a further example of words not intended as generic names to draw attention to a case which might mislead.

165. *Article 20.* Add the following: "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 specific names published in accordance with the binary method of Linnaeus.

"Examples: The generic name *Radicula* . . .

"The name of a genus may not consist of two words, unless these words were from the first combined into one or joined by a hyphen.

"Example: The generic name *Uva ursi* . . .

"Note: The following are not to be regarded as generic names: 1) words not intended as names.

"Example: *Anonymos* Walt. . . .

"*Schaenoides* and *Scirpoides*, used by Rottböll, *Descr. Pi. Rar. Progr.*: 14, 27. 1772 to

indicate unnamed genera resembling *Schoenus* and *Scirpus* which he stated (op. cit.: 7) he intended to name later are token words and not generic names. *Kyllingia* Rottböll and *Fuirena* Rottböll (*Descr. Icon. Pl.*: 13, 70. 1773) are the first legitimate names of these genera. 2) unitary designations of species.

"Example: F. Ehrhart . . ."

(The examples are those of the present Art. 68.)

166. *Article 21.* Add to the second para.: "or the prefix *Eu-*." Delete the third para.

167. *Article 23.* Add after the third para. and its examples:

"The specific epithet may not exactly repeat the generic name with or without the addition of a transcribed symbol (tautonym).

"Examples: *Linaria* . . ."

Delete the last para.

Add the following at the end of the Article:

"Note: The following are not to be regarded as specific epithets: 1) words not intended as names,

"Examples: *Viola "qualis"* . . .

2) ordinal adjectives used for enumeration, "Examples: *Boletus* . . .

3) those published in works in which the Linnaean system of binary nomenclature for species was not consistently employed.

"Examples: The name *Abutilon album* . . .

"Linnaeus is regarded as having used binary nomenclature for species consistently from 1753 onwards, although there are exceptions, e.g. *Apocynum fol. androsaemi* L. (*Sp. Pl.*: 213. 1753)."

(The examples are those of the present Art. 70.)

168. *Article 24.* For the third para. substitute the present Art. 71.

169. *Article 27.* Delete.

170. *Article 32.* Delete "both" in second line.

After "(see Art. 29)" read: ", (2) have a form which complies with the provisions of Chapter III, and (3) be accompanied . . ."

171. *Article 42.* Add the following:

"Note: This Article applies to specific and

other epithets published under *Anonymos* and other token words that are not generic names (see Art. 20, Note, (1)).

"Examples: The binary combination *Anonymos aquatica* Walt. (Fl. Carol. 230. 1778) is not validly published. The correct name for ...

(This example is from the present Art. 23.)

"The binary combination *Scirpoides paradoxus* Rottböll (Descr. Pl. Rar. Progr.: 27. 1772) is not validly published since *Scirpoides* is a token word, not a generic name. The first validly published name for this species is *Fuirena umbellata* Rottböll (Descr. Icon. Pl.: 70. 1773).

172. Article 64(2). Add the following:

"The names of two subdivisions of the same genus, or of two infraspecific taxa within the same species, even if they are of different rank, are treated as homonyms if they have the same epithet and are not based on the same type. The same epithet may be used for subdivisions of different genera, and for infraspecific taxa within different species.

"Examples: Under *Verbascum* ... (from present Art. 21).

"The following is illegitimate: *Erysimum* ... Art. 26." (from present Art. 27)."

173. Article 68. Delete.

174. Article 69. Delete (3).

175. Article 70. Delete (2), (3), (4), (5), and Note 1.

#### ARTICLE 18 (A. A. BULLOCK)

176. The alternative names of the families mentioned in Article 18, Note 2 should be listed as follows:

<i>Palmae</i>	<i>Arecaceae</i> Type: <i>Areca</i> Linn.
<i>Gramineae</i>	<i>Poaceae</i> Type: <i>Poa</i> Linn.
<i>Cruciferae</i>	<i>Brassicaceae</i> Type: <i>Brassica</i> Linn.
<i>Leguminosae</i>	<i>Fabaceae</i> Type: <i>Faba</i> Mill. (= <i>Vicia</i> Linn. p.p.)
<i>Guttiferae</i>	<i>Clusiaceae</i> Type: <i>Clusia</i> Linn.
<i>Umbelliferae</i>	<i>Apiaceae</i> Type: <i>Apium</i> Linn.

*Labiatae* *Lamiaceae*  
Type: *Lamium* Linn.

*Compositae* *Asteraceae*  
Type: *Aster* Linn.

177. The second para. of Article 18, Note 2 would be more explicit if worded as follows:

"When *Papilionaceae* are regarded as a family distinct from the remainder of the *Leguminosae*, that name is conserved against *Leguminosae*. The alternative name is *Fabaceae*. This is an unique exception to Art. 51."

A cross-reference to this in Art. 51 is required. The following is proposed:

178. Add at the end of Article 51: "An unique exception is made for the family name *Papilionaceae* (see Art. 18, Note 2).

#### THE NAMES IN NECKER'S ELEMENTA BOTANICA (J. E. DANDY and R. ROSS)

The unitary designations of species employed by F. Ehrhart have never been regarded as forming part of botanical nomenclature. On the other hand those used by Necker have often been treated as names of genera. They have been listed as such in standard indices, e.g. Steudel, Nomencl. Bot., Pfeiffer, Nomencl. Bot., Index Kewensis, and Dalla Torre et Harms, Gen. Siphonog., and a number of them appear as conserved or rejected names in Appendix III of the Code. The reason for this is that Necker, unlike Ehrhart, etc., adopted for his species many generic names of earlier authors, and the taxa to which he applied them were largely comparable in circumscription to the genera of other authors. On the other hand most of his contemporaries ignored Necker's names, and many recent authors, (e.g. Stearn in Rowley, Nat. Cactus Succ. Journ., 8: 45. 1953) concerned with establishing the correct names of plants, have considered that Necker's names could not be regarded as validly published generic names under the Code. Others, e.g. Proskauer (Taxon, 7: 125-130. 1958), have come to the opposite conclusion.

In view of this conflict of opinion, it is clear that, in the interests of stability, there should be a definite statement in the Code about the status of these names. Whether this should, as Mansfeld proposes (Taxon, 7: 155-6. 1958), state that they are to be treated as validly published generic names, or whether they should be declared not to be

such depends upon which course will result in least disturbance of current nomenclature. A detailed analysis of Necker's names is being prepared and will be published before the Montreal Congress. As far as it has gone, it indicates the desirability of rejecting Necker's names. The authors of this proposal consider that the most suitable way in which to do this would be to add such names as a further example of the unitary designation of species to be rejected under Art. 68 (3), for we hold the view that Necker used the term "species", just as Linnaeus did, for the smallest permanent and constant groups into which plants could be divided; they differed not in their terminology but in their taxonomic judgment. Some of our colleagues, however, consider that Proskauer's arguments in the opposite sense are convincing, and, as we regard the rejection of Necker's names as much more important than the method by which it is done, we put forward the following proposal:

179. Add to *Article 20*: "Note: The names of the taxa called "species naturales" by Necker, *Elem. Bot.* 1790, are not to be treated as names of genera."

#### NAMES OF SUBDIVISIONS OF GENERA (R. Ross)

The provisions which form Rec. 21A of the present Code were in the previous edition (*Int. Code Bot. Nomencl. . . . Stockholm, 1950. Utrecht, 1952*) included in the preceding article. Neither arrangement is satisfactory, for in the present Code there is no mandatory provision to limit the form which the subdivisional epithet may take, and in the Stockholm Code the provisions about the ranks of subdivision for which each of the alternative forms of epithet was to be used, although worded in the form of a recommendation, and rightly so, were included in an article. That part of Rec. 21A that deals with the forms of names should be put back into the Article.

Furthermore, Rec. 22A and Rec. 22B would be better placed after Art. 21, Rec. 22B being put first and Rec. 22A combined with the part of present Rec. 21A which does not become an article. The following amendments, which include an improved wording of the present Rec. 22A, second para., are therefore proposed:

180. *Article 21*. Add to first para.: "The epithet is either a substantive of the same form as a generic name, or a plural adjective agreeing in gender with the generic name and written with a capital initial letter."

181. *Recommendation 22B* to become *Recommendation 21A*.

182. *Recommendation 21B*. To read: "The epithet of a subgenus or a section is usually a substantive, that of a subsection or lower subdivision of a genus is preferably a plural adjective."

"Botanists, when proposing new epithets for subdivisions of genera, should avoid those in the form of a substantive when other coordinate subdivisions of the same genus have those in the form of a plural adjective, and vice versa."

"They should also avoid, when proposing an epithet for a subdivision of a genus, one already used for a subdivision of a closely related genus, or one which is identical with the name of such a genus."

"If it is desired to indicate the resemblance of a subgenus or section (other than the type subgenus or section) of one genus to another genus, the ending *-oides* or *-opsis* may be added to the name of that other genus to form the epithet of the subgenus or section concerned."

#### DESCRIPTION, DIAGNOSIS AND DEFINITION (R. Ross)

One of the basic principles of the Code of Nomenclature, although it is not included in those set out in Division I, is that every name, to have any status in botanical nomenclature, must be accompanied by an indication of the characters of the taxon to which it applies. The provisions which ensure this form Chapter IV, Section 2, of the Code. Although in certain circumstances that indication can be an illustration with analysis, it must normally be in words to comply with the provisions of this section. That verbal indication is termed a "description" throughout the section, except in Art. 34, where "diagnosis" is used. The difficulty of deciding whether a particular form of words is or is not sufficient to satisfy the provisions of Chapter IV, Section 2, has been discussed by De Wit (*Taxon*, 5: 4-7. 1956) and Ross (*Taxon*, 5: 41-3. 1956) and Bullock (*Taxon*, 6: 215-6. 1957) has also recently made some remarks about what is desirable.

Bullock, in proposing an amended wording for Art. 34, suggested that "diagnosis" in that article should be replaced by "description" on the grounds that some authors were saying too little in Latin about the new taxa for which they were proposing names. His view is that a full description should in future be regarded as necessary for validating names of new taxa. This would represent a break with previous practice, for up to the present a definition has always been considered adequate to validate a new name. As Cain (Proc. Linn. Soc. London, 169: 144-163. 1958) has recently pointed out, it was a definition that Linnaeus provided in his "specific name", as distinct from his trivial name, for each species, and in so doing he was following the precepts of Aristotelean logic. These require that every entity in a classification be defined, the definition consisting of a "genus" and a "differentia", that is to say of a statement of the group to which the entity belongs and of the character or characters which distinguish it from all other entities within that group. In botanical literature the "genus" in this sense to which a taxon is assigned is often only indicated in a very general way by implication; thus in older works it may only be implied that a genus, in the botanical sense, belongs to the flowering plants. A statement of the character or characters that are unique to it is, however, a definition in the above sense.

In spite of all the developments in taxonomy during the past two hundred years, a definition in the Aristotelean sense is still all that is essential to indicate the entity to which a name is to be applied. It might be well if "definition" were to replace both "description" and "diagnosis" in Chapter IV, Section 2. "Description" is not really a suitable word for it suggests that much more than a statement of the differential characters is required to fulfil the requirements of this section of the Code. The primary meaning of "diagnosis" is the mental process of deciding on the position of something in a classification. The following proposal is therefore made:

183. *Chapter IV, Section 2.* Throughout this section, for "description" read "definition".

184. *Article 34.* For "diagnosis" read "definition".

Whichever word is used, and especially if

it is decided to retain "description", these provisions will be much more unequivocal if there is an explicit statement of what is required. The following is therefore proposed:

185. *Article 32.* Add the following note before the existing notes: "Note. A definition [description] is a statement intended to indicate the character or characters by which a taxon is to be distinguished."

This note will not only provide a clear guide in almost every case to whether or not a name is validly published, but also it states established custom and is in logical accord with the principle stated in the opening sentence of this contribution. It will, if accepted, make the mandatory provisions of the Code more explicit but no more stringent than they are at present. There is, however, substance in Bullock's view that in publishing new taxa a description in Latin and not only a definition is desirable. The insertion of the following new recommendation is therefore proposed:

186. "*New Recommendation 34A.* Authors publishing names of new taxa should give or cite a full description in Latin."

#### REFERENCE TO THE BASIONYM

(F. C. DEIGHTON)

The wording of the third para. of *Article 32* was altered from that in the Stockholm Code, where it was *Article 42*, second para., because it was thought by the Editorial Committee that the word "place" in the Stockholm wording might be taken to mean solely the geographical locality at which was issued the work in which the basionym was validly published. There was no intention of altering the effect of the provision. The wording of the Stockholm Code, provided "place" was read correctly, made it clear that the work in which a new combination appears must contain a statement of what the basionym is, its author, the title of the work or serial in which it appeared, the volume number if applicable, the number of the page, plate, specimen (in the case of exsiccatae), etc., where it was validly published, and the date, errors of citation being ignored. This is what "a full reference to its author and original publication" was intended to convey, but there has been a tendency to associate the



words "(direct or indirect)" in the first para. of the article with "reference" in the second and to cite a work in which the data about the original publication appear instead of actually giving the data. Thus Dr. A. Munk (in *Dansk. Bot. Ark.* 17(1): 58. 1957) wrote as follows: "*Neuronectria peziza* (Tode ex Fr.) Munk n. comb.

Syn. very numerous; vide Weese 1914, p. 100 sub *Nectria peziza*." Weese, 1914, does not appear in the bibliography at the end of the article or elsewhere therein.

Similarly Dr. R. Ciferri (in *Mycopathologia*, 7: 86-89. 1954) listed a large number of new combinations under *Meliola* in the following form:

"*M. crotonis* (Stev. et Teh.) = *Irene crotonis* Stev. et Teh. = *Irenopsis crotonis* Stev." and added at the end of the list "(For bibliographic references see F. Petrak, *Indexes of Fungi*, republished by The Commonwealth Mycological Institute, Kew, and the *Indexes of Fungi* from the year 1940 up to now)."

The publication of these new combinations by Munk and Ciferri do not comply with Art. 32, third para., if this is interpreted as originally intended, and they would appear not to have been validly published. This, however, has been questioned, and it would therefore be well if the wording of the article were altered to make clearer what its requirements are. At the same time it should be made clear that it applies to all new names, not only to combinations and cases where an epithet cannot be used in a new position, but also to those replacing illegitimate names. The following is therefore proposed:

187. *Article 32*, third paragraph to read: "A new combination or a new name published after 1 Jan. 1953, is not validly published unless its basionym (name-bringing or epithet-bringing synonym) or substituted synonym is clearly indicated and a full and direct reference given to its author and original publication with page, or plate, etc., reference and date."

188. Add the following Note to *Article 32*, third paragraph as Note 1, present Notes 1 and 3 becoming Notes 3 and 4 respectively: "Mere reference to the "*Index Kewensis*", the "*Index of Fungi*" or any work other than that in which the name was validly published, does not constitute a full and direct reference to the original publication of a name."

## ARTICLE 33, SECOND EXAMPLE

(A. A. BULLOCK)

There is some doubt as to the meaning of "these names" in the last line. The intention is clear under the provisions of the first part of the article. Ducke did not accept the names under *Piratinera* and they were therefore not validly published. Those under *Brosimum* were accepted by him and, being published before 1 Jan. 1953, are validly published.

189. *Article 33*, second example. The last sentence should read "The publication of the names under *Brosimum* which were accepted by Ducke and published before 1 Jan. 1953, is valid, whilst that of the names under *Piratinera*, not accepted by Ducke, is invalid. If these names had been published after 1 Jan. 1953, all of them would be regarded as invalidly published.

## ARTICLE 35, INDICATION OF TYPE

(F. C. DEIGHTON)

This new article has given rise to certain difficulties of interpretation. The Code does not state in what way the type should be indicated, nor in what language such indication should be made. Apparently there is nothing to compel an author to indicate the type in words along with the original diagnosis of the name; he may therefore, presumably indicate it by marking a herbarium specimen 'Type' (in any language he chooses) but is not compelled to give notification that he has done so at the time when he first publishes the new taxon. It is obviously essential and intended that a clear indication should be given at the time of the original publication of the name, and so that this should be understandable by everyone, the indication should be in Latin, as is the diagnosis. In a recent publication everything except the name and diagnosis has been in Japanese, and without a translation from that language it has been impossible to know whether or not the name is validly published. As any proposal to effect this will mean a more stringent requirement than formerly, it must have effect from some future date. The following is therefore proposed:

190. *Article 35*. Add the following: "The nomenclatural type of a name published on

or after 1 Jan. 1961 must be indicated by the insertion of the Latin word 'typus' (or 'holotypus', etc.) immediately before or after the particulars of the type so designated.

191. Add the following *new recommendation* 35A: "The indication of the type should follow immediately the Latin diagnosis."

#### SUPERFLUOUS NAMES (R. Ross)

There are cases where a new combination whose basionym is legitimate is itself superfluous because there was available an earlier legitimate epithet. In some such cases the earlier epithet has ceased to be available, either because of an alteration of circumscription or because of its use in the genus in question for another taxon of the same rank. The situation then arises that the name which Arts. 54-56 say is to be used for the taxon is illegitimate under Art. 64 (1). This gives rise to various difficulties. The cases are inevitably complicated, and it will be best to consider actual examples.

*Andropogon fasciculatum* L. (Sp. Pl.: 1047, 1753) and *Agrostis radiata* L. (Syst. Nat., ed. 10, 2: 873, 1759) are described as two independent species. Swartz (Nov. Gen. Sp. Pl.: 26, 1788) made the combination *Chloris radiata* (L.) Sw. thus:

"*radiata*. 5. C. spicis (subsenis) plurimis fasciculatis erectiusculis, flosculis subulatis aristatis glabris.

*Agrostis radiata* Linn.

*Andropogon fasciculatum* Linn.

*India occidentalis*."

*Chloris radiata* was accordingly superfluous when published, for the earlier epithet *fasciculatum* was available. However, Hackel in DC., Monogr., 6: 177 (1889) stated that *Andropogon fasciculatum* L. was not conspecific with *Chloris radiata* (L.) Sw. His view has been accepted ever since, as has the view that *Agrostis radiata* L. is correctly placed in the genus *Chloris*. Given the acceptance of these views, Art. 55 indicates that the correct name for *Agrostis radiata* L. is *Chloris radiata*, but this is illegitimate under Art. 64 (1).

A more complicated example is the orchid whose first legitimate name is *Ophrys peruviana* Aubl.; this is currently treated as belonging to the genus *Spiranthes*. The following is an annotated synonymy.

*Ophrys peruviana* Aubl., Hist. Pl. Guiane Franc. 2: 816 (1775) non *Spiranthes peruviana* C. Presl (1827).

*Satyrium spirale* Sw., Nov. Gen. Sp. Pl.: 118 (1788) non *Neottia spiralis* (L.) Sw. (1800).

nec *Ibidium spirale* (L.) Salisb. (1812).

vel Salisb. ex House (1905).

nec *Spiranthes spiralis* (L.) Chevall. (1836).

This was described as a new species with no reference to Aublet's work or to any other synonyms. It was treated as a taxonomic synonym of *Ophrys peruviana* by Richard (see sub *Spiranthes tortilis* infra) and this is the currently accepted view.

*Ophrys quinquelobata* Poir. apud Lam. in Encycl. Méth., Bot. 4: 568 (1798) nom. superfl.

Poiret cites the Burmann description and figure on which *Ophrys peruviana* Aubl. is based.

*Neottia tortilis* Sw. in K. Vet. Akad. Nya Handl., Stockh. 21: 226 (1800) nom. nov. pro *Satyrium spirale* Sw. non *Neottia spiralis* (L.) Sw.

This is a legitimate name since the epithet *spirale* was not available because Swartz used it in this work for another species of *Neottia* based on *Ophrys spiralis* L.

*Neottia quadridentata* Willd., Sp. Pl. 4: 73 (1805) nom. superfl. Willdenow cited *Ophrys peruviana* Aubl. as a synonym, and hence this name is superfluous, for the combination *Neottia peruviana* was not pre-occupied.

*Spiranthes tortilis* (Sw.) Rich. in Mém. Mus. Hist. Nat. 4: 59 (1818) nom. superfl.

This name was published by Richard thus: "4. *S. tortilis*. *Neottia tortilis* Willd. 74. et *Neottia quadridentata* Willd. 73."

Willdenow (Sp. Pl. 4: 74, 1805) attributed *Neottia tortilis* to Swartz and also cited as a synonym *Satyrium spirale* Sw. on which that name is based. This name is therefore superfluous, for the epithet *peruviana*, from *Ophrys peruviana* Aubl. for which *Neottia quadridentata* is a superfluous name, was available. The combination *Spiranthes peruviana* was legitimately used for a different species by C. Presl in 1827. The epithet *spirale* from *Satyrium spirale* Sw., on which *Neottia tortilis* was founded, continued to be available until 1836, when Chevallier founded the combination *Spiranthes spiralis* on *Ophrys spiralis* L. The first author to use the name *Spiranthes tortilis* subsequent to this was apparently Lindley (Gen. Sp. Orchid. Pl.: 468 (1840).

*Spiranthes quadridentata* Lindl. in Bot. Reg. 10: sub t. 823 (1824) nom. superfl.

Lindley published this name as follows: "15. *S. quadridentata*. Nob. *Neottia 4-dentata* Willd."

The name is superfluous since the epithet *peruviana*, from *Ophrys peruviana* Aubl., for which *Neottia quadridentata* is a superfluous name, was available. This name differs in status from *Spiranthes tortilis* in that its epithet was not taken from a legitimate name.

*Gyrostachys peruviana* (Aubl.) O. Kuntze, Rev. Gen. Pl. 2: 663 (1891) nom. illegit.

*Gyrostachys* O. Kuntze, loc. cit., is a superfluous name for *Spiranthes* Rich. It was not validly published by Persoon in 1807.

*Ibidium tortilis* (Sw.) House in Muhlenbergia, 1: 129 (1906) nom. illegit. "*tortilis*".

*Ibidium* Salisb. in Trans. Hort. Soc. Lond. 1: 292 (1812) is listed in the Code as rejected against *Spiranthes* Rich. It was apparently published as a substitute for *Neottia* Sw. in K. Vet. Akad. Nya Handl. 21: 225 (1800) non Ludw., Inst. Bot. ed. alt.: 135. 1757, but the reference is rather vague and its status uncertain. It was certainly validly published as a superfluous name for *Spiranthes* by House in Bull. Torrey Club 32: 380 (1905). Since the combination *Ibidium spirale* was not available in 1906, and since House excludes *Ophrys peruviana* Aubl., his choice of epithet was correct under the Code.

*Spiranthes quinquelobata* Urb. in Fedde Repert. Sp. Nov. 15: 305 (1918). Urban cites all the names cited above except *Neottia quadridentata*, *Spiranthes quadridentata*, and *Gyrostachys peruviana*. This is the correct name in the genus *Spiranthes* for this species if *Spiranthes tortilis* cannot be used.

The names which we need to consider are *Chloris radiata* and *Spiranthes tortilis*. The first problem is whether they must be rejected under Art. 64 (1) in spite of the fact that their epithets are the earliest legitimate ones for the species other than those not available because of earlier homonyms in the respective genera. That Art. 72, Note, makes it correct to use them was suggested by the *Gossypium* example to that provision in the Stockholm Code, where it was Art. 81, second sentence. This example implied that, although *Gossypium sturtii* F. v. Muell. was a superfluous name when published, for it was based on *Sturtia gossypoides* R. Br. and the com-

bination *Gossypium gossypoides* was not pre-occupied, it was legitimate for the name to be brought into use after the publication of *Gossypium gossypoides* Standley (1923) based on another type, the authority for the name being not von Mueller but Hutchinson, Silow & Stephens, who revived it in 1947, and its priority dating from that year. If this interpretation of the Code is accepted, the correct names, authorities, and dates of the two species which we are considering are *Chloris radiata* (L.) Hack. (1889) and *Spiranthes tortilis* (Sw.) Lindl. (1840). The *Gossypium* example was deleted from the Paris Code because it was established that Willis had applied the name *Gossypium sturtianum* to the species earlier in 1947 than *G. sturtii* had been revived for it. It should, however, never have been included in the Code, for its final statement is not in accordance with its provisions. Art. 72, Note, (Paris = Art. 81, second para., Stockholm) only authorises the adoption of an epithet that has formed part of an illegitimate name applied to the taxon, not the adoption of the illegitimate name itself. *Gossypium sturtii* was superfluous when published as a new name for *Sturtia gossypoides* R. Br. and hence its use as a synonym of R. Brown's name is illegitimate under Art. 64 (1), and its use in any other sense is illegitimate under Art. 64 (2), the homonym rule. It seems that the same reasoning must apply, as the Code stands at present, to *Chloris radiata* and *Spiranthes tortilis*, although they differ from *Gossypium sturtii* in having epithets taken from legitimate names. In other words Art. 64 (1), where it applies, overrules Arts. 54-6.

The typification of *Chloris radiata* (L.) Sw. and *Spiranthes tortilis* (Sw.) Rich. raises another question. The type of a new combination is that of its basionym; on the other hand the type of a superfluous name is that of the name or epithet which ought to have been adopted under the rules. Applying the first of these principles, the types of *Chloris radiata* and *Spiranthes tortilis* are, respectively, those of *Agrostis radiata* L. and *Saturium spirale* Sw., applying the second, they are those of *Andropogon fasciculatum* L. and *Ophrys peruviana* Aubl.

It seems most unsatisfactory that anything other than the fact that the combination is pre-occupied by a homonym should prevent the use of the earliest legitimate epithet for an infrageneric taxon. It is also clearly desirable that the type of a new combination

should be the type of its basionym. This can be achieved by introducing a note to Art. 64(1) excluding from it superfluous new combinations the epithet of whose basionym is legitimate. Such names as *Chloris radiata* and *Spiranthes tortilis* would then be regarded as legitimate but incorrect when published but as becoming correct later. There would be no need for the often inconclusive search for the first use of the name after the obstacles to its correct use had disappeared. On the other hand the permanently illegitimate status of such names as *Gossypium sturtii* would not be affected. The following is therefore proposed:

192. *Article 64(1)*. Add: "Note: A nomenclaturally superfluous new combination is not illegitimate if the epithet of its basionym is legitimate. When published it is incorrect, but it may become correct later.

"Examples: *Chloris radiata* (L.) Sw. (Nov. Gen. Sp. Pl.: 26. 1788) based on *Agrostis radiata* L. (Syst. Nat., ed. 10, 2: 873. 1759) was nomenclaturally superfluous when published since Swartz also cited *Andropogon fasciculatum* L. (Sp. Pl.: 1047. 1753) as a synonym. It is however the correct name in the genus *Chloris* for *Agrostis radiata* when *Andropogon fasciculatum* is treated as a different species as was done by Hackel (DC. Monogr. 6: 177. 1889).

"*Spiranthes tortilis* (Sw.) Rich. (Mém. Mus. Hist. Nat. 4: 59. 1818) was nomenclaturally superfluous when published since Richard cited as synonyms *Neottia quadridentata* Willd. (Sp. Pl. 4: 73. 1805), an illegitimate superfluous name for *Ophrys peruviana* Aubl. (Hist. Pl. Guiane Franç. 2: 816. 1775), and the basionym *Neottia tortilis* Sw. (K. Vet. Akad. Nya Handl., Stockh., 21: 226. 1800), a legitimate new name for *Satyrium spirale* Sw. (Nov. Gen. Sp. Pl.: 118. 1788) non *Neottia spiralis* (L.) Sw. (1800). After the publication of *Spiranthes peruviana* C. Presl (1827) and *Spiranthes spiralis* (L.) Chevall. (1836), it became the correct name in *Spiranthes* for the species as circumscribed by Richard. Should *Ophrys peruviana* Aubl. and *Satyrium spirale* Sw. be regarded as different species of *Spiranthes*, *Spiranthes tortilis* (Sw.) Rich. would be the correct name for *Satyrium spirale* Sw. and a new epithet would be required for *Ophrys peruviana* Aubl. Neither *Spiranthes quadridentata* Lindl. (Bot. Reg. 10: sub t. 823. 1824), based on *Neottia*

*quadridentata* Willd., nor *Spiranthes quinquelobata* Urb. (Fedde Repert. Spec. Nov. 15: 305. 1918), based on *Ophrys quinquelobata* Poir in Lam. (Encycl. Méth., Bot. 4: 568. 1798), another illegitimate name for *Ophrys peruviana* Aubl., can be used, for both were superfluous when published and their epithets are not derived from legitimate basionyms. The combination *Spiranthes peruviana* was not pre-occupied in 1824, and Urban cited *Satyrium spirale* Sw. and *Neottia tortilis* Sw. as synonyms.

#### ARTICLE 66 (R. Ross)

The examples to this article indicate that it only applies to cases where two separate organisms are thought to be organically connected parts of a single individual. It is quite right that names applied to such composites should be rejected, unless one of them provides only a very minor part of the description. A redrafting of this article to make these points clear is proposed as follows:

193. *Article 66*. To read: "A name must be rejected if it is based on a type consisting of two or more entirely discordant elements believed by the author to be parts of a single individual, unless one or more of them form so minor a part that the other can be chosen as type."

#### GENDER OF GENERIC NAMES

(A. A. BULLOCK)

The gender of generic names is often doubtful, even to a classical scholar; to those with little Latin and less Greek it is worse. Rec. 75A is designed to assist the unlearned, but its helpfulness is largely wasted since the recommendation may be disregarded. It is proposed, therefore, that appropriate parts of Rec. 75A be rewritten to form a new Art.

194. *New Article 75 bis*: A Greek or Latin word adopted as a generic name will retain its classical gender, or the gender assigned to it in 1753 or later.

Note 1. In spite of their classical gender, however, certain generic names will be treated as feminine in accordance with botanical usage.

Examples: The following masculine words are treated as feminine generic names: *Adonis*,

*Diospyros*, *Strychnos*. Also *Orchis* and *Stachys*, masculine in Greek and feminine in Latin are treated as feminine.

Note 2. The name *Hemerocallis*, derived from the Latin and Greek neuter *hemerocalles* and given masculine gender by Linnaeus, is treated as feminine, as are all other generic names ending in *-is*.

Generic names compounded of two or more Greek or Latin words will take the gender of the last of these, unless the ending is altered deliberately to give a contrary gender.

Examples: *Andropogon* was treated as neuter by Linnaeus, but since *pogon* is masculine, it should, like all other compounds ending in *-pogon*, be treated as masculine. Other masculine endings are *-codon*, *-myces*, *-odon*, *-panax*, *-stemon*. Similarly generic names ending in *-mecon* are feminine, as are those with *-achne*, *-carpha*, *-cephala*, *-chlamys*, *-daphne* and *-osma*, whilst the endings *-ceras*, *-dendron*, *-nema*, *-phragma*, *-stigma* and *-stoma* are neuter. Classically, names ending in *-anthos*, *-anthus*, *-chilos*, *-chilus* or *-cheilos* should be neuter, but they are treated as masculine by botanical usage. Also, names ending in *-gaster* should be feminine but are treated as masculine. Deliberately changed endings are shown by compounds ending in *-carpus* (masculine), *carpa* or *carpaea* (feminine) and *-carpon*, *-carpum* or *-carpium* (neuter).

Generic names ending in *-oides* or *-odes* are treated as feminine, regardless of the gender originally assigned to them.

Arbitrarily formed generic names, vernacular names or adjectives used as generic names, whose gender is not apparent, take the gender assigned to them by their authors or by the first author to do so.

Examples: *Taonabo* Aubl. (vernacular name) made feminine by Aublet. *Agati* Adans. (vernacular name) with no apparent gender, was made feminine by Desvaux who was the first subsequent author to adopt the name. *Cordyceps* Link (adjective) was made masculine by Link by assigning to the genus species such as *C. capitatus* with normal masculine endings.

#### ORTHOGRAPHY (F. C. DEIGHTON)

Though, according to Art. 23, para. 2, the epithet of a species "may even be composed arbitrarily", it was not intended that epithets derived from Latin or latinized words should

depart from accepted Latin usage. This is implied in Recommendation 73E.

In fungus names, in which it is the common practice to derive the specific epithet from the name of the host plant, incorrectly formed genitives and errors in spelling (e.g. of the stems of nouns used in conjunction with the element *incola* or *icola*, to form a noun in apposition) are common and are likely to continue to be so in the absence of an authoritative list of genitives and stems of all plant generic names.

It is therefore desirable that some ruling should be made governing permissible ways of composing epithets for fungus names in order both to ensure that the epithets, if derived from Latin or latinized words, do not contravene accepted Latin usage and to avoid duplication or near-duplication of epithets with identical meaning; and furthermore to make it clear which of such near-duplicated names are to be treated as homonyms.

It is recommended that a list of such rulings should be incorporated in the Code. The following is proposed:

The following Notes (6 and 7) should be added at the end of the present Article 73 and examples:

195. *Article 73, Note 6.* "Latin or latinized words are declinable and must be treated in accordance with accepted usage. The following three different uses of such words shall apply to specific epithets of fungus names:

1) Nouns in apposition must be either descriptions of the fungus itself or, if derived from the name of the host plant or an associated plant or object, must be composed of the stem of such a name with the addition of *incola* or *i-cola*. A descriptive noun in apposition may be the generic name of another fungus.

2) Nouns derived from and referring to the name of the host plant or an associated plant or object may be only in the genitive case (except for those names ending in *incola* or *icola*: see (1) above), and if published in the nominative should be corrected. Nouns of Latin or Greek origin can be spelt in only one way in the genitive case, singular or plural respectively; except for certain Fourth Declension trees names (e.g. *Quercus*), epithets derived from which, in two or more forms or spellings of the genitive, must be regarded as orthographic variants. The geni-

tive singular is not, however, to be treated as an orthographic variant of the genitive plural.

3) Adjectives derived from the host plant name, etc., must be accepted as published provided that they are in accordance with accepted usage.

Examples of nouns in apposition which are descriptive epithets of fungi: *Meliola hercules* Hoehnel (the setae of which resemble the club of Hercules); *Thelephora perdix* Hartig (causing the disease known as 'partridge wood'); *Hydnum radula* Fr. (referring to the rough hymenial surface); *Boletus sistotrema* Fr. (from its resemblance to fungi of the genus *Sistotrema* Pers. ex Fr.).

Examples of descriptive epithets which should be corrected: *Peniophora gladiola* G. H. Cunningham, 1955, is an error for *P. gladiolus* (noun in apposition descriptive of the cystidia of the fungus; not to be confused with the epithet *gladioli* which should be used if the fungus was growing on the host plant *Gladiolus*); similarly *Peniophora umbracula* G. H. Cunn. and *P. thermometra* G. H. Cunn. (both epithets being descriptive of the cystidia of the fungus are errors for *P. umbraculum* and *P. thermometrum* (or *thermometron*), respectively); *Botrybasidium heteronemum* John Eriksson, 1958, is an error for *B. heteronema* (noun in apposition descriptive of the hyphal threads of the fungus); *Acytostelium leptosomum* Raper, 1956, is an error for *A. leptosoma* (noun in apposition referring to the small size of the sorocarps).

Examples of nouns derived from the name of the host plant: *Synchytrium biophytum* Mishra, 1953, and *Synchytrium biophyti* Lingappa, 1956, both parasitic on *Biophytum* spp., are both validly published species based on different types. Mishra's name should be corrected <sup>1)</sup> to *S. biophyti* making Lingappa's name a later homonym. Similarly, *Sphaerulina carica* Hara, 1954, on *Ficus carica*, should be corrected to *S. caricae*. (But note that *castaneus* (feminine *castanea*) is an adjective, whereas *Castanea* (decapitalized - *castanea*) is a noun.) The following, however, are not to be regarded as homonyms: *Cercospora*

*smilacina* Sacc., 1881, derived from the name of the host plant *Smilax*, and *Cercospora smilacinae* Ell. & Ev., 1900, derived from the name of the host plant *Smilacina*.

Examples of incorrectly formed genitives which should be corrected: '*antidesmae*' for *antidesmatis*; '*aethionemae*' for *aethionematis*; '*octoknematis*' for *octoknemae*; '*physalicola*' for *physalidicola*; from the respective host plant genera *Antidesma* (neuter), *Aethionema* (neuter), *Octoknema* (from the feminine noun *kneme*) and *Physalis*. The correct genitive of *Echinops* is *echinopsis*, while the correct genitive of *Echinopsis* is *echinopsidis*. The epithet '*echinopsidis*' if applied to a fungus growing on *Echinops*, should be corrected to '*echinopsis*' and should not be regarded as homonymous with an earlier or later epithet '*echinopsidis*' in the same genus if the latter is clearly intended to be the genitive of *Echinopsis*.

Examples of nouns with alternative genitive forms: Fourth Declension tree names such as *Quercus* and *Ficus* gen. sing. *querci* or *quercus*, *fici* or *ficus*, gen. plural *quercorum*, *ficorum*, but also often given by mycologists (incorrectly but now possibly sanctioned by usage) in the Fourth Declension genitive form '*quercuum*', '*ficum*'. Also *Agrostis*, gen. sing. *agrostis* (fide Lewis & Short, Latin Dictionary, Oxford, 1955), but frequently also given by mycologists, and now accepted by usage, as *agrostidis*."

196. Article 73, Note 7. "Non-latin or non-latinized words used as names or epithets are indeclinable.

Examples: *Cercospora sissoo* Sydow, on *Dalbergia sissoo*; *Cercospora mombin* Petrak & Ciferri, on *Spondias mombin*. The names *sissoo* and *mombin*, being indeclinable, cannot have a genitive form which, in accordance with Note 6 (2) above, would have been used if available. Also *Nectria hauturu* Dingley (a vernacular epithet), *Nectria ruapehu* Dingley (from Mt. Ruapehu, New Zealand).

197. New Recommendation 73H: "Epithets of fungus names derived from the generic names of the host plant should be spelt in accordance with the accepted spelling of such a name; other spellings must be regarded as orthographic variants and should be corrected.

Examples: *Phyllachora anonicola* Chardon, 1940, should be altered to *annonicola*, since

<sup>1)</sup> Such a correction is accepted by bacteriologists. Example: *Bacterium tabacum* Wolf & Foster, 1917, was transferred to *Pseudomonas* as *Ps. tabaci* (Wolf & Foster) F. L. Stevens, 1925.

the spelling *Annona* is now accepted in preference to *Anona*; *Meliola albizziae* Hansford & Deighton, 1948, should be altered to *albisiae*, since the spelling *Albizia* is now accepted in preference to *Albizzia*."

198. *New Recommendation 73I*: "Epithets composed of the stem of a substantive (often the generic name of a host plant) with the addition of either *incola* or *i-cola* (both derived from the stem of the Latin verb *colo*) are nouns in apposition, and epithets differing only in the spelling of the appended element '*incola*' or '*icola*' should be treated as orthographic variants. The epithet *corticola* is an error (perhaps now to be regarded as sanctioned by usage) for *corticicola*, and must be regarded as an orthographic variant of it.

## XVII. REGNUM AND SUBREGNUM?

Tyge Christensen (Copenhagen)

In Taxon 7: 149 Fosberg proposes the introduction of a rank of subregnum for such groups as Fungi and Algae, subordinate to the Regnum Vegetabile, but comprising several divisions.

In the present author's opinion, this proposal is inadvisable, as it will link the code more closely to an old and unnatural classification. On the contrary, it may now be time to detach the code from the Linnaean division of the living world into a Regnum Animale and a Regnum Vegetabile.

The primary division used by most present-day authors is a separation of organisms with a proper nucleus from organisms with a nuclear equivalent of different organisation. Among nuclear organisms the red algae are regarded by many phycologists as being primarily acontic, while organisms with flagella composed of eleven strands in all probability form a common natural group. Subdivision of the latter is on the basis of pigments and type of flagellation, an isocontic group comprising green algae and Cormophyta, a heterocontic group uniting Chrysophyta, Phaeophyta, and Oomycetes, etc., and this subdivision, too, precedes any separa-

Example: *Cercospora acalyphincola* Petrak, 1957: the name *Cercospora acalyphicola*, should it ever be published, would be homonymous."

199. *Article 23, paragraph 2*. Add: "(But see also Recommendation 73E)".

200. *Article 64 (2), Note*. Alter the wording at the end of the Note, from "(See Art. 75)" to read "(See Arts. 73 and 75)".

## POSITION OF CONTENTS (A. A. BULLOCK)

201. It is urged that the *Contents* should be placed at the beginning. This is normal British, American, and German practice. Apart from cost, there is no objection to having it at the end also.

tion of plant and animal groups. Thus animal and algal euglenoids are currently grouped together, and so are algal and holozoic Chrysophyta. For the Metazoa a grouping together with the fungal chytrids and the algal *Pedinomonas* has been proposed, all of which are opisthocontic. Other animal groups show different types of flagellation, and must belong in other places. So, although much is highly uncertain in this sphere, there is little doubt that the categories named animals, algae, and fungi must be regarded as mere practical groups which, as such, have no place in a natural classification.

202. The code should be a formal guide to taxonomists, but should not favour any particular classification. So, instead of inserting a rank between division and regnum, it is proposed that Regnum Vegetabile should be removed from the enumeration of systematic ranks given in *Article 4*, thus leaving authors free to group the divisions as they think best, with more or fewer superior ranks, and with algal, fungal, and animal divisions arranged and connected as agrees best with the actual state of science.

## XVIII. PROPOSALS BY YAROSLAV PROKHANOV (U.S.S.R.)

203. Add to *Article 53* the following examples: "*Stipa pennata* L. (Sp. Pl. 1753) has been split into several species all bearing other names. Mansfeld (Verzeichnis Pfl. Deutsch. 1940) rightly reintroduced this name

for one of the species, namely *Stipa joannis* Cel. (Oesterr. Bot. Zeitschr. 34: 318. 1884). The latter has to be abandoned."

The introduction of this example, even at the expense of others, is highly desirable