



To Correct or Not to Correct?

Author(s): R. K. Brummitt and N. P. Taylor

Reviewed work(s):

Source: *Taxon*, Vol. 39, No. 2 (May, 1990), pp. 298-306

Published by: [International Association for Plant Taxonomy \(IAPT\)](#)

Stable URL: <http://www.jstor.org/stable/1223056>

Accessed: 27/07/2012 08:01

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at

<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



International Association for Plant Taxonomy (IAPT) is collaborating with JSTOR to digitize, preserve and extend access to *Taxon*.

<http://www.jstor.org>

material and that the generic placement was questionable. Clearly that portion of the protologue chosen by Wherry as the lectotype of *Phlox ovata* L. does not correspond at all closely with the full protologue of the original publication if the generic name and its accompanying diagnosis is considered as part of the protologue as seems generally to be accepted. Specimens in Linnaeus's possession in 1753 that were named *Phlox ovata* by Linnaeus are a much closer match to the complete protologue. Surely nobody would argue that the description of ovate leaves and a solitary flower constitutes the entire Linnaean protologue. Consequently it would seem that *Phlox ovata* L. (*Sp. Pl.* 152. 1753.) has been properly retypified by the Linnaean specimen 217.10 (Wilbur, 1987).

Reveal (1989) has now decided that *Phlox ovata* L. should be typified by Linnaean specimen 217.10 but that conservation is required to effect this change under Arts. 14 and 69 of the most recent ICBN. Under these articles it is possible to conserve the name of a species that has been widely and persistently used for a species not including its type. Conservation with a new lectotype is certainly a possible, yet needlessly cumbersome and involved way to resolve this issue. Conservation should not be proffered merely to avoid the question of determining whether Reveal or Wilbur is "right" concerning the irreversibility of Wherry's original lectotypification as suggested by Reveal. Reveal claimed that although "Wilbur's arguments are groundless, his goal is sound." Nothing in Reveal's paper (1989) demonstrates that Wilbur's relectotypification of the Linnaean *Phlox ovata* is contrary to either the spirit or letter of the Code. Fortunately, the Code is written in such a way that each of us can correct mistakes based upon uninformed or incompletely informed past decisions which otherwise would have tended to bind the botanical community. The study and effort required of several committees to effect conservation is considerable. Botanical progress requires an *International Code of Botanical Nomenclature* that "is simple and founded on considerations sufficiently clear and forcible for everyone to comprehend and be disposed to accept." If working taxonomists are unable to apply correctly the articles of the ICBN to resolve such relatively minor problems as this one, then we need to clarify the Code; we should not create and empower a nomenclatural bureaucracy to resolve even our simplest nomenclatural problems. A source of pride in the ICBN has been that it was written for the users with rare and minimal assistance by a hierarchy of bureaucratic committees. We should preserve the ICBN as an effective tool enabling working systematists themselves to resolve the nomenclatural problems encountered in their research.

Acknowledgments

I should like to acknowledge the bibliographic assistance of Dr. John M. MacDougal of the Missouri Botanical Garden who has provided a copy of the relevant pages from Plukenet's work.

Literature Cited

- Plukenet, L. 1700. *Almagestum Botanici Mantissa*. London.
- Reveal, J. L., C. R. Broome, L. Brown and G. F. Frick. 1982. Comments on the typification of two Linnaean species of *Phlox* (Polemoniaceae). *Taxon* 31: 733–736.
- Reveal, J. L. 1989. (954) Proposal to conserve *Phlox ovata* L. (Polemoniaceae) with a conserved type. *Taxon* 38: 515–516.
- Stearn, W. T. 1957. An introduction to the *Species Plantarum* and cognate botanical works of Carl Linnaeus. 1–176. (Prefixed to Ray Society's facimile of Linnaeus, *Species Plantarum*, Vol. 1.)
- Wherry, E. T. 1955. *The Genus Phlox*. Morris Arboretum, Philadelphia.
- Wilbur, R. L. 1987. Lectotypification of *Phlox ovata* L. (Polemoniaceae). *Taxon* 36: 130–132.

TO CORRECT OR NOT TO CORRECT?

R. K. Brummitt and N. P. Taylor¹

One of the most commonly encountered problems of interpretation of the International Code concerns Art. 73, the first paragraph of which reads "The original spelling of a name or epithet is to be retained, except for the correction of typographic or orthographic errors and the standardizations

¹ The Herbarium, Royal Botanic Gardens, Kew, Richmond TW9 3AE, U.K.

imposed by Arts. 73.8 (compounding forms), 73.9 (hyphens), and 73.10 (terminations; see also Art. 32.5)”. Although seven examples are given of names which are not to be corrected, and four of names which are to be corrected, it is not easy to draw general principles from these.

Some users of the Code are by instinct disinclined to ‘correct’ any original spellings, disregarding the part of the Article after the first comma. Among major reference works, *Index Nominum Genericorum* has in the past had a tendency to follow this approach, usually listing corrected spellings as only orthographic variants. Others are variously more inclined to apply the wording after the first comma, some seeing it as an option which may or may not be adopted, others seeing it as being obligatory to correct an original spelling in certain circumstances. We find ourselves inclined to the latter view; the opinion that the original spelling should always be retained is clearly contrary to the Article, while treating corrections as optional means that different spellings can both be acceptable, which seems undesirable. But if correction is obligatory in certain circumstances, then we need clearer guidance as to what these circumstances are. To try to illustrate the extent of the problem we quote below some actual examples with which we have been confronted in recent years.

1. Specific and Intraspecific Epithets

a. Slips of the pen.—The name *Vitex microcalyx* Baker was published in *J. Linn. Soc. Bot.* 25: 341. 1890. In transferring this species to *Karomia*, R. B. Fernandes (*Garcia de Orta, Bot.* 7: 37. 1985) there corrected the epithet to *macrocalyx*, noting that the protologue referred to ‘calyce fructifero magno. . .’. The original spelling seems to have been a simple slip, for Moldenke (*Fl. Madag.*, Verb. 260. 1956) says that the type is labelled *macrocalyx*, not *microcalyx*.

A similar case involving a greater change in the spelling is that of *Sesbania sphaerocarpa* Welw. (*Apont. Phytogeogr.*: 590. 1853). The protologue referred to ‘Legumina linearia . . . semina perfecte sphaerica’, and the type is labelled *S. sphaerosperma*, not *sphaerocarpa*. The latter was apparently a simple *lapsus* by Welwitsch. Among later authors, some have retained the obviously incorrect original published epithet, while others have corrected it to *sphaerosperma*—see J. B. Gillett (*Kew Bull.* 17: 127. 1963).

In Ex. 2 of Art. 73 in the cases of *Globba brachycarpa* (short-fruited) cited as a typographic error for *G. trachycarpa* (rough-fruited), and *Haeteria alba* cited as a typographic error for *H. alta*, seem to be examples of correctable names. Whether the errors are typographic or orthographic may be debatable, and the wording does not actually say whether the names **may** or **must** be corrected, but the two examples seem to establish a principle which can be extended at least to *Vitex microcalyx*. We would suggest that it should extend also to *Sesbania sphaerocarpa*, to avoid perpetuation of nonsensical epithets.

b. Printers' errors.—It is often difficult to say whether an error is made by the author or a printer, but some certainly come from the latter. *Indigofera longipedunculata* Fang & Zheng (*Acta Phytotax. Sin.* 21: 331. 1983) is surely such a case and has been corrected in *Index Kewensis* to *I. longipedunculata*.

c. Incorrectly formed epithets.—B. K. Simon (*Austrobaileya* 3: 168–171. 1989) has pointed out that the form of the epithet of *Cenchrus setigerus* Vahl (*Enum.* 2: 395. 1806) in masculine is *setiger*, and has corrected it accordingly. This presumably comes under the category of orthographic errors.

The epithet in *Ipomoea incomta* Hallier f. (*Bot. Jahrb.* 18: 151. 1893), transferred by the same author to *Stictocardia incomta* (Hallier f.) Hallier f. (*Meded. Herb. Leiden* 1910: 26. 1911), has no meaning unless it is regarded as a spelling error for *incompta*, which would mean ‘shaggy’, an appropriate epithet for a species distinguished by its long indumentum on its sepals. Although most authors have retained Hallier’s original spelling, it has been corrected to *incompta* by B. Verdcourt (*Kew Bull.*, in press).

Bowiea myriocantha Haworth (*Phil. Mag.*, n.s. 1: 122. 1827) is apparently named from the many prickles on the leaves, and should have been *myriacantha* (Greek *myrio-*: many, and *acanthos*: spine). An epithet *myriocantha* is meaningless, and when the species was transferred to *Aloe* it was corrected to *A. myriacantha* (Haworth) Schultes f. (*Syst. Veg.* 7: 704. 1829). This corrected form has been used by all authors since. A more complicated case is presented by *Cactus macrocanthos* Salm-Dyck (*Observ. Bot.* 1: 4. 1820). Britton and Rose (*Cact.* 3: 222. 1922) ‘corrected’ this to *C. macracanthus*, the change to the -us ending having been introduced much earlier as *Melocactus macrocanthus* (Salm-Dyck) Link & Otto (*Verh. Ver. Beförd. Gartenb.* 3: 418. 1827). As in the *Aloe* example above, the correction to *macracanth-* seems in order, but the change to the ending may be harder to justify, since the -os

termination is quite appropriate for an epithet in Greek such as this. However, the Code gives no guidance on whether correction in line with its Rec. 23B.1(a)—‘use Latin terminations insofar as possible’—is allowable, and an example clarifying what is permitted would be useful.

Another example of a bad epithet is in *Kleinia polychotoma* Chiovenda (*Fl. Somalia* 1: 205. 1929), which was spelled *polychotoma* in the caption to an illustration in the same work. Neither spelling is etymologically acceptable. In transferring the species to *Senecio*, Bally (*Flow. Pl. Afr.* 35: t. 1369. 1962) published *S. polytomus*, pointing out that Chiovenda erroneously thought that *dichotoma* is derived from *di-* and *-chotoma*, whereas it is *dicho-* and *-toma*, and something with multiple branching should have been *polytoma* by analogy.

More extreme cases of mis-formed epithets are *Poa scabristemmed* Cui (*Acta Bot. Boreali-Occid. Sin.* 7: 93. 1987) and *Carex purplevaginalis* Q. S. Wang (*J. Wuhan Bot. Res.* 5: 343. 1987), both mixtures of Latin and English. The latter could be converted without too much problem to *C. purpleovaginalis*, but should the former be corrected to *scabriculumis* (certainly not *scabristemma*)? Or are these anomalies allowable under Art. 23.2, which says that “The epithet of a species may be taken from any source whatever, and may even be composed arbitrarily” adding, interestingly, “(but see Art. 73.1)”? Certainly nobody would try to ‘correct’ the mixture of Greek and Latin in *Euphorbia amplophylla* Pax (*Ann. Ist. Bot. Roma* 6: 186. 1897) to *amplifolia* on the grounds that it is a compound of two languages. It is perhaps arguable that these are not correctable orthographic errors if the linguistically different components of the compound epithet are themselves correctly spelled.

None of the examples under Art. 73 concerns a linguistically mixed epithet, and two additional cases such as some of those above would be useful to illustrate which changes are acceptable.

d. Epithets derived from Latin plant names.—Art. 73, Ex. 2 tells us that *Thevetia nereifolia* Adr. Juss. ex Steudel is an obvious typographic error for *T. neriifolia*, without explaining why. The reason is that the genus to which the leaves are likened in the epithet is spelled *Nerium*, not *Nereum*; apparently the epithet is to be spelled accordingly. An exactly comparable example is *Podocarpus nereifolius* G. Don (in Lambert, *Descr. Pinus, Append.* 21. 1824).

Presumably the same argument applies to *Bignonia callistegioides* Cham. (*Linnaea* 7: 712. 1872), derived from the genus *Calystegia* and presumably to be corrected to *B. calystegioides*. In transferring the epithet to *Clytostoma*, Grisebach (*Symb. Fl. Argent.* 275. 1879) adopted the corrected spelling, but Fabris (*Rev. Mus. La Plata* 9: 347. 1965) and Gentry (*Ann. Missouri Bot. Gard.* 66: 826. 1973) have reverted to the original *callistegioides*.

Labillardiere (*Icon. Pl. Syr.* 1: 9. 1791) published *Fontanesia phylliraeoides*, presumably referring to a likeness to the genus *Phillyrea* though he did not say so. Most authors from Willdenow (*Sp. Pl.* 1: 52. 1797) onwards have corrected it to *F. phillyreoides*, but recently both *Flora Europaea* (3: 53. 1972) and *Fl. Turkey* (6: 146. 1978) have reverted to the original spelling (in the former case the decision being that of the editor’s against the author’s wishes). Is there any justification for such decisions?

Some such cases may be complicated by the existence of orthographic variants of the eponymous plant name. Presumably the epithet should be spelled according to the correct spelling of a generic name. Willdenow (*Sp. Pl.* 3: 342. 1800) published the generic name *Phaylopsis*, which was ‘corrected’ to *Phaulopsis* by Sprengel (*Anleit.* 2: 422. 1817), and the latter spelling has been conserved since the 1905 Vienna Congress. Noting a morphological resemblance to this genus, S. Moore (*Trans. Linn. Soc. II*, 4: 34. 1894) described a different plant as *Hypoestes phaylopsoides*. Do we now have to correct this to *H. phaulpsoides*, or is *H. phaylopsoides* acceptable since it was correct when published?

e. Epithets based on personal names.—The name *Solanum rohrii* C. H. Wright (*Bull. Misc. Inf., Kew* 1894: 128. 1894) was based on a specimen collected by Dr. Roth, after whom *Cordia rothii* Roemer & Schultes 1819 and *Indigofera rothii* Baker 1871 are named. Wright (*Fl. Trop. Afr.* 4(2): 231. 1906) recognised that he had mis-read the name of the collector on the specimen label, but retained the spelling *rohrii*. To us this is a clear orthographic error, and we would correct it to *S. rothii* C. H. Wright.

Similarly *Cassia langsdorffii* Kunth ex Vogel (*Syn. Cass.* 55. 1837), named after Langsdorff, should be corrected to *C. langsdorffii*, as in *Copaifera*, *Pithecellobium* and *Swartzia langsdorffii*, though Irwin and Barneby (*Mem. New York Bot. Gard.* 35: 879. 1982) have retained the original mis-spelling of the epithet. Again, *Cypridium fairieanum* Lindley (*Gard. Chron.* 1857: 740. 1857) has been corrected in *Index Kewensis* on its transfer to *Paphiopedilum* to *P. fairieanum*, since it was named after a Mr.

Fairrie (misquoted as Fairie by Lindley)—see P. Cribb (*Kew Mag.* 2: 351. 1985). We concur with this, since there seems to be no case for perpetuating such obvious errors when the Code permits, or demands, a correction of them.

Art. 73.7 says, however, that ‘When changes made in orthography by earlier authors who adopt personal, geographic or vernacular names in nomenclature are intentional latinizations, they are to be preserved’. The examples in Ex. 9 are all generic, and the only specific example given as such is in Ex. 10 and concerns terminal letters, discussed below. The epithet *glaziovii* has often been used to commemorate Glaziou (e.g., *Abutilon glaziovii* K. Schum., *Hyptis glaziovii* Briq., *Polygala glaziovii* Chod.) and could perhaps be given as an example, the name being ‘latinized’ to Glaziouvius. However, *glazioui* has also often been used, as in *Mimosa glazioui* and *Pithecellobium glazioui*, both published by Bentham in 1875, though curiously Bentham changed these to *glaziovii* in Martius’, *Fl. Brasiliensis* in 1876. The Code does not ask for consistency of treatment of any personal name, and the original should apparently be followed.

It certainly seems to us to be going too far to argue that *Acicalyptus fullageri* F. Muell. (*Fragm.* 8: 15. 1873) and *Lomaria fullageri* F. Muell. (*Fragm.* 8: 157. 1873) are based on a latinization of the name of their collector on Lord Howe Island, James Fullagar, as apparently maintained by Merrill and Perry (*J. Arnold Arbor.* 18: 331. 1937). Indeed, Mueller (*Fragm.* 9: 77–78. 1875) himself, changed both epithets to *fullagari*, which should be further corrected to *fullagarii*. Recent Australian publications have sometimes given the original, sometimes a corrected form. These cases could be given as examples of mis-spellings which should **not** be taken as intentional latinizations.

A number of cases concern terminal vowels of personal names. It was hoped that the re-writing in the Sydney Code of the former example of *Zygophyllum billardieri* DC., named after J. J. H. de Labillardière (or de la Billardière), would clarify matters. In Ex. 10 we now read ‘The intended latinization is “Billardierius” (in nominative), but that termination is not acceptable under Art. 73.10 and the name is correctly spelled *Z. billardierei* DC.’. But the wording (particularly ‘that termination’) is unsatisfactory, and the implications may not be clear. Does it imply that when the personal name ends in a vowel (other than ‘a’—see Rec. 73C(a)) the latinized form is always derived simply by adding *-us* to the unaltered name? It presumably does imply that *Glochidion melvilliorum* Airy Shaw (*Kew Bull.* 25: 487. 1971), named after Dr. and Mrs. Melville, must be converted to *G. melvilleorum* Airy Shaw. And presumably *Blandfordia backhousii* Lindl. (*Bot. Reg.* t. 18. 1845) has to become *B. backhousei*, which to us certainly looks better. But does it also imply that *Cephalotaxus fortunei* Hook. (*Bot. Mag.* 76: t. 4499. 1850) **must** be ‘corrected’ to *C. fortunei*, to match *Saxifraga fortunei* Hook. (*Bot. Mag.* 89: t. 5377. 1863), both named after Robert Fortune? And does it mean that *Solanum dallachii* Benth. (*Fl. Austral.* 4: 456. 1869), named after Mr. Dallachy, must be spelled *S. dallachyi*? Or are they intentional latinizations to be preserved?

The case for changing *Justicia brandegeana* Wasm. & L. B. Smith (Reitz, *Fl. Illustr. Catarin.*, Acanth. 102. 1969), named after T. S. Brandegee, to *J. brandegeana* by analogy with the *billardierei* example, has been argued recently by Brummitt (*Acanthus* 3: 2. 1988), but this has been disputed by Daniel on the same page. Many species are named after T. S. Brandegee or his wife M. K. Brandegee, and there is no consistency in keeping the double ‘e’ or eliminating one or both of them—see *Polygala brandegeana* Chod., *Acacia brandegeana* I. M. Johnston, *Agave brandegeei* Trelease, *Fritillaria brandegei* Eastwood, *Grayia brandegii* A. Gray. Interestingly, *Cactus brandegei* Coulter, the basionym for *Mammillaria brandegei* (Coulter) K. Brandegee, was neither commented on nor corrected by Mrs. Brandegee herself (see *Erythraea* 5: 116. 1897). A case for changing *Ruellia tweediana* Griseb. (*Goett. Abh.* 24: 259. 1879), named after Tweedie, to *R. tweediana*, has been argued by Ezcurra (*Acanthus* 5: 1. 1989).

We have also encountered reluctance to follow Art. 73.10 and Rec. 73C.1 in the case of Portuguese names ending in *-o*. By analogy with *fedschenkoi* in Rec. 73C.1.a it would seem that the genitive epithet from Loureiro must be *loureiroi*. In practice we have found *loureiri* frequently (*Convolvulus*, *Anamirta*, *Dracaena*, *Flagellaria*, etc.), *loureirei* (*Chenopodium*), *loureirii* (*Aneilema*, *Conyza*), *loureiroi* (*Ampelopsis*), *loureionis* (*Cyanotis*) and *lourerii* (*Polygala*). Similar problems relate to Brotero with *broteri* (*Allium*, *Euphorbia*) and *broteroi* (*Carduus*, *Ornithogalum*), and Monteiro with *monteiri* (*Euphorbia*), *monteiroi* (*Aloe*) and *monteirii* (*Acacia*). An example in the Code enforcing the *-oi* ending would be useful.

The significance of the *billardierei* example is apparently still unclear. It would be possible for the Code to clarify its intention by saying that the full correct spelling of the personal name should be retained in the epithet and the appropriate termination should be added according to Art. 73.10. The present ruling on ‘intentional latinizations’ could be restricted to generic names (see below) in accor-

dance with the good examples given in Ex. 9. One might ask whether it is desirable to allow at all so-called latinizations of names which are in no way Latin in formation of epithets. Should we thus try to introduce a measure of standardisation in epithets, and clarify the reasoning behind the example of *billardierei* which to many would seem to be contrary to the ruling on intentional latinizations? The only exceptions should be epithets derived from names which are already in Greek or Latin form, as in Rec. 73C.2, or perhaps also a few very well established cases such as Glaziou/Glaziovius could be included as stated examples. This recommendation is at present non-obligatory, unlike Rec. 73C.1 which is compulsory because it is referred to in Art. 73.10. It might well be advantageous to transfer the wording of the first sentence of Rec. 73C.2 to Art. 73.7, making it compulsory, and to delete the bracketed second sentence. The cases of *munronis* and *richardsonis* at present covered by the third sentence are unnecessary and inappropriate here since under Rec. 73C.1 they must be corrected to *monroi* and *richardsonii* (cf. also our example of *loureironis* above).

One remaining problem is to know when a personal name is already in a Latin or Greek form. In commemorating Brazza, Cabra and Wawra in *Cogniauxia brazzaei*, *Dimorphochlamys cabraei*, and *Trichosanthes wawraei*, Cogniaux has consistently adopted his own latinization of their names rather than accepting that they are already in Latin form as 'recommended' in the obligatory Rec. 73C.1(a). Does Art. 73.7 over-ride Art. 73.10 here, or should we 'correct' them to *brazzae*, *cabrae*, and *wawrae* in the usual way? The same problem can occur with names in the masculine form. We have *Ranunculus brotherusii* Freyn but *Campanula brotheri* Somm. & Lev. and *Rosa brotheri* Scheutz, all named after Brotherus, a Finn. For the Greek name Lavranos we have *Aloe lavranosii* Reynolds, *Conophytum lavranosii* R. Rawe, *Phagnalon lavranosii* M. Quaiser & H. W. Lack, *Euphorbia lavrani* Leach, *Huernia lavrani* Leach, *H. sordida* var. *lavrani* C. L. Scott, and *Caralluma lavranii* Rauh & Wertel. The last named should be corrected to *C. lavrani*, assuming that it was intended to be the genitive form allowed by Rec. 73C.2. For Purpus we have *Begonia purpusii* Houghton, and others, but we know of no *purpi*. In contrast, for Wislizenus we have among others *Echinocactus wislizeni* Engelm. (often incorrectly written '*wislizenii*'), but we know of no use of '*wislizenusii*'.

f. Epithets derived from geographical names.—Some, but not all, of the principles relating to personal names apply to geographical names as well. *Hermannia alhiensis* K. Schum. (*Notizbl. Bot. Gart. Berlin* 2: 303. 1899) is apparently based on a mis-reading of an herbarium label, the locality being given by Schumann as Alhi Plateau. There is no Alhi anywhere in Kenya, where the species was described from, and this is merely a mistake for the Athi Plains. The epithet should be corrected to *athiensis*, just as *Solanum rohrii* should be corrected to *S. rothii*.

But unlike most personal names, geographical names are often subject to change over a period of time. Royle (*Ill. Bot. Himal.* 372. 1839) first validated the name *Iris kemaonensis*; this had been proposed but not published in 1838, and was later published in 1840, by David Don as *I. kamaonensis*; and J. D. Hooker (*Fl. Brit. Ind.* 6: 274. 1892) changed it to *I. kumaonensis*. Although the geographical area is most commonly spelled Kumaon, both the spellings Kemaon and Kamaon had appeared on earlier maps. In this case the original *I. kemaonensis* is apparently not wrong and should be retained. Similarly *Astragalus affghanus* Boiss. (*Fl. Orient* 2: 1095. 1872?) cannot be 'corrected' to *A. afghanus* to correspond with the modern Afghanistan since Affghania is an earlier variant spelling of the country—see Stearn (*Bot. Lat.*, ed. 3: 215. 1983). Justification of odd spellings may thus involve searching old maps for now forgotten versions of modern names. *Sophora kentukea* Dum. Cours. (*Bot. Cult.* ed. 2, 6: 56. 1811) is apparently based on an early French spelling of Kentucky, as the vernacular is given there as 'S. de Kentukey', and the change in epithet in *Cladrastis kentuckea* (Dum. Cours.) Rudd (*Phytologia* 21: 327. 1971) does not seem justified. But *Pyrenacantha kamassana* Baill. (*Adansonia* 10: 272. 1872) seems to be a gross error for *kaurabassana*, derived from an early spelling of the Cabora Bassa rapids in Mozambique, and should apparently be corrected—see E. J. Mendes (*Fl. Zamb.* 2: 347, 349. 1963).

A problematical case concerns *Cereus fernambucensis* Lemaire (*Nov. Cact. Gen. Sp.* 58. 1839), whose author, a Frenchman, stated, "ETYM. *Cereus* cujus patria est Fernambuco." The spelling is clearly deliberate, referring to the Brazilian city of Recife, formerly known as Pernambuco, which is now the modern name of the state in which Recife is situated. According to the *Times Gazetteer of the World* (1899) the name Pernambuco comes from the native Indian words *parana mbuc* (meaning 'arm of sea') and L. C. Tibiriçá (*Dicionário Tupi Português* 15. 1984) tells us that this Tupi language lacks a letter corresponding to 'f'. Thus, at first sight, Lemaire's spelling seems to be in error and many

authors have not hesitated to correct the epithet to *pernambucensis*, which certainly seems to make sense in a modern context. However, two factors argue for retention of the 'f' spelling: first, according to de Toni's *Repertorium Geographico-Polyglottum* (n.d.), the Italian spelling is or was 'Fernambuco' and Werdermann (*Brasilien und seine Säulenkakteen* 89–90, 1933) claims that this was the more common spelling of the place name in the 19th century; secondly, Art. 73.3 of the Code advises (but does not legislate) against correction when it affects the first letter of a name or epithet (but see Art. 73.1, Ex. 3, which seems to contradict Art. 73.3). On balance we favour maintaining *C. fernambucensis* for this well known Brazilian species, in line with *Iris kemaonensis* etc.

Finally, a surprising interpretation of Art. 73.1 is advanced by P. V. Heath (*J. Mamm. Soc.* 29: 57, 1989) in respect to *Mammillaria esperanzaensis* Bodeker, which is assumed to refer to C. A. Purpus's locality of Esperanza, Puebla, Mexico. According to Heath this epithet is orthographically incorrect and should be changed to *esperanzensis* by analogy with *canadensis*, but we are unable to see how or why Art. 73.1 should require such a correction to be made, even though it may be common practice to elide the final 'a' when forming such epithets.

g. Later corrections by the original author.—We can all make mistakes, and many of us would like to retain the right to correct them. A well known European oak was first described as *Quercus frainetto* Tenore (*Fl. Nap.* 1, *Prodr. Suppl.* 2: lxxii, 1813?), but he (*Syll. Fl. Neapol.* 470, 1830) corrected this to *Q. farnetto* with a note 'typographica menda sic evulgata'. The word 'frainetto' is meaningless, but 'farnetto' is a diminutive of 'farnia', an Italian name for an oak. Some floras have accepted Tenore's more meaningful corrected version, but many, including *Flora Europaea*, have declined to allow the correction and retained the meaningless original. A comparable example involving an epithet commemorating a person is *Melocactus negryi* K. Schum. (*Monatsschr. Deut. Kakt. Ges.* 11: 171–172, 1901), which Schumann says is named after the President of the Brazilian state of Amazonas. The epithet is so spelled three times in the original article, but two years later Schumann (*Gesamtb. Kakt. Nachtr.* 130–131, 1903) corrected the epithet to *negryi*, saying that it was named for Sr. Nery and that the earlier spelling was in error. Since then most authors have used the corrected spelling, but recently Trujillo and Ponce (*Ernestia* 47: 3, 1988) have reverted to *M. negryi*. Does an author not have the right to correct a clear mistake?

h. Hyphenated epithets.—Since 1975 Art. 73.9 requires deletion of all hyphens in epithets except when the epithet is formed of words which usually stand independently. We have no problem interpreting this, and the examples given in the Code seem clear enough except for one point. When the last letter of the first part and the first letter of the second part are both vowels, the resulting unhyphenated name may be clumsy. Two such cases are given in Ex. 13, in both of which the vowel heading the second part is given a diaeresis: *Ficus neoëbudarum* and *Scirpus* sect. *Pseudoëriophorum*. Is this a general rule to be inferred from these examples? Is the diaeresis applicable only on letters 'e' and 'i' (see also *Cephaëlis* and *Isoëtes* in Art. 73.6)? Or, although it is not allowed for at present in Art. 73.9, we wonder whether elision of the vowels should be allowed in some cases.

The epithet in *Sison verticillato-inundatum* Thore (*Essai Chloris Landes* 101, 1803) has been dehyphenated as *Thorella verticillatinundata* (Thore) Briq. in *Flora Europaea*. Must we have *T. verticillatoinundata*? With diaeresis? Does *Athyrium austro-occidentale* Ching (*Acta Bot. Bor.-Occid. Sin.* 6: 152, 1986) have to be converted to *austrooccidentale*, perhaps with diaeresis on the second 'o'? *Flora Europaea* also elided the vowels in producing *Robinia pseudacacia* L., originally written by Linnaeus (*Sp. Pl.* ed. 1: 722, 1753) as *R. PseudoAcacia*, but changed to *R. Pseud-Acacia* (*Sp. Pl.* ed. 2: 1043, 1763). Does the right of an author to correct his own epithet mean that *pseudacacia* is permissible? Linnaeus's original *R. pseudoacacia* does not appear to be in error according to Art. 73, and we feel that it therefore cannot be corrected. The hyphenated form *R. pseud-acacia* could only be justified if the two word elements involved can stand separately (Art. 73.9), which does not seem to be possible in Latin, unless the use of an upper case 'P' and hyphen by Linnaeus indicates that he thought 'Pseud' could stand on its own. It has been suggested to us that *Gnaphalium luteo-album* L. (*Sp. Pl.* ed. 2: 851, 1753) should become *lutealbum*, but *lutealbum* seems preferable to us; *Flora Europaea* retains the hyphen, even though the Code required its deletion since 1975.

An amusing and probably unique epithet is provided in *Elaeagnus s-stylata* X. R. Xu (*Acta Sci. Nat. Univ. Sunyatseni*, 1987(2): 145, 1987), so called because of its s-shaped style. It seems necessary to retain the hyphen.

i. *Epithets with apostrophes.*—Although Art. 73.9 rules on hyphens, there is no rule covering apostrophes. Rec. 73C.4(b) recommends that an epithet commemorating O’Kelly should be written *okellyi*, as it is in *Orchis maculata* var. *okellyi* Druce (*Irish. Nat.* 1909: 211. 1909). For O’Donell we have both *Lycium o’donellii* Barkley (*Lloydia* 17: 202. 1955) and *Cuphea odonellii* Lourteig (*Notas Mus. La Plata, Bot.* 19: 281. 1959). *Cymbidium i’ansoni* Rolfe (*Orchid Rev.* 8: 191. 1900) is named after Mr. I’Anson, and this spelling was retained by P. Cribb and D. Dupuy (*Kew Bull.* 40: 432. 1985). But if hyphens have to be deleted, why not apostrophes also? This would be particularly welcome in numerous epithets in *Solanum* published by C. M. Ochoa (*Phytologia* 65: 103–113. 1988) such as *murukewillu*, *janck’o-chojllu* and *wila-k’oyul*.

j. *Epithets with accents or other diacritical marks.*—Diacritical signs are not allowed under Art. 73.6, and, if published, they “are to be suppressed with the necessary transcription of the letters so modified.” Some ‘examples’ are given, which presumably stand as rules, such as *ã* becoming *ae*. Only one of these concerns a consonant: *ñ* becomes *n*. But there are many more diacritical signs which are not covered by this rule, as discussed by D. A. Webb (*Feddes Repert.* 64: 20–21. 1961) with regard to the name *Sedum stefčo* Stefanov (*God. Sof. Univ. Agro-Les. Fak.* 24: 105. 1946), two years later converted by Stefanov to *S. stefšicho*. As noted by Webb, this is a transcription according to German practice, but a Spaniard or Englishman would have written *stefcho*, a Frenchman *stefšcho*, a Pole *stefczo*, and an Italian *stefcio*. His solution was simply to delete the háček and give *S. stefco*, but this would not give the correct pronunciation to anyone and may be the least acceptable. Perhaps since Stefanov himself did make a ‘correction’ we should follow him. The Code still gives no guidance. Perhaps the first transcription published should always be accepted.

2. Generic Names

We suggest that criteria concerning generic names may be sometimes judged differently from those affecting specific and infraspecific epithets. The need for caution in making changes is greater at generic rank, for one change may affect many specific names. Also, a variant spelling of a specific epithet may often be very easily found in a list of names under one genus, but a variant generic spelling may be very difficult to find in a list of genera. This is especially true when the spelling variant concerns the first syllable or letter of a generic name, and Art. 73.3 and its Ex. 5 (*Lespedeza* named for Céspedes may not be corrected) give clear guidance that correction should be avoided in such cases.

a. *Incorrectly spelled names.*—The name *Ciclospermum* Lagasca has often been changed to *Cyclospermum*—see B. L. Burt (*Taxon* 38: 507–509. 1989). Very many generic names begin with *Cyclo-*, but no other is given in ING starting *Ciclo-*. There is no basis for *Ciclo-* in classical Greek, and we would regard it as a correctable error. In this case, however, the name is currently under consideration by the Committee for Spermatophyta which will make its own recommendation. Rather comparable is *Chamelaucium* Desfontaines which has often been corrected to *Chamaelaucium*. Again there are very many names in ING beginning with *Chamae-*, but no other with *Chame-*, and again we would regard the original spelling as an error to be corrected. Another case is *Diplarrena*, published as such by Labillardière, which has almost always been written as *Diplarrhena*. Here ING fails to record the original spelling and gives only the corrected version. Many would see this as being acceptable. We see no need to perpetuate barbarisms, which may be offensive to those with even only a little knowledge of classical Greek, for the sake of rigidly following original spellings when the Code clearly allows for corrections.

b. *Names based on personal names.*—A good example to begin with is that of *Albizia* Durazzini 1772, named after a Florentine nobleman, Sig. Filippo degl’Albizzi, who introduced *A. julibrissin* into cultivation in 1749 (Stearn in A. W. Smith, *Gard. Dict. Pl. Names* 1971). In 1844 Bentham took up the name but ‘corrected’ it to *Albizzia*, in accordance with the spelling of the man’s name. This spelling persisted until 1945 when Elbert L. Little, Jr., a campaigner for the stability of names on the behalf of thousands of foresters at successive Botanical Congresses, published a note ‘correcting’ it back to *Albizia* (*Amer. Midl. Nat.* 33: 510). Subsequently, this spelling gained substantial further support through the publication of Brenan’s Mimosoideae for the *Flora of Tropical East Africa* in 1959. Little had noted that Durazzini used the single ‘z’ spelling four times in the protologue, so it can scarcely have been a mistake on his part. Assuming Durazzini’s spelling was not an attempt at an intentional latinization (covered by Art. 73.7), it may be held to be a correctable orthographic error. This would

not serve nomenclatural stability if applied today, but the change introduced 30–40 years ago may seem unnecessary in retrospect if one accepts that corrections may be made to accord with the spelling of the personal name.

The doubling of consonants is actually a feature of many such names. W. T. Stearn has commented to us that during the Renaissance period and later, when scholars writing in Latin would latinize many French and other personal names, the doubling of a consonant became standard practice in order to indicate a short preceding vowel. Thus Linnaeus published *Burmanna* (from Burman), *Camellia* (from Kamel), *Ruellia* (from Ruel) and *Bellonia* (from Belon). Other examples are *Batemannia* Lindley (from Bateman), *Hunnemannia* Sweet (from Hunneman) and *Schlimmia* Linden (from Schlim). By contrast *Bischofia* Blume was clearly said to be named after Bischoff and the reduction to the single 'f' seems deliberate. Although a change to *Bischoffia* was made by Decaisne, the original spelling has been generally used. But *Prescotia* Lindley ex Hooker was said to be named after John Prescott, a clear mistake for Prescott, and has usually been corrected to *Prescottia* (see e.g., Airy Shaw in Willis, *Dict.* ed. 8). On the other hand *Ramatuela* Kunth was said to be named after Ramatuel, a mistake for Ramatuelle, but has not usually been corrected to *Ramatuellea*.

Just as terminal vowels in personal names have caused problems in specific epithets (see *backhousii* etc. above) which may or may not be deliberate latinizations, so they may give doubts in generic names. But we would be very disinclined to change *Backhousia* Hooker & Harvey (from Backhouse), *Stackhousia* J. E. Sm. (from Stackhouse) or *Nitschkia* Otth ex. P. Karsten (from Nitschke) to *Backhousea*, *Stackhousea* or *Nitschkea* as has been suggested to us. The *-ia* termination in such cases is very well established in practice.

Huernia R.Br. 1810 was named in honour of Justus Heurnius, the transposition of 'eu' to 'ue' being subsequently 'corrected' as *Heurnia* by Sprengel (*Anleit.* ed. 2, 2: 488. 1817). But Sprague (*Bull. Misc. Inf. Kew* 1929: 242. 1929) believed that Robert Brown's 'ue' spelling was deliberate, 'doubtless because it was more euphonius than Heurnia'. He pointed out that this spelling appears in two other places in the original publication, so it can hardly have been a simple typographical slip. Most authors have used Brown's orthography and it seems unwise to change it now, especially since such action is cautioned against in Art. 73.3.

Linnaeus's spelling *Sigesbeckia* (from Siegesbeck) is apparently a deliberate spelling which has become well established and should not change now, although *Siegesbeckia* has been used quite extensively. The spelling *Honkenya* Ehrh., however, appears to be an error, for Ehrhart stated that it was in honour of Honkeny, a mistake for Honckeney. *Flora Europaea* (1964) has used the original *Honkenya*, but *Med-Checklist* (1984) has opted for the corrected *Honckenya*. In ING (1979) *Honkenya* is accepted and *Honckenya* is given as an orthographic variant.

The more striking cases of latinizations in *Valantia* L. (from Vaillant), *Gleditsia* L. (from Gleditsch), and *Clutia* L. (from Cluyt) are well catered for in Art. 73, Ex. 9, and there is no reason to argue with this.

Of the above cases, only *Prescotia*, perhaps *Ramatuela*, and *Honkenya* can be positively shown to be errors and so are good candidates for correction. In any question of doubt we would tend to opt for the original spelling.

c. Later corrections by the original author. — Blume, in his preface (*Flora Java* v–viii. 1828), corrected the spellings of various generic names published by himself three years before in his *Bijdr.* (1825), noting that the earlier spellings were errors occasioned by his illness and the fact that he did not have access to the literature at the time. Examples are *Caelospermum* corrected to *Coelospermum*, *Gynochtododes* to *Gynochthodes*, and *Rhynchoglossum* to *Rhynchoglossum*. The corrected version of the latter has now been recommended for conservation by the Committee for Spermatophyta, following a proposal by L. Skog (*Taxon* 34: 319–320. 1985), but should it be necessary to conserve such corrections by the original author when genuine etymological errors have been demonstrated? Surely authors should be allowed to correct their mistakes and expect others to follow suit. However, another of the examples cited above, *Gynochtododes* corrected by Blume himself to *Gynochthodes*, has been differently treated by A. C. Smith (*Fl. Vitiensis Nova* 4: 341. 1988), who has maintained the original spelling and not the corrected form, which most other authors have employed. Other examples of authors correcting their mistakes include the much debated *Brachyscome* and *Lagenifera*, both published by Cassini and later corrected by him to *Brachycome* and *Lagenophora*, respectively. His corrected spellings are accepted by D. J. N. Hind and C. Jeffrey (*Kew Bull.* 43: 329–331. 1988). The former case is currently

the subject of a conservation proposal—see K. Adolphi, S. Seybold and L. A. S. Johnson (*Taxon* 38: 511–513. 1989)—and *sub judice* with the Committee for Spermatophyta.

3. Conclusions

Only errors may be corrected; names which cannot be shown to be errors must be retained as originally published. The seven cases in Art. 73, Ex. 1 of the present Code are all cases where one of two or more permissible variant spellings is published, which are not errors. This leaves us with only four examples under Art. 73.1 of actual errors, which are correctable, and these are all at specific level. These are divided into three described as typographic errors and one described as an orthographic error, but it is not clear to us what the difference is between typographic and orthographic. All four might be described as spelling mistakes. What we need is examples of a much wider range of kinds of errors, with explanations of why they are errors, so that better principles may be established.

At the Berlin Congress we proposed a Special Committee to make recommendations for improvements, but, although this received some support, it was eventually declined. Yet in our experience it is problems of spelling of epithets, etc. which are the most frequent cause of uncertainty. We hope our attempted review above will highlight problem areas, and we invite any interested persons to contact us by August 1990 with a view to formulating proposals, which must be submitted by November 1990. Additional examples would be very welcome.

Acknowledgments

We are very grateful to numerous colleagues and others for providing examples quoted above, particularly the compilers of *Index Kewensis*, Rosemary Davies and Katherine Lloyd, also Sally Bidgood, P. F. Cannon, Rosemary Casserly, W. D. Clayton, P. J. Cribb, T. F. Daniel, Cecilia Ezcurra, J.-F. Veldkamp, M. G. Gilbert, J. B. Gillett, P. S. Green, Pat Halliday, R. J. F. Henderson, Susan Holmes, C. Jeffrey, D. H. Kent, G. P. Lewis, J. M. Lock, Barbara Mackinder, B. Mathew, R. D. Meikle, A. Nicholas, P. D. Sell, C. A. Stace, Jana Stirton, W. T. Stearn, and B. Verdcourt.

WATHENIA, THE CORRECT GENERIC NAME FOR *TANYDORUS* (LYCOPODIALES) SENSU SKOG, NOT AS TO TYPE

Judith E. Skog¹

The generic name *Tanydorus* J. Skog (1986) was established for some of the material assigned to *Onychiopsis mantellii* by Seward, one specimen of the material originally described as *Filicites* subgenus *Hymenopteris psilotoides* Stokes and Webb (1824), and one new specimen in the Manchester Museum. All the material placed in this genus is from the Wealden, Lower Cretaceous, of England. In 1825 Sternberg listed *Hymenopteris*, attributed to Robert Brown, based on material from Tertiary. Unfortunately Sternberg was mistaken in both the age and the author of the genus, as well as the status of the taxon, and after a search of the literature, *Hymenopteris* R. Br. ex Sternberg is based upon the same material and the same species established by Stokes and Webb. Therefore *Tanydorus* becomes a later homonym of *Hymenopteris*.

Sukh Dev (1965) compared the material from England with material from other parts of the world and concluded that the original material of *Filicites (Hymenopteris) psilotoides* belonged in the same species as specimens assigned to the genus *Onychiopsis* Yokoyama. He combined all species of *Onychiopsis* into one, *O. psilotoides* and designated the illustration of Stokes and Webb (1824, Plate 2, Fig. 7) as the lectotype. Apparently he could not locate the specimens of Stokes and Webb. When this illustration was transferred to *Tanydorus* I noted that the illustration would serve until the type could be found. Unfortunately repeated searches for the Stokes and Webb specimen have not been successful. Since the International Code for Botanical Nomenclature (Berlin) has been made quite clear that only a specimen can serve as type material for fossil plants (Article 9.4 with Article 7.18), a new type must

¹ Biology Department, George Mason University, Fairfax, VA 22030, U.S.A.