

PROPOSALS TO AMEND THE CODE

Edited by John McNeill & Nicholas Turland

(242-257) Report of the Special Committee on Suprageneric Names

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The Committee on Suprageneric Names was authorized by the Nomenclature Section of the XVI International Botanical Congress in Saint Louis in 1999. The Committee was convened in December 2001 following the announcement by Barrie & Nicolson (in *Taxon* 50: 893–896. 2001). Eleven of the announced 12 members have participated, as follows:

John C. David, CABI Bioscience, Egham, U.K.

Alexander B. Doweld, National Institute of Carpology, Moscow, Russia

Gerry Moore, Brooklyn Botanic Garden, New York, U.S.A.

Richard K. Rabeler, University of Michigan, U.S.A.

James L. Reveal, c/o University of Maryland, U.S.A.

Paul C. Silva, University of California at Berkeley, U.S.A.

Peter F. Stevens, Missouri Botanical Garden, U.S.A.

Nicholas J. Turland (Convener), Missouri Botanical Garden, U.S.A.

Edward G. Voss, University of Michigan, U.S.A.

Mark F. Watson (Secretary), Royal Botanic Garden Edinburgh, U.K.

Peter G. Wilson, Royal Botanic Gardens, Sydney, Australia

In addition, John McNeill (Rapporteur-général; Royal Botanic Garden Edinburgh, U.K.) and Fred R. Barrie (Secretary of the General Committee; Missouri Botanical Garden c/o Field Museum, Chicago, U.S.A.) participated as ex-officio (non-voting) members.

Our mandate was to provide recommendations and, where necessary, specific proposals on the following issues to the Nomenclature Section of the XVII International Botanical Congress in Vienna.

1. To consider the utility of establishing starting dates other than 1 May 1753 for names above the rank of genus.
2. To evaluate whether names were validly published in certain critical works and the ranks used therein.
3. To comment on proposals that were either rejected or referred to the Special Committee on Suprageneric Names by the Nomenclature Section at Saint Louis.
4. To review a list of proposed changes to the citations of names of families in Appendix IIB that were not implemented in the *Saint Louis Code*.

We also discussed several new proposals additional to this mandate. Our recommendations are presented here with the exception of changes to App. IIB, which will form a supplementary report to be submitted to *Taxon* in time for publication prior to the Vienna Congress. We carried out all our discussions via e-mail by means of a mail server and web site set up by Watson at the Royal Botanic Garden Edinburgh. In autumn 2003 we began to vote on the various issues and these votes are presented here in the format [for] : [against] : [abstain]. We followed Barrie & Nicolson (l.c.:

893) in requiring at least a two-thirds majority to recommend here a proposal to the Nomenclature Section at Vienna. In some cases we considered various options on one proposal and held a 'primary' ballot to decide which option was the more (or most) popular; that option was then put to a final ballot unless it had already been supported by a two-thirds or greater majority in the primary ballot. The issues of starting date and critical works were on our first ballot, in which 11 members voted; the other items on our mandate were split between a second ballot, in which 10 members voted, and a third ballot in which 10 members voted on most of the proposals, but only 9 on the remainder. The minimum number of 'yes' votes for a two-thirds majority was therefore 7 (rounded to the nearest integer with 11 or 10 members voting) or 6 (with 9 members voting).

I. Starting date

Until the Saint Louis Congress, an informal starting date of 4 August 1789 (Jussieu's *Genera plantarum*) applied to names of families of Spermatophyta listed in App. II of the Code. We have carefully considered (1) the utility of formally introducing such a starting date, and (2) the question of how wide its application should be outside App. II, in groups other than Spermatophyta, and at suprageneric ranks other than family.

App. II originated from a list of names of families of Angiospermae ("*Indicis nominum familiarum angiospermarum prodromus*") drawn up by Bullock (in *Taxon* 7: 1–35. 1958), who (l.c.: 2) explained his choice of 1789 as the starting date for names of families thus: "I found that 1753 was an impossible commencing date and the difficulties of interpretation at this early period convinced me that Jussieu's *Genera plantarum* (1789) is the earliest work in which modern families became recognisable". He also stated (l.c.): "In his 'Familles' (1763) Adanson frequently used modern family names, but here the resemblance of his families to the modern concept ended. I have excluded also the names in Giseke's edition (1792) of his own and Fabricius' transcription of Linnaeus' *Praelectiones in ordines naturales plantarum*. Most of the names in that work are illegitimate [no longer the case since the Sydney Code (1983)], and the families (ordines naturales) are often extremely heterogeneous." Later (in *Taxon* 7: 158–163. 1958), Bullock published "*Additamenta et Corrigenda*" to his earlier list and (p. 159) explained his disregard for some 400 names of families proposed by Rafinesque between 1815 and 1838; while admitting that these names were "usually validly published and often exactly typified", he chose not to list them because the majority of the families to which they apply were "extremely heterogeneous". Still later (in *Taxon* 8: 154–181, 189–205. 1959), Bullock published a list of names of families proposed for conservation and (p. 155) referred to Jussieu (l.c.) "as a convenient early

starting point for the nomenclature of families". It should be noted that Bullock's concern about heterogeneous families is not now a concern because the name of a family formed from the name of a genus is typified by that genus under Art. 10.6.

At the Montreal Congress (1959), the Nomenclature Section accepted by a large majority the principles of a list of conserved names of families, while the actual names on the list were to be studied by the Committee for Spermatophyta (*Proceedings*, Regnum Veg. 20: 31. 1960). The principles were those given by Bullock in the introduction to his second list (l.c.: 1959). A Subcommittee for Family Names was established (l.c.: 108) and a list of conserved names of families in Angiospermae appeared as App. II in the *Montreal Code* (1961), with listed names conserved against unlisted names and homonyms and a starting date of 1789 applying only to names on the Appendix. The Subcommittee for Family Names reported to the Edinburgh Congress in 1964 (*Proceedings*, Regnum Veg. 44: 61–65. 1966). It regarded as debatable (l.c.: 63) Bullock's argument that Jussieu's *Genera plantarum* is the earliest work in which modern families become recognizable, but conceded: "his choice was certainly well founded since it avoided a difficult and time consuming search in the early literature". The Subcommittee hoped the Nomenclature Section would approve its report and give consent to the Appendix as already printed in the *Montreal Code* (with necessary corrections). The Section approved this and also approved the inclusion of gymnosperms so that, in the *Edinburgh Code* (1966), App. II comprised Spermatophyta. In the *Seattle Code* (1972), two families of Algae were added, and the starting date was limited to Spermatophyta. In the *Leningrad Code* (1978), families of Musci and Hepaticae were added. In the *Berlin Code* (1988), App. II was split into App. IIA and IIB, with the former comprising names in Algae and Pteridophyta conserved in the same manner as names of genera in App. III, i.e., with names conserved against explicitly listed rejected names. App. IIB comprised names of Musci, Hepaticae and Spermatophyta conserved against all unlisted synonyms and homonyms, as in the earlier editions of the *Code*, and with the starting date of 1789 still applying to Spermatophyta.

At the Tokyo Congress, Nicolson moved a proposal from the floor on behalf of Hoogland and Reveal (*Proceedings*, Englera 14: 95–96. 1994) to introduce a starting date of 1789 for names of families and lower suprageneric ranks in all groups for which an earlier starting date was given in Art. 13. The stated intent was to formalize in the main body of the *Code* what had been informally accepted in App. II, and later App. IIB, since Montreal. However, the scope of the 'informal' starting date was names of families of Spermatophyta only, and the new proposal went much further. It was defeated. Greuter then moved a proposal to "empower the Editorial Committee to leave the listed authorships and dates in App. IIB unchanged", but this too was defeated. This occurred at least partly because the fate of proposals on Names in Current Use ('NCU') was at that time still undecided. If a protected 'NCU list' for families had been introduced, the need for a starting date would have been redundant. In the final Session, three days later (*Proceedings*: 241–243), McNeill introduced a motion practically identical to Greuter's. An amendment from Stearn so that it would "not preclude the correction of purely bibliographical errors" was accepted and the motion was carried. This resulted in the addition of the footnote to Art. 14.4 Note 1 in the *Tokyo Code*, to maintain "as a temporary exception" the traditional, but informal starting date of 1789 for Spermatophyta in App. IIB.

Prior to the Saint Louis Congress (1999), it would have been possible to argue that the protected status of App. IIB still held, the

footnote notwithstanding. However, once the Saint Louis Nomenclature Section accepted the Tokyo Code as the basis for its discussions (which it did on the first morning, as is traditional, without discussion), the wording of the *Tokyo Code* became official. Thus the original protected status was lost and was replaced by the footnote.

At the Saint Louis Congress, Reveal moved a proposal from the floor to delete the footnote to Art. 14 Note 1. With NCU then effectively dead, those present agreed with Reveal that the fruits of his research with Hoogland should be incorporated into App. IIB. At least some of those present believed that the footnote could be deleted without raising the problem of pre-Jussieu names, while others understood that removing the footnote also removed the unofficial starting date of 1789. Others still (probably most of those present) did not realise the implications one way or the other. It is evident from the *Proceedings* (Englera 20: 109–112. 2000) that at least Reveal was aware that the starting date would revert to 1753, and indeed Reveal's list of proposed corrections to App. IIB (in *Taxon* 47: 851–856. 1998) included numerous pre-1789 names. Greuter moved an amendment to Reveal's proposal to retain the footnote but delete the word "temporary", so that maintenance of App. IIB and the starting date would become a permanent exception to Art. 14 Note 1. Greuter's proposal was defeated and Reveal's was carried, so the footnote was deleted and the informal starting date lost.

With the loss of the starting date, the Editorial Committee was mandated to update App. IIB with the changes given in Reveal's published list (l.c.). This was done by two of its members (Turland and Barrie), who, after critically reviewing Reveal's list, altered the author and place of publication of 34 names (nearly all of them major families) to Adanson, *Familles des plantes*, vol. 2 (1763) in the Saint Louis App. IIB. Proposed changes involving Durande's *Notions élémentaires de botanique* (1782) and Batsch's *Disposition generum plantarum jensium* (1786) were deferred for this Special Committee to consider (see below, and Turland & Barrie in *Taxon* 50: 897–903. 2001). We now recommend acceptance of those deferred changes, so a further 39 or 40 names will be altered in the Vienna Code, plus up to two more from J. F. Gmelin's *Allgemeine Geschichte der Pflanzengifte* (1777). Indeed, there may be still more pre-1789 works currently resting in peace, in which listed names were validly published. All these changes could be prevented (or reversed in the case of Adanson) by reinstating the starting date.

The concept of a starting date of 1789 for all suprageneric names in all groups without a later starting date in Art. 13 and not limited to App. IIB would scarcely be more far reaching than that which effectively survived in the Tokyo App. IIB, i.e., for listed names of families of Spermatophyta. Let us consider what might be affected. (1) Unlisted names: the only name we could trace of a family of Spermatophyta not listed on App. IIB, validly published before 1789, and accepted by a recent author is *Veroniceae* Durande (1782). It was used by Olmstead & al. (in *Amer. J. Bot.* 88: 348–361. 2001) even though the authors admitted (l.c.: 355) that *Plantaginaceae* is the earliest conserved name for the taxon concerned. (2) Other ranks: above and below the rank of family, we are not aware of any suprageneric name in any group and in current use that was validly published prior to 1789 other than *Rosopsida* Batsch (1786). There is at least one case where an automatically typified suprafamilial name is not validly published because it was formed from the name of a family which at that time was itself not validly published (cf. Art. 16.1 and 32.1(b)), its pre-1789 publication no longer valid because of the starting date.

That case is *Pinales* Dumort. (1829), which would otherwise be validly published as *Pinales* Lindl. (1833). (3) Other groups: few suprageneric names of non-spermatophytes were validly published prior to 1789. In fact, the only one in current use known to us is the algal name *Fucaceae* Adans. (1763).

We considered three options for formally and permanently establishing a starting date of 4 August 1789 to apply to suprageneric names whether or not they are listed on App. II: (1) to apply to all groups for which an earlier starting date is given in Art. 13; (2) to apply to Spermatophyta, Pteridophyta and Bryophyta (*Sphagnaceae* and *Hepaticae*) only; and (3) to apply to Spermatophyta and Bryophyta only.

Aware that our Committee is dominated by specialists in Spermatophyta (9 : 2), we sought the opinions of the other relevant Permanent Nomenclature Committees. The Committee for Pteridophyta has not yet formed an opinion (Zimmer, pers. comm., 8 November 2003); the Committee for Bryophyta commented “we do not see a problem with the 1789 date” (Zijlstra, pers. comm., 18 July 2002); the Committee for Fungi did not comment; and the Committee for Algae commented “A majority of the Committee (9 yes against 5 abstentions) expressed the opinion that the new proposed starting date of 1789 should apply only to the groups considered under Appendix IIB of the Code...” (Compère, pers. comm., 4 November 2003).

Bearing in mind all of the above, we discussed the first option, and considered a proposal to modify Art 13.1 by adding a seventh clause (g), which would apply a starting date of 4 August 1789 to all suprageneric names. It was defeated by a vote of 4 : 6 : 1. The second option, applying to Spermatophyta, Pteridophyta and Bryophyta, was supported by a vote of 8 : 2 : 1, more than a two-thirds majority, and therefore resulted in proposal 242. The third option, affecting only Spermatophyta and Bryophyta, was even more strongly supported by a vote of 9 : 1 : 1 and resulted in proposal 243.

In both Tokyo and Saint Louis, nobody doubted that the lists of Hoogland and/or Reveal could be used uncritically. Indeed, updating App. IIB seemed merely to be an editorial exercise. Unfortunately, the problems since encountered in the task of updating have been great. Nearly half of the proposed changes have been (and some still are) under intense discussion by this Committee as to whether the names in question are in fact validly published and, if so, whether at the rank of family or not. We believe, therefore, that some of the stability which App. IIB (and its users) enjoyed for 40 years will be restored if the Vienna Nomenclature Section accepts either proposal 242 or 243.

(242) Amend Art. 13, adding to clauses (a) and (c), as follows:

“(a) ...], except suprageneric names, 4 August 1789 (Jussieu, *Genera plantarum*).

“(c) ...], except suprageneric names, 4 August 1789 (Jussieu, *Genera plantarum*).”

(243) If proposal 242 is defeated, amend Art. 13, replacing clause (a) with two clauses and adding to clause (c), as follows:

“(a) SPERMATOPHYTA, 1 May 1753 (Linnaeus, *Species plantarum*, ed. 1), except suprageneric names, 4 August 1789 (Jussieu, *Genera plantarum*).

(a bis) PTERIDOPHYTA, 1 May 1753 (Linnaeus, *Species plantarum*, ed. 1).

“(c) ...], except suprageneric names, 4 August 1789 (Jussieu,

Genera plantarum).”

2. Critical works

Durande, *Notions élémentaires de botanique* (1782)

The Saint Louis Editorial Committee deferred making any changes to App. IIB that would list Durande as the place of valid publication of a name until we had considered the matter (Turland & Barrie, l.c.). Durande presented two systems in his book: a natural system based on the more recent views of A. L. de Jussieu (later published by Jussieu himself in 1789), and at the same time he improved Tournefort’s and Linnaeus’s artificial systems of classification by circumscribing their more traditional, yet artificial groups, so that they were more akin to natural families, although he gave them at the rank of “classe” and with French names (e.g., “Personnées”, “Labiées” and “Composées” on pp. 315–316) rather than Latin ones. The names of families in question here belong to the system based on Jussieu’s views. The issue is this: if Durande presented two systems simultaneously, and the natural system was arguably no more than a report on Jussieu’s system, then could the names in either system have been accepted by Durande? If they were ‘not accepted’, they would not be validly published (Art. 34.1(a)). We discussed this in some detail and finally concluded that Art. 34.2 applies and that *both* systems should be regarded *en bloc* as alternative names. We voted as follows: 7 that the names are validly published : 1 that they are not : 3 that the issue is equivocal. We therefore here recommend that the names be regarded as validly published.

This means that 36 names, mostly of major families, will require their author and place of publication to be changed to Durande (1782) in the *Vienna Code*, unless one of the starting date proposals is accepted. These names are (with page numbers): *Acanthaceae* (265), *Aceraceae* (291), *Araliaceae* (275), *Basellaceae* (261), *Berberidaceae* (283), *Bignoniaceae* (265), *Cactaceae* (287), *Cannaceae* (258), *Caryophyllaceae* (285), *Cichoriaceae* (272), *Convolvulaceae* (268), *Dipsacaceae* (274), *Ericaceae* (270), *Gentianaceae* (268), *Hypericaceae* (285), *Iridaceae* (257), *Juncaceae* (255), *Lauraceae* (283), *Malpighiaceae* (280), *Musaceae* (257), *Najadaceae* (250), *Phytolaccaceae* (261), *Plantaginaceae* (262), *Plumbaginaceae* (263), *Polygonaceae* (260), *Rhamnaceae* (289), *Rubiaceae* (274), *Rutaceae* (284), *Sapotaceae* (269), *Saxifragaceae* (287), *Scrophulariaceae* (265), *Typhaceae* (254), *Umbelliferae* (276), *Urticaceae* (293), *Vitaceae* (280) and *Zannichelliaceae* (254).

It is also worth noting that *Aceraceae* Durande (1782) antedates *Sapindaceae* Jussieu (1789), so a ‘superconservation’ proposal (cf. Reveal in *Taxon* 49: 291–294. 2000) would be necessary to retain the name *Sapindaceae* if the families were united. Names on App. IIB are conserved only against unlisted synonyms and homonyms, not against each other, unless a note explicitly indicates a ‘superconservation’. Similarly, *Zannichelliaceae* Durande (1782) antedates *Potamogetonaceae* Dumort. (1829).

Batsch, *Disposition generum plantarum jenensium* (1786)

The Saint Louis Editorial Committee (Greuter & Hawksworth, *Saint Louis Code* [Preface]: xvi) questioned whether “*Piperitae*” (Batsch, l.c.: 52) could be accepted, with correction of the termination under Art. 18.4, as the place of valid publication of the name *Piperaceae*. The problem is that Batsch did not mention the genus *Piper*, but he did explicitly include *Arum*; the book concerns the central European flora, which includes *Arum* but not *Piper*. Therefore, it seemed that “*Piperitae*” could not have been formed from an included genus, as is required by Art. 18.1. There

was also some concern (Greuter & Hawksworth, l.c.) about the large number of descriptive names published in the book, e.g., *Drupiferae*, *Pomiferae*, *Senticosae*, etc., which are names not validly published under Art. 32.1(b) because they do not have a form in accordance with Art. 18.1. The Editorial Committee therefore deferred “*Piperitae*” and eight other names of Batsch (with page numbers) for us to consider: *Alliaceae* (50), *Caryophyllaceae* (38), *Cucurbitaceae* (60), *Gentianaceae* (59), *Hypericaceae* (39), *Juncaceae* (50), *Melanthiaceae* (50) and *Primulaceae* (59). We unanimously agreed that Batsch’s use of descriptive names has no bearing on the eight names listed above, which are all validly published. As regards “*Piperitae*”, Linnaeus (Gen. Pl., ed. 6, Ord.: [1]. 1764) published “*Piperitae*” as including the genus *Piper* but as a *nomen nudum*. Batsch was most probably using Linnaeus’s name for a family that included both *Arum* and *Piper*, even though he did not explicitly include *Piper*. If this is true, Batsch was the first to publish the name validly, and the incorrect Latin termination *-itae* is correctable to *-aceae* under Art. 18.4.

Of the eight valid names by Batsch, three or four will need to have their place of publication changed on App. IIB, unless one of the starting date proposals is passed. They are *Alliaceae*, *Cucurbitaceae*, *Melanthiaceae* and *Primulaceae* (depending on the validity of *Cucurbitaceae* J. F. Gmel., Allg. Gesch. Pflanzengifte: 23. 1777). The other four names were all validly published four years earlier by Durande (l.c., see above).

Berchtold and Presl, *O pňrozenosti Rostlin* (1820)

The Saint Louis Editorial Committee deferred all proposed changes to App. IIB concerning this book until we had considered it. The entry for *Abietaceae* Bercht. & J. Presl. was left unchanged from that in the *Tokyo Code* because the Editorial Committee was deferring, not itself making, a decision on the book.

Berchtold and Presl published a series of groups with the rank of “rad”, which both in the 1820s and today is Czech for “order”. Some of us considered that few would object to these groups being treated as families under Art. 18.2 if Berchtold and Presl had not subdivided some of their “rad” into groups with the rank of “čeled”, which both in the 1820s and today can only mean “family” in Czech (see Turland & Barrie, l.c.). For Art. 18.2 to be applicable, Berchtold and Presl must have intended their “rad” to be families. If they explicitly subdivided some of them into families, then that could hardly have been their intention. Others among us considered that, by comparing the system of Berchtold and Presl with that of contemporary authors, notably A. P. de Candolle, the names at the rank of “rad” (order) were clearly intended in the modern sense of families and should be treated as such under Art. 18.2, rendering those at the rank of “čeled” (family) not validly published because a family under a family is a misplaced term (Art. 33.7). We voted as follows: 8 that the names be accepted at the ascribed ranks: 2 that “rad” be treated as family and “čeled” is a misplaced term: 1 abstaining. Therefore more than a two-thirds majority recommends accepting the ranks as ascribed.

How does this affect App. IIB? The relevant proposed changes by Reveal (l.c.) will not be made because those names are at the rank of order, not family. Similarly, *Abietaceae*, always cited from Berchtold and Presl on App. IIB, will have to be changed to *Abietaceae* Gray (Nat. Arr. Brit. Pl. 2: 222, 223. 1821). The place of publication of the following names in App. IIB, validly published as families (“čeled”) by Berchtold and Presl, will need to be corrected: *Arecaceae* Schultz Sch. (1832), *Hydrocotylaceae* Hyl. (1945), *Maregraviaceae* Choisy (1824) and *Nolanaceae* Dumort. (1829).

Apart from App. IIB, the main effect of our recommendation is that some names at the rank of order were published earlier than previously thought. This should not be a source of nomenclatural disruption (beyond a change of author and place of publication) because the principle of priority is not mandatory above the rank of family (Art. 11.9). Some of the ordinal names were not validly published because Art. 32.1(b) requires a name to have a form which complies with the provisions of Art. 16–27 and, under Art. 16.1(a), an automatically typified suprafamilial name must be formed from a *legitimate* name of an included family, and not all the corresponding familial names had at that time been validly published.

It should be mentioned that in 1822 C. Presl (in J. Presl & C. Presl, Delic. Prag. 1822) published several familial names validated by reference to the ordinal names of Berchtold and Presl. In the *Praemonenda* immediately preceding p. 5, Presl explicitly stated that his work was ordered according to “*familias naturales*” and that he had added references to the “*familiarumque novarum*” of Berchtold and Presl. Indeed, a direct reference to Berchtold and Presl follows 11 family names, each of which clearly corresponds to an earlier name ranked as ‘rad’. Evidently Presl in 1822 considered the names ranked as ‘rad’ in 1820 to be families. However, this is later, external evidence and does not alter the fact that in 1820 orders were explicitly subdivided into families. This does mean that in App. IIB the author and place of publication of *Cuscutaceae* would have to be updated to C. Presl (l.c.: 87), validated by reference to the description of “*Cuscutae*” in Berchtold and Presl (l.c.: 247).

3. Appendix IIB

The following notes concern aspects of App. IIB other than the starting date and the works of Durande (1782), Batsch (1786) and Berchtold and Presl (1820), which have been discussed above.

Bullock (l.c. 1959: 154), when explaining the principles of his list of names of families proposed for conservation, stated “any earlier publication of the same name ... is to be regarded as a rejected homonym” and “Although additions to this list are possible, it has been made long deliberately in order to avoid difficulties in the future.” These principles, which also included the 1789 starting date, were accepted by the Montreal Congress, so the concept of App. II being a protected list of names, effectively an NCU list, was in place from the beginning. Like the starting date, this was an informal rule not actually mandated in the main body of the *Code*.

The Tokyo Nomenclature Section was aware that earlier places of valid publication and often different authors were known for numerous entries on App. IIB. It formally authorized “maintenance of authorship and dates of publication as listed” in App. IIB and, accordingly, the footnote to Art. 14 Note 1 was inserted into the *Tokyo Code*. The vote at Saint Louis to delete that footnote mandated the Editorial Committee to update App. IIB. The relevant data had been provided by James Reveal as a list of proposed changes prepared by him with the late Ruurd Hoogland (see Reveal in *Taxon* 47: 851–856. 1998). Greuter (Chairman of the Editorial Committee) gave fellow members Turland and Barrie the task of verifying the proposed changes and updating App. IIB. They did so, but deferred changes (see Turland & Barrie in *Taxon* 50: 897–903. 2001) whenever they were unsure if a name was validly published or if its rank was that of family. Their rationale was to avoid the risk of introducing errors into App. IIB. Altogether 101 entries were updated in the *Saint Louis Code*, while proposed changes to another 100 entries were deferred for

our Committee to evaluate and make a recommendation to the Vienna Nomenclature Section. The work of checking the latter 100 entries is ongoing, and a full report will be published in *Taxon* prior to the Vienna Congress. For some of the names, it is now obvious that Turland and Barrie erred on the side of caution and should have made the proposed changes in the Saint Louis App. IIB. In other cases, errors would certainly have been introduced had Turland and Barrie accepted the proposed changes uncritically, so here their caution was well justified. In many cases, however, it is equivocal whether the names are validly published, and these form the greatest part of our remaining work on App. IIB. Furthermore, since 1999, Reveal has unearthed additional earlier places of valid publication, which are currently being verified by Turland, and these will be put before the whole Committee where there seems to be any doubt about their valid publication or rank.

For 39 years App. II was a stable reference for those who wished to cite authors or places of publication for names of families of Angiosperms (34 years for Spermatophyta), or when issues of priority arose. That stability suffered a severe blow in 1999, and will suffer another one in 2005, when there will be many changes in the Vienna App. IIB, regardless of the success of the proposals on a starting date of 1789 for suprageneric names. In fact, App. IIB will be forever vulnerable to alteration every six years, and the Editorial Committee will be mandated to make changes for as long as people propose them. Of course making corrections is not in itself a bad thing, but what if this creates instability?

There is also the issue of 'superconservation', i.e., conserving one name against another in App. IIB in cases of taxonomic synonymy. For example, if Actiniaceae (1925) and Saurauiceae (1858) are united, the former name must be used. The updated entries in the *Saint Louis Code* removed the need for two superconservation notes that had been in the *Tokyo Code*, namely Pinaceae (1836 became 1763) vs. Abietaceae (1820) and Sterculiaceae (1830 became 1807) vs. Byttneriaceae (1814). However, they also necessitated three new superconservation proposals, which were subsequently published by Reveal (in *Taxon* 49: 291–294. 2000): Caryophyllaceae (1789) vs. Alsinaceae (1825 became 1763), Ericaceae (1789) vs. Vacciniaceae (1821 became 1763) and Cordiaceae (1829) vs. Ehretiaceae (1830 became 1827). At the time of writing (May 2004), no decision on these proposals has been published by the Committee for Spermatophyta. The revision of App. IIB for the *Vienna Code* will doubtless make existing superconservation notes unnecessary while necessitating a few further ones. Of course there are two processes involved here: purely nomenclatural changes, such as these, and taxonomic changes, which are increasingly likely as phylogenies are drawn and re-drawn. It might be better if superconservation proposals could be deferred until phylogenies are more settled).

Even more worrying is the spectre of Rafinesque's names of families, mentioned in passing under the starting date discussion above, but not actually affected by the starting date as they were all published after 1789. In compiling the list that became App. IIB, Bullock (in *Taxon* 7: 159. 1958) disregarded these names, describing them as "extremely heterogeneous", even though many of them are perhaps the earliest places of valid publication. As noted above, any heterogeneity is irrelevant as, under Art. 10.6, they are automatically typified by the generic name from which they are formed. There are two potential causes of disruption here: (1) if they are earlier places of publication of names already on App. IIB, they will necessitate changes to the author and place of publication of those entries, and (2) they might also necessitate

time-consuming superconservation proposals.

We are anxious to acknowledge and incorporate the diligent research of Reveal and Hoogland into App. IIB. That is why we recommend making all the corrections that are known to us in the *Vienna Code*. We discussed the notion of then formally maintaining the authors and places of valid publication in the Vienna App. IIB by means of the following proposal:

In Art. 14 Note 1 replace "App. II or III" with "App. IIA or III" and add a second sentence; also add a cross-reference to Art. 6 Note 1:

[Art. 14 Note 1] "However, the places of valid publication of the entries in App. IIB are to be maintained as they appear in the *Vienna Code*, even though some of those names are isonyms under Art. 6 Note 1."

[Art. 6 Note 1] "(but see Art. 14 Note 1)"

Art. 6 Note 1, which was new in the *Saint Louis Code*, explains that only the earliest among isonyms (the same name based on the same type published independently at different times by different authors) has nomenclatural status. Maintaining the entries of App. IIB would mean accepting later isonyms. We voted 4: 4: 2 and therefore do not recommend this proposal to Vienna.

This leaves us with two options: (1) continue to make whatever corrections are necessary to App. IIB in future issues of the *Code*, or (2) informally agree to 'let sleeping dogs lie' and not look for any earlier places of publication after the *Vienna Code* (a naïve hope, perhaps).

4. Proposals (mainly) from Saint Louis

Art. 16 Prop. F (see *Taxon* 48: 91–93. 1999; Englera 20: 123–124. 2000)

This proposal concerned formation of suprageneric names with an *Eu-* prefix. We reworded the original proposal to remove its internal contradictions, and added a parallel rule for Art. 19, as follows:

Add a new paragraph each to Art. 16 and 19 and refer to them under "but see" in Art. 32.1(b):

"16.1 *bis*. Automatically typified names using the prefix *Eu-* to denote a subordinate rank are validly published contrary to Art. 32.1(b) and are to be corrected by deletion of the prefix.

19.3 *bis*. A name of a subdivision of a family that uses the prefix *Eu-* to denote a subordinate rank is validly published contrary to Art. 32.1(b) and is to be corrected by deletion of the prefix."

However, some of us still disliked the inconsistency of condoning the *Eu-* prefix for suprageneric names while at the same time forbidding it for infrageneric epithets (Art. 21.3). We voted 4: 5: 1 and therefore do not recommend this proposal to Vienna.

Art. 16 Prop. G (see *Taxon* 48: 91–93. 1999; Englera 20: 124–127. 2000)

This proposal concerned terminations of suprageneric names. We agreed that upgrading Rec. 16 to a rule was indeed appropriate (it is already a 'back-door' rule in Art. 16.1(a)), but without mandatory endings for either superorders or rankless names. One of us (Silva) noted that the algal endings *-phyceae* (class) and *-phycidae* (subclass) could usefully be extended to the higher ranks, as is already done for the fungal endings. The proposed new rule is explicitly limited to automatically typified names so as not to

affect the valid publication of descriptive names, whereas this was not an issue as a recommendation. Art. 17.1 (orders and suborders) is kept separate to avoid eroding it too far; if it were eventually subsumed into Art. 16, copious renumbering would be necessary from Art. 18 onward. We recommend proposal 244 to Vienna by a vote of 9 : 1 : 0.

(244) Convert Rec. 16A to a rule, to be placed after Art. 16.4:

“16.4 bis. Automatically typified names are to end as follows: *-phycota* (division or phylum), *-phycotina* (subdivision or subphylum), *-phyceae* (class) and *-phycidae* (subclass) for the algae; *-mycota* (division or phylum), *-mycotina* (subdivision or subphylum), *-mycetes* (class) and *-mycetidae* (subclass) for the fungi; and *-phyta* (division or phylum), *-phytina* (subdivision or subphylum), *-opsida* (class) and *-idae*, but not *-viridae* (subclass) for all other groups of plants.”

A suggested alternative proposal, combining Rec. 16A.1 and 16A.2, adding endings for algae, and using the same format as Rec. 16A.3, was defeated in the primary vote.

We also discussed endings for ranks not covered by Rec. 16A, namely those formed with the prefix “super-” as well as the rank of kingdom. We drafted the following proposal, which we recommend to Vienna by a vote of 8 : 2 : 0. Note that clause (h) strictly belongs under Art. 17, but we leave any decision on its placement to the Editorial Committee.

(245) Insert a new paragraph at the end of recommendation 16A:

“16A.4. The following endings are recommended for ranks not covered in Rec. 16A.1–3 [/ paragraph of proposal 244].

- (a) *-ota* (superkingdom)
- (b) *-obiota* (kingdom)
- (c) *-obiotina* (subkingdom)
- (d) *-ophytanae* (superdivision or superphylum), but *-mycotera* in fungi
- (e) *-idanae* (superclass), but *-mycia* in fungi
- (f) *-anae* (superorder)
- (g) *-indae* (superfamily)
- (h) *-idinae* (supertribe)”

An alternative proposal, recommending that the endings of names at ranks not covered in Rec. 16A.1–3 (or the paragraph of proposal 244) should “accord with established custom”, was defeated in the primary vote.

Art. 16 Prop. H (see Taxon 48: 91–93. 1999; Englera 20: 127–128. 2000)

This proposal concerned a special termination to denote rankless suprageneric names. While some of us saw some utility in mandating an ending for such names, this was not a majority view. We voted 1 : 9 : 0 and therefore do not recommend this proposal to Vienna.

While discussing terminations of ranks, an issue was raised on the ranks themselves. There is currently a loophole in Art. 4.3 in that the “further ranks” that may be “intercalated or added” are unlimited. The next proposal explicitly limits these ranks to a principal or secondary rank prefixed by “super-” (e.g., superorder or supersection, but not “supersubspecies”), while still allowing what we believe is a large enough potential number of ranks. We rec-

ommend this proposal to Vienna by a vote of 8 : 2 : 0. Note that it does not only concern suprageneric names.

(246) Replace Art. 4.3 with the following paragraph:

“4.3. If a still greater number of ranks is desired, the terms for these are made by adding the prefix “super-” to the terms denoting the principal or secondary ranks, which are immediately subordinate to them.”

Art. 16 Prop. I and J (see Taxon 48: 91–93. 1999; Englera 20: 128. 2000)

These proposals concerned choosing among suprafamilial names, touching on the principle of priority, which is not mandatory at such ranks (Art. 11.9). The Rapporteurs had noted the internal conflicts that would arise in these two proposals as submitted to the Saint Louis Congress. We discussed the following proposal, uniting both Prop. I and J, with amendments. However, we voted of 5 : 5 : 0 and therefore do not recommend it to Vienna.

Rephrase and expand Rec. 16B.1 as follows:

“16B.1. In choosing among automatically typified names of a taxon above the rank of family, authors should follow the principle of priority, but they should (a) adopt a name that is typified by the name of a family which they accept and, (b) retain a consistency among all the appropriate ranks (e.g., *Pinophyta*, *Pinophytina*, *Pinopsida*, *Pinidae*, *Pinales*, *Pininae*, and *Pinaceae*; or *Magnoliophyta*, *Liliopsida*, *Commelinidae*, *Commelinales*, and *Commelinaceae*).”

Three other options on Rec. 16B.1 were defeated in a primary vote: to delete the recommendation altogether, to delete the word “generally”, and to rephrase the recommendation as “In choosing among automatically typified names for a taxon above the rank of family, authors should follow established custom [in a general way].”

Art. 33 Prop. D (see Taxon 48: 104–105. 1999; Englera 20: 172. 2000)

This proposal concerned exceptions to rank-denoting terminations among the suprageneric names of Engler and Prantl. We voted 3 : 6 : 1 on the following, slightly modified version of Prop. D and therefore do not recommend it to Vienna:

Add a paragraph after Art. 33.8 and three Examples:

“33.9. An exception to Art. 33.7 is made for names of subdivisions of families in publications of Engler (*Syllabus*, ed. 1–11. 1892–1936) and Engler & Prantl (*Die natürlichen Pflanzenfamilien*, ed. 1. 1887–1915) published prior to 1 January 1908, wherein names ending with the terminations *-oideae*, *-eae* and *-inae* are to be regarded as proposed at the ranks of subfamily, tribe and subtribe respectively (Art. 19), regardless of any conflicting explicit designation.

[examples omitted]”

Art. 35 Prop. E (see Taxon 48: 107–108. 1999; Englera 20: 178. 2000)

This proposal concerned rankless names published by Endlicher that have been accepted as families by some authors. We voted 3 : 6 : 1 on Prop. E and therefore do not recommend it to Vienna. Our decision means that the author and place of publication of several entries in App. IIB, given as published by Endlicher

at the rank of family, will require correction.

Art. 41 Prop. A (see Taxon 48: 110–111. 1999; Englera 20: 182. 2000)

This proposal concerned valid publication of suprafamilial names by means of a new first paragraph in Art. 41. We discussed three different versions of this proposal. The first option was identical to Prop. A but omitted the last sentence on compliance with Art. 36.1, the Latin requirement. We voted 2 : 6 : 2.

Add a paragraph and two Examples before Art. 41.1:

“*Art. 41.0.* In order to be validly published, the name of a taxon above the rank of family must be accompanied (*a*) by a description or diagnosis of the taxon, (*b*) by a reference (direct or indirect) to a previously and effectively published description or diagnosis of a taxon above the rank of genus, or (*c*) by a reference (direct or indirect) to a previously and effectively published description or diagnosis of a genus when the author of the new name indicates that no more than one genus belongs to the taxon.

[examples omitted; one was identical to that of proposal 015 below]”

The second option was simplified to allow reference under clause (*b*) to any previously and effectively published description or diagnosis. We voted 1 : 7 : 1.

Add a paragraph before Art. 41.1:

“*Art. 41.0.* In order to be validly published, the name of a taxon above the rank of family must be accompanied (*a*) by a description or diagnosis of the taxon, or (*b*) by a reference (direct or indirect, but see Art. 32.3) to a previously and effectively published description or diagnosis (but see Art. 36).”

The third option took into account the Saint Louis Rapporteurs’ comment that validation of a suprafamilial name by reference to the description or diagnosis of a generic name was inconsistent with Art. 41.1, which does not allow a familial or infrafamilial name to be thus validated. It proposed to amend Art. 41.1 to apply to all suprageneric names and for clause (*b*) to refer to any suprageneric name. We voted 5 : 2 : 2. Therefore, although the third option was the most popular, none was sufficiently supported to be recommended to Vienna by the Committee as a whole. However, the third option is included in the appendix below (proposal 015).

Art. 41 Prop. B (see Taxon 48: 110–111. 1999; Englera 20: 182–183. 2000)

This proposal concerned a Voted Example on *Peganaceae*. We voted 6 : 2 : 2 on a slightly modified version as a ‘normal’ Example. Although this proposal is not sufficiently supported by the Committee as a whole, it is included in the appendix below (proposal 016).

There was some agreement among us that some automatically typified suprageneric names are not ‘names of new taxa’ (and therefore subject to the Latin requirement of Art. 36.1) but are ‘transfers’ to new ranks: each in effect a ‘stat. nov.’ Although such a name has a basionym, it cannot be a new combination because under Art. 6.7 a combination must be a name of a taxon below the rank of genus. Such a suprageneric name is similar to a generic name that is based on an infrageneric combination, except that only the stem of the basionym is retained in the new rank. We discussed and voted on two additional proposals on Art. 41 to clarify

when a suprageneric name should be regarded as a ‘stat. nov.’ and when it should be regarded as the name of a new taxon, but neither proposal achieved even a simple majority of ‘yes’ votes. We voted 5 : 2 : 3 on the first proposal and 5 : 3 : 2 on the second:

Add a Note after Art. 41.1:

“*Note 0.* When an automatically typified suprageneric name is validated by reference to a descriptive name (Art. 16.1(b)), a suprageneric name that is not validly published, or a generic name, the new name is that of a new taxon, not an avowed substitute (replacement name, *nomen novum*) nor a new status (*stat. nov.*), and must therefore comply with Art. 36.1.”

Add a paragraph after Art. 41.3:

“*Art. 41.4.* For the purpose of referring to a previously and effectively published description or diagnosis, the name of the taxon to which that description or diagnosis applies may be cited (but see Art. 32.3).”

Art. 49 Prop. A (see Taxon 48: 113. 1999; Englera 20: 192–193. 2000)

This proposal concerned parenthetical author citations following suprageneric names. Based on our discussions summarized under Art. 41 Prop. A and B above, we drafted the following amended version of Prop. A to modify Art. 49.1 rather than add a new Art. 49.2. However, we voted 4 : 5 : 1 and therefore do not recommend the proposal to Vienna.

Rephrase Art. 49.1 as follows and add an Example:

“*49.1.* When a taxon is altered in rank but retains its name, the stem of its name, or the final epithet in its name, the author of the earlier, name-, stem- or epithet-bringing legitimate name (the author of the basionym) must be cited in parentheses, followed by the name of the author who effected the alteration (the author of the new name). The same holds when a taxon of lower rank than genus is transferred to another genus or species, with or without alteration of rank.

Ex. 2 bis. Poaeae R. Br. (in Flinders, Voy. Terra Austr. 2: 583. 1814) raised to the rank of family, retaining the stem *Po-*, is cited as *Poaceae* (R. Br.) Barnhart (in Bull. Torrey Bot. Club 22: 7. 1895).”

5. Additional proposals

The Committee also drafted and discussed various proposals additional to those on our mandate. Among these was a set of proposals suggested by Werner Greuter on suprafamilial names: that they should be exempt from all requirements for valid publication, priority and author citation, but nevertheless should remain usable as ‘names’ under the *Code* (cf. Art. 6.3). Seven of these additional proposals were supported by a two-thirds or greater majority in our ballots, and are therefore included here and recommended to Vienna.

Art. 16

None of us could think of a suprafamilial descriptive name at the rank of order or below that is in use in any recent system of classification. The following proposal would close up what the Committee considered a loophole in Art. 16.1, thereby preventing names such as *Centrospermae* to be validly published for an order. The words “Automatically typified” would then become redundant in Art. 17.1. We recommend this proposal to Vienna by a vote of 8 : 2 : 0.

(247) Add “above the rank of order” to the second clause Art. 16.1 and delete “Automatically typified” from Art. 17.1:

“... (b) descriptive names, not so formed, which apply to taxa above the rank of order with a recognized circumscription and which may be used unchanged at different ranks.”

Art. 16 Prop. D at Saint Louis was accepted (see Taxon 48: 90–92. 1998; Englera 20: 122–123. 2000), but without taking up Ex. 7. The next proposal replaces that Example, which stated that “Ginkgales” [sic] (Tieghem, *Elém. Bot.*, ed. 3, 2: 206, 210. 1898) was not validly published as the name is in French, even though it seemingly has a Latin termination (“-ales”). It cannot, therefore, be hoisted from oblivion by Art. 16.3. The Committee felt that this could lead to confusion because it did not instruct the reader as to how to distinguish between the Latin -ales and the French “-ales”. We believe our alternative proposal is more instructive and recommend it to Vienna by a vote of 9 : 1 : 0.

(248) Add an example to Art. 16:

“Ex. 5 bis. “Codiales” (Chadefaud, 8ème Congr. Int. Bot. Paris Rapp. Commun. Avant Congr. 17: 92. 1954) and *Codiales* Feldmann (l.c.: 97) were proposed in the same publication. Chadefaud’s article is presumed to be completely in French, as evidenced by his writing “Sphaeropléales” and “Derbésiales”, and therefore “Codiales” was not validly published by him. Although Feldmann also wrote “Sphaeropléales” and “Derbésiales”, he provided a formal key and subsequent discussion in which he wrote *Derbesiales*, thus making a distinction between French scientific names in the text and Latin scientific names in the key. By analogy, *Codiales* Feldmann is accepted as validly published. In the absence of typographic cues, -ales must be accepted as Latin regardless of the language of the text.”

The aim of the next proposal is to expand Art. 16.4 and Ex. 6 to account for word elements belonging to the fungi and other groups of plants. We recommend this proposal to Vienna by a vote of 8 : 1 : 1.

(249) Expand Art. 16.4 and Ex. 6:

“16.4. Where one of the word elements -*clad-*, -*cocc-*, -*cyst-*, -*monad-*, -*myces-*, -*nemat-*, or -*phyton-*, being the genitive singular stem of the second part of a name of an included genus, has been omitted before the termination -*phyceae*, -*phycota* (algae), -*mycetes*, -*mycota* (fungi), -*opsida* or -*phyta* (other groups of plants), the shortened class name or division or phylum name is regarded as based on the generic name in question if such derivation is obvious or is indicated at establishment of the group name. These word elements may also be omitted before the termination for subdivision or subphylum as appropriate in each case.

Ex. 6. The name *Raphidophyceae* Chadef. ex P. C. Silva (1980) was indicated by its author to be based on *Raphidomonas* F. Stein (1878). The name *Saccharomycetes* G. Winter (1881) is regarded as being based on *Saccharomyces* Meyen (1838). The name *Trimerophytina* H. Banks (1975) was indicated by its author to be based on *Trimerophyton* Hopping (1956).”

Art. 18 and 19

The following three proposals form a set. Their aim is to make an explicit statement that names of families and subdivisions of families (except those listed in Art. 18.5 and 19.7) are automatically typified names. At present, the term ‘automatically typified’

is explicitly applied only to suprafamilial names. These proposals also aim to clarify what actually is the type of these names. At present, the identity of the type is apparent only after referring to Art. 10.6. We voted 6 : 3 : 0, each Committee member voting the same, on all three proposals.

(250) Add the following sentence to Art. 18.1:

“A name of a family is automatically typified on the included genus used to form the name.”

(251) Add the following sentence to Art. 19.1:

“A name of a subfamily is automatically typified on the included genus used to form the name.”

(252) Add the following sentence to Art. 19.3:

“A name of a tribe or subtribe is automatically typified on the included genus used to form the name.”

Art. 52

We believe that the following proposal usefully illustrates an aspect of Art. 52.3 that is not yet exemplified, i.e., a name that was nomenclaturally superfluous when published is not illegitimate if it is based on the stem of a legitimate generic name. We recommend this proposal to Vienna by a vote of 7 : 0 : 2.

(253) Add the following example to Art. 52:

“Ex. 12 bis. *Carpinaceae* Vest (1818) was nomenclaturally superfluous when published because of the inclusion of the type of *Salicaceae* Mirb. (1815). However, it is not illegitimate because it is based on the stem of a legitimate generic name, *Carpinus* L.”

6. Appendix: proposals with less than two-thirds support

The following proposals received only 6 ‘yes’ votes out of 10, or 5 out of 9, i.e., a simple majority but not enough for the whole Committee to recommend the proposals to Vienna. Instead, the supporting Committee members are listed for each proposal.

Art. 11 and 16 (proposed by Moore, Reveal, Stevens, Turland, Voss & Wilson)

This proposal was part of the set suggested by Werner Greuter. It strengthens the wording concerning the non-application of the principle of priority above the rank of family. Instead of priority not being mandatory (i.e., one could follow it, if one wished) it simply does not apply. The Committee voted 6 : 4 : 0.

(254) Amend Art. 11.9 and Art. 16 Note 2 as follows, but leave the cross-references in parentheses unchanged:

“The principle of priority does not apply above the rank of family (...)”

Art. 18 (proposed by David, Doweld, Reveal, Silva, Stevens & Wilson)

The new Note of this proposal explains that a “non-traditional or inappropriate Latin or latinized termination” should be treated in the same manner as an “improper Latin termination” under Art. 18.4. Some members of the Committee felt that such an explanation was superfluous and confusing. However, the Committee voted 6 : 4 : 0 and we therefore include the proposal here.

(255) Add a Note and an Example after Art. 18.4:

“*Note 1.* Names published at the rank of family (see also Art. 18.2) but with a non-traditional or inappropriate Latin or latinized termination are to be considered validly published providing all other conditions for valid publication are fulfilled.

Ex. 7bis. “*Lauri*” (Jussieu, *Gen. Pl.*: 80. 1789) was validly published as Lauraceae even though a non-traditional Latin termination was used. “*Beslerides*” (Rafinesque, *Sylva Tellur.*: 70. 1838) was validly published as *Besleriaceae* even though an inappropriate latinized termination was used. However, “*Carpantheous*” (Rafinesque, *Med. Repos.*, ser. 2, 5: 357. 1808) was not validly published as the termination “-ous” is in English, not Latin.”

Art. 41 (proposed by Moore, Rabeler, Silva, Turland & Wilson)

This proposal is the third option discussed above under Art. 41 Prop. A from Saint Louis. The Committee voted 5 : 2 : 2.

(256) Amend Art. 41.1 as follows and add an Example:

“*Art. 41.1.* In order to be validly published, the name of a taxon above the rank of genus must be accompanied (a) by a description or diagnosis of the taxon, or (b) by a reference (direct or indirect) to a previously and effectively published description or diagnosis of a taxon above the rank of genus.

Ex. 0. The superorder *Myrtales* (Bartl.) Takht. (*Sist. Filog. Cvetk. Rast.*: 295. 1967) was validly published (as a stat. nov.) by reference to a basionym, the class *Myrtopsidea* Bartl. (*Ord. Nat. Pl.*: 225, 326. 1830, “*Myrti*”).”

Art. 41 (proposed by Rabeler, Reveal, Stevens, Turland, Watson & Wilson)

This proposal is a modified version of Art. 41 Prop. B from Saint Louis, discussed above. The Committee voted 6 : 2 : 2.

(016) Add an Example after Art. 41.1:

“*Ex. 1bis.* *Peganaceae* (Engl.) Tiegh. ex Takht. (*Sist. Magnoliif.*: 178. 1987) was validly published (as a stat. nov.) by reference to the basionym *Peganoideae* Engl. (in Engler & Prantl, *Nat. Pflanzenfam.* 3(4): 90. 1890).”

(258–260) Proposals to adopt more explicit terms in the Code to indicate the publication and nomenclatural status of names

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The *Code* is an intimidating document even to those whose native tongue is English. It is therefore important that wherever it is possible, the simplest unambiguous terminology should be used. Further, in a time when biology is increasingly taught as a single subject, the use of different terms for identical concepts in the different internationally mandated *Codes* dealing with biological nomenclature is unfortunate. Indeed, the continued use of different and not always unequivocally translatable terms hinders the teaching, understanding, and communication of biological nomenclature. This matter was considered by representatives of the five current *Codes* prior to the St. Louis Congress, and a series of 11 proposals to simplify and harmonize the terminology used in the different *Codes* was put before that Congress (Hawksworth in *Taxon* 47: 949–950. 1998). Three of the proposals were adopted in an amended form in St. Louis and included in the *St. Louis Code*.

There was a reluctance to approve changes in the other eight terms, partly because the issue became confused with the *Draft BioCode* (Greuter & al. in *Taxon* 47: 127–150. 1998), which was not then and is not now being put to the Congress. There were extensive discussions on the issue of terms (cf. Greuter & al. in *Englera* 20: 18–32. 2000), the key point to emerge being that changes should be made where they represented an improvement in the *International Code of Botanical Nomenclature (ICBN)*. With this background, and recognizing that the new terms have now already been employed in two successive issues of the *International Code of Nomenclature for Cultivated Plants (ICNCP)* (Brickell & al. in *Acta Hort.* 647 [Regnum Veg. 144]: i–xxi, 1–23. 2004) and the Italian translation of the *ICBN* (Mazzola in *Inform. Bot. Ital.* 29: 1–132. 1998), it seems appropriate for the Vienna Congress to revisit the matter with respect to three of the previously unapproved proposals.

It has to be stressed that these three proposals are made here with the aim of improving the clarity of the botanical *Code*.

(258) Proposal to replace the term “effective publication” by “publication”.

Throughout the *Code*, substitute “publication” for “effective publication”, and “published” for “effectively published”.

This proposal restricts the term “publication” to the physical act of publication (i.e., printing and distribution), the normal meaning of the word in English and one which has unambiguous equivalents in most written languages. The term is already used in this restricted sense in both *International Code of Zoological Nomenclature (ICZN)* (Ride & al., *Internat. Code Zool. Nomencl.*, 4th edn. 1999) and the *ICNCP*.

(259) Proposal to replace the term “valid publication” by “establishment”.

Throughout the *Code*, substitute “established” for “validly published”, and “establishment” for “valid publication”.

The term “validly published” in the *Code* is a particular source of confusion as it relates to the content of what is published and not the act of publication (i.e., printing and distribution). The use of a completely different word, “established”, for names which meet all the pertinent requirements of “valid publication” under the *Code* clearly separates the two concepts. By eliminating the use of “published”, the possibility of confusions with “effective publication” in translations and in discussions is immediately removed. The term is already used in this restricted sense in the *ICNCP*, and the *ICZN* refers to “establish” in its Glossary as meaning “available”, the equivalent term in the zoological *Code* for “validly published”.