QUESTIONS OF EFFECTIVE PUBLICATION

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Summary

Problems of defining "effective publication" in relation to the International Code of Botanical Nomenclature are discussed. Modern technological developments make the definition of "printed matter" obscure, and the number of copies and mode of dispersal of them similarly make "publication" difficult to define. Special problems created by theses, symposium handouts and correction slips are discussed. Two proposals are made to clarify the existing Article 29 of the Code, and a further proposal is made that a special committee be set up to consider ways in which "effective publication" might be restricted in future.

Introduction

Articles 29–31 of the International Code of Botanical Nomenclature, dealing with conditions and dates of effective publication, have been altered little since the 1956 edition of the Code, apart from two rather minor additions. Modern technology, giving a multiplicity of different methods of reproduction of written matter in anything from one to very many copies, now necessitates reconsideration of the wording of these Articles. At the same time doubts still exist about some "publications" using more traditional methods. Some clarification of the meaning of the Code in this respect is urgently needed, and the desirability of introducing more stringent requirements should be fully investigated.

The problems of "effective publication" are here discussed essentially in relation to new names of plants, but they may also have a wider relevance in botanical circles. The Kew Record of Taxonomic Literature, for example, aims to include all relevant published work, and also occasionally other items which are clearly indicated as "unpublished." The problem of defining publication thus also arises in the wider context of botanical bibliography, where the criteria used may not always coincide exactly with those adopted by botanists in a nomenclatural context. There is no implication here that the principles adopted for plant nomenclature should necessarily apply in a wider field, though in many cases they probably will.

Methods of Production of Copies

Article 29.1 requires that effective publication be by "printed matter," but the definition of this is becoming increasingly blurred by the versatility of modern methods. Starting at the bottom of the acceptability scale, it seems that the present Art. 29.3 and 29.4 deal adequately with hand-written copy, which is unacceptable after 1953 even if reproduced by some mechanical means. No mention is made in Art. 29 of typescript, but it may be safely assumed that matter produced by a conventional typewriter, consisting of one top copy plus one to several carbon copies, is not considered to be printed. On the other hand, copy originally produced on a typewri-

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ter and then reproduced by offset lithography (as for example the important taxonomic journal *Mitteilungen der Botanischen Staatssammlung München*) must certainly be accepted as printed matter.

What, then, of multiple top copies run off on a modern tape-punching typewriter? The cost of doing this for a large number of copies is probably not economically competitive with other methods and I am not aware of any major works or any new botanical names “published” in this way, but documents or reports for limited circulation relating to taxonomic botany may well have been produced by this method. From a botanical point of view there seems to be little essential difference between this and offset lithography from a typescript, the end product being much the same in appearance, and if a decision needs to be made it would seem that multiple copies from automatic typewriters or other word-processing equipment should qualify as “printed” in this context.

The industrial printing unions, and others, might object to one referring to copies reproduced by typing onto a wax stencil and running off on a duplicating machine (variously referred to as “mimeographed,” “duplicated,” “cyclostyled,” “ronoed,” etc.) as “printed,” and librarians often regard such material as essentially “unpublished,” but in our restricted botanical context this may be disputed. An example which vitally affects a case of botanical nomenclature is the mimeographed journal *The Orchid Weekly*, edited by A.D. Hawkes and E.A. Flickinger. In volume 2, number 46, dated 6 January 1961, the new generic name *Flickingeria* A.D. Hawkes was “published” on p. 451. At this time another new name, *Ephemerantha* P.F. Hunt & Summerhayes, for the same genus was in press, and this was eventually published in *Taxon* 10: 101 (May 1961) together with a footnote from the authors claiming that *Flickingeria* was not effectively published because the journal was only mimeographed and not printed. But to accept this view would mean that works such as Backer’s *Beknopte Flora van Java* in 20 volumes (1940-1961), von Breitenbach’s five hard-backed volumes of the Indigenous Trees of Southern Africa (1965) and his Indigenous Trees of Ethiopia with printed cover (1963), and the current *Bulletin of the African Succulent Plant Society* (new names in vol. 6: 148, etc.) and the *East African Natural History Society Bulletin* are also not effectively published. In his *Taxonomic Literature in 1967* Stafleu refers to Backer’s work as “Published in mimeographed form...” (repeated by Stafleu and Cowan in 1976). Are these works *effectively* published or not? Probably most botanists would incline to the view that they should be acceptable, but some statement in the Code is needed.

Modern methods of type-setting, which in many printing firms are replacing linotype and other hot-metal processes, include those involving composers using golf-balls, daisy-wheels, ink-jet sprays, laser beams and photographic devices, often regulated by a computer with floppy-disc memory (“computer type-setting”). These are, however, all only different methods of producing a plate from which multiple copies are then produced by a lithographic process. In the modern context there is no difficulty about accepting any of these as “printing,” just as off-set lithography from a copy produced by an ordinary typewriter is accepted.

Two other methods of reproduction, xerox and photocopying, seem to be rather different in nature since they do not produce a plate from which printing is effected lithographically. Both are well known and extensively used in botanical circles. How should we regard typed material reproduced by xerox or photocopy? There may be many botanists who would accept mimeographed matter as acceptable for effective publication but who would not allow xeroxed or photocopied material. From a botanist’s point of view, the essential difference seems to be that mimeographing usually produces many copies at one time, whereas xerox or photocopying is often a “one-off” job. It would be tempting to discount these methods for effective publication, but this would be dangerous. Some 212 new combinations were proposed (unfortunately without basionym references) in 1977 in a 10-page document entitled “South American Flora: new comb., new stat., new names” by J. Angely, which was apparently reproduced in 200 copies by photocopy, and it would be equally easy to
do this by xerox. Modern xerox machines are being developed to produce thousands of copies an hour, and their promoters see them playing a major part in book production in the printing industry in the near future. Furthermore there may be difficulty in distinguishing xerox from other means of reproduction, which would introduce a considerable practical problem in applying such a restriction. Blanket rejection of these methods by the Code at the moment would seem to be unwise.

Looking further to the future, if multiple print-outs from data-banks are produced by computers (as distinct from computer type-setting discussed above) it would seem that these too could be acceptable as “printed matter.” At present this remains a theoretical consideration only, but there are those who foresee the day when scientific journals will be replaced by electronic data-banks in the not too distant future. Article 29.1 already clearly rules that microfilm is not an acceptable medium for effective publication, and, if the need should ever arise, one would surely assume that simple storage of names in a computer without print-out would similarly be ruled out.

It seems that the only definite statement one can make about methods of reproduction at present is that hand-written copy (even if mechanically reproduced), microfilm, and conventional type-writer output consisting of one top copy plus carbon copies, are all unacceptable. Any other form of mechanical reproduction of non-autographic material may be accepted for effective publication if certain requirements in method of distribution are met.

**Distribution of Copies**

The second main requirement under Article 29.1 is that matter be distributed “to the general public or at least to botanical institutions with libraries accessible to botanists generally.” The number of libraries is not stipulated, and presumably in an extreme case a printed work distributed to as few as two libraries should be taken as effectively published. We must face the fact that if a new name, description and details of type specimen are typed on to a single sheet of paper and two xerox copies of this are taken and placed in two botanical libraries, there is nothing in the Code to say that this is not effective publication. Although in a commercial context “publication” may imply offer for sale, this is not so in the botanical world where publications may often be distributed free of charge.

Suggestions have sometimes been made that, for example, perhaps 12 leading botanical libraries should be designated and only works deposited in all of these should be regarded as effectively published. Unfortunately such suggestions would be completely unworkable in practice, for who would ever know how many of the listed libraries had received a work? If one library somehow failed to receive, or perhaps mislaid, or even could not afford to buy, its copy, would the publication be ineffective even though 10,000 copies had been sold elsewhere? Would the date of publication be the date of its receipt by the last of the twelve libraries? Somewhat more practicable would be to designate a single library in the same way, but, apart from putting a very great responsibility (and possibly financial strain) on one institution, this could encourage marginal publications with very small numbers of copies. Such proposals would certainly create more problems than they would solve, and it seems very desirable to leave the responsibility for effective publication with the distributor rather than with receiving institutions.

Mention should also be made here of problems in defining distribution to “the general public.” Journals are certainly known which are distributed only to members of a particular society and cannot be purchased by libraries, and these may run the risk of being considered not effectively published. The Botanical Society of the British Isles publication *B.S.B.I. News*, which contains botanical papers, is not available for purchase by libraries or non-members, though institutions can obtain copies by becoming institutional members. Are members of a society “the general public” if membership is open to anybody?
Theses

A particular problem arises from theses submitted for a degree. It seems to be increasingly found that copies of apparently unpublished theses are distributed personally by the author or by the University, giving rise to frequent questions of effective publication. An example is the thesis by H.A. Hosni entitled 'Revision of the genus Tribulus L., sections Alata and Inermis in Egypt and Arabia' apparently produced by xerox from electrically typed copy, submitted to the University of Cairo in 1978, and containing new names (as on p. 30). The spine bears only 'M.Sc. Thesis' instead of a title, and presumably the work is not published in a commercial sense. However, a copy was received at Kew in 1978 and perhaps a few other institutions received copies. Is this effective publication in a botanical sense? It is difficult to see why not.

It is certainly not possible to rule that all these are to be regarded as not effectively published, for in some European countries they are required by the University to be submitted in printed form and are commonly widely distributed. One example among many would be M.N. Chaudhri's 'Revision of the Paronychiinae' submitted to the University of Utrecht in 1968 and containing many new names, and there are also, of course, the Linnaean Dissertations which include many very early names. In some countries theses can commonly be ruled out as being typed only, thus existing as a top copy plus carbon copies only, but the modern facilities for producing multiple copies from a typescript mean that it is increasingly popular to produce limited editions for distribution to a few interested persons or libraries. I am also informed that in some cases these are distributed in mimeographed form to several universities in one country, and are then later published in scientific journals from which effective publication of names included is accepted. One must ask whether there is any justification for not dating such names from the mimeographed version according to the present Code.

Even worse problems arise if copies are taken from a typescript by some mechanical means some time after submission of the thesis. The commercial firm of University Microfilms International, based in Ann Arbor and London, reproduces on demand copies of theses by microfilm-xerography. The present Article 29.1 rules that distribution of microfiche does not constitute effective publication, but it says nothing about positive copies from microfiche. The Ph.D. thesis submitted to the Vanderbilt University, Tennessee, in 1976 by J. L. Collins, entitled 'A Revision of the Annulate Scutellaria (Labiateae) was requested from University Microfilms International by the Kew Library and a copy deposited there in 1978. It includes new combinations, as on p. 184, and is apparently now available "in libraries." The cover of the Kew copy says it is "Published on demand", and inside it is dated 1978, not 1976, but does this constitute effective publication under the Botanical Code? If so, is the date of publication 1976 or the date when the first copy was produced on demand? How do we know when that was? A more extreme example is the Ph.D. thesis of J.B. Imlay, 'The Taxonomy of the Siamese Acanthaceae,' submitted in 1938 to the University of Aberdeen, from where a xerox copy was sent to Kew in 1978.

It seems desirable not to accept such works as effectively published, partly because of the small number of copies of each and partly because of the difficulties of dating publication. There is, however, little essential difference from normal publication except that multiple copies are (presumably) not produced simultaneously, though if several libraries were to place a block order for copies all at the same time even this objection could be overcome. One cannot exclude from effective publication matter which is distributed only on demand for this would include any work which is offered for sale in the normal way. The date of publication of any book sold commercially is apparently that on which copies are actually offered and available for purchase, not that on which they actually reach the public or libraries. Even if nobody buys such a book it is still effectively published. The same should thus apply to theses offered on demand, except for the fact that copies apparently do not exist
It is tempting to suggest that the Code should stipulate that theses are acceptable as effective publication only if multiple copies are distributed simultaneously with submission of the thesis to the University, but in practice many Universities are probably very slow in sending out copies and might be considered to negate effective publication even if they delayed a single day. The problems of theses are complex, and it is hoped that a special committee may be convened to sort the problem out.

It may be noted that there seems to be no objection to new names proposed in theses being effectively published in properly distributed abstracting journals which cover theses. New names taken from theses have been effectively and validly published in *Dissertation Abstracts* in recent years.

**Symposium Hand-outs**

Another special case, affecting a number of names published in the last decade, arises from literature produced in multiple copies and distributed to participants at symposia or other meetings, who may or may not place a copy in their own institutional library. At the symposium held by the Flora Europaea Organisation at Coimbra in May 1972 participants presenting floristic reports for different countries were asked to bring typescripts of their reports for distribution at the meeting, only brief synopses of these being read there. The 'Floristic Report on the Cretan Area' by W. Greuter, 72 pages of xeroxed typescript, was among those circulated, and it included a number of new combinations, such as *Leopoldia dionysica* (Rech.fil.) Greuter on p. 17. This was later printed and published in *Mem. Soc. Brot.* in 1975, but effective publication can be dated from the symposium in 1972. Although it seems that the mere handing out of copies at the meeting could be ruled out by the present wording of Article 29.1 that effective publication "is not effected by communication of new names at a public meeting" (though this was probably originally intended to apply to verbal communication, and it might be argued that since the meeting in question was private, not public, this is not applicable!) the author requested sufficient botanists present to deposit copies in their libraries when they returned home. Here there was a deliberate move to ensure effective publication via distribution of copies at a meeting, but a case of unconscious effective publication may have happened at a symposium on the taxonomy of the Leguminosae held at Kew in 1978. In the usual way, abstracts of papers were circulated at the meeting, and one of these included a new combination in *Bauhinia* complete with full validating details. If two or more participants placed these abstracts in their institutional libraries later, how is one to say that they are not effectively published? A botanical symposium in Sevilla (Spain) in September 1976 also produced exactly this situation, and, after confirmation that copies of the unpagedinated mimeographed single-sided six-page hand-out were deposited in the botanical libraries of Geneva and Kew, the names were included in the Index Kewensis (see for example *Sisymbrium cavanillesianum* Castroviejo & Valdés on second page), even though the bibliographic problems were considerable.

Can one rule out all "publications" distributed at symposia, conferences, congresses, etc., whether or not they are placed in libraries? This would presumably include, for example, the names such as *Carpotheca carvifolia* (Boiss.) Tamamschian published on p. 107 of the Abstracts of Papers presented at the XII International Botanical Congress in 1975, which were printed and distributed in hard-backed volumes of over 600 pages. Several other comparable publications of bound symposium abstracts containing new names have been noted in recent years. In many cases the names seem not to be independently published elsewhere, and it is presumably the author’s wish that they be considered effective and valid in these published abstracts. In other cases abstracts of papers presented at a meeting may be published as part of a journal, and any new legislation on this should presumably be carefully worded to...
avoid affecting names included there. Again the problem is complex and should be considered by a special committee.

**Correction Slips**

In the journal *Nature in Wales*, vol. 14(1), 1974, three new species of *Rubus* were described by A. Newton, but owing to an error during printing the first two, on pages 24 and 27, were both named *R. troiensis*. Shortly afterwards subscribers to the journal received a small slip of printed paper reading "*Nature in Wales*, Vol. 14, No. 1/Errata: page 27 for 2. *Rubus troiensis* A. Newton sp. nov. read *Rubus aequalidens* A. Newton sp. nov.". If this slip of paper constitutes effective publication the name *R. aequalidens* is validated on it. The single slip of paper has no publisher except for reference to the relevant journal, no date, no pagination, no author and is printed on one side only. A similar slip of paper, entitled Druckehlerberichtigung, was distributed with *Feddes Repert.* 90(4), 1979, giving "*var. torquatum* (Cullen) Mory comb. nov." and a reference back to p. 580, line 16 of vol. 89(9–10) of the same journal, giving similar bibliographic and nomenclatural problems. These examples illustrate the sort of unforeseeable problems which may arise in attempts to define effective publication.

**Bibliographic Criteria to Limit Effective Publication**

In an attempt to positively exclude a number of doubtful publications it might be possible to impose certain bibliographic strictures. One possibility would be to rule that literature not printed on both sides of the paper (recto-verso) is not effectively published. This would mean that Backer’s *Beknopte Flora van Java*, mentioned above as a mimeographed publication, would not be effective, and there might be other similar cases. A requirement of consecutive pagination as a condition for effective publication would certainly, if retroactive, exclude well known works such as ed. 8 of Miller’s *Gardeners’ Dictionary* and Lindley’s *Folia Orchidacea*, and also most of *Curtis’s Botanical Magazine* which until very recently bore only plate numbers and no pagination.

If such conditions can be imposed for the future only, not retroactively, it might be possible to stipulate that only literature bearing a separate cover, a title, year of publication or place of publication, be given, but again this might create more problems than it would solve. How does one define ‘title’? Suppose the year given is not the year of publication, as with many journals which publish a volume supposedly for one year but actually appearing the following or subsequent years (or in the case of some ‘year-books,’ the previous year). What is the ‘place’ of publication of a journal of a society with no permanent headquarters? Imposition of such conditions designed to cut out doubtful publication might well inadvertently threaten other publications which are currently perfectly acceptable to everybody. Perhaps the most practicable of such suggestions would be a requirement that the source from which the publication is available must be given, which might be the publishing body or at least the place (town) of publication.

In certain situations it is necessary to distribute “printed matter,” perhaps in mimeographed or xerox form, to botanical institutions, but with the clear desire that this should not be accepted as effective publication. Preliminary accounts of Floras, circulated to institutions for comment, as was extensively done in preparation of *Flora Europaea*, are a common example. To avoid any ambiguity it would seem desirable that such matter be actually marked ‘For private circulation only’ or at least a written directive be given to the recipients that this is so. In this way it can be positively demonstrated that such “printed matter” is not being made available to the general public.
Proposals to the XIII International Botanical Congress

Proposal (63): In Art. 29.1, before the word "communication" insert "verbal," and after "public" insert "or private."

Proposal (64): Delete the last phrase of Art. 29.1 from "or by the issue of microfilm . . ." and replace Art. 29.4 by the following: "Printed matter is here interpreted as any non-autographic matter reproduced in multiple identical copies by a mechanical process, including offset lithography, mimeographing, xerox copying, photocopying and production of multiple top copies by an automatic typewriter. It does not include handwritten material reproduced by a mechanical or graphic process after 1 Jan. 1953, or a single top copy plus carbon copies produced by a nonautomatic typewriter, or microfilm."

The following proposal is made jointly by R. K. Brummitt and H. Hara (Tokyo).

Proposal (65): A Special Committee on Effective Publication shall be set up to consider the possibility of introducing into Arts. 29–31 certain restrictions on effective publication. The Committee should pay particular attention to theses, symposium hand-outs and other printed matter with very restricted circulation or inadequate bibliographical documentation.

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