

# Separates, preprints, and the *International Code of Zoological Nomenclature*: issues, problems and recommendations

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ABSTRACT: Separately printed copies, known as reprints, offprints, separates or preprints, were issued for many of the papers published in books or journals in the nineteenth and twentieth centuries. They are of particular interest when a date of publication is in question. If a separately printed paper was distributed in advance of the book or journal containing the paper, does that advance its date of publication? This paper analyses the way this issue has been approached in successive editions of the *International Code of Zoological Nomenclature* and, for comparison, the *International Code of Nomenclature for Algae, Fungi and Plants*. Particular problems are identified in the current Zoological Code, and recommendations made for eliminating these and restoring clear rules on an issue that has long caused difficulty and disagreement.

KEYWORDS: reprint, offprint, separate, preprint, advance distribution, publication date, International Code of Zoological Nomenclature.

## INTRODUCTION

Separate copies of papers from scientific books and journals have been printed for their authors since the 18th century (Csiszar, 2010, 2018). These separately printed papers, classified variously as reprints, offprints, separates or preprints, played an important role in communications between scientists in the 19th and 20th centuries until becoming superseded by digital copies from the 1990s. They would now be of antiquarian interest only, except that they pose an awkward problem when determining the date of publication of the paper involved, and especially with papers describing new species.

The long-established principle of priority in zoological (and botanical) nomenclature is that “The valid name of a taxon is the oldest available name applied to it”, and to be available “it must have been published” (I.C.Z.N., 1999, Articles 23.1, 11.1). Although there are limitations and exceptions to this general principle it remains fundamental to the present system of nomenclature. Publication and date of publication of names remains crucial. So, the point at issue with separately printed papers is: if they were distributed before the book or journal containing the paper, do they represent an earlier date of publication of the paper involved and any new name in it? In short, does advance distribution of a separately printed paper qualify as publication? Although separately printed papers were a part of science publication for several centuries, and there have been rules concerning them in the *International Code of Zoological Nomenclature* for many years, deciding whether they qualify as published, or influence the date of publication, remains difficult and uncertain. This paper considers the issues and problems involved, and how they might be resolved.

The cases involved are usually historic, arising with papers published under earlier Codes, or before there was any formal Code of nomenclature at all. In examining the way these cases are resolved under the Code we will also take a historical approach, considering the

problems that have arisen and how Code rules to deal with them have been developed. The historical perspective helps to clarify the issues and the problems that arise under the current Code.

#### A NOTE ON TERMS

For the purposes of discussion this paper uses the cumbersome but descriptive term “separately printed copy” of a paper, or “separately printed paper”, to avoid the problems that arise with other terms which might be used. Some familiar terms such as “reprint” or “offprint” have particular connotations about the relationship of the separate copy to the associated book or journal and how or when the separate copy was printed or distributed; while other terms (“separate”, “preprint”) are used with restricted definitions in the *International Code of Zoological Nomenclature*, or with quite different connotations in general use (“preprint”). The general term “separately printed paper” is therefore used, leaving open to investigation the questions of printing, distribution, and status under the Code.

However, this general term covers a range of separately printed papers with different purposes or uses. It will help to distinguish the particular categories in question.

#### THE SEPARATELY PRINTED PAPERS IN QUESTION

The points at issue with separately printed papers are firstly whether they were distributed before the book or journal containing the paper, and secondly, if so do they represent an earlier date of publication of the paper involved and any new name in it?

#### **Was the separately printed paper distributed in advance?**

The first question is whether the separately printed paper was distributed before the book or journal containing the paper. In principle, this is a matter of finding whether the date of issue of the separately printed paper was earlier than the date of issue of the book or journal. In practice there are many variations and complications which can make this simple question very difficult to determine.

Full issue dates printed in both the separate paper and the book or journal provide the best indication of whether the separately printed paper was issued in advance, although even with such dates the picture can be complicated by delays and errors. But issue dates were rarely printed in separately printed papers, or books or journals, until the twentieth century. Usually the dates available are imprint dates, which may represent the date of printing rather than date of issue, and generally give the year only.

But there are also many separately printed papers, and even some books and journals, that have no imprint date or printed issue date at all. For these, their date of issue or distribution, and whether the separately printed paper was distributed in advance, can only be established or confirmed from other evidence, such as records of accession or receipt, or notices or reviews in other journals or newspapers. In this regard dating separately printed papers is in principle little different than dating printed books or journals and many of the approaches and resources reviewed by Dickinson *et al.* (2011) for the latter can be applied also to separately printed papers.

In practice, however, such evidence is not usually sought unless there is a critical nomenclatural issue at stake. In the great majority of cases where separately printed papers

are identified as distributed in advance this is inferred from an imprint or issue date earlier than the date of the book or journal.

### **How widely was the separately printed paper distributed?**

The next question is whether the separately printed paper can be regarded as published, or in other words whether it was made publicly available by sale or free distribution, and in this regard separately printed papers vary widely.

At one extreme are those forms of separately printed paper that were not intended for distribution at all. Proof copies printed for checking and correction, or advance sheets supplied to authors as a courtesy would not have been intended for distribution, although they may in some cases have been circulated to some extent. These would generally be regarded as unpublished and having no effect on date of publication (but see Dickinson *et al.*, 2011 on the uncertain status of advance sheets).

Then there are the forms of separately printed papers intended for limited distribution, particularly those that might be distributed in advance of the main publication of the paper. These include, for instance, separately printed papers provided to participants at a conference in advance of any published volume of proceedings. But of particular interest here are the separately printed papers which were supplied to authors to distribute as they wished, or “author’s copies”. These are of uncertain distribution and publication status, and pose the greatest difficulty in deciding whether their distribution in advance of the main publication of the paper in a book or a journal might effectively advance its date of publication.

A further and rather different class of separately printed papers should also be mentioned: those intended for public sale or free distribution. They are seen, for instance, in those journals in which papers are issued singly and separately under a series title such as “Occasional Papers”, “Communications” or “Memoirs”. Such separate papers can be termed “papers published separately”. They are published works in their own right and even if they are reissued later in volumes of collected papers the question of distribution in advance of the main publication does not really arise – they are the main publication of the papers involved, and the question for nomenclatural purposes is whether they were properly published and the date of that publication.

In the discussion below we are primarily concerned with author’s copies, but the other forms of separately printed papers distinguished – proofs, advance sheets, advance printed conference papers, and papers published separately – are also relevant.

### **DOES ADVANCE DISTRIBUTION OF THE SEPARATELY PRINTED PAPER ADVANCE THE DATE OF PUBLICATION?**

We then come to the point: if a separately printed paper, particularly an author’s copy, is shown by its date or otherwise to have been issued or distributed before the book or journal containing the paper, does that represent an earlier publication of the paper and any new name in it?

Since the nineteenth century there have been opposing views on this. In 1867 the botanist George Bentham discussed the question of determining publication date and noted that “author’s separate copies have sometimes been generally circulated and even on sale a considerable time before the complete part to which they belong”. He considered that this “ought surely to be admitted as a sufficient publication” (Bentham, 1867: xvi). But when a committee of eminent British zoologists reported in 1897 on the same question, they argued

that “private presentation by the author is not publication ... If private presentation be disregarded, as suggested, then the date of private distribution of an author’s separate copies cannot be accepted [as the date of publication]” (Flower *et al.*, 1896: 490). The question came down to whether the distribution of separately printed papers was really private (authors sending copies just to their mailing list of colleagues) or public (available to anyone who requested a copy). In 1902 the bibliographer C.D. Sherborn set out his approach to the question in his authoritative *Index* of published names in zoology: “No author’s copy, or excerpt from any publication distributed privately before such publication was offered for public sale or public distribution has been accepted [as setting the date of publication]” (Sherborn, 1902: vi). In practice, however, Sherborn did cite some separately printed papers as advancing the date of publication, presumably judging them to have been “offered for public sale or public distribution” (see for instance entry for *Ambystoma*, Sherborn, 1922: 256). In 1928 C.W. Stiles, then Secretary of the International Commission on Zoological Nomenclature, expressed a similar view to Sherborn’s, that “Separates (preprints, reprints, etc.) are essentially complimentary copies for the personal use of the author and his special mailing list, i.e., a restricted distribution ... they are not separate publication”. But as Stiles admitted “there are viewpoints, *pro* and *con*, *ad infinitum*, other than those I have presented” (Stiles, 1928: 475-476).

Before examining the development of Code rules to deal with the question, we should look in more detail at why it matters: the nomenclatural issues at stake.

#### WHY DOES ADVANCE DISTRIBUTION OF SEPARATE PAPERS MATTER? THE NOMENCLATRURAL QUESTIONS AT STAKE

The basic principle of priority in zoological (and botanical) nomenclature is that (with some conditions) the earliest published name for a taxon has priority over any later name. The date of publication of a name, whether in a book, journal or separately printed paper, is crucially important. The question of whether the advance distribution of a separately printed paper advances the date of publication of the paper and any name described in it is thus of great interest from a nomenclatural point of view. The question arises in several different situations of nomenclatural interest or significance:

1. Simply in relation to *publication date* of a name or a work. The question of whether a separately printed paper distributed in advance might affect the publication date of the paper and a new name in it is of concern to bibliographers and taxonomists seeking to give a full and correct citation of the name with its author and date.

2. In relation to *precedence of publication*. If there are two or more different names proposed for the same taxon (synonyms), or the same name proposed for two or more different taxa (homonyms), then it must be determined which synonym or which homonym has priority by being the first published. The question of whether a separately printed paper distributed in advance might advance the date of publication of either name may be critical in determining which of them has precedence of publication.

There is a third situation where advance distribution of separately printed papers may have nomenclatural consequences of another kind:

3. In relation to *pre-emption of authorship*, when a new name is found to have been quoted and published by a second author before it has been properly published by its original author. Deliberate pre-emption is regarded as most improper, but it may occur inadvertently when

the publication of a book or periodical is delayed after separately printed papers from it have already been distributed: a new name may begin to be cited from the separately printed paper and published by other authors before the book or periodical containing the original author's paper is finally published. In this situation, the question of whether the advance distribution of the separately printed paper qualifies as publication determines whether the original author or the citing author is credited as the author of the name as first published.

Does it matter who the author is? The objective scientific position is that the author of a name is cited only "for the purpose of partial bibliographical identification of the name. It is not cited as an honour, nor to imply any degree of credit for establishing the name" (Bradley, 1957: 156). But scientists are not always as dispassionate as that. It is generally felt to be fair and proper that the original author should retain authorship of the name(s). However, in a situation like that described above, this will be the outcome only if the advance distribution of the separately printed paper is accepted as effective publication.

The next section surveys the way these various issues and situations have been dealt with in the development of the *International Code of Zoological Nomenclature* (hereafter referred to as the Code, or when necessary, the Zoological Code) and, for comparison, the *International Code of Nomenclature for Algae, Fungi and Plants* (hereafter referred to as the Botanical Code). The history of developments in this area will give some context on the issues involved and the various approaches that have been taken, and may help clarify the complex wording of the current Zoological Code in particular. We look first at the approach taken by the Botanical Code.

## THE DEVELOPMENT OF CODE RULES ON SEPARATELY PRINTED PAPERS DISTRIBUTED IN ADVANCE

### THE BOTANICAL CODE

The earliest Botanical Codes of 1905, 1910 and 1930 said nothing on separately printed papers distributed in advance and left it uncertain whether they could be regarded as published for the purpose of deciding on priority of publication of new names in them. Eventually botanists at their International Congress in 1935 dealt with this problem by adding a new Article to the Botanical Code modifying the conditions of "effective publication" (i.e., when a name or a work is regarded as published for the purposes of nomenclature). The Article bypassed the question of whether or not a separately printed paper was itself published, and simply ruled that "*When separates from periodicals or other works placed on sale are issued in advance, the date on the separate is accepted as the date of effective publication*" (Sirks, 1936: 343). An exception clause was added in 1950: "... unless there is evidence that it [the date] is erroneous" (Lanjouw *et al.*, 1952). This rule has continued unchanged since then and still stands as Article 31.3 of the 2018 Botanical Code (Turland *et al.*, 2018).

The approach of the Botanical Code here can be described as a validation rule: regardless of whether or not a "separate" can itself be considered published, if it is dated and distributed before the book or journal containing the paper, then its earlier date is accepted as the date of publication of the paper and any new name in it. The term "separate" is not specifically defined in the Botanical Code but is used in its generally understood meaning of a separately printed paper, although the rule is confined to those that have their own date.

The validation rule gives certainty in questions of publication date and precedence where separately printed papers are involved, and also avoids the pre-emption of authorship where

new names are cited and published from separately printed papers before the book or periodical containing the original author's paper is finally published.

#### THE ZOOLOGICAL CODE

Zoologists, by comparison, have wrestled much more with the issue of how to deal with separately printed papers distributed in advance, and have tried several different approaches.

#### **The Règles internationales de la Nomenclature Zoologique (1905)**

The first official Zoological Code – the *Règles internationales de la Nomenclature Zoologique* (I.C.Z.N., 1905) – said nothing on separately printed papers, or even on what constituted publication. In the following years these issues began to be addressed by the International Commission on Zoological Nomenclature (hereafter referred to as the Commission) and its Opinions and Declarations were later adopted as amendments to the *Règles*.

The Commission first addressed the issue of what constituted publication in 1910, when it declared that “Publication, in the sense of the Code, consists in the public issue of printed matter” (Opinion 15, I.C.Z.N., 1910). In 1912 the Commission added that “The qualifying word ‘public’ in this definition indicates that the printed matter in question is not intended for special persons only or for a limited time, but that it is given to the world, or used in the nature of a permanent scientific record” (Opinion 51, I.C.Z.N., 1912). That clarified to some extent the publication status of separately printed papers distributed in advance, which the Commission considered soon afterward. Its Opinion in this case set the approach taken on the issue for many years afterwards.

#### **Opinion 59 (1914): advance distribution of separately printed papers, publication, and the problem of pre-emption of authorship of names**

The case considered by the Commission in 1913 raised questions about the publication status of separately printed papers distributed in advance in a case of possible pre-emption of authorship of a name by inadvertent prior publication: where a new name was cited from a separately printed paper before the paper was properly published in its journal form.

The case is described in I.C.Z.N. (1914). An American parasitologist, A.D. Barker, had a paper naming a new genus *Amphimerus* scheduled for publication in the journal *Archives de Parasitologie* and when he received separately printed copies of the paper from that journal, he proceeded to distribute them. But publication of *Archives de Parasitologie* was delayed and in the meantime a British scientist, R.T. Leiper, had used the separately printed copy to make an abstract of Barker's paper with the name and diagnosis of *Amphimerus*, which was published in the *Journal of the London School of Tropical Medicine* (Leiper 1912). Thus, Leiper's abstract citing the name *Amphimerus* was published before Barker's paper in *Archives de Parasitologie* where Baker named it. The Commission was asked to rule on what constituted the first publication of the name *Amphimerus* – the separately printed paper by the original author Barker, or the published abstract by the second author, Leiper?

There has always been a strong feeling against pre-emption of authorship: that it is improper and unfair for another scientist to gain the credit for a new name by deliberately or inadvertently getting in ahead and publishing it before its formal book or journal publication by the original author. In the *Amphimerus* case the Commission managed to meet this concern while also maintaining the view that the advance distribution of separately printed papers did not represent publication in the sense of “public issue”.

The Commission noted some further details to the case which were crucial in its decision here. There were in fact two lots of separately printed papers. The first lot was distributed by Barker as he received them from *Archives de Parasitologie*, with covers stating that they were not to be put on sale; but another lot was taken by Barker's university institute, which gave them new covers with its name and a new date of issue, and distributed them (and indeed offered them for sale) as part of its scientific studies series. The Commission ruled (Opinion 59, I.C.Z.N., 1914) that the first lot of separately printed papers distributed by the author were not published and of no standing in zoological nomenclature, but that the second lot were effectively published by the university offering them for sale, and the new name thus dated from their date of issue. Barker's separately printed paper, published as "*Studies from the Zoological Laboratory, the University of Nebraska, No. 103*" (Barker, 1911) thus had precedence over Leiper's abstract (Leiper, 1912), and Barker remained the author of the name *Amphimerus*.

However, it was the first part of the ruling, about the copies distributed by the author not being published, that was mainly remembered and Opinion 59 became regarded as setting a general rule that the distribution of separately printed papers did not constitute publication, and therefore names in separately printed papers had no status (they were not "available") until the book or journal the paper was included in was published (see for instance Serventy, 1946). The Commission advocated this rule and also urged that editors, publishers and authors should refrain from distributing separately printed papers in advance in order to avoid the nomenclatural problems that could arise.

### **The 1948 amendments to the Règles**

For many years the Commission continued to advocate both the rule that advance distribution of separately printed papers did not advance the date of publication, and the recommendation that advance distribution should be avoided. But they were not formally adopted until the International Congress of Zoology at Paris in 1948, when they were included among a great list of amendments to the *Règles* pushed through by the forceful Secretary (and Acting-President) of the Commission, A.F. Hemming.

Thus the rule, worded in Hemming's verbose and legalistic style, was adopted, that "*where a new name appears in a paper published in a book or serial and separates of that paper are distributed in advance of the publication of the paper concerned, the new name ranks for the purposes of the Law of Priority not from the date of the distribution of the separates but from the later date on which the paper was actually published either in that book or serial or elsewhere*" (Hemming, 1955: 335; I.C.Z.N., 1950: 146) – along with the recommendation "*urging editors not to make available, and authors not to distribute, copies of papers prior to those papers being actually published in the book or serial for inclusion in which they had been printed*" (I.C.Z.N., 1950:168).

But later in the same evening session of the Congress the rule was reconsidered in the light of other amendments being passed. These inserted two new Articles into the *Règles*, firstly on what constitutes *publication* of a work or a new name, and secondly on determining the *date of publication*. The new Article on publication set out criteria for a work to be considered published. In brief, the work must be:

1. reproduced in ink on paper by printing or similar means producing multiple identical copies;
2. issued for the purpose of public, permanent record;
3. available by sale or free distribution to anyone applying for a copy;

4. and not on a list of specific exceptions that were ruled as not published (I.C.Z.N. 1950: 217-220).

The other new Article set out rules for determining the date of publication:

1. the date of publication specified in a work is taken to be correct unless and until evidence is published showing that date to be incorrect.
2. if the date of publication specified in a work is incomplete, giving only the year, or the month and year, then the date is taken as the last possible day of that month or year.
3. if no date of publication is specified in a work, then the date is taken as the latest possible day compatible with the evidence available from any source (I.C.Z.N. 1950: 223-225).

And where did the rule on separately printed papers distributed in advance fit? The rule already passed was essentially a rule on date of publication, which implicitly assumed that the separately printed papers, which it referred to as “separates”, were not published. But when the new Articles on publication and on date of publication came up, it was decided that the rule on separately printed papers should be rewritten to be included in the Article on publication, to make it explicit that such “separates” were not published. They were thus included on the list of what does not constitute publication, along with another of the categories of separately printed papers discussed earlier as being not intended for distribution:

*“a new name is not to be deemed to have been made public in a publication ... when the only action taken to make that name public consists of: —*

*(i) the distribution of printer’s proof sheets of the book or paper containing the new name ...*

*(ii) the distribution of separata in advance of the appearance of the paper in question in the book or serial, for inclusion in which it was printed” (I.C.Z.N. 1950: 219).*

Whichever way the rule on separately printed papers distributed in advance is written – in terms of publication date, or of publication – it is almost the reverse of the validation rule of the Botanical Code. It can be described as a prohibition rule: that advance distribution of separately printed “separates” of a paper from a book or journal is deemed not to constitute publication and consequently their advance distribution does not advance the date of publication of that paper and any new name in it.

This rule helped to settle questions of precedence by ruling out any influence of separately printed papers distributed by authors. But it did not give a satisfactory outcome in cases of threatened pre-emption of authorship where a new name was cited from a separately printed paper before the paper was properly published in its journal form.

This can be seen in a case reported by Clarke (1958) concerning species named by Newcomb (1854) in *the Proceedings of the Zoological Society of London*, with a separately printed paper distributed some time in advance. The dating was rather difficult in this case because the *Proceedings* at that time did not show any date of issue or even an imprint date. However, Clarke (1958) determined that a paper by another author, Pfeiffer (1854), which quoted the new names and descriptions from Newcomb’s separately printed paper, was actually published several months before the *Proceedings* issue containing Newcomb’s paper.

Under the prohibition rule that advance distribution of separately printed “separates” of a paper does not constitute publication and does not advance the date of publication of the paper, this would have meant that Pfeiffer (1854) quoting and publishing the new names from Newcomb’s separately printed paper would become the first publication of the names. Newcomb’s authorship of the new names would thus be pre-empted by Pfeiffer. But as with the Commission in its Opinion 59, Clarke (1958) found a way to avoid that and maintain the authorship of the names with the original author, Newcomb.

Clarke (1958) noted that the separately printed copy of Newcomb’s paper had some small typographical differences compared to the paper in the *Proceedings* (it had different page numbers and a misprint in the separately printed paper had been corrected in the *Proceedings*). He argued that the separately printed paper, being different, should therefore be regarded as a different “edition” of the paper rather than as a “separate” and thus would not come under the prohibition rule that advance distribution of “separates” of a paper did not advance its date of publication. Instead, as a different “edition”, the separately printed paper could be regarded as a distinct publication with its own publication date. Although its exact date was not known, as the separately printed “edition” must have been distributed before Pfeiffer’s paper citing it, it would therefore represent the first publication of the names in question. By this argument Clarke (1958) bypassed the prohibition rule and maintained Newcomb’s authorship of his new names.

However, in reaching this conclusion Clarke (1958) glossed over the basic question that still remained: whether the separately printed paper, even if regarded as a separate “edition”, was really published – whether it met the criteria now set out in the *Règles* for what constitutes publication.

The new rules introduced in the 1948 Paris amendments on what constitutes publication, what does not constitute publication, and on date of publication, have continued in force, with some rewording and refinement, up to the present – except for the rule that advance distribution of separately printed papers does not constitute publication. In this area there has been a more complex history.

### The 1961 Zoological Code

The *Règles*, read in conjunction with all the amendments passed at successive Congresses, became more and more difficult to follow. Eventually a consolidated and revised version, renamed the *International Code of Zoological Nomenclature*, was worked out at the International Congress of Zoology at London in 1958. A draft code had been drawn up by the Commission’s president, based on the *Règles* with all the amendments to date. In this draft code the prohibition rule and the recommendation concerning separately printed papers distributed in advance were both included in a new section on “What does not constitute publication”. This set out again that the distribution of “separata or offprints” did not constitute publication: “*a separatum ... shall not be deemed published until the publication containing it has been issued to subscribers or the general public*” (Bradley, 1957). But at the Congress the session on zoological nomenclature, after long and heated discussions, rejected many provisions of the Commission’s draft code, including this one. When the new Zoological Code eventually emerged in 1961 the recommendation that “*Authors should not distribute reprints (separata) in advance*” still remained (I.C.Z.N., 1961: Recommendation 21A), but the prohibition rule had been dropped: advance distribution of separately printed papers was no longer on the list of what does not constitute publication.

One section of the Commission's draft that was finally adopted in the 1961 Code was a new Glossary giving definitions of terms used in the Code. This included two categories of separately printed paper:

*“preprint, n. An article printed especially for private distribution in advance of the publication that is to contain it.”*

*“reprints (separata), n. Printed copies of an article in a serial publication or in a separate work, intended for distribution subsequent to the publication of the work that contains it.”*

The category of particular interest here is the “preprint”, which as defined is essentially an author's copy printed and distributed in advance.

Without any specific rule in the 1961 Code on separately printed papers distributed in advance, the issue of whether or not preprints advanced the date of publication was left by default to the general provisions of the Code concerning publication. A preprint, or any separately printed paper distributed in advance, would advance the date of publication only if it was itself published – if it met the conditions of the Code for what constitutes publication.

Of the conditions set out above in the 1948 Paris amendments, and repeated in clearer wording in the 1961 Code, preprints clearly meet condition (1) concerning printing in ink on paper, and condition (4) concerning prohibited methods (the distribution of separately printed papers in advance was no longer listed as not constituting publication). However, conditions (2) concerning issue “for the purpose of public permanent record”, and (3) that they must be “obtainable by purchase or free distribution” were more difficult to decide.

Does a preprint, which under the definition is “printed especially for private distribution”, meet these conditions? There remained differing views on this. One view, that preprints did meet the requirements for publication, was expressed in a case brought before the Commission just as the new code came into force. Smith & Tihen (1961) discussed a paper by J.J. Tschudi in the *Mémoires de la Société des Sciences Naturelles de Neuchâtel*, dated 1839, with separately printed copies, dated 1838. Smith & Tihen (1961) referred to the latter as “preprints” and argued that “the Code recognizes preprints as acceptable as of the date of their publication”, or in other words that preprints were published within the meaning of the Code. The Commission validated Tschudi's name *Ambystoma* with the date of the preprint (Opinion 649, I.C.Z.N., 1963), implying that in this case at least the preprint was deemed to be published.

### **The 1964 Zoological Code**

A new edition of the Zoological Code in 1964 (I.C.Z.N., 1964) corrected some errors and inconsistencies in the 1961 Code and incorporated a few minor amendments adopted by the 1963 International Congress of Zoology. However, there were no changes in the rules, recommendations or definitions concerning separately printed papers. Their publication status remained unclear.

For instance, Brown (1964a) argued that separately printed papers from the *Proceedings of the Entomological Society of Philadelphia* distributed by authors in advance of the journal were preprints which had “no bibliographical standing”, i.e., they were not published. But Todd (1966) argued the reverse, asserting that these same preprints met the Code's criteria for publication.

In the face of this uncertainty concerning separately printed papers distributed in advance, several cases were submitted to the Commission for a ruling. Two cases in particular involved threatened pre-emption of authorship of names. In 1973 H. Lemche, a commissioner

himself, submitted the case of a species named in a paper he had written in 1929 for inclusion in a book. He had distributed separate copies of the paper at that time, and the new name began to be used, but publication of the book did not proceed until it was resurrected many years later, in 1971. Lemche's new name had been used and published by many other authors in that time (Lemche, 1973). Was he still the author of the name – was it validly published in his 1929 separately printed paper? The Commission ruled that it was (Opinion 1085, I.C.Z.N., 1977).

In 1978 D. Heppell, also a commissioner, submitted a similar case concerning new names in an 18th century paper written for inclusion in a book. Separate copies, marked "for the use of the compiler and his friends" were printed and distributed in 1799 but the book was destroyed by a fire at the printers and thus was never published. However, the new names became widely used and generally attributed to the 1799 separately printed paper. Heppell (1978) sought a ruling on whether that paper was "published within the meaning of the Code". And he also formally requested that the Commission make a general "clarification of the status of preprints". He sought a declaration which would amend the Code to rule definitely one way or the other – either to rule that the advance distribution of preprints did constitute publication, or to rule that it did not. He even suggested alternative amendments to the Code for whichever direction was decided (Heppell, 1978: 42-43). The Commission gave its Opinion on his specific case, that the 1799 separately printed paper was published within the meaning of the Code, but held back from giving any general ruling on the status of preprints (Opinion 1233, I.C.Z.N., 1982).

### The 1985 Zoological Code

That general ruling on separately printed papers distributed in advance came in the next edition of the Zoological Code (I.C.Z.N., 1985). In line with the Commission's ruling on Lemche's case in particular, the 1985 Code adopted a validation rule like that of the Botanical Code:

*"[Article 21] (h) Advance distribution of separates. – An author who distributes separates in advance of the specified date of publication will thereby advance the date of publication of the work."*

There are a number of features of this rule that should be noted.

Firstly, it is more specific than the validation rule of the Botanical Code. The wording that "An author who distributes separates in advance ..." specifies that it applies only to those separately printed papers distributed in advance by authors, or advance author's copies.

Secondly, it refers to "separates in advance", not "preprints". The terms have changed: in the 1961 and 1964 Codes a "separate" was defined as a separately printed paper "intended for distribution subsequent to the publication of the work that contains it", but in the 1985 Code a "separate" is defined in the Glossary as any separately printed paper, without any restriction as to when it was intended to be distributed:

*"separate, n. A copy of a work (contained in a periodical or book) intended for distribution, usually by the author(s), independently of the periodical or book that contains it. Although author's extras, offprints, reprints, and separates (separata) are all, technically, slightly different, no distinction for the purposes of the Code is made between them, and all are grouped under the term separate."*

At the same time the term “preprint”, which was previously defined as a separately printed paper “printed especially for private distribution in advance” is now also defined quite differently, as a separately published paper, published in advance:

*“preprint. n. A work published separately, with its own date of publication, in advance of the book or periodical that is to contain it.”*

These new definitions have added importance because beginning in this Code the Glossary definitions are not just for guidance but have regulatory force: under a new Article 87(a), “in interpreting the Code, the meaning attributed in the Glossary to a word or expression is to be taken as its meaning for the purposes of the Code.”

Under the new definitions the validation rule concerning “An author who distributes separates in advance” is referring to separately printed papers distributed by the author in advance, i.e., advance author’s copies – which previously would have been referred to as “preprints”.

And thirdly, unlike the earlier prohibition rule in force from 1948-61, which was a rule concerning *publication* (that separately printed papers were not published), the new validation rule in the 1985 Code is a rule concerning *date of publication*. It does not confer any status of publication on the separately printed paper in question – the author’s copy – but rules only that its advance distribution effectively advances the date of publication of the paper as published in the book or journal.

One implication of this is that if a separately printed paper is distributed but publication of the book or journal containing the paper does not proceed, then the validation rule does not arise – if there is no published book or journal there is no publication date which could be advanced. The separately printed paper must then be considered in isolation and judged against the Code criteria for publication before any question of a date of publication arises.

Such a case was discussed recently by Imamura & Hoese (2021). In 1910 the Australian ichthyologist J.D. Ogilby submitted a paper to the Royal Society of Queensland describing new species of fish, based on notes he had taken while unofficially accompanying a government fisheries research expedition. The paper was accepted for publication in the *Proceedings* of the Society and author’s copies were printed and provided to Ogilby, who began distributing them. But when the Society was informed that Ogilby was not authorised to work on the expedition material it withdrew his paper from publication in the *Proceedings*. Doubts were expressed at the time and subsequently whether Ogilby’s distribution of the author’s copies constituted publication, but his names have continued to be used. What is their status? Should they be cited from Ogilby’s 1910 author’s copy or some later publication by another author?

Imamura & Hoese (2021) concluded that as Ogilby’s paper had not been published in its journal form that the validation rule on the advance distribution of separates did not apply. What then was the status of Ogilby’s new names? The question reverted to whether his author’s copies met the Code criteria for a published work. Imamura & Hoese (2021) met this difficulty and avoided pre-emption of Ogilby’s authorship simply by asserting that the author’s copy did meet those criteria, stating that “This study ... regards Ogilby (1910) as a published and available work because it satisfies ICZN (1999, Arts. 7-9) on criteria of publication”.

Such exceptional cases remain difficult. However, in the more usual cases of distribution of separately printed papers in advance of a definitely published book or journal containing the paper the validation rule in the 1985 Code was clear. Although there was some criticism

of the rule that “it is not right to consider as the date of publication the time when the author sent some copies to his friends” (Holynski, 1994), the rule did provide certainty in settling questions of date of publication (Golovatch & Enghoff, 1993; Dubois & Ohler, 1995; Ward *et al.*, 1996; Nieto Nafria & Mier Durante, 1998), and possible pre-emption of authorship (Klaver & Böhme, 1992).

### The 1999 Zoological Code

However, in the next (and current) edition of the Code (I.C.Z.N., 1999) the validation rule was terminated. It would continue for historical cases (and hence Imamura & Hoese, 2021 were still able to consider it for the 1910 case), but for separates distributed from the date of the new Code the prohibition rule would return: advance distribution of these separates would no longer advance the date of publication. This made for a rather complex rule which was set out in a renumbered Article 21.8:

*“21.8. Advance distribution of separates and preprints. Before 2000, an author who distributed separates in advance of the specified date of publication of the work in which the material is published thereby advanced the date of publication. The advance issue of separates after 1999 does not do so, whereas preprints, clearly imprinted with their own date of publication, may be published works from the date of their issue.”*

In this rule a distinction was drawn between “separates” and “preprints”, and their Glossary definitions were amended accordingly, with “separates” now differing from “preprints” by not having an imprint date:

*“separate, n. A copy (reprint or offprint) of a work contained in a periodical, book or other larger work, intended for distribution (usually privately by the author(s)) detached from the larger work which contains it but without its own specified date of publication (imprint date). The advance distribution of separates after 1999 does not constitute publication for purposes of zoological nomenclature. See preprint.”*

*“preprint, n. A work published, with its own specified date of publication (imprint date), in advance of its later reissue as part of a collective or cumulative work. Preprints may be published works for the purposes of zoological nomenclature.”*

There was one more change of interest in the 1999 Code: the list in Article 9 of “What does not constitute published work” was expanded to include one more of the categories of separately printed papers of limited distribution we distinguished earlier: “papers . . . issued primarily to participants of meetings, symposia, colloquia or congresses”.

### The 2012 Amendments to the Zoological Code

The wording of Article 21.8, that preprints “may” be published works, left it uncertain what the necessary conditions were for them to be regarded as published and thus advancing the date of publication. That uncertainty was removed in amendments to the Code passed by the Commission in 2012. Article 21.8 was amended to make it clear that preprints are only to be regarded as published works (and therefore advancing the date of publication) “if they fulfil the criteria for publication in Article 8 and are not excluded by Article 9” (I.C.Z.N., 2012).

That was only a small part of the 2012 Amendments, which were mainly aimed at clarifying Code rules in relation to electronic publication. One of the issues here was the status of a new category of separately printed paper: electronic copies posted online before the

publication of the paper in a book or journal. These had begun about 1990 as physicists began exchanging preprints of their papers as electronic text files distributed through computer networks (Voss, 1991, Lewin, 1996). From the speed of the process and the easy accessibility to anyone on the network these electronic advance copies quickly came into widespread use across science, but for early versions of papers, before peer review and publication (Fry, Marshall & Mellins-Cohen, 2019; Hoy, 2020). Thus, although they are still universally known as “preprints” they do not fit the Code definition of that term. Nor do they meet the Code criteria for published works. The 2012 Amendments extended those criteria to allow for certain classes of works published electronically, but not electronic advance copies. They were added to the list in Article 9 of “What does not constitute published work”, and for good measure a new clause was added to Article 21.8 on “Advance distribution of separates and preprints” ruling that as advance copies of papers posted online are not considered published, they do not advance the date of publication. And to try to avoid confusion between these electronic “preprints” and the separately printed paper “preprints” in the sense used in the Code, the reference to the latter in Article 21.8 was amended to “preprints on paper”.

#### **SUMMARY: THE STATUS UNDER THE CURRENT CODE OF SEPARATELY PRINTED PAPERS DISTRIBUTED IN ADVANCE**

The current Code – the 1999 Code with the 2012 Amendments – provides rules and recommendations for a range of different categories of separately printed papers in relation to publication, and date of publication.

At one end of the scale there are some categories of separately printed papers that are listed in Article 9 as not constituting published work within the meaning of the Code, and thus if distributed in advance they do not advance the date of publication: proof sheets, texts of presentations issued to participants at meetings, and preliminary versions of works accessible electronically in advance of publication (colloquially known as digital “preprints”).

At the other end of the scale there are the categories of separately printed papers which are clearly published works (referred to above as “separately published papers”) and these are accepted as published within the meaning of the Code if they fulfil the criteria of Article 8 and are not excluded by Article 9.

Falling between these two groups is the category of particular interest here: “author’s copies”, the separately printed papers supplied to authors for their personal use, to distribute as they wished. These separately printed papers are of uncertain distribution and publication status. They pose the greatest difficulty in deciding whether they qualify as published, or whether, if they were distributed in advance of the substantive publication of the paper in a book or a journal, they might effectively advance its date of publication.

As the historical survey above makes clear it has been difficult to find a satisfactory way of dealing with this issue and in past Codes two quite different approaches have been tried. First there was a conservative approach, with a rule that separately printed papers distributed by the author in advance are deemed not to be published and consequently do not advance the date of publication. This rule (here styled the “prohibition rule”) was recommended by the Commission for many years before it was formally adopted in the *Règles internationales de la Nomenclature Zoologique* in 1948. It provided certainty when determining publication dates by removing separately printed papers from contention, but it gave the undesirable outcome of pre-emption of authorship in cases where new names begin to be published by other authors citing them from separately printed papers before the book or periodical containing

the original author's paper had been published. The prohibition rule was rejected by the International Congress of Zoology in 1958, leaving no specific rule on separately printed papers distributed by the author in the Codes of 1961 or 1964.

Then in the 1985 Code the opposite approach was taken, with a rule that separately printed papers distributed by the author in advance of the publication of the paper in a book or journal are deemed to effectively advance the date of publication, whether or not the separately printed papers themselves qualify as published. This rule (here styled the "validation rule") provides a different certainty in determining publication date, by accepting the advance date of a separately printed paper as the date of publication, and it preserves authorship of names with the original author against threatened pre-emption by other authors citing the names from separately printed papers distributed in advance. This validation rule was similar to the longstanding (and still current) rule in botanical nomenclature.

However, in the current 1999 Zoological Code the operation of the validation rule has been terminated and the prohibition rule introduced again. Article 21.8 on "advance distribution of separates and preprints" sets out that the validation rule for "separates" distributed by authors in advance remains in force for historical cases arising before this Code came into effect in 2000, but from then the prohibition rule applies. The 1999 Code also introduced a new distinction between the two classes of separately printed papers involved – "separates" and "preprints" – with a different rule for "preprints". As amended in 2012 Article 21.8 reads:

***"21.8. Advance distribution of separates and preprints.***

*Advance distribution of separates or preprints affects date of publication as specified by the following criteria:*

*21.8.1. Before 2000, an author who distributed separates in advance of the specified date of publication of the work in which the material was published thereby advanced the date of publication.*

*21.8.2. The advance issue of separates after 1999 does not advance the date of publication, whereas preprints on paper, unambiguously imprinted with their own date of publication, are published works from the date of their issue, if they fulfil the criteria for publication in Article 8 and are not excluded by Article 9 (see Glossary: "separate", "preprint").*

*21.8.3. Some works are accessible online in preliminary versions before the publication date of the final version. Such advance electronic access does not advance the date of publication of a work, as preliminary versions are not published (Article 9.9)."*

**PROBLEMS WITH ARTICLE 21.8 AND THE DEFINITIONS OF "SEPARATE" AND "PREPRINT"**

In practice there are difficulties in interpreting and applying Article 21.8, and it will therefore be examined in some detail. We should first recall how it was intended to operate. The 1999 Code was drawn up, as noted in its introduction, under "the requirement that [new] rules ... must not upset actions taken by past generations operating under different, and less restrictive, nomenclatural rules" (I.C.Z.N., 1999: xxiii). Article 21.8, therefore, should not overturn decisions made under the previous rule in Article 21(h) of the 1985 Code. For separately printed papers distributed by authors in advance before the new 1999 Code came into effect on 1 January 2000, the previous validation rule should continue to apply: they would advance the date of publication. Then, from 1 January 2000, a new prohibition rule

would apply: as the Commission explained when completing the drafting of the 1999 Code, "after [the date of the new Code] the distribution of separates of works published in a serial would not advance the date of publication" (I.C.Z.N., 1996: 236; also see I.C.Z.N., 1999: xxviii).

Article 21.8 appears to follow exactly that plan:

*"Before 2000, an author who distributed separates in advance of the specified date of publication of the work in which the material is published thereby advanced the date of publication. The advance issue of separates after 1999 does not do so ..."*

However, although the rule here for separates distributed in advance before 2000 is worded almost exactly the same as the previous rule in Article 21(h) of the 1985 Code which was in force at that time, the new rule does not have the same meaning or effect as the previous rule because the defined meaning of the term "separate" has changed. In the 1985 Code a "separate" was defined as meaning any separately printed paper, whether it had its own date or not, but in the 1999 Code a "separate" is defined more narrowly as being "*without its own specified date of publication (imprint date)*". Under this narrower definition, the new rule in Article 21.8 no longer applies to all separately printed papers as the old rule in Article 21(h) of the 1985 Code did, but only to those without their own date.

In practice, almost all cases of separately printed papers found to be distributed in advance *do* have their own date. As noted earlier, that is the way advance distribution is almost always identified: by the separately printed paper having an imprint date or printed date of issue that is earlier than that of the associated book or journal. But under the 1999 Code's definition such advance-dated separately printed papers can no longer be classed as "separates". At first glance it appears that they must be classed as "preprints".

The rule for "preprints" in Article 21.8 of the 1999 Code does not follow the pattern of maintaining the old rule for those distributed "before 2000" and then providing a new rule for those distributed "after 1999". There was in fact no rule for "preprints" in the previous Code. In the 1999 Code there is a new rule for "preprints", appended rather awkwardly to the rule for "separates after 1999". As clarified slightly by the 2012 Amendment it reads:

*"21.8.2. The advance issue of separates after 1999 does not advance the date of publication, whereas preprints on paper, unambiguously imprinted with their own date of publication, are published works from the date of their issue, if they fulfil the criteria for publication in Article 8 and are not excluded by Article 9."*

Under this rule a "preprint" is only regarded as published within the meaning of the Code (and hence advancing the date of publication to its own date) if it meets the Code's standard criteria for publication in Articles 8 and 9.

But this brings us back to the original difficulty with any separately printed paper distributed in advance: deciding whether or not it can be considered as published. Making this judgement has always been problematic, especially with author's copies, separate papers printed for authors. As noted earlier, there have been disparate views on this issue since the nineteenth century. After clearer Code rules and criteria on publication began to be developed authorities still expressed widely differing opinions about "preprints", as they called them. In 1964 commissioners N.D. Riley and W.E. China gave their opinion that "the issue of preprints to authors satisfies the criteria of publication set out in Article 8 [of the Code]" (Brown, 1964b). In 1977 commissioner H.E. Vokes considered a particular preprint to be not published as "I find no indication that the ... paper was freely available to all, as is a basic requirement for 'publication'", while commissioner W.D.L. Ride considered the same preprint to be published,

on the grounds that its distribution “meets the requirements of Art. 8(3) - i.e. that a person obtained a copy gratis” (I.C.Z.N., 1977). In 1997 N. Evenhuis (later also a commissioner) set out the point at issue: “In order to be considered a valid publication according to the Code, preprints should be available to the public for sale or for free and not be distributed only to colleagues.” But in his view, determining whether or not any particular preprint was distributed only to colleagues, and therefore whether it was published, was a “virtual impossibility” (Evenhuis, 1997: 7).

It is because of this difficulty in deciding whether a separately printed paper is published that specific rules on the question are needed in the Code. But although Article 21.8 provides clear rules for separately printed papers without their own date (“separates” under the Code definition), it does not provide clear rules for those that do have their own date. They are excluded from the rule for undated “separates”, and if they are treated as dated “preprints” the rule there merely returns to the difficult question of whether they meet the standard criteria for publication.

The problem here appears to lie not with Article 21.8 itself but with the altered Code definitions of the terms “separate” and “preprint” used in it. Separately printed papers with their own date, particularly those that are distributed by authors, no longer fit within either category, “separate” or “preprint”, as these terms are defined in the 1999 Code.

### **The definition of a “separate”**

Authors analysing or summarising this part of the 1999 Code have stumbled over the restriction in its definition of a “separate”, that it must be “without its own specified date of publication (imprint date)”. Dickinson *et al.*, (2011: 19-20) suggested the restriction would be better reversed: “we would have preferred to see the Code allow the advancement of dates of publication of such separates only when they carry their own date of ‘publication’”. Hawksworth (2010: 177) thought it was reversed: in his *Terms used in Bionomenclature* he misquoted the Code definition of “separate” as “with its own specified date of publication (imprint date)”. And Gardner & Hayssen (2004: 17) overlooked the restriction altogether: in their guide to the Code they paraphrased its definition of a “separate” as simply “A copy (reprint or offprint) of an article printed separately from the journal or periodical in which the article appears.”

And in fact many authors who have applied Article 21.8 to cases of separately printed papers distributed in advance have done the same: they have pragmatically ignored or overlooked the new restriction in the definition of “separate”. Although their separately printed paper does have a date they still call it a “separate” and thus use the validation rule of Article 21.8 for (undated) “separates” to conclude that the advance distribution of their “separate” (as indicated by its date) advances the date of publication to that date (see for instance Lamotte & Ohler, 2000; García Prieto *et al.*, 2004; Geiser, 2009; Brignon, 2018).

It appears that Article 21.8 was actually intended to work that way, with the validation rule continuing to operate as it did under the previous Code with any separately printed paper, whether it had its own date or not. But that was upset by the change in the definition of “separate” which excludes those with their own date.

That change in the definition was made very late in the process of drafting the 1999 Code and appears to have escaped wider scrutiny. Neither the change in definition of “separate”, nor the changes to Article 21 concerning separately printed papers distributed in advance were included in the draft Code circulated for discussion in 1995 (I.C.Z.N., 1995). Commissioners later met to further revise the Articles of the Code (and at this stage made the

changes to Article 21) but only as that was completed did they move to “revise the Glossary, which was an integral part of the Code, to reflect any necessary changes” (I.C.Z.N., 1996: 236). It may have seemed necessary to draw a clearer distinction between “separates” and “preprints” but the distinction inserted into the definition of “separate” (that it did not have a date, by comparison with a “preprint”, which did) had the further and apparently unintended effect of excluding dated separately printed papers from the scope and operation of the newly drafted validation rule for pre-2000 “separates” in Article 21.8.

Apart from providing an arbitrary distinction between “separate” and “preprint” there seems no particular reason or rationale for restricting “separates” to those without their own date. Certainly the rule for pre-2000 “separates” in Article 21.8 would be both clearer and in line with the previous rule if the restriction were removed and the definition restored to the previous more general one.

### **What is a “preprint”, and what does Art. 21.8.2 regarding “preprints” mean?**

What is a “preprint”? Returning to the question raised in the discussion above about separately printed papers distributed by an author in advance which do have their own date – if these are excluded from the current definition of a “separate” can they be classed as “preprints”?

Here we need to clarify the meaning of the term “preprint” as used in the Code. Earlier editions of the Code defined a “preprint” as “*An article printed especially for private distribution in advance of the publication that is to contain it*” (I.C.Z.N., 1961, 1964) and this remains the generally understood meaning of the term “preprint” (for the paper version at least; online “preprints” are rather different). The essential meaning here is that the “preprint” is literally pre-printed – printed in advance of the published version. Many authors explaining the terms used in nomenclature still define “preprint” in this sense: “If separates are printed and distributed before the printing and distribution of the journal, they are referred to as preprints” (Jackson & Groves, 2015: 14; see also Gardner & Hayssen, 2004:12).

However, the Code definition has changed and now, as noted by Dickinson *et al.*, (2011: 292), the term as used in the Code has a distinctly different meaning from the above general or colloquial meaning. The change dates from the 1985 Code, where the definition became “*A work published separately, with its own date of publication, in advance of the book or periodical that is to contain it.*” This was elaborated further in the 1999 Code which now defines a “preprint” as “*A work published, with its own specified date of publication (imprint date), in advance of its later reissue as part of a collective or cumulative work.*” Under these definitions a “preprint” is not just separately printed in advance, as the word “preprint” literally means and is generally understood, but separately published in advance of a later reissue in a volume of collected papers. Separately printed papers distributed by an author in advance, whether they have their own date or not, do not readily fit the current Code definition of “preprint” as it is doubtful whether they can be classed as published.

The point here is that the term “preprint” as used in the 1999 Code does not refer to advance author’s copies, or preprints as that term has generally been understood, but to a different category of separately printed papers – papers published separately, which are clearly publications in their own right, even if they are later reissued in collected volumes of such papers.

What then does the clause in Article 21.8.2 concerning “preprints” signify? The unusual Code meaning of “preprint” makes the clause particularly liable to be misunderstood. It may

help to make its intended meaning clearer if it is read with the problematic term “preprint” replaced with its Code definition:

*“21.8.2. The advance issue of separates after 1999 does not advance the date of publication, whereas works published separately, with their own specified date of publication (imprint date), in advance of their later reissue as part of a collective or cumulative work, are published works from the date of their issue, if they fulfil the criteria for publication in Article 8 and are not excluded by Article 9.”*

Read with its meaning thus spelled out, it can be seen that the “whereas preprints” clause in Article 21.8.2 merely confirms that papers published separately are accepted as published, provided they meet the conditions of Articles 8 and 9. They are exempted from the preceding rule that *“The advance issue of separates after 1999 does not advance the date of publication.”*

The operation of the “whereas preprints” clause is illustrated by one of the very few cases where it has actually been applied to a “preprint” in the Code sense. Lambertz (2013) sought to elucidate the publication and date of a name described by Meise (1934) in the Norwegian journal *Nyt Magazin for Naturvidenskaberne*. Lambertz (2013) found that there were also separately printed copies of the paper with the byline *“Særtryk av Nyt Magazin . . .”* (“reprint from *Nyt Magazin*”) which were distributed by the local museum as part of its numbered reprint series under the added series title *Meddelelser fra det Zoologiske Museum, Oslo* (“Communications from the Zoological Museum, Oslo”). The separately printed *Meddelelser* paper was dated 1933, a year earlier than the *Nyt Magazin* issue containing the same paper. The *Meddelelser* paper was thus a published “preprint” in the sense of the 1999 Code definition: it was a work published (distributed publicly by the museum rather than just privately by the author), with its own specified date of publication (imprint date), in advance of its later reissue in the journal *Nyt Magazin*.

Hence under the “whereas preprints” clause of Article 21.8.2, since this “preprint” evidently meets the criteria for publication of Articles 8 and 9, it is confirmed as published from the date of its issue, and thus, as Lambertz (2013) concluded, it “unequivocally has priority and counts as the formal [first] publication containing the species description.”

But is the “whereas preprints” clause really necessary? Reading Article 21.8 as a whole suggests that it is only needed because the rule in Article 21.8.2 that *“The advance issue of separates after 1999 does not advance the date of publication”* is too loosely expressed. Clearer drafting of this rule could have avoided any need for the clarifying “whereas preprints” clause at all.

This can be seen by comparing the two rules of Articles 21.8.1 and 21.8.2 that are to apply “before 2000” and “after 1999” respectively. The first rule in Article 21.8.1 sets out precisely that *“Before 2000, an author who distributed separates in advance of the specified date of publication of the work in which the material was published thereby advanced the date of publication”*. If the complementary rule in 21.8.2 applying “after 1999” were then expressed with equal precision (*“After 1999, an author who distributes separates in advance does not thereby advance the date of publication”*) this would make it clear that like the rule “Before 2000” it applies only to separates that are distributed by authors, and then there would be no suggestion that the rule might affect published papers (those which are distributed publicly, not privately by authors) and thus there would be no need to add the confusing “whereas preprints” clause exempting such papers from the rule.

If the “whereas preprints” clause could be done without, this would also remove any need to use the term “preprint” in its present unusual Code sense at all, which would avoid much misunderstanding.

## CONCLUSION

The current Zoological Code – the fourth edition (I.C.Z.N 1999) as amended in 2012 (I.C.Z.N. 2012) – incorporates a specific Article, 21.8, on whether advance distribution of separates or preprints of a work published in a book or journal advances its date of publication.

For those separates distributed before the date of this Code, Article 21.8.1 maintains the validation rule of the previous Code, that separates distributed in advance by authors advance the date of publication. But for those distributed from the date of this Code (1 January 2000), Article 21.8.2 reverts to a prohibition rule, that separates distributed in advance do not advance the date of publication. Preprints are exempted – their advance date of issue is taken as the date of publication provided they meet the standard criteria for publication in Articles 8 and 9.

However, as the analysis above makes clear, there are problems with Article 21.8 arising firstly from a little-noticed change in the Code definition of “separate” which now restricts these to separately printed papers “*without [their] own specified date of publication (imprint date)*”. This has the effect, evidently unintended, that separately printed papers *with* their own date, no longer being “separates”, are therefore excluded from the continuing validation rule in Article 21.8.1 for “separates” distributed before the date of this Code. Further problems arise from the loose wording of the rule in Article 21.8.2 applying after the date of the Code, and from the Code use of the term “preprint” in a sense that is different from either the historically understood meaning, or the modern digital meaning, of that term.

It is therefore recommended that changes be made to the definition of “separate”, and to the wording of Articles 21.8.1 and 21.8.2, to clarify the meaning and operation of the Code rules for determining the date of publication in historical and recent cases of separately printed papers distributed in advance, and to obviate the need to use the term “preprint” under its current confusing Code definition:

## Recommendations

1. That the restriction in the Glossary definition of “separate”, that it is “*without its own specified date of publication (imprint date)*”, be deleted to restore the term to its previous more general sense, encompassing all separately printed papers with or without their own date. This would ensure that Article 21.8.1 applying “Before 2000”, would have the same meaning and effect as Article 21(h) of the previous 1985 Code in force at that time, as was evidently intended.

2. The statement appended to the Glossary definition of “separate”, that “*The advance distribution of separates after 1999 does not constitute publication for purposes of zoological nomenclature*” does not reflect the actual rule in Article 21.8.2 of the Code, which has “... **does not advance the date of publication**”. The difference appears slight, but introduces complex and confusing logical inferences. Further complexities arise with the changes in Recommendation 3 below. The statement could be corrected, but it is not really necessary and it is thus recommended that it be deleted from the Glossary definition of “separate”.

With these amendments and other minor word changes the Glossary definition of “separate” would thus be (with the recommended **new** and ~~deleted~~ wording in bold):

*“separate, n. A **printed** copy (reprint or offprint) of a work contained in a periodical, book or other larger work, intended for distribution (usually privately by the author(s)) detached from the larger work which contains it ~~but without its own specified date of publication (imprint date).~~ **The advance distribution of separates after 1999 does not constitute publication for purposes of zoological nomenclature. See preprint.**”*

3. That the rule in Article 21.8.2 that *“The advance issue of separates after 1999 does not advance the date of publication”* be written more precisely, mirroring the complementary rule for “before 2000” in Article 21.8.1, to make clear that it applies to separates distributed in advance *by authors*. The confusing following clause *“whereas preprints ...”* (which indicates that the above rule does not apply to separately printed papers that actually meet the Code criteria for publication) would then become redundant and can be deleted, and the problematic term “preprint” can be deleted entirely from Article 21.8.

The whole Article 21.8 would thus be (with the recommended **new** and ~~deleted~~ wording in bold):

*“Article 21.8 Advance distribution of separates **and preprints**.*

*Advance distribution of separates ~~or preprints~~ affects date of publication as specified by the following criteria:*

21.8.1. *Before 2000, an author who distributed separates in advance of the specified date of publication of the work in which the material was published thereby advanced the date of publication.*

21.8.2. *After 1999, an author who distributes separates in advance does not thereby advance the date of publication, ~~The advance issue of separates after 1999 does not advance the date of publication whereas preprints on paper, unambiguously imprinted with their own specified date of publication, are published works from the date of their issue, if they fulfil the criteria for publication in Article 8 and are not excluded by Article 9. (see Glossary: “separate”, “preprint”).~~*

21.8.3. *Some works are accessible online in preliminary versions before the publication date of the final version. Such advance electronic access does not advance the date of publication of a work, as preliminary versions are not published (Article 9.9).”*

4. That the use in the Code of the term “preprint” under its present Glossary definition be reconsidered. That definition is a source of confusion, as it is idiosyncratic and quite different from either the historically understood meaning, or the modern online meaning of the term.

The amendments recommended above would delete all uses of the term “preprint” in the Code except for Recommendation 21E (*“Preprints, incorporating their own date of publication, should be identified clearly as such”*). This has been carried over from earlier Codes when “preprint” had a different meaning. It serves no purpose in the current Code and could also be deleted, removing any need for the term in its present confusing sense.

These changes would clarify the meaning and operation of the Code as it currently stands, without moving in any new direction. The recommended amendment to the definition of “separate” would restore the rule for historic (pre-2000) separately printed papers to the way

it operated under the previous Code and preserve decisions reached then, as was evidently intended. Thus, under Article 21.8.1, before 2000 any separately printed paper ("separate"), whether dated or undated, if distributed by an author in advance would advance the date of publication. Those with their own date would advance the date of publication to that date, while those without their own date would advance the date of publication to the date determined by the standard Code procedure for undated works in Article 21.7.

The recommended changes to Article 21.8.2 would clarify the meaning of this rule for recent (post-1999) separately printed papers while leaving it unchanged in its effect: after 1999 any separately printed paper distributed by an author in advance would not advance the date of publication. The limitation to those distributed by an author would make clear that this prohibition does not apply to those separately printed papers which are issued publicly by publishers or institutions, and which therefore meet the criteria for publication of Articles 8 and 9; these would continue to be treated as published, with their own date of publication.

This appears to be the way the Code was intended to operate in this area. The suggested amendments would restore clear rules to the long-contested question of whether an author distributing separately printed papers in advance of the book or journal containing the paper advances its date of publication.

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