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## Online-only publishers are here to stay, and will continue to work closely with the ICZN

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BioMed Central is a Science, Technology and Medical publisher of online, open access journals. We have always endeavoured to ensure that our journals adhere to the norms of the research communities we serve (Knapp *et al.*, 2011; Krell 2012; Sands & Moylan 2012). We were therefore somewhat bewildered by the tone of the piece from Dubois *et al.* (2013) criticising online-only journals, specifically our interpretation of the International Code of Zoological Nomenclature (the Code) on criteria for publication for nomenclatural purposes (ICZN 1999) prior to the 2012 Amendment to the *International Commission on Zoological Nomenclature* (ICZN 2012a,b,c). We responded to this in our recent blog (Harold *et al.*, 2013).

We appreciate that Dubois *et al.* (2013) are challenging the Commission on certain ambiguities and misunderstandings of the Code (and its amendments) and the implications this has for publishers, editors and authors alike. Following the 2012 Amendment, online publications are available for nomenclatural purposes if certain criteria are met. However, the crux of the problem for works published after 1999 and before 2012 seems to be in our interpretation of Article 8.6 of the fourth edition of the Code which states that: ‘*For a work produced after 1999 by a method other than printing on paper to be accepted as published within the meaning of the Code, it must contain a statement that copies (in the form in which it is published) have been deposited in at least five major publicly accessible libraries which are identified by name in the work itself.*’

By this we understood that if five printed copies were distributed we would have fulfilled the requirements of the Code. BioMed Central certainly contacted the ICZN for clarification of this practice in 2005 and called for an official statement from the ICZN with respect to online publication. At later dates we received reassurance that the process of distributing print copies was sufficient (from the Executive Secretary of the ICZN and others in 2008). However, we did not appreciate that a response from one or two members of the Secretariat cannot be considered an official response of the Commission. As recently explained by the consensus response from the ICZN (2014) it appears our interpretation of Article 8.6 was incorrect. The production of paper copies did not confer ‘availability’ to an electronic work or any new species names described therein. Yet in cases where multiple paper copies for articles describing new names were indeed issued (and did conform to Article 8 of the Code) these copies form a separate work *on their own*.

In their article, Dubois *et al.* go to great lengths to investigate the procedures operated by BioMed Central and document their findings in Table 2 (p 60). They classify many of the published articles (the ‘works’) as unavailable despite proven distribution by deposition of five identical paper copies. However, in light of the recent clarification by the ICZN (2014) it is the paper copies *themselves* which confer availability to new names. In other cases, where paper copies were distributed by BioMed Central, Dubois *et al.* note that they cannot find the paper copy in the Paris Museum library. BioMed Central regrets this situation but cannot be held responsible for the storage or classification system of individual institutions. The other institutions which were sent paper copies (in addition to

the Paris Museum library) were: Natural History Museum, London, UK; American Museum of Natural History, New York, USA; The Library for Natural Sciences, Russian Academy of Sciences, Moscow; Life Science Library, Academia Sinica, Taiwan.

Dubois *et al.* go on to present further evidence that the version of the distributed printed article does not ‘match’ the article available online. This discrepancy is explained by simple differences in the layout of text between the accepted author version of the article and the final version. However, the discrepancy is irrelevant since the online version is not conferring availability. The crucial point is that all the printed works were identical to each other and thus fulfil requirement Article 8 of the Code. Regrettably, in some cases, Dubois *et al.* find no evidence that multiple paper copies were made or deposited at the time. Certainly in the early days (pre-2008) there was sufficient confusion about the correct process that paper copies were distributed (and can be found in Paris, see Dubois *et al.*, Table 2) even though the printed works did not contain this information. But in light of the ICZN (2014) response, given the online version is not conferring availability, the printed work does not need to contain the information about distribution. For other isolated cases where the existence of multiple copies cannot be confirmed, BioMed Central will contact the ICZN. If only names were available from the electronic version of record!

Clearly online publishing is here to stay and BioMed Central is willing to work together with the ICZN to ensure that we avoid a situation where “*open access papers, having the widest possible availability to readers, [are] unavailable for nomenclature*” to quote Frank-Thorsten Krell, Commissioner, ICZN (Krell 2012). Thanks to the 2012 Amendment to the Code, this is not a problem for current works published from January 2012 onwards. Online-only journals are now ‘available’ for nomenclature provided the paper is registered in the *Official Registry of Zoological Nomenclature* (ZooBank, <http://zoobank.org>) before publication and certain other criteria are met (see ICZN 2012a,b,c & Zhang 2012). We will apply to the Commission and request they use their Plenary Power to make available previously published ‘unavailable’ names where a paper version was not issued prior to the 2012 Amendment.

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