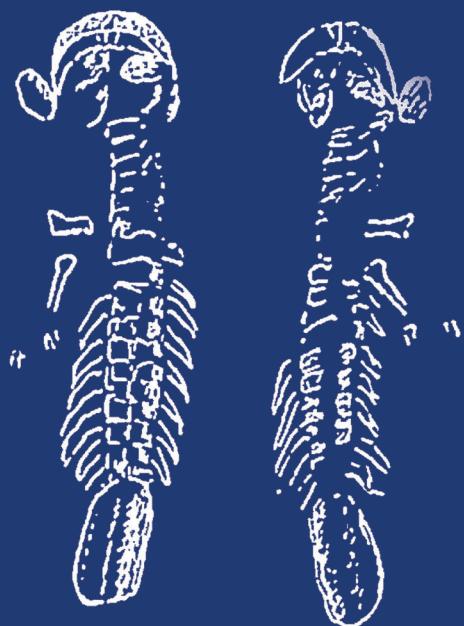


## ‘Retraction’ of taxonomic papers: the meaning of the word ‘issued’ and related ones in zoological nomenclature

Alain DUBOIS



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Original figure of the holotype of *Boomgardia salamandrinaformis* Huene, 1948, described as a fossil Urodele, but based on a fossil Arthropod according to Herre (1950).

Herre W. 1950. — Der derzeitige Stand unseres Wissens über die fossilen Urodelen, zugleich einige kritische Bemerkungen über *Boomgardia salamandrinaformis* v. Huene. *Neues Jahrbuch für Geologie und Paläontologie* 1: 19-25.

Huene F. F. von 1948. — Ein echter Urodele aus dem unteren Dogger. *Neues Jahrbuch für Geologie und Paläontologie, Monatshfete*, (Abteilung B: *Geologie - Paläontologie*), Stuttgart: 33-39.

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# **'Retraction' of taxonomic papers: the meaning of the word 'issued' and related ones in zoological nomenclature**

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retraction of publication,  
*International Code of Zoological Nomenclature*,  
terminology,  
definitions

**MOTS CLÉS**  
Disponibilité nomenclaturale,  
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## **ABSTRACT**

A basic reason for the diverging interpretations regarding the nomenclatural status of 'retracted' publications lies in different understandings of some 'simple' terms like 'issued', used in Article 8 of the *Code* but not defined in this text. After a discussion of the questions at stake, formal definitions of some of these terms are provided.

## **RÉSUMÉ**

*"Rétractation" des publications taxonomiques : la signification du mot "issued" ("édité") et des mots voisins en nomenclature zoologique.*

Une cause fondamentale des divergences d'interprétation concernant le statut nomenclatural des publications "rétractées" consiste en désaccords au sujet de la signification de termes "simples" comme "issued" ("édité"), employés dans l'Article 8 du *Code* mais non définis dans ce texte. Après une discussion de ces questions, des définitions formelles de ces termes sont proposées.

## INTRODUCTION

Vlachos (2020) replied to my paper (Dubois 2020b) about the nomenclatural consequences of the ‘retraction’ of taxonomic papers. He expressed surprise that “among the numerous people and scientists that chose to offer their opinions and ideas on this matter in both private and public media”, I “chose to quote only” his own, but at the same time he provided the explanation of this ‘choice’, which is that he had been the initiator of the ‘thread’ at stake, the only one devoted to the retraction of taxonomic papers on a well-known electronic list devoted to nomenclature and to the *Code* (<http://list.afriherp.org/mailman/listinfo/iczn-list>). Unfortunately, very few subscribers to this list contributed to this discussion, and among them a single one supported the opinion of Vlachos that “a retracted paper no longer exists” and that “the *Code* does not have a mechanism to deal with that”. This is a scientific question of interest and importance for all zootaxonomists, and it deserves better than a thread in an electronic forum. It should be addressed in a genuine scientific paper, with references, examples, and detailed discussion considering the problem in a wider perspective, not limited to taxonomy.

## IS THE *CODE* UNCLEAR ABOUT THE NOMENCLATURAL STATUS OF ‘RETRACTED’ PAPERS?

Vlachos (2020) discussed only a part of the questions raised in my paper. Although these questions have a bearing on this discussion, he did not take a stand on whether ‘retraction’ of scientific papers was indeed acceptable in science, whether in taxonomy ‘retraction’ is appropriate to deal with misallocation of specimens to taxa, or whether it should indeed be accepted as having nomenclatural consequences under the *Code*.

Vlachos claimed to agree with Krell (2015), but this is not correct. Vlachos stated that, under the current *Code*, the status of a paper first published as available but then ‘retracted’ is unclear and should be clarified in the *Code*. This is not what Krell (2015: 24) said. He wrote: “As soon as it is published fulfilling all criteria for availability, a paper and the nomenclatural acts that it contains are available in perpetuity (unless later deemed to be unavailable by the ICZN’s plenary power).” This clearly means that the *Code does indeed* provide a clear and unambiguous Rule allowing to deal with the status of so-called ‘retracted’ papers, and that no change is indeed necessary in this respect. But then Krell added unnecessary complexity by stating that “To retract a paper containing nomenclatural acts a Case should be submitted to the Commission to apply its plenary power to declare those acts and the paper unavailable.” Therefore Krell fully agreed with me to acknowledge that, under the *Code*, ‘retraction’ by itself has no nomenclatural consequence, but that the Commission should be consulted, or even the *Code* modified, *if, and only if*, taxonomists considered necessary to reject automatically all ‘retracted’

works, and therefore their new nomina and nomenclatural acts, as nomenclaturally unavailable. *But why should this be so?* There is no scientific reason for this, as acknowledged by Krell himself, who wrote: “Retracting a paper containing zoological nomenclatural acts would be ill-advised because the Code does not provide a mechanism to deal with a published paper that is supposed to no longer exist. (...) However, there is no reason for retracting a publication on the grounds of a simple synonymy. This is an inappropriate over-reaction that causes confusion.” This is exactly the point I made in my paper and in support of which I provided a series of examples of nomina first proposed for taxa the taxonomic position of which was later changed, which never posed any taxonomic or nomenclatural problem.

Contrary to what Vlachos pretends, Krell did not state that “a retracted paper no longer exists”. He wrote “that is supposed to no longer exist”, which is quite different. For the reasons developed in my paper, on the contrary such a paper doubtless still exists, despite being ‘stamped as retracted’. It still exists electronically, as a PDF, in the archives of the journal where it was published and possibly in other archives, on all the computers on which it has been downloaded, and on all the discs where it has been copied. The formula “no longer exists” should be taken literally, and could apply only if all physical and electronic copies of the work had been destroyed. The *Code* does not mention the controversial concept of ‘retraction’ and there is no reason why it should do so. It should rather ignore it altogether. The idea that it should be modified in order to deal with it is indeed inappropriate and misguided, and can be considered as non-scientific, as ‘retraction’ itself is so.

Currently, as practiced and supported by some (e.g. <https://retractionwatch.com>), ‘retraction’ of a paper can be done either by its author(s), whether voluntarily or under a ‘strong solicitation’ of the editor or publisher of the work — as in the case of the papers by Xing *et al.* (2020) (see <https://www.nature.com/articles/s41586-020-2553-9>) or of Metra *et al.* (2020a) (see Metra *et al.* 2020b) —, or directly by the latter or by ‘the journal’ itself — as in the case of the paper by Séralini *et al.* (2012) (see <https://www.sciencedirect.com/science/article/pii/S0278691512005637>). As mentioned briefly in Dubois (2020b), there may be several reasons or purposes for such retractions, but addressing this question in detail would be outside the scope of the present discussion. What is clear however is that it poses or will pose problems to the historians of science, whereas publication in the same journal of an argumented correction or rebuttal of the original paper, without ‘retracting’ it, does not have this drawback.

Vlachos asks the question: “how can we treat the name as available if we should not be allowed to cite it?” These are strong but fully unjustified words. *Not allowed?* By whom? By the original author, editor or publisher of the work? According to the *Code*, these people have no right or power to disallow that. Once published, a work is not anymore in the hands of its author, editor or publisher, it has become a document that belongs to the whole academic community, and its originators have lost definitively any control

or grip on it. Vlachos fails to understand that the world of zoological nomenclature is an independent world, as stated in the 'Principle of Zoological Nomenclature Independence' (Dubois 2011: 16–17; Dubois *et al.* 2019: 26–27, 67), which is implemented 'silently' throughout the *Code* although it is not mentioned as such. The *Code* has its own rules, which do not depend on the practices in other fields like non-nomenclatural scientific works or non-scientific works. The decision of publishers to deny and erase their past works, which poses strong deontological problems (Dubois 2020b), has no bearing on zoological nomenclature. Zoological nomenclature does not need to be allowed or not to work as it does to please people involved in other domains, including commercial publishers.

## ARTICLE 8 OF THE CODE

In order to support his interpretation that so-called 'retracted' papers do not exist anymore, Vlachos' provided a very strange 'interpretation' of Article 8 of the *Code*, that very few practicing taxonomists would probably adopt. He wrote: "Note that only Art. 8.1.2 contains the words '*when first issued*', so I assume that Art. 8.1.1 refers to the entire life of the paper, whereas Art. 8.1.2 refers only to the moment when the work was first issued." There is nothing in the *Code* to support this interpretation. The Glossary of the *Code* does not provide a definition of the terms '(to) issue' and 'issued', so that these terms must be understood in their 'common language' sense. Let us quote just then three definitions of the verb 'to issue' provided by well-known English dictionaries: "to produce or provide (something official)" (Procter 1995: 755); "go or come out (...); send forth, publish, put into circulation (...); be derived or result (...); emerge from a condition (...)" (Thompson 1995: 723); "supply or distribute (something)" (Pearsall 2001: 970). All other dictionaries give equivalent definitions. These definitions invariably point to a punctual act, an event that occurred only once, at a given time, not to a permanent condition: that of the *distribution* of something — in the case of zoological nomenclature, of a text or document. According to its characteristics (on paper, on disc or online, pre-registered or not), this distribution provides (or not) nomenclatural availability to this document. To state that a work was 'issued' means that it has gone through this process and must then be considered, once and for all, as *having been* 'issued'. This nomenclatural availability applies to this document 'for its entire life', but this is not the case for its 'being issued', which designates a single past historical event, that has occurred and cannot be repeated, modified or denied subsequently, not to a permanent repetition of this event. Denying this belongs in the domain of revisionism or denialism and should have no place in science.

The whole Article 8 of the *Code* concerns "what constitutes published work" *at the time* of its publication. It is written in the present tense ('is issued') and it concerns the criteria relevant for providing availability to a work when it is distributed, not in the past tense ('has been issued') to

describe characteristics that could be modified later. For example, the requirement of Article 8.5.3 that a work distributed electronically "be registered in the *Official Register of Zoological Nomenclature* (ZooBank) (...) and contain evidence in the work itself that such registration has occurred" is meaningful only at the time of distribution of the work, not later. This applies equally to all uses of the term 'issued' in the three Articles 8.1.1, 8.1.2 and 8.1.3, as well as in 8.2 concerning the disclaiming of publication, and there is in fact no compelling reason to add 'first' as a qualification of 'issued' in Article 8.1.1. This addition in the current version of the *Code* was possibly motivated in order to exclude clearly subsequent re-issues of the work from this criterion, as re-issuing a non-available work unmodified does not make it available. The meaning of the Article would be the same without this addition, as the only 'issue' of a work relevant for its nomenclatural availability is the original one. A work is issued once and for all; there has been one issue and no subsequent one.

Another word that is used in the *Code* as an equivalent to 'issued' is 'published', but these two terms are not strict synonyms. In the *Code*, 'issued' applies indiscriminately to any document being publicly distributed, at the time of its distribution, whether nomenclaturally available or not. This is indeed synonymous to 'published' as used in common language. But the use of 'published' in the *Code* is more restrictive. It does not only mean 'distributed', but 'distributed while respecting precise Criteria which provide nomenclatural availability to this work'. In order to distinguish the two meaning of the terms 'published' and 'publication', I recently (Dubois 2020a) proposed to keep them for the general and usual meaning of these terms, but to use 'promulgated' and 'promulgation' for the special act of 'nomenclatural publication', i.e., publication making a work available. Using these terms, it is appropriate to write that 'to issue' a publication in order to make it nomenclaturally available consists in distributing it in a way that promulgates it.

Contrary to what Vlachos (2020) wrote, a promulgated work is nomenclaturally available from the day of its original distribution, and remains permanently so. Its potential 'retraction' by anybody, motivated for example by so-called 'taxonomic vandalism' as mentioned in his final imaginary example, would not change anything to this. The only way to solve such problems, which are not so rare in zoological nomenclature (see e.g. Dubois *et al.* 2013: 28–29), is, and has been so far under the *Code*, through its invalidation by the Commission under the plenary power. This is a very efficient manner to avoid the bloom of nomenclatural problems and instability that would result from a 'liberalisation' of the Rules, providing the possibility for anybody to remove the availability of nomenclatural works and acts. The proposal of Vlachos tends to transfer the responsibility of such exceptional cases from the Commission to any individual in the scientific community or even outside of it, which would entail a 'deregulation' of zoological nomenclature in favour of individual interests, not for the common good.

ISSUED, PRODUCED, DISTRIBUTED, RELEASED,  
PUBLISHED, PROMULGATED, POSTED:  
PROPOSED DEFINITIONS FOR THE *CODE*

In order to avoid further idle discussions on this matter, I am proposing below a few formal definitions of some of the terms tackled above and related ones, for their possible inclusion, after proper consideration and discussion, in the Glossary of the *Code*.

ABBREVIATIONS

<i>a</i>	adjective;
<i>n</i>	noun;
<i>p</i>	past participle.

**Distributed**, *p.* • In the frame of zoological nomenclature, concerning a work: spread to several recipients. [1] Work consisting in a physical document (printed on paper or released on optical disc): spread as several identical copies. [2] Work released electronically: made publicly available online. • Common language term, hereby formally defined for use within the frame of the *Code*.

**Issued**, *p.* • In the frame of zoological nomenclature, concerning a work: produced and publicly distributed. • Common language term, hereby formally defined for use within the frame of zoological nomenclature.

**Obtainable**, *a.* • In the frame of zoological nomenclature, concerning a work: [1] in Articles 8.1.3 and 8.4.2.1 of the *Code*: producible, that can be produced; [2] in Article 8.1.2 of the *Code*: acquirable, that can be acquired. • Common language term, formally defined for use within the frame of the *Code* by Dubois & Aesch (2017: 41).

**Posted**, *p.* • In the frame of zoological nomenclature, concerning a work: publicly distributed but not conforming to the provisions of Articles 8–9 of the *Code*, and therefore nomenclaturally unavailable. • Common language term, formally defined for use within the frame of zoological nomenclature by Krell (2015) following Anonymous (2008).

**Produced**, *p.* • Made, fabricated, brought to existence. • Common language term, hereby formally defined for use within the frame of zoological nomenclature.

**Promulgated**, *p.* • In the frame of zoological nomenclature, concerning a work: distributed conforming to the provisions of Articles 8–9 of the *Code*, and therefore nomenclaturally available. • Term proposed by Pavlinov (2014) and later, independently, by Dubois (2020a: 51), in order to avoid ambiguity, for the meaning [2] of the term *Published* (see below).

**Promulgation**, *n.* • In the frame of zoological nomenclature, concerning a work: its public distribution conforming to the provisions of Articles 8–9 of the *Code*, therefore making it nomenclaturally available. • Term proposed by Pavlinov (2014) and later, independently, by Dubois (2020a: 51), in order to avoid ambiguity, for the meaning [2a] of the term *Publication* (see below).

**Public**, *a.* • In the frame of zoological nomenclature, concerning a work: obtainable (acquirable) by everybody, free of

charge or by purchase, either directly or after subscription, the latter being open to everybody. • Common language term, hereby formally defined for use within the frame of zoological nomenclature.

**Publication**, *n.* • [1] *General meanings*: [1a] the action of public distribution of a work; [1b] the work resulting from this action. [2] *Specialised meanings in the frame of zoological nomenclature*: [2a] the action of public distribution of a work conforming to the provisions of Articles 8–9 of the *Code* (see *Promulgation*), i.e.: either [2a<sub>1</sub>] printed on paper or released on optical disc after 1985 and before 2013, and distributed as several identical copies; or [2a<sub>2</sub>] released electronically after 2011; [2b] the work resulting from this action. • [1] Common language term. [2] Meanings of the term defined in the Glossary of the *Code*.

**Published**, *p.* • [1] *General meaning*: work publicly distributed. [2] *Specialised meaning in the frame of zoological nomenclature*: work publicly distributed conforming to the provisions of Articles 8–9 of the *Code*, and therefore nomenclaturally available (see *Promulgated*). • [1] Common language term. [2] Meaning of the term as defined in the Glossary of the *Code*.

**Released**, *p.* • In the frame of zoological nomenclature, concerning a work: made publicly obtainable (acquirable). • Common language term, hereby formally defined for use within the frame of zoological nomenclature.

**Work**, *n.* • In the frame of zoological nomenclature, any text or illustration, whether published or unpublished. • Meaning of the term as defined in the Glossary of the *Code*.

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