CASE No. 14

PROPOSAL FOR RECONSIDERATION OF THE HIERARCHY OF NOMENCLATURE STATUS OF GENERIC AND TRIVIAL NAMES AS RECOGNIZED IN THE CODE OF ZOOLOGICAL NOMENCLATURE (Z.N.(S.) 1565)

By Hobart M. Smith, (Department of Zoology and Museum of Natural History, University of Illinois, Urbana, Illinois. U.S.A.)

In spite of the existence of several published essays on the several levels of “availability” of trivial names in zoological nomenclature (Smith, 1945, Science 102 : 185-189; idem. 1947, 106 : 11; idem. 1949, Herpetologica 5 : 11-18; Blackwelder, Knight and Smith, 1950, Science 111 : 289-290, reprinted in 1953, Bull. zool. Nomencl. 8 : 27-28), the 1961 Code is very vague in treatment of the subject, particularly in not making it clear that a name may be occupied, and therefore published, and still not available; the Code is therefore not as clear-cut as it should be in use of the terms “published”, “occupied”, and “available”. It is here proposed that Chapters IV and V of the 1961 Code be expanded to describe a more clear-cut hierarchy of nomenclatural status of trivial names than it now does.

The hierarchy may usefully be thought of as consisting of five levels, as depicted in Fig. 1 and outlined as follows:

1. Publication
   A. Unpublished (nomina inedita)
   B. Published (nomina edita)

2. Occupancy
   A. Unoccupied (nomina inoccupata)
   B. Occupied (nomina occupata)

3. Availability
   A. Unavailable (nomina inutibilia)
   B. Available (nomina utibilia)

4. Identifiability
   A. Dubious (nomina dubia)
   B. Clear (nomina clara)

5. Validity
   A. Invalid (nomina invalida)
   B. Valid (nomina valida)

Publication

Publication under the 1961 Code is clearly set forth in Articles 7-9 of Chapter III. Any name which can be considered published by those criteria may then be considered from the standpoint of occupancy.

Chapter III confines itself to definition of publication on the basis of mode of reproduction and dissemination of the medium carrying the name, with one exception: names published anonymously after 1950. The latter inclusion is
inconsistent and unnecessary, since Article 14 and 17(7) make it plain that such names are “unavailable” presumably in the sense of having been published but having no nomenclatural status. It would be unwise to follow this line of thought consistently and thus to designate all of the other 12 types of unavailable (but, as of now, “published”) names listed in the second following paragraph as unpublished. Failing that, consistency suggests that names published anonymously after 1950 simply be regarded as unavailable, not as unpublished, deleting item 7 from Article 9.

**Occupancy**

The most useful context of occupancy is in relation to pre-occupancy: an occupied name preoccupies, therefore renders a later proposal of the same name unavailable. Unoccupied names do not preoccupy. Four sorts of names are occupied, yet never available under automatic provisions of the Code: (1) junior primary homonyms (except those whose generic taxa, known by one name, are different, *fide* Article 57c); (2) generic names ending in -ites, -ytes and -ithes (Article 20); (3) names rejected by the Commission for purposes only of the Law of Priority but not for the Law of Homonymy (Art. 79(a)(ii)); and (4) junior secondary homonyms suppressed before 1961 (Art. 59c).

Many “published” names are, of course, “unoccupied” and therefore “unavailable”; it should be made clear, however, that just because a name is unavailable it is not necessarily unoccupied. For example, Art. 19 states that incorrect spellings are unavailable; more important, they are unoccupied as is made clear by Arts. 32c and 33b. Other examples of published names that are unoccupied are: (1) *nomina nuda*; (2) names not using the Roman alphabet; (3) names that are not Latinized if the Roman alphabet is used; (4) non-binomial names; (5) names proposed after 1930 which are based on the work of an animal, or for trivial names lack a diagnosis, or for generic names, lack a type designation; (6) for a trivial name, absence of a generic allocation; (7) citation of a name solely in the synonymy; (8) after 1960, names proposed conditionally or for “variety” or “form”; (9) names for infrasubspecific forms; (10) names rejected by the Commission for purposes of both the Law of Priority and Law of Homonymy; and (11) names improperly formed (Art. 11e–g). In addition, if deleted from Art. 9 as recommended in the preceding discussion of “publication”, a twelfth item should be added: (12) names published anonymously after 1950.

Three minor corrections in Chapter IV, whether altered to include the concept and category of occupancy, merit passing attention. Article 16(a)(viii) should include the limiting expression “before 1931”, *fide* Article 24(b). Secondly, Article 17 should include an entry “before 1931, it was founded on the work of an animal”, *fide* Article 24(b). Thirdly, Article 17(5) should read “it was originally proposed for what is known now to be an organism but was not then considered an animal; or”.

**Availability**

Available names are defined in the 1961 Code as those that satisfy the provisions of Chapter IV—a rather impractical definition since Chapter IV is five pages in length and includes 11 articles. By the interpretation here
recommended, available names are *occupied names that can be used as valid names if they should become senior synonyms*; unavailable names cannot be used as valid names even if they should become senior synonyms. The four sorts of names that are occupied but are never available under automatic provisions of the Code are listed in the first paragraph in the discussion of "occupancy".

For the sake of simplicity it seems best not to require that the term "unavailable" be restricted to occupied names, or "unoccupied" to published names (Fig. 1); thus a name may be unavailable because it is unoccupied or unpublished as well as failing to satisfy the particular requirements of available names as opposed to other occupied names; but not all unavailable names are unoccupied or unpublished. The terms are thus not used interchangeably, but in an overlapping sense; all unpublished names are unoccupied and unavailable, and all unoccupied names are unavailable; but only part of unavailable names are unoccupied, and only part of unoccupied names are unpublished. To make these terms mutually exclusive in the context of taxonomy would be unduly complex.

**Identifiability**

Unfortunately not all available names can readily be identified. A large number of them are quite conformant with requirements for availability but cannot definitely be allocated with the proper infrageneric taxon. Such names are *nomina dubia*, whereas names identifiable to the recognized infrageneric taxa are *nomina clara*. All nomina clara can readily be allocated to one or the other of the two divisions of the next level in the hierarchy (invalid and valid names), but nomina dubia by their very nature cannot as such advance in hierarchial consideration; if by arbitrary fixation or discovery of new evidence they are placed with some definite taxon, they then no longer remain nomina dubia but become nomina clara and as such can be determined as valid or invalid names.

<table>
<thead>
<tr>
<th>Publication</th>
<th>Occupancy</th>
<th>Availability</th>
<th>Validity</th>
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<tbody>
<tr>
<td>nomina inedita</td>
<td>nomina inoccupata</td>
<td>nomina inutilinia</td>
<td>nomina invalida</td>
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<tr>
<td>nomina edita</td>
<td>nomina occupata</td>
<td>nomina utilibia</td>
<td>nomina dubia</td>
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<td>nomina clara</td>
<td>nomina valida</td>
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<tr>
<th>Publication</th>
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The "nomen oblitum" rule (Article 23b) does not require a new category in the hierarchy of nomenclatural status, because even though the status of such names is not specified they would naturally become unavailable either for the purposes of both the Law of Priority and the Law of Hononymy (therefore "unoccupied"), or for the purposes of the Law of Priority alone (therefore "occupied" but "unavailable").

Validity

Valid names are appropriately defined and their determination properly prescribed by the 1961 Code. A single useful addition would be the clear establishment that the category "invalid" is inclusive of the terms unavailable, unoccupied and unpublished, but not vice versa. The relationships of these terms is depicted in Fig. 1.

Fig. 1. Proposed nomenclatural loci for generic and trivial names in zoological taxonomy. Blocks are equivalent from right to left, and vice versa, as indicated by dotted lines; they are not equivalent from top to bottom. The two arrows indicate only that nomina dubia can become nomina clara, and vice versa; no other vertical exchange or equivalence exists under any one Code.

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