



BIONOMINA

2

**The *International Code of Zoological Nomenclature* must be drastically improved
before it is too late**

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Table of contents

Abstract	4
Key words	4
Abbreviations and printing conventions	5
The need of a <i>Code</i>	5
Excellency of the theoretical bases of the <i>Code</i>	6
Linking the present and the past	8
Terminology	9
Structure and plan of the <i>Code</i>	13
The logical structure of the Rules	13
The plan of the <i>Code</i>	13
Basic Principles of the <i>Code</i> : a necessary update	15
General Principles of the <i>Code</i>	16
The Principle of Nomenclatural Independence	16
The Principle of Nomenclatural Foundation	16
The Principle of First-Reviser	17
First stage of the <i>Code</i> : nomen availability	17
Criteria of availability	17
The Principle of Nominal-Series	19
The Principle of Binomina	21
The Principle of Coordination	22
The Principle of Neonymy	22
Nomenclatural availability: synthesis	23
Second stage of the <i>Code</i> : nomen allocation	23
The Principle of Onomatophores	23
The need of deposition of onymophoronts in permanent collections	25
Nomenclatural allocation: synthesis	25
Third stage of the <i>Code</i> : nomen validity and correctness	25
Criteria of validity	25
Synonymy	26
Homonymy	27
Exceptions, usage, stability and robustness	27
The binding value of the <i>Code</i> as a universal system	28
Useless or destructive personal debates among taxonomists	30
A wrong message to non-taxonomists	32
A threat against natural history museums	32
Categories of usage	33
The Principles of validity	35
Correctness	35
Nomenclatural validity and correctness: synthesis	36
Fourth possible stage of the <i>Code</i> : nomen registration	36
Higher-ranked and lower-ranked taxa nomenclatures	36
Nomenclatural ranks and taxonomic categories	37
Higher-ranked taxa nomenclature	38
The need of Rules for higher-ranked taxa nomenclature	38
The ambiostensional nomenclatural system	39
Other systems	41
Lower-ranked taxa nomenclature	42
A cornucopia of “details”	44
Availability	44
Diagnoses and cladognoses	44
Nomina and spellings	45
A taxonomy of nomina and spellings	45
Structure and length of nomina	45
Nominal-complex	48
Allocation	50
Onomatophores	50
Categories of onomatophores	50
Categories of symphoronts	50
Onymotopes	51
Modes of designation of onomatophores	52
Aporionyms	53

Validity and correctness	57
Nomenclature of “strange species”	57
Secondary homonymy	57
Family-series nomenclature	59
Implementation of changes into the <i>Code</i>	60
<i>Code</i> -compliance in publications	63
Conclusions	65
Acknowledgements	66
References	67
Appendix 1. Glossary	77
Appendix 2. Nomenclatural Principles	96
Appendix 3. Figures	99

Abstract

At the beginning of the century of extinctions, science has only inventoried a very small proportion of the living species of the globe. In order to face the taxonomic urgency that results from this taxonomic gap combined with the biodiversity crisis, zootaxonomy needs efficient, rigorous and automatic nomenclatural Rules, that allow to spend a minimal time on nomenclatural problems—rather than investing time, energy and money in renaming millions of already named taxa in order to follow alternative nomenclatural systems, e.g., “phylogenetic” ones, that furthermore do not show theoretical superiority to the current Linnaean-Stricklandian one. The current *Code*, result of a 250-year improvement process, is based on very sound and healthy Rules, being theory-free regarding taxonomy, relying on objective allocation of nomina to taxa by a system of ostension using onomatophores, and on an objective basic Principle, priority, for recognizing the valid nomen of a taxon in case of synonymy or homonymy. Nevertheless, this nomenclatural system is certainly not perfect. It should be modified at least in nine directions: (1) it should adopt a technical terminology avoiding possible misinterpretations from outsiders of the field and even from specialists, and allowing a precise formalisation of its mode of functioning; (2) its plan should be drastically modified; (3) its Principles should be redefined, and some added; (4) material evidence for the allocation of nomina to taxa through specimens deposited in permanent collections should be given more weight; (5) it should incorporate all nomina of higher taxa, providing clear and strict universal Rules for their naming, whereas conserving the traditional nomina largely used in non-specialized systematic literature; (6) it should allow for the recognition of many more ranks at lower nomenclatural levels, i.e., just above genus, between genus and species, and below species; (7) it should provide much more stringent Rules for the protection against priority of “well-known” nomina or sozonyms; (8) various “details” should be addressed, various Rules and Recommendations changed before a new edition of the *Code* is published; (9) the procedure of implementations of changes in the *Code* should be modified in order to involve zootaxonomists of the whole world in the decisions. In several instances, the Rules of the *Code* should become much more compulsory for all zoologists, editors and publishers, to avoid the publication of endless and sometimes most detrimental discussions among taxonomists which give a poor image of nomenclature and taxonomy among the biological sciences, such as bitter discussions about the “best” nomen to be used under a so-called “usage” philosophy, or about nomina to be applied to higher taxa. *Code*-compliance in zootaxonomic publications should be highlighted, and editors and publishers should require from authors who follow alternative nomenclatural Rules (or no rule at all) to make it clear by using particular modes of writing their nomina. It is argued here that if the *Code* of the 21st century does not evolve to incorporate these changes, it will prove unable to play its role in front of several important recent theoretical and practical developments of taxonomy and run the risk of being abandoned by a part of the international community of zootaxonomists. The latter could then adopt alternative “phylogenetic” nomenclatural Rules, despite the severe practical problems and theoretical flaws posed by such projects. This would be most detrimental for all comparative biological disciplines including systematics, and even for the unity of biology. In the course of this discussion, a few recommendations are given concerning the standards and guidelines suggested by recent authors for a good, modern, integrative taxonomy.

Key words. Taxonomy, nomenclature, *Code*, Principles, terminology, availability, allocation, specimens, types, onomatophores, collections, validity, registration, ranks, higher taxa, priority, usage, spelling, change in Rules, integrative taxonomy, phylogeny, century of extinctions, taxonomic gap, taxonomic urgency