



***Bionomina*, a forum for the discussion of nomenclatural and terminological issues in biology**

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“No one wants to alter the language of common sense, any more than we wish to give up talking of the sun rising and setting. But astronomers find a different language better, and I contend that a different language is better in philosophy. (...) I conclude that common sense, whether correct or incorrect in the use of words, does not know in the least what words are. I wish I could believe that this conclusion would render it speechless.”

Bertrand Russell 1953: 306–307

Introduction

Science is an encounter between reality and language. It is based on objects and facts, apprehended through observation and experimentation, and on descriptive, predictive and explanatory concepts, models and theories, expressed through language. Accurate, unambiguous and universal communication is crucial for science to operate and develop. As well stated by clear-sighted scientists and historians of science like Ernst Mayr, an important, although often underrated, ground of disagreement, or of false agreement, among scientists, is the terminology they use. Not rarely, different colleagues or schools of thought erroneously think they disagree (or agree), simply because they use different terms for the same concept, or the same term for different concepts. Therefore scientific terms, i.e., simple *words*, play a crucial role in the scientific activity.

This is particularly true of biology, particularly of the fields that deal with the comparative and evolutionary aspects of this discipline (systematics, including phylogenetics, taxonomy and nomenclature, as well as comparative anatomy, ethology, ecology, biogeography, etc.). These disciplines have witnessed, especially in the last half-century, an unparalleled increase of technical terms designating particular concepts.

Some of these terms are in widespread use, whereas others appeared in a few publications only. A problematic fact is that different, more or less formal, “schools of thought”, or simply groups of colleagues from different backgrounds and traditions, sometimes use different terminologies, which may render communication among them difficult or faulty. This is aggravated by the contemporary specialization into distinct disciplines (which tend to employ different terms, concepts and methods), combined with the fact that many questions in current biology require interdisciplinary collaboration across different fields. This problem has long been identified as a major one in the domain of biological nomenclature, where it has soon been recognized that, if communication about living organisms was to be universal and unambiguous, it was necessary to devise a set of regulations to identify and invalidate synonyms and homonyms, and to have a single scientific name for a given taxon within the frame of any given classification or taxonomy. This was followed by the implementation of the international Codes of nomenclature that are in force nowadays. However, similar issues also exist in many other branches of biology, and no “Code of terminology” has been devised and agreed upon concerning the terms to be used, even for well-identified concepts.

As a matter of fact, whereas in nomenclature the basic Principle used to establish the valid nomen of a taxon is Priority of publication (sometimes tempered by “usage”), no such Principle is in force for most other terminologies used in biology. Various guidelines have been and can be used to establish the preferred term for a given concept, such as priority, usage, appropriateness, etc. Given the absence of a general consensus on the “best” system, each case has to be considered separately, and the respective merits of the different proposals have to be compared and critically weighted.

There currently exists no journal in the world specifically devoted to terminological problems in biology. Although some journals focus on particular aspects such as zoological and botanical nomenclatures of taxa, none addresses general aspects of nomenclatural systems, or other terminological questions. The aim of this new journal, *Bionomina (International Journal of Biological Nomenclature & Terminology)* is to provide a forum for discussion in this field.

Even before we started publication, the title of the journal was the matter of a hot discussion among members of the Editorial Board. We finally chose the title *Bionomina* with a subtitle, although some of us were unhappy with a term coined by combining a Greek root (βίος, *bios*, “life”) with a Latin root (*nomen*, “name”). The majority of us thought that, despite being such a “chimera” (as are many other technical terms of contemporaneous language), this term was short, euphonious and clear for all biologists worldwide, and is further clarified by the subtitle. However, in a way, this debate was a kind of foreshadowing of the discussions we will have in the journal.

This refereed journal will exist in two versions, a traditional one on paper and an electronic version, both being distributed at the same date. The basic principles of functioning of this new journal will be the same as those of its sister publications *Zootaxa*, *Phytotaxa*, *Molluscan Research* and *Zoosymposia*, also published by Magnolia Press.

The following list of topics is given as an indication of the domains of biological nomenclature and terminology covered by the journal, but is not restrictive, and is liable to be expanded according to needs and suggestions from editors, readers and prospective authors.

Nomenclature, terminology and related issues

The words *nomenclature* and *terminology* are of frequent use in science. They refer to both the process of designing or choosing names for objects in a science or other discipline, and the resulting body or system of such names in a particular field. Although most users tend to prefer one of these terms in certain situations, dictionaries or internet sites are of little help to decide the “proper” sense of these terms, as both can be used interchangeably, according to the preferences of different persons or groups of persons. As such, they are a perfect illustration of one of the purposes of this new journal, which is to discuss the methods to be used to fix the “proper” meaning(s) of technical terms.

In this journal, no prescriptive use of these two terms will be in force, but authors are strongly encouraged to explain in which sense they are using them. A common practice is to call *nomenclature* the system of scientific names applied to formal taxa of organisms, whereas *terminology* designates the body of scientific or technical terms applied to biological objects, structures or concepts other than taxa. Nomenclature as such understood is part of the larger discipline of *systematics*.

The term *systematics* was derived from the Greek σύστημα (*systema*), “group, troupe, system of doctrines, institutions, political constitution, philosophical system”, used in the title of Linnaeus’s series of books presenting his classification of nature, the *Systema Naturae*, the tenth (1758) and twelfth (1766, 1767) editions of which are particularly famous. Various meanings have been given to this term in the past, from a narrow one meaning taxonomy as defined below to a wide one covering all comparative domains of biology, including not only phylogenetics, taxonomy and nomenclature, but also comparative anatomy, ethology, ecology, biogeography, etc. This latter meaning of the term is adopted here.

The term *taxonomy* was coined by de Candolle (1813: 19) on the basis of the Greek word τάξις (*taxis*), “order, arrangement”¹. More than one century later, Meyer (1926: 127) coined the term *taxon* to designate any taxonomic unit, at any hierarchical level, recognized by a biologist, whether named or not. The concept was much older, since it appeared already in Linnaeus (e.g., 1758), who used for it the term *phalanx*, borrowed from the Greek φάλαγξ, “line of battle, order of battle”. However, for more than one century and a half no general term was regularly used for this concept, although terms were used for some of these units, at some peculiar hierarchical levels or “ranks” (species, genus, family, class, etc.). Although it “looks like” being Greek, the term *taxon* is not a genuine Greek term, a fact which can be checked in any ancient Greek dictionary. As such, the use for it of the plural *taxa* is not justified and, according to grammarians (e.g., Quirk *et al.* 1972: 185), the regular plural *taxons* would probably be more correct, but the tradition of use of *taxa* is well-established and acknowledged by dictionaries, in English at least².

The term *nomenclature* is traditionally used in biology in the restrictive sense it has in the titles of the international Codes of nomenclature that are currently in force for taxa of animals (Anonymous 1999), plants and fungi (McNeill *et al.* 2006), prokaryotes (Lapage *et al.* 1992; Euzéby 2007), viruses (Fauquet *et al.* 2005) and cultivated plants (Brickell *et al.* 2009). The term nomenclature was borrowed from the Latin *nomenclatura*, where it was based on the term *nomen* (plural *nomina*), “name”. This latter term has long been used in zoological and botanical nomenclatures in expressions like *nomen nudum*, *nomen dubium*, *nomen oblitum*, etc. Dubois (2000) proposed to use it alone, without adjectives, as the technical designation of a “scientific name”, i.e., a name formed and used in a manner complying with the formal Rules of a Code and with the purpose of designating a taxon formally recognized in a taxonomy. This use of the term is encouraged in *Bionomina*. This allows a clear distinction between scientific names and other kinds of “names” used in biology and particularly in nomenclature (vernacular names, names of authors of nomina and/or publications, names of localities, etc.).

A scientific classification or taxonomy of living organisms can be established and used without a nomenclature. In pre-Linnaean times, and even in the first works of Linnaeus, each taxon was designated by a long periphrasis or diagnosis, which was supposed to provide a list of characters allowing to differentiate a taxon from its close “allies”. This method was still in force in the well-known works of Linnaeus (1753, 1758, 1766, 1767) for some taxa at intermediate ranks used in some cases between the basic and “mandatory” ranks of class, order, genus and species (see Dubois 2007). Still nowadays, in many works some taxa are recognized and diagnosed but not named, especially in the frame of new taxonomic arrangements resulting from recent cladistic analyses. Another alternative system to nomenclature is through the uses of letters, codes or numbers for taxa, i.e., *numerclatures* and related systems (see references to such systems in Dubois 2005: 369). Such systems are appropriate and sufficient for computer treatment of taxonomic data, but are not convenient for

1. The proper spelling for this term has been debated, and *taxinomy* appears to be the correct one (Pasteur 1976; Fischer & Rey 1983; Casevitz 1990), but *taxonomy* is usual in English. In French, both spellings *taxinomie* and *taxonomie* are in use, with a traditional preference for the former one.
2. In French, both plurals *taxa* and *taxons* are regularly used.

direct communication between humans, who normally use words to refer to objects or concepts (Dubois 2005).

Another useful term is *onymology* (Dubois 2000), to designate the field of the theory, epistemology and history of nomenclatural terms and concepts. It comes from the Greek root *-ωνυμος* (*onymos*), derived from *ὄνομα* (*onoma*), “name” and used in various classical Greek terms (*ἀνώνυμος*, *ψευδώνυμος*, *ὀμώνυμος*, etc.).

Finally, the word *terminology* (from the Latin *terminus*, “term”, derived from the Greek *τέρμα*, “boundary, mark”, and the Greek *λόγος*, “speech”) is often used to designate any kind of process of naming objects or concepts other than taxa in biology, and the system of such terms resulting from this process. In this context, “term” can be a name, an adjective, a verb, or a combination of names, adjectives and/or verbs. This use of the word terminology is not mandatory in *Bionomina*, but any other use should be explicated.

General topics

Two basic issues in terminology and nomenclature are *synonymy* (different terms used for the same concept or taxon) and *homonymy* (same term or similar terms used for different concepts or taxa). The problem of synonymy is amplified by the fact that the meaning of a term often *evolves* through time, and this process may result in the same term having different, and sometimes contradictory or incompatible, meanings, while being considered by many to be the “same” term. *Bionomina* will explore critically the various approaches that have been used in the past and that are currently used to decide which term should be kept as the valid one in such situations: priority of publication, widespread usage, “consensus” or tradition, appropriateness of the term for the concept at stake, length, palatability and “euphony”, subsequent “more appropriate” redefinition, decisions of international scientific meetings, etc.—not to mention simple “personal preference” of some authors, without explicit rationale. Could a more general attitude and more precise guidelines be adopted? Should the same principles be applied to all situations, or should different principles be implemented in different domains? Debates on these crucial issues of terminology and nomenclature will be encouraged in *Bionomina*.

The problems posed by synonymy and homonymy are enhanced by the frequent lack of knowledge of the mere existence of synonyms and homonyms. *Bionomina* encourages the submission of manuscripts that attempt to address these questions and that provide ideas and techniques for solving them (e.g., the use of ontologies as controlled vocabularies in databases).

Terms are embedded in particular living languages. This situation has several important consequences, and needs to be considered from a linguistic perspective, which is rarely the case. Different languages will have different cultural backgrounds, and different ways to classify concepts. In one and the same language, different levels of language coexist, and the meaning of terms may vary accordingly. Authors often try to adapt their level of language to fit the aimed audience, which creates several sets of pseudo-synonyms. Merging the fields of biology and linguistics is a promising field of investigation.

Terminological problems involve problems of standardization and objectivisation. With the increasing importance of biological databases and with the exponentially increasing amounts of data produced in biology, knowledge and data management, their organization and their proper documentation become more and more important, and many biologists start to realize the necessity for standardizing data (Vogt 2009). *Bionomina* will address the aspects of this dynamic and promising field that are connected to language.

Nomenclature of taxa: a lively field

Several international Codes of nomenclature of taxa (i.e., formally recognized taxonomic groups of organisms) are currently in force, dealing with animals, plants and fungi, bacteria and viruses, and cultivated plants. In general, these different Codes follow the guidelines of the first Linnaean-Stricklandian-Candolleian Codes of nomenclature of the 19th century, and they share some important (although often untold) features:

(1) they rely on a *Nomenclatural Founder Principle* (the status of a nomen being usually established in the publication where it is created, not through “usage” in subsequent works); (2) they are *theory-free* for the allocation of nomina to taxa (which is made automatically through ostension using “types” or onomatophores, not through intensional or extensional definitions of taxa); (3) they are based mainly on *Priority of publication* for establishing the valid nomina of taxa.

Although some of these Codes have been long in force, their basic Principles and many of their Rules are still the matter of lively debates. These debates have been intensified by recent proposals, such as that to shift publications of nomenclatural acts from paper to online media, and to require a mandatory online registration of nomenclatural acts. Discussions of these matters have been so far restricted to meetings and informal discussions among colleagues, as well as to online (i.e., semi-private) discussions in some internet “forums”. Few such contributions have yet been published in permanent documents such as journals and books, partly because of a reluctance of some journals to publish some opinions. To progress, science needs free discussion, not censorship. Therefore the existence of an independent journal dealing with these questions in all freedom should promote the development of a healthy, unbiased debate.

Taxonomic nomenclature faces other important challenges. Although they rely on the same philosophical foundations, the Codes mentioned above use largely different terminologies, and Rules slightly or widely different in several important respects. This explains the failure, so far, of the attempts to unify these Codes under a single *Biocode*. For example, subjecting zoological and botanical nomina to the same Rules would unavoidably lead to change the nomina of many taxa either in one or in both these groups of organisms. The terminological differences regarding the formulation of the Rules, however, could easily be suppressed or greatly reduced by adopting a common terminology for the same concepts, if not a common Code.

Another recent development is the appearance of several alternative nomenclatural systems, based on different philosophical foundations, which are usually called “phylogenetic nomenclatures”. This includes the *Phylocode*, supported by an international society. In such systems, the allocation of nomina to taxa is not theory-free, but is based on intensional definitions of taxa.

Important debates have raged in the last two decades between the supporters of “traditional” theory-free nomenclatural systems and those of theory-bound “phylogenetic” ones. Unfortunately, these debates have been carried out mostly by two distinct groups of authors who rarely met and seldom had direct dialogues. Apart from a few notable exceptions, the editorial boards of existing journals tend to favour one of these “schools”, and tend to deny others the right to reply. The debates must be followed in different journals, that furthermore are not specifically dedicated to conceptual aspects of nomenclature and taxonomy, which results in the review processes for such manuscripts being often questionable. *Bionomina* intends to publish papers from different “schools”, as well as debates and replies to previously published papers. Our Editorial Board is composed of professionals who recognize themselves in different “schools” or in no school at all.

An important problem of any discussion between the different “traditional” Codes of nomenclature, as well as of between them and alternative nomenclatural systems, is posed by the existence of different terminologies for the same concepts, or the use of the same terms for different concepts. Clarification of the debate between supporters of these different approaches to the nomenclature of organisms would be facilitated by the adoption of a common terminology for the designation of the basic concepts they use, such as “taxon”, “rank”, “category”, “type”, “available”, “valid”, “correct”, etc.

Another domain poorly explored until now is the relationship that exists or may exist between formal taxonomic units recognized and named by taxonomists according to nomenclatural rules, and “informal” units of biodiversity recognized by ecologists, conservation biologists or other disciplines of comparative biology, and that receive designations (names, or codes, or numbers) incompatible with the current Codes of nomenclature (Dubois 2006). This is a promising domain of comparative terminology to the development of which *Bionomina* intends to contribute.

Morphological and anatomical terminology

Correct identification of homologous anatomical, morphological and functional characters, structures, tissues or organs, both across different organisms and during ontogeny, is a fundamental step of comparative and evolutionary biology. Language plays an important role in this process. Different terminologies used to designate identical or homologous structures result in misleading comparative, phylogenetic and evolutionary conclusions. Different traditions exist in different countries, languages or research “schools”, which act as a brake against a unification of terminology in this domain.

Part of the linguistic problems of morphology results from the lack of a standardized, formalized and commonly accepted descriptive methodology and terminology, and the lack of a general rationale for the delimitation of morphological traits. Terms and descriptions therefore vary from author to author, the meaning of a term often changes through time, and morphological terminology is often restricted to a specific taxonomic group and cannot be easily transferred to others. This non-standardization can, in scientific practice, lead to identically described structures that are in fact not identical, or to divergent descriptions of one and the same morphological structure. Morphological terminology is often based on homology assumptions, and has problems with comparability, reproducibility and transparency. Some authors (e.g., Vogt *et al.* 2010) argue that homology must be strictly separated from the definition of types of morphological objects, and that morphological terms and concepts should be defined without reference to taxa and hypotheses of homology, preferably purely anatomically, and should clearly indicate the trait’s active participation in a specific biological process. *Bionomina* will be open to discussion of this point of view and adverse ones.

Other terminologies in biology

Many other fields of biology, and particularly of comparative and evolutionary biology, involve terminologies that are the subject of lively discussions. Just to mention a few, they include all debates around the taxonomic and evolutionary terms “species”, about concepts and terms dealing with speciation, with reproductive modes and patterns (including gametogenesis and modes of initiation of eggs’s development, and various kinds of sexual and metasexual reproduction), with hybridization, with perturbation of developmental clocks, with genetic and epigenetic anomalies, with cladistic patterns of relationships, with evolutionary ecology, population biology, biogeography, conservation biology, biotic pollution, etc. All other biological disciplines, from neurosciences and physiology to genetics and molecular biology, also have terminological problems and questions. One example is how in developmental biology normal stages of organisms have been recognized. These are convenient for purely developmental purposes, but this approach can turn out to be problematic for understanding the evolution of development (Love 2010). Any review and discussion relating to the terminologies of biology will be welcome in *Bionomina*.

Semantic discussions are not, as some put it, “pedantic” ones. Scientific errors, wasted effort and duplication could be avoided thanks to shared lucid rationalization of terminological practices and principles. These questions do not have only “theoretical” implications, but also social ones, considering the costs and time expenditure involved in having competing standards and criteria (as exemplified by adoption of single standards of measurement).

Modern biomedical databases contain enormous amounts of information and must be devised in such a way as to allow conservation of and access to this information in the future. This is not just an issue of terms and naming. Philosophically sound standards for structuring information using basic categories and bio-ontologies are needed, so as to ensure that computerized inferences drawn from these databases do not lead to inconsistent results (Smith *et al.* 2003; Vogt 2009).

Evolving concepts, evolving terms

A balance must be sought, when dealing with terminological concepts, between the opposite needs to stabilize terminology (resulting in optimal communication) and to allow reflection in the language of the permanent evolution of scientific views and concepts. Critically important terms like individual, species, character, gene, homology, etc., have been conveying continuously changing meanings, thus often inviting people to abandon the old terms, or to add qualifications to them, or to replace a term with a multitude of specialized terms corresponding to different meanings of the old one. A *chronological* approach to terminological issues, as found for example in the *Chronological English Dictionary* (Finkenstaedt *et al.* 1970), would certainly be most enlightening and useful. The proper solution to these issues cannot result from a rigid attitude applied indiscriminately in all cases, but requires a proper critical survey of each situation, seeking for the best for unambiguous and universal communication between scientists worldwide and through time.

The definitions and uses of terms may change during history, but, even at one point in time, different definitions may be debated and favoured. It may appear uncontroversial that the historical change of scientific concepts is advantageous, but a critical approach is needed to ascertain why the novel definition is actually an improvement. It is not always clear whether having different conceptualizations is a problem or whether a context-sensitive use of scientific terms can within certain bounds be advantageous. Pluralists about species concepts clearly favour diversity of use, but here one could argue that one has to clearly distinguish separate species concepts under different terms. Even among molecular geneticists, there are several alternative definitions of the gene concept. Another example is the concept of evolutionary novelty, with different definitions being currently debated (Moczek 2008).

As new biological disciplines emerge and develop, and existing ones evolve or are revolutionized, researchers active in these areas could be encouraged to discuss translations and comparisons of their developing conceptual fields to already existing neighbouring or “foundational” fields or areas, focusing on terminological issues.

Terminological issues have important practical consequences in society. They interfere not only with the way science functions but also with the way it is received, understood or supported by decision-makers and politicians of science. Terminological changes have occurred in most domains of the intellectual, cultural and practical life, especially in the recent decades. They may be reflected in seemingly trivial matters like the names of institutions or of scientific disciplines. It is certainly not innocent if, in many countries and institutions, scientific disciplines like “zoology” or “embryology” do not appear any more, suggesting that real biological entities like “animals” or “embryos” are no more “objects of science” and that only concepts, like “evolution” or “development” are worthy of this status. A critical approach of these issues is needed, and will be offered a field of expression and discussion in *Bionomina*.

Other issues that will be explored in *Bionomina* are issues of terminology in relation with questions of human gender and of anthropomorphism in concepts and language (Bleier 1984; Hoquet 2009), as well as matters related to the translation of scientific terms and texts from a language to another one.

***Bionomina* as a forum**

Science progresses both by continuous increase of factual knowledge and theories, and by “revolutions” that challenge once admitted facts and theories. Debates, confrontations and even polemics are essential for the development of science, and freezing discussions and criticisms through any “conservative” system (either promulgated by States, or unofficial but dominant ideas imposed, e.g., by providers of salaries and funds for research, by research directors or simply by editors and referees of journals) hampers scientific progress.

Except in the domain of the nomenclature of taxa, the problems addressed in this journal will probably never be solved by a “Code” of any kind. The traditional Codes of nomenclature claim to respect the freedom of taxonomic thought, and except in a few situations they do so. But there is no “Code of taxonomy”, and this

is fortunate. Several taxonomic “schools” exist and must be given the chance to publish their works in order for the whole scientific community to decide which one finally wins the agreement of most scientists. Science needs freedom to go on, not “official science” decided by committees and groups. Every time an “official” science has been promulgated, this has been at the expense of scientific progress: just remember Lysenko. Censorship is not a solution, and official lists of “authorized” terms, journals or research subjects neither. Science does not need “politically correct” thinking, it needs debates, contradictions and free expression of disagreement.

The tradition of discussion and confrontation of divergent opinions on all scientific matters was very lively in the scientific periodicals of the 19th and early 20th centuries, which often published papers defending opposite points of view, including sometimes several successive replies from either side. This tradition has weakened, and too few periodicals nowadays accept to publish “forums” confronting different opinions, most periodicals rather tending to adhere to a “school of thought”.

The purpose of *Bionomina* is to open a space of free discussion among colleagues involved in or interested in all aspects of the terminology of comparative and evolutionary biology, including, but not limited to, taxonomy and nomenclature of taxa. Authors having different opinions are encouraged to present them in a documented and argued manner.

Editorial policy

The Editorial Board (EB) of *Bionomina* is international and composed of competent specialists of the various domains of biological nomenclature and terminology to be covered by the journal, *and* willing to contribute to a collective discussion of these problems. People convinced that they hold the only and final “truth” and just want to express their ideas under an “argument of authority” approach are not invited to join our team. We need open-minded persons willing to participate in a debate.

Members of the EB will be in charge of scientific domains covered by their expertise (e.g., zoological and botanical nomenclature under their respective codes, *Phylocode*, evolutionary theory, taxonomic concepts, species and speciation, morphological terminology, etc.). Each manuscript will be sent directly by the author to one of them, who will act as Corresponding Editor (CE) for that paper. The CE will first check whether the manuscript does indeed fall within the editorial scope of the journal, and within his/her domain of expertise, and, if so, send it for advice to two or more referees, who can be either members of the EB, or not. If applicable and possible, the CE will select referees among different “schools”. For each manuscript, after a dialogue between the author(s) and the CE, the final decision will be in the hands of the CE.

Compared with many other periodicals, however, members of the EB of *Bionomina* agree to review manuscripts submitted to the journal according to a distinction between two different kinds of comments: mandatory suggestions and simple recommendations. *Factual mistakes* (e.g., concerning the rules of the nomenclatural Codes, or regarding the history of concepts and terms) will be the matter of *objective proposals of change*. These must be followed by the authors to modify their manuscripts, and not doing will be a reason of rejection of the paper. Recommendations regarding the clarity of language and argumentation may also fall in this category, if the original is too obscure for a “normal” reader not being highly specialized in the field covered by the paper. On the other hand, *subjective recommendations*, based on *differences of opinions* between the author of the manuscript and the referee or CE, can be offered, but as *advice* aiming at clarifying the paper, replying to some potential criticisms and/or making it more convincing. Refusal to follow these suggestions should be briefly clarified by the author to the CE, but cannot be alone a reason for refusing the manuscript. In other words, no censorship will be exerted on the opinions of the authors. We consider that the author(s) of a paper, not the CE or referees, is/are alone responsible of its content. However, another ground for rejection of a paper may be that it just paraphrases previous contributions on the same question, without bringing any new information or data. Opinions may be strongly defended by an author against different

opinions expressed in another contribution, provided this involves no *ad hominem* attacks against living or deceased colleagues, or against groups or institutions.

Bionomina intends to play several roles regarding nomenclature and terminology: (1) offering a historical and descriptive perspective regarding practices and traditions; (2) providing an epistemological approach about the different conceptions of nomenclature, terminology and philosophies of the naming process; (3) opening a forum for confronting different opinions; (4) seeking a balance between prescriptive or normative goals and descriptive, informative and clarifying aims, i.e. providing a precise and concise lexical starting point; and, (5) in cases where consensus emerges (possibly as a result of meetings), playing a role of proposition of methodologically more prescriptive recommendations to the international community of biologists.

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