



Introducing the *Draft BioCode* (2011)

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Abbreviations

- IAPT. International Association for Plant Taxonomy.
ICB. International Committee on Bionomenclature.
ICSEB. International Congress of Systematic and Evolutionary Biology.
IUBS. International Union of Biological Sciences.
IUMS. International Union of Microbiological Societies.

As information on the world's biota becomes increasingly integrated across different groups of organisms, from bacteria and fungi to animals and plants, there is a concomitant rising need for a consistent and harmonized approach to the regulation of scientific names. The *BioCode* initiative represents a concerted effort, by biologists intimately involved in the operation of the current system of separate codes, to devise a unified approach to the future naming of organisms of all kinds. This need has become pressing in view of common issues that the separate organismal codes now have to address, consequent on the rapid changes taking place in global informatics, database architecture, molecular systematics and ecology, and electronic publication.

The *Draft BioCode* (2011) is most appropriately viewed as a framework over-arching the practices of the current series of codes, but which also addresses ways in which some of the key issues of current concern in systematics could be handled by all codes, for example the registration of new names and electronic publication. In addition, it has been drawn up so that its provisions can be adopted at the appropriate time for any particular group of organisms, at any rank or range of ranks. Such adoption is to be determined by the appropriately mandated international body if and when the necessary structures exist and are operational.

The advantages of moving towards a more harmonized system were realized at a Systematics Association-sponsored symposium held at the Third International Congress of Systematic and Evolutionary Biology (ICSEB III) in Brighton (UK) in 1985. IUBS then established a standing committee on biological nomenclature after debates at the 22nd IUBS General Assembly in Budapest (Hungary) later that year. In 1988, following discussions during the XIVth International Botanical Congress in Berlin (Germany) in 1987, and with the support of IUBS and the International Association for Plant Taxonomy (IAPT), an *ad hoc* group including representatives of all five representatives of the committees in charge of the five current codes met in Kew (UK) to consider a common approach towards the protection of names then in use. Following from the report of that meeting, further meetings of the *ad hoc* group, and discussions and debates at the 23rd IUBS General Assembly in Canberra (Australia) in 1988 and ICSEB IV at College Park (Maryland, USA) in 1989, led to a major conference on *Improving the Stability of Names* being convened in Kew in 1991—with the support of IUBS, IAPT and the Systematics Association. Later in 1991, the 24th IUBS General Assembly,

meeting in Amsterdam (Netherlands), passed a resolution to encourage harmonization between the various codes. An exploratory meeting on harmonization between the codes was then convened in Egham (UK) in 1994; this was held under the auspices of IUBS, IUMS (International Union of Microbiological Societies) and IAPT with support from CAB International, the Linnean Society of London, and the Royal Society of London. It set an agenda for future action in biological nomenclature, including the establishment of what became the IUBS/IUMS International Committee on Bionomenclature (ICB) following the 25th IUBS General Assembly in Paris (France) later in 1994. The ICB addressed several issues of concern when it met in Egham the following year, but also generated a first draft of a prospective *International code of bionomenclature*. That document was developed and presented at ICSEB V in Budapest in 1996, as the *Draft BioCode: the prospective international rules for the scientific naming of organisms*. Having taken note of debates during that congress, the ICB met again at Egham in 1997 and then issued a revision, the *Draft BioCode* (1997).

The *BioCode* was, from the first, seen as something to deal with names proposed in the future, while the existing separate codes continued to deal with those of the past. It was envisaged as operating in parallel while agreed lists of names were developed by, for example, phylum, order or family. Whereas some minor changes have been effected in the existing codes towards improved harmonization since that time, an agreed list of names and a mechanism for compulsory registration of new names continued to be available only in bacteriology. However, as the 21st century commenced, the rapid evolution of databases meant that the production of lists on a group basis became more practical, and a need for a timely and low-cost system of cataloguing newly proposed names emerged in botany, mycology and zoology. In addition, changing classifications as a result of molecular phylogenetic studies, meant that the problems of groups potentially being treated under different codes, or meriting transfer from one to another, grew. Against this background, the ICB organized a meeting to consider the issues surrounding the mandatory registration of new scientific names in the rooms of the Linnean Society of London (UK) in 2007, and a workshop on *Tailoring Biological Nomenclature to User Needs* at the Natural History Museum in London in 2009. As a consequence of these discussions, the 30th IUBS General Assembly in Cape Town (South Africa) later that year decided that it was time to revisit the prospect of a *BioCode*. The ICB then convened a workshop at the Botanischer Garten und Botanischer Museum in Berlin in October 2010 to produce an update of the *Draft BioCode* (1997) to allow for subsequent developments in the different codes, and also the possibilities afforded by new technologies. That document, the *Draft BioCode* (2011), is presented here as a basis for further consideration during BioSystematics Berlin 2011 (which incorporates ICSEB VII).

In presenting the *Draft BioCode* (2011), I wish to thank the past and current members of the ICB, and also others that have participated in the various workshops, debates and symposia on this issue over the last 25 years. Their sustained and insightful comments are now crystallizing into a vision for a pragmatic nomenclatural system, tailored to the electronic and molecular age, and in which biologists, as a whole, can have confidence.

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Note added in proof: This work is also being published in *Taxon* **60** (2011) and *Bulletin of Zoological Nomenclature* **68** (2011) in order to ensure wide dissemination amongst systematists as a whole.