

Priority and Stability in Zoological Nomenclature: Resolution of the Problem of Article 23b at the Monaco Congress

For years, major groups within the zoological community were not entirely satisfied with the balance of power, as expressed in the old International Rules of Zoological Nomenclature (officially the "Règles"), between achievement of stability through a strict priority approach (that is, the oldest name ever given to an organism should be the only name ever lawfully used for it) and arriving at essentially the same goal by means of conservation of certain names, if well known (or similar reason), in spite of their being junior synonyms of older names. In the new Code, published in 1961 (and again, with little change, in 1964), the celebrated (or infamous, depending on one's point of view) Article 23b represented a fresh attempt at achieving stability in nomenclature without causing undue controversy. Unfortunately, considerable unhappiness persisted—for example, the reports and comments by Mayr *et al.* (1), Collette *et al.* (2), and Mayr (3), and many published in outlets of less wide distribution—and the serious problem was left for resolution by the 17th International Congress of Zoology, convening in Monaco this past September.

Full and official reports of the several actions of the International Commission on Zoological Nomenclature (ICZN), of the Section on Nomenclature, and of the Congress itself will appear elsewhere in due time; the purpose of this comment is to give immediate assurance to the zoological community at large (since so few persons attended the Congress) that a "compromise" solution of the problem posed above was indeed reached, resolving the matter in a way that will surely be most satisfactory to the vast majority of zoologists the world over, no matter what group of organisms they are working with (4).

Commissioner W. D. L. Ride, of Australia, is to be credited with the skillful drafting of revisions of Articles 23, 79, and 80 which, following full discussion, were unanimously accepted by the ICZN, similarly approved by the Section on Nomenclature, and ratified by the entire Congress in its final plenary session on 30 September 1972, and which neatly put to rest the major dissatisfaction, or potential dissatisfaction, of various groups of taxonomists with the 1961 version of Article 23b,

its recently proposed revisions, or its complete deletion. The new provisions legally take effect when they have been published in the *Bulletin of Zoological Nomenclature*. Only selected portions (5) of two of the three newly revised Articles peculiarly appropriate to the present notice are directly quoted below; the reader is urged to read the entire texts, with their supporting details, examples, and other such material when they appear in a forthcoming number of the *Bulletin*.

Article 23 (a-b). *Purpose.* The Law of Priority is to be used to promote stability and is not intended to be used to upset a long-established name in its accustomed meaning, through the introduction of an unused name which is its senior synonym. A zoologist who considers that the application of the Law of Priority would in his judgment disturb stability or universality or cause confusion is to maintain existing usage and must refer the case to the Commission for a decision under the Plenary Powers [Art. 79].

Article 79 (b). *Suppression of unused senior synonyms.* Where an application is made to the Commission for the suppression of a name on the grounds that it is an unused name, that is, a senior synonym of a name in general current use, a *prima facie* case that stability is threatened will be made if it can be shown that the senior name is not known to have been used during the immediately preceding fifty years and that the name it would replace has been applied to a particular taxon, as its presumably valid name, by at least five different authors and in at least ten publications during the same period.

Article 80 simply explains that when a case is under consideration by the

Commission, existing (that is, the most common) usage is to be maintained until the decision of the ICZN has been published.

Thus it would appear that all "working zoologists" will now have clear-cut guidelines in what formerly might have been judged unclear or disputable cases; and that the primary aim of the Code itself, as so well expressed in its preamble, "to promote stability and universality in the scientific names of animals, and to ensure that each name is unique and distinct," has been judiciously maintained.

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References and Notes

1. E. Mayr, G. G. Simpson, E. Eisenmann, *Science* **174**, 1041 (1971).
2. B. B. Collette, D. M. Cohen, J. A. Peters, *ibid.* **177**, 452 (1972).
3. E. Mayr, *ibid.*, p. 453.
4. This action of mine has the approval of R. V. Melville, secretary to the ICZN; several of the senior commissioners, including the acting president, Dr. L. B. Holthuis, who were asked to comment on a draft of my manuscript; and Dr. D. S. Farner, president of the Section on Nomenclature at the Monaco Congress.
5. Quoted portions of the newly revised Articles of the Code were selected by me, present as a commissioner of the ICZN at all of the meetings on nomenclature convened at the Congress; but the selection also has the tacit approval of the persons indicated in the preceding note. The present paper, however, is not to be cited as the authoritative publication on these revisions of the Code. In the case of Article 23, the new "a-b" incorporates and/or replaces the former "a" and the controversial "b"; the single paragraph is designated "a-b" to avoid renumbering all subsequent paragraphs, which remain essentially unchanged. In Article 79, only paragraph "b" is new, so other parts are not quoted here. In the case of Article 80, two subsections were added to clarify the meaning of the Article's present introductory paragraph; since the latter (paraphrased in the text of this paper) remains unchanged, inclusion here of the new explanatory information seems unnecessary.

30 October 1972

Fluidity of Simple Liquids—Reply to a Criticism

Eicher and Zwolinski (1) published a comment on "Limitations of the Hildebrand-Batschinski shear viscosity equation." They write for the kinematic viscosity $\nu^{-1} = a_3/\rho + a_4$ (ρ is density), fix values of a_3 and a_4 by the method of least squares, and report substantial deviations of calculated from experimental values of viscosity in the cases of *n*-hexane and three other liquids.

I wish to remark, first, that my equation for fluidity (2) differs significantly from that of Batschinski, both in the physical meaning of its constants, B and V_0 , and in relating fluidity to rela-

tive rather than absolute expansion.

Second, the simplest and most enlightening way to test the validity of an equation such as mine is to plot the best available experimental values of the fluidity, ϕ , against the molar volume, V . A large-scale plot of values of the fluidity of *n*-hexane from -90° to $+70^\circ\text{C}$, from tables by F. D. Rossini *et al.* (3), shows points that fall on a straight line with scarcely visible deviations.

A paper on "Fluidity: A general theory," by J. H. Hildebrand and R. H. Lamoreaux, has been published (4).