

**Rufus Richard Humphrey's Contribution
to
Zoological Nomenclature**

**Hobart M. Smith
EPO Biology
University of Colorado
Boulder, Colorado 80309-0334**

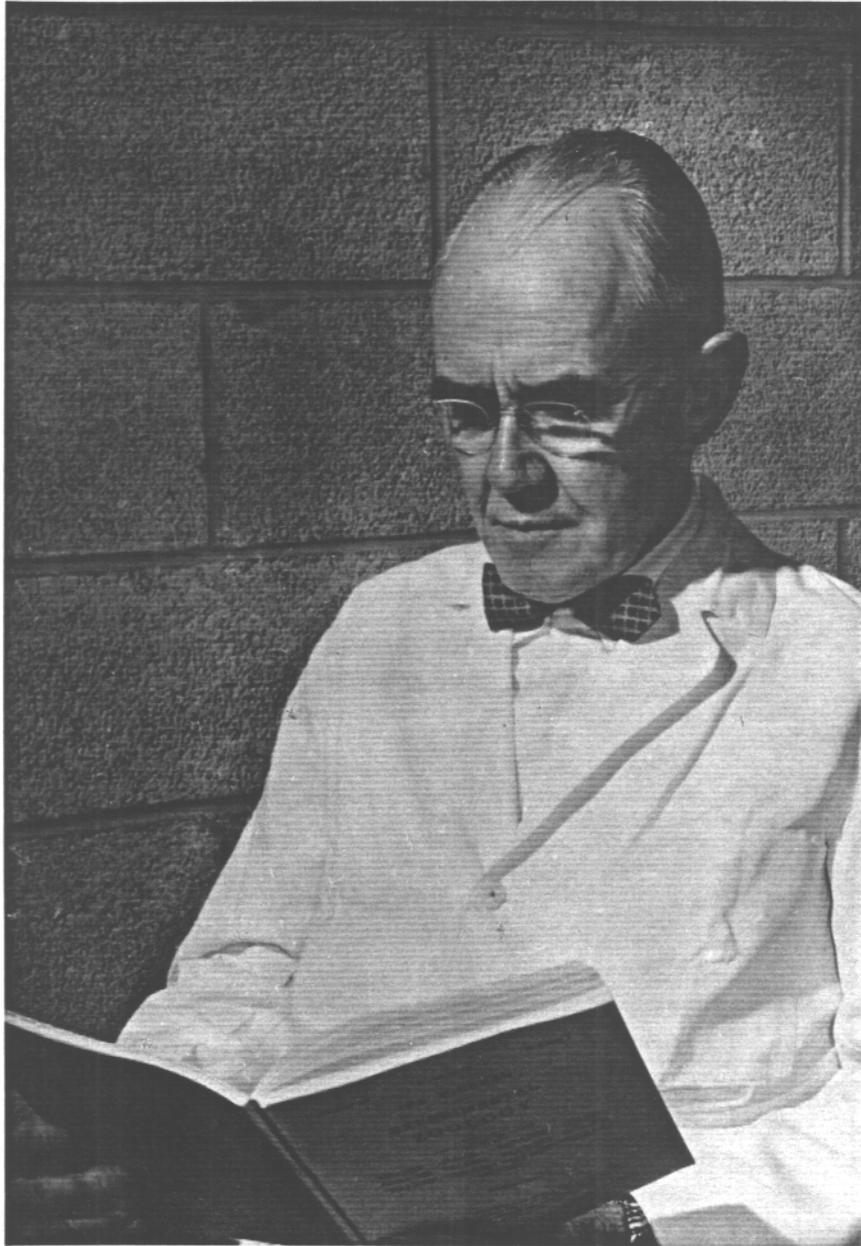
Most devotees to the memory of the internationally revered gentleman and scholar, Rufus Richard Humphrey, giant as he was in experimental amphibian genetics, would be surprised to know that he merits honor as well in the statutory field of zoological nomenclature. His role was of critical importance in that context, yet is not well known or appreciated even by taxonomists, much less by his experimental colleagues or admirers.

His service to zoological nomenclature pertains to the fundamental guiding objects of its International Code, namely the promotion of stability, universality, and uniqueness of animal names, and it involved one of Humphrey's favorite experimental animals, the Mexican axolotl, now universally known by the scientific name of *Ambystoma mexicanum*.

It was not always so known, in spite of the fact that the original author, Tschudi, spelled the generic name *Ambystoma*, not *Amblystoma*, in his original 1838 description, not only once, but four times. It clearly was not a lapsus for *Amblystoma*. And for most of the subsequent 150 years, to the present time, zoologists have agreed that the original spelling of any name should be retained, and that agreement has been reflected statutorily for over a century. Certain rare exceptions—obvious lapses—have been and are now permitted to that rule. Workers following Tschudi erroneously interpreted the spelling *Ambystoma* as a lapsus for *Amblystoma*, assuming that a perfectly descriptive derivation was intended from the Greek words meaning blunt mouth (*amblys* and *stoma*, respectively). On the contrary, Tschudi's spelling was contradicted as a lapsus not only by its usage four times, but by a perfectly reasonable and appropriate (not that those attributes are essential!) derivation from a contraction for "anabystoma," meaning "to cram into the mouth." Stejneger (1907:24) was the first to point out these justifications for not regarding the spelling *Ambystoma* as a lapsus, and taxonomists soon universally accepted his reasoning. The six editions of the checklist of North American Amphibians and Reptiles (1913-1953) were particularly influential in stabilizing the *Ambystoma* orthography.

Experimental zoologists, however, had adopted the spelling *Amblystoma* that had become so widely accepted in the 19th century, and tenaciously retained it through much of the first half of the 20th century. Inasmuch as they were almost totally unfamiliar and unsympathetic with taxonomic procedure and literature, their persistent usage of the spelling *Amblystoma* was quite understandable. Yet it was a sore point with taxonomists, who did not readily forgive any zoologist for flouting even in this innocent way the obviously vital objectives of zoological nomenclature to achieve stability, universality, and uniqueness of scientific names.

Taxonomists were getting nowhere as mid-twentieth century approached, until one portentous day in 1943, when Rufus Richard Humphrey visited the University of Rochester to give a seminar on some of his researches on the axolotl, which he called an *Amblystoma*, as he had in his many publications for over 20 years. Subsequently he was kind enough to talk with me, as one also deeply interested in the axolotl, although as a member of the Mexican herpetofauna, the taxonomy of which has been a lifetime preoccupation. In the course of the conversation, I complained bitterly that experimen-



Rufus Richard Humphrey

tal zoologists still did not use the proper name (*Ambystoma* and *Amblystoma* are, technically, different names) for the axolotl's genus. Humphrey expressed surprise, having been unaware of the point, and in his usual gracious, gentle, good-willed manner said that he would be glad in the future to accommodate nomenclatural rules in that context.

Sure enough, his first usage of *Ambystoma* came the same year (1943), and over the next two or three years he shifted to a consistent usage of that name.

Largely through the tremendous influence of his many subsequent works (see Barone and Lawrence, 1978), always using *Ambystoma* (although for a time he hedged, as did others, by citing *Siredon* as an alternative name, before it became commonplace to recognize that name, usually associated with the larval stage, simply as an invalid junior synonym of *Ambystoma*), others followed his lead, so that essentially all zoologists, experimental or not, now are accustomed to using the proper name.

That universality of nomenclature that has finally been achieved in this small but very important context can properly be laid, I think, primarily at the door of Rufus Richard Humphrey, one of the most beneficent, gracious and gentlemanly scholars of all time. He merits accolades of taxonomists as well as of his fellow experimental zoologists.

Literature Cited

- Barone, Dorothy, and Larry M. Lawrence. 1978. Publications of R. R. Humphrey. *Axolotl Newsl.* (6):1-6 (see addenda, *ibid.* 1979 (7):33 and 1980 (9):36).
- Humphrey, Rufus Richard. 1943. A lethal recessive character in the mexican axolotl (*Ambystoma mexicanum*). *Anat. Rec.* 85: 32.
- Stejneger, Leonhard. 1907. Herpetology of Japan and adjacent territory. *Bull. U.S. Nat. Mus.* (58):i-xx, 1-577, figs. 1-409, pls. 1-35.