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Herbert Holdsworth Ross.—Herbert H. Ross, the 26th president of the Society of Systematic Zoology, was born in Leeds, England, on March 3, 1908; he died November 2, 1978, in Athens, Georgia. Ross entered the University of British Columbia in 1922 at the age of 14 where he received a B.S. in Agriculture. He completed his M.S. (1929) and Ph.D. (1933) in Entomology at the University of Illinois at Urbana. Ross' early mentors S. A. Forbes, T. H. Frison, and V. E. Shelford affected his later development as a scientist, teacher, and administrator.

Dr. Ross' career at the Illinois Natural History Survey spanned more than 41 years from 1927 through 1969, during which time he played a significant role in increasing the state's monetary support of the Survey. He was also instrumental in making the Illinois Natural History Survey one of the premier institutions of its kind in our nation—as a result of his field efforts. From 1947 to 1969 he also held a joint appointment with the University of Illinois as a Professor of Entomology. Retiring from the University and the Survey in 1969, he assumed a teaching and research professorship at the University of Georgia at Athens until 1975. Even following his second retirement, he continued to lecture and conduct systematics research at Athens until his death. Ross communicated with his students in an informative and very human way, most notably through morning coffee breaks.

Dr. Ross was first and foremost an entomologist. He will be remembered for *A Textbook of Entomology* (1948, 1956, 1965), the fourth edition of which he was completing at the time of his death. He also published over 220 papers, books, and chapters of books on such diverse insect groups as Orthoptera, Plecoptera, Hemiptera, Homoptera, Megaloptera, Neuroptera, Trichoptera, Diptera, and Hymenoptera. He became a noted authority especially on world caddisflies and Nearctic sawflies and leafhoppers.

As a systematist, he recognized and rigorously adhered to the principle of reconstructing phylogenetic branching sequences exclusively according to shared, derived character states (long before the appearance of W. Hennig's classic treatise). As to methods of classification, although he preferred monophyletic taxa, he also allowed paraphyletic groups.

On the subject of historical biogeography, he characteristically interpreted modern distribution patterns as the result of dispersals from ancestral ranges (vide: *Evolution and Classification of the Mountain Caddisflies*, 1956; "The evolution and past dispersal of the Trichoptera" in *Ann. Rev. Entomol.*, 1967; and *Biological Systematics*, 1974). A notable exception was the award winning (University of Georgia Chapter of Sigma Xi Faculty Research Award, 1972) treatise, "The classification, evolution, and dispersal of the winter stonefly genus *Allocapnia*" (*Illinois Biol. Monogr.*, 1971, 45: 1–166; published with W. E. Ricker). Despite its title, this publication hypothesized the evolution of species of *Allocapnia* in isolated refugia left as the North American climate warmed south of the receding Pleistocene glaciers—with modern ranges largely established by vicariance, rather than dispersal, mechanisms.

He realized early in his career that many biologists, especially applied entomologists, may fail to examine seriously taxonomic ideas in groups other than their own. This realization is expressed in a handwritten note found among his professional papers after his death (source unknown): "Preoccupation with an applied field eventually leads to a realization that some bar to further progress is being encountered, and reflection on this problem leads to the conclusion that some added stimulus is needed from a more basic and much broader field." Accordingly, after a long struggle with himself (that perhaps he should let someone else champion the cause of broader biological perspective), he became a synthesizer of ideas from many of the traditionally isolated taxonomic specialties, publishing two books on evolution and one on systematics (*A Synthesis of Evolutionary Theory* in 1962, *Understanding Evolution* in 1966, and *Biological Systematics* in 1974).

Three of the major goals for systematics that involved Ross through much of his career are alluded to in the Preface to *Biological Systematics*. Largely

because of his efforts, these goals are now much closer to being generally accepted and utilized than ever before. First, he was convinced that there is an aspect of systematics which can truly be called "scientific," which he termed "biosystematics," which concerns itself with studies of species (determining the number of species, the factors responsible for their origin, and character changes since that time) and of phylogeny (determining the relationships of lineages and their character changes throughout time and space). The methods of biosystematics are the same as for any other experimental science and the resulting inferences are not authoritative pronouncements to be engraved irrevocably into a humanly-devised classification system. There is no more "art" in biosystematics than in any other modern scientific discipline.

He was further convinced that, although there are obvious differences among plants, animals, and microbes which are of significance to the study of systematics, there are also many similarities. Therefore, a perspective that is limited to botanical or zoological or microbial systematics deprives a scientist of observations and ideas which might otherwise be of exceptional value to him. For example, botanical studies of speciation involving introgressive hybridization or involving chromosomal polyploidy led to subsequent discovery of such phenomena in animals.

A third major goal for Professor Ross was to convince scientists in all the various fields of biology that systematics is much more than a technical preoccupation bent solely on providing standardized names for their study organisms. Rather, it can and should be the focal discipline of biology, coordinating and integrating observations and conclusions from all its various fields of inquiry. Thus, a phylogeny, for example, developed from the studies of a biochemist or a morphologist, might shed new light for interpretations of problems besetting a behaviorist, an ecologist, or a biogeographer. In short, he helped set the pace toward making modern biologists aware that there is no discipline more necessary for understanding the otherwise fragmented aspects of biology than systematics.—*John C. Morse, Department of Entomology and Economic Zoology, Clemson University, Clemson, South Carolina 29631, and Robert T. Allen, Department of Entomology, University of Arkansas, Fayetteville, Arkansas 72701.*