BOOK REVIEW

BIOLOGICAL SYSTEMATICS. Herbert H. Ross. Addison-Wesley, Reading, Mass., 345 p., 1974. $12.95.

As a handbook of systematics or as a potential textbook for a course in zoological systematics this book has but 1 competitor—*Principles of Systematic Zoology,* by Ernst Mayr (McGraw-Hill, New York, 428 p. 1969. $12.50). Each has its strong points and the two are complementary in some respects. However, Ross' is more concisely and clearly written, more even-handed in dealing with the philosophies of classification known as phenetics and cladistics, and, of course, more up-to-date.

Ross touches only lightly the topics of zoological nomenclature and intraspecific variation and omits discussion of museum procedures and taxonomic publication—subjects that Mayr deals with more extensively. On the other hand Ross manages to merge effectively the systematics of plants and microbes with that of animals. He smoothly treats in quick succession organisms as diverse as trypanosomes, beetles, ferns, mules, and bacteria, and successfully juggles 3 codes in his brief treatment of rules of nomenclature. The most valuable part of Ross' book, in my opinion, is his thorough coverage of techniques and principles of constructing phylogenies and of integrating such phylogenies with geographical and ecological data.

Occasionally Ross' treatment of a subject is disappointing. For instance (p. 103), he accepts the idea of speciation by temporal isolation (i.e. allochronic speciation) but gives no clue as to how such temporal isolation might originate. Nor does he cite any reference to an animal example or to discussions of the likelihood of temporal isolation being a cause rather than an effect of speciation. In another instance he goes against widespread usage (and creates a homonym!) in defining *sibling species* as sister species arising from the same ancestral species rather than as species not diagnosed by conventional methods (p. 97).

The book is well illustrated and has only an average number of typographical errors. The index is brief but works. There is no glossary. References cited include a few as recent as 1972.

To a commendable extent Ross realizes the 3 objectives he sets himself: (1) to emphasize the scientific aspects of systematics, (2) to use examples from animals, plants, and bacteria, and (3) to present the theory and practice of systematics simply and clearly.

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