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CONCEPTS IN NEMATODE SYSTEMATICS. *Proceedings of an International Symposium held jointly with the Association of Applied Biologists, in Cambridge, September 2-4, 1981. The Systematics Association Special Volume Number 22.*

Edited by A. R. Stone, H. M. Platt, and L. F. Khalil; Series Editor: D. L. Hawksworth. Published for the Systematics Association by Academic Press, London and New York. \$50.00. x + 388 p.; ill.; subject/taxonomic index. 1983.

What are the major concerns of working nematode systematists? To judge from the 27 chapters in this well-edited volume, they are: how to make best use of techniques in phylogenetic systematics (3 chapters and a mention in the Preface); what novel sources of data can be used to aid identifications, especially of pathogens (8 chapters); how should species and their parts be identified and defined (13 chapters); and what is current theory concerning the evolution of particular groups (15 chapters)? These topics are among the major in-

terests of all systematists. Thus, in addition to the wealth of information about nematodes, this book presents a useful measure of the degree to which general issues in systematics have had an impact in particular disciplines. Reading this volume, one realizes that there is a long way to go before theoretical concerns become working dicta, but that there are definite indications of change.

There is a clear dichotomy represented in these papers. Some workers concentrate on more and better characterization of traits, be they anatomical, morphometric, biochemical, or ultrastructural. Their aim is more precise characterization of groups of individuals: species and their parts, which have many names. There is a very close connection between evidence from characters and taxonomic decisions in this reductionist approach. However, there is very little comparative biology in it. On the other hand, there are workers whose interest is primarily evolutionary. By and large, they establish a functionalist/adaptive scenario without an explicit phylogenetic hypothesis, and with little recourse to data except *post hoc*. The chapter by Sprent is an excellent example of this dichotomy. The outstanding morphological work summarized in the first half of the chapter is almost completely ignored in the evolutionary scenario presented in the second half.

Two conceptual highlights are papers which recognize the above dichotomy as a problem, and attempt to draw both sides together. The first, by Coomans, provides an excellent and readable account of phylogenetic systematics. Coomans asserts that the key to resolving many problems at the reductionist and at the holist ends of the scale lies in comparative studies. The second of these important chapters is by Ferris. Her contribution demonstrates the range of practical utility of phylogenetic systematics, applied directly to problems discussed by many of the other authors.

As more evolutionary biologists, especially ecologists, utilize statements of evolutionary patterns in their studies, the demand for explicit phylogenies will arise. To judge from the high standard of data generation manifested by the contributions to this volume, it is my opinion that nematologists and nematodologists following the admonitions of Ferris and Coomans will find rewarding new dimensions in their research programs.

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