

Book review

M.R. Siddiqi, 1986. Tylenchida, parasites of plants and insects. Commonwealth Institute of Parasitology, St Albans, England, 645 pages. Price £ 49.50.

This book may be regarded the successor of Goodey's 'Soil and freshwater nematodes' (first edition 1951; second edition 1963) for the Tylenchida. It is illustrative of the explosive increase in information since 1960 (date of finishing manuscript of 2nd edition) that the Tylenchida, without Aphelenchina, which Siddiqi considers an independent order, occupy 70 pages in the first edition, 108 in the second, and nearly 600 larger pages in Siddiqi.

The introductory chapter deals with techniques and gives a historical review, enlivened by photographs of 42 nematode taxonomists (I. Andr ssy and G. Thorne are missing; A.D. Baker died 1974). Then follow chapters on morphological characters (20 pages) and on taxonomic methods (11 pages). The morphological part is generously illustrated with drawings and SEM and TEM photographs. The taxonomic section deals not only with morphological methods, but also with biochemical and cytogenetical ones, and enters upon evolutionary systematics and numerical taxonomy (phenetics). Siddiqi defines homology in the sense of Simpson (Principles of animal taxonomy, 1961), not of Remane (Die Grundlagen des nat rlichen Systems, der vergleichenden Anatomie und der Phylogenetik, 1952) whose book is not listed in the bibliography. One may have various opinions about evolutionary systematics, but it is a good thing that Siddiqi explains his philosophy. He recognizes Haeckel's 'biogenetic law' as valid, but does not discuss the recent criticisms (Smit, 1962, Ontogenesis and Phylogenesis. Their interrelation and interpretation, Acta Biotheoretica 15; De Beer, 1951, Embryos and ancestors), which admittedly might be outside the scope of the book. Fortunately he says on p. 67: 'the reconstruction of phylogeny should be carried out by tracing the likely pathways of ancestral characters, although it is an impossible task to *establish* the course of evolution'.

After reviewing several older systems of classifying Tylenchida, the author outlines his own. The order is divided into four suborders, this rank clearly being influenced by his exclusion of Aphelenchina. The suborders are defined morphologically and biologically. New is the extension of Hexatylini, including *Hexatylus*, Anguinidae, Sphaerulariidae, Allantonematidae and Neotylenchidae. The treatment of this suborder is valuable in that life cycles are considered as well. One may object that *Hexatylus* differs from all other members of the group in oviduct structure. But is this sufficient to exclude the genus from the group?

The treatment of genera in Tylenchida is partly obsolete through the recent work of Raski and Geraert (Revue de N matologie 10, 1987).

Many changes are introduced in systematics and unfortunately it is not always clear how the principles in the chapter on methods were applied.

Siddiqi tries to strike a balance between splitting and lumping, but arguments for deciding whether differences between species (groups) justify generic separation, are often lacking. In the Criconematina, four generic names are sunk into synonyms of *Ogma*, but two new generic names are erected, and the seven subgenera are distinguished chiefly on the shape of cuticular ornamentations, which were already shown by Sachs (1949, Zool. Jb.Syst. 78, p. 363-364) not to be very suitable for diagnosing higher taxa. In the *Tylenchorhynchus* group, three genera are reduced within *Tylenchorhynchus*, but on the other hand *Bitylenchus* is recognized as separate on not very convincing grounds. More points could be mentioned but this is only casping at details. Not a single systematist has ever succeeded in constructing a system with which all his colleagues agree.

The layout of the book is very good: the numerous illustrations are of high quality and the discussions are logical and easy to follow. Due attention is given to mode of life. The book gives a wealth of information and will surely remain a standard volume for a long time. Siddiqi is to be congratulated upon completion of the immense task of bringing together all modern information on this group and presenting it in an excellent manner.

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