Cestodes (tapeworms) represent without any doubts one of the most fascinating groups of helminth parasites. They are so extremely adapted to parasitism that they have completely lost the digestive tract; on the other hand, their reproduction capacity is extraordinary. It is evident that this group of animals will continue to attract the attention of biologists to study many phenomena of host-parasite relationships, adaptation to parasitic life, physiology, biochemistry, etc. In addition to this aspect, diseases caused by tapeworms still represent medical and veterinary problems.

Each study of tapeworms, like in other animals, must be based on reliable identification. This prerequisite, however, causes great difficulty due to the existence of many unsolved problems in the taxonomy of individual cestode groups, including those of importance for human and veterinary parasitology. It is evident that the identification keys accessible even for non-specialists are in high demand. This need is exacerbated by the fact that classical monographs, devoted to cestodes (Wardle and McLeod’s “The Zoology of Tapeworms” (1952) and Yamaguti’s Systema Helminthum (1959)) are fairly out-dated. A more recent volume by G.D. Schmidt (“Handbook of Tapeworm Identification”, CRC Press, Boca Raton, 1985) is highly appreciated as a source of invaluable information, including identification keys to generic level and lists of known species in the latter volume. Unfortunately, the book by Schmidt was mainly a compilation of literary data without a critical re-appraisal of individual groups. This is obvious since the book was authored by only one person, even though he was a good specialist in several tapeworm groups.

For the above mentioned reasons, I was very interested in seeing a new volume, edited by three helminthologists from England, L. F. Khalil and A. Jones from the International Institute of Parasitology at St Alans, and R. A. Bray from The Natural History Museum at London, UK. They invited leading specialists in individual cestode groups to contribute to this book. Nineteen contributors from eleven countries prepared excellent monographs, summarizing current knowledge of the taxonomy of tapeworms with keys to generic level.

The present volume consists of dichotomous keys, mostly based not only on one differentiating criterion, generic diagnoses providing comprehensive information about individual taxa and numerous figures representative of each genus. The authors propose many new synonymies and re-arrangements mostly at higher taxonomic levels; 15 new cestode genera, mainly in the Cycophyllidea, are established.

It is impossible to list all contributors and to review separately each chapter devoted to individual orders (Amphilinida and Gyrocotylida are treated as orders, not as classes or subclasses as considered by some authors) and to individual families in the Cyclophyllidea (15 chapters). Haplostothriidae (A. Jones) and Tetrabothriidae (M. Hoberg) are treated as separate orders, which also might not be accepted by all cestologists.

I was enthused mainly by the chapter devoted to the Trypanorhyncha (I. Beveridge, R. Campbell). This chapter provides an excellent guide to the very complicated terminology of hook morphology of trypanorhynch tapeworms, parasites of elasmobranchs; number of figures and their quality are impressive. The cyclophyllidean families Dilepididae (F. V. Bona), Paruterinidae (B. Georgiev and V. V. Kornyushin) and Hymenolepididae (C. Vaucher) can also be mentioned for their perfect line drawings of the tapeworms, the identification of which is rather difficult. However, other chapters are of comparable quality.

Since I am mostly interested in fish tapeworms, I have to admit that the only chapter I did not find to be of extraordinary quality in documentation is that devoted to the Proteocephalidea (A. A. Rego). It is a pity because Prof. Rego is an outstanding specialist in Neotropical proteocephalans of fish. Unfortunately, line drawings in his chapter are rather poor and identification keys do not contain more detailed characteristics, which makes difficult the identification of some genera with polymorphic species.

In addition to the keys, the book includes a List of Genera with genera inquirendae, genera incertae sedis, nomina nuda, and larval and collective names. It is supplemented by a glossary with the most important terms used in cestodology. The bibliography is also very comprehensive (43 pages).

It is evident that not everybody will agree with the arrangements of individual groups, with the choice of diagnostic criteria or with generic diagnoses. However, I consider the present book to represent a qualitative step ahead in the taxonomy of tapeworms. I highly appreciate it as an important stimulus in the reconsideration of “classical” taxonomy and morphology. It is an invaluable text for any study on the biology of these extraordinary parasites.

I highly recommend Keys to the Cestode Parasites of Vertebrates to parasitologists, veterinarians and zoologists.

Tomáš Scholz