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NEW BOOK

M. L. Sood: Fish nematodes from South Asia. Second revised and enlarged edition

Kalyani Publishes, Ludhiana, New Delhi etc., India, 2017, 1039 pp., including 752 plates of illustrations.

South Asia, representing the main part of the zoogeographical Oriental Region, is a remarkable area the fauna of which is noted for its high degree of diversity and species-richness. This also concerns fishes and their helminth parasites including nematodes, in both freshwater and marine environments. Nematodes are common parasites of fishes, in which they attack practically all body organs, parasitizing them as adults or as larvae. Fish nematodes, as one of the most significant groups of fish parasites in tropical and subtropical countries, are not only a theoretical interest, but some of them are known to be the agents of serious diseases of fishes, domestic animals and man. The significance of nematodes as important fish pathogens is also increasing with the rapid development of marine, brackish-water and freshwater aquaculture in different countries during recent years.

Regardless of the large number of mostly taxonomic and faunistic papers treating fish nematodes in South Asian countries, knowledge of the fauna of these parasites in the region in question is still scarce. Nearly twenty years ago, the much needed compilation of this extensive literature was initiated by Prof. M. L. Sood of the Punjab Agricultural University in Ludhiana, a well-known Indian helminthologist, when his comprehensive book "Fish Nematodes of South Asia" (1989) appeared, being followed by his subsequent monographs "Amphibian Nematodes of South Asia" (1990), "Reptilian Nematodes of South Asia" (1999) and "Nematode Parasites of Birds (Including Poultry) from South Asia" (2006).

During two decades since the first of the above-mentioned Sood's books was published, more than 200 additional forms of fish nematodes from this region appeared in the literature. So there was a need for the author to undertake the very difficult work to compile all the extensive materials for the second revised and enlarged edition of "Fish Nematodes of South Asia". He coped this task very well and produced the comprehensive book, which will undoubtedly serve for years as an indispensable tool for studies of fish parasites in the region.

The text of the volume is divided into 5 chapters. After the short Introduction (3 pages), the most extensive part of the book is the text entitled Description of Species (847 pages), dealing with representatives of the individual nematode taxa of the subclasses Adenophorea and Secernentea, being followed by Systematic Position of Fish Nematodes from South Asia (26 pages), Host-Parasite List (41 pages) and Literature Cited (49 pages). Included is also Appendix (29 pages), compiling mostly more recently published data on fish nematodes, followed by Author Index, Parasite Index and

Host Index. In contrast to the first edition of the book, now the illustrations are placed directly in the respective texts, which makes the use of the book for readers easier. Like in the author's earlier volumes, the description, hosts, localization, distribution and relevant notes are given for each species. The majority of species are also illustrated, with line drawings and few SEM micrographs taken from the original papers.

The survey contains almost all nematode species described to date from fishes of this geographical region, including those which have already been synonymized with others (this being mentioned in accompanying remarks) or the forms (e.g. *Cylicostrongylus*, *Furconema*, *Ichthyostongylus*, *Neocylicostrongylus*, *Neoichthyostongylus*, *Premana*, *Pseudomazzia*, *Rastellascaris*, *Spirocotyle*) that are evidently doubtful. On the other hand, representatives of *Hakynema*, *Ichthyouris*, *Neosynodontisia* and *Royandersonia* (all Oxyuroidea) and *Orientattractis* (Cosmoceroidea), as well as *Camallanus hampalae*, *Oceanicucullanus chitwoodae*, *Procamallanus punctatus* or *Rhabdochona equispiculata*, reported from fishes in Thailand, Malaysia and Vietnam, are missing.

Although the author of this monograph has stated that the nematode fauna of fishes in South Asia is "fairly well known", this survey again documents the unsatisfactory situation in the taxonomy of these parasites in this region where, usually without a critical evaluation of previous data, a number of additional, mostly poorly described species are newly established, resulting in an apparent inflation of species. For example, Kakar *et al.* (2011) reported 17 (!) poorly described species of *Rhabdochona* from three species of fishes of Balochistan, Pakistan, although representatives of this genus are known to exhibit a rather high degree of host specificity. Therefore, future detailed taxonomic revisions in individual groups of these nematodes will undoubtedly reduce considerably the number of species of fish nematodes in this region.

Nevertheless, this monograph represents one of the fundamental ichthyoparasitological works in the countries of South Asia and may become a basis for subsequent revisions of taxonomy as well as studies on the biology, ecology and zoogeography of fish nematode parasites in this region. It will serve as an important source of information for parasitologists, biologists, veterinarians, workers in fisheries and university students, although it will also be of interest to ichthyologists, museum curators and those engaged in nature conservation.

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