



Nematode Parasites of Birds (Including Poultry) from South Asia

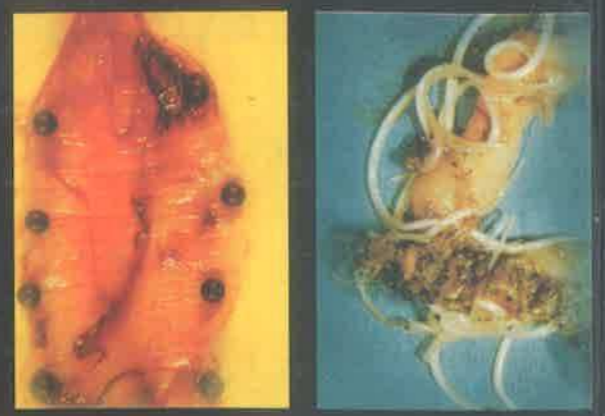
M. L. Sood



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The book consolidates the complete informations available to-date on the reported over 465 species (in addition to unclassified/unidentified and sp. inq.) described under about 75 genera, 25 families and 17 superfamilies, on the bird (including poultry) nematodes from South Asia (Bangladesh, Bhutan, India, Myanmar, Nepal, Pakistan and Sri Lanka).

For each species, description, location, locality, material and relevant information are given. Majority of the species are also illustrated, with drawings taken from the original papers.

In providing relevant data concerning all the hitherto described species of bird nematodes (which are otherwise scattered in many, often barely accessible journals, the book may be an indispensable source of information for subsequent revisions of taxonomy, as well as studies on the biology, ecology/zoogeography of bird nematodes from this region, including control of poultry nematodes.

M.L. Sood M.Sc. (Hons.), Ph.D., D.Sc., Ex-Professor & Head, Department of Zoology, Punjab Agricultural University (PAU), Ludhiana. He is well-known parasitologist (Helminthologist), with over 35 years of teaching and research experience. He has about 170 publications, including research papers, review articles and chapters in books. In addition, Dr. Sood has written seven books, a monograph and a bibliography. His books, 'Amphibian Nematodes from South Asia', and 'Reptilian Nematodes from South Asia' have been awarded 'Dr. M.S. Randhawa Best Book Award' by PAU. Making significant contributions on metabolism of ruminant nematodes, Prof. Sood is currently compiling the monographic work on Nematodes Parasites of Mammals (under different sub-titles), after those on fish, amphibian, reptiles and birds (including poultry).

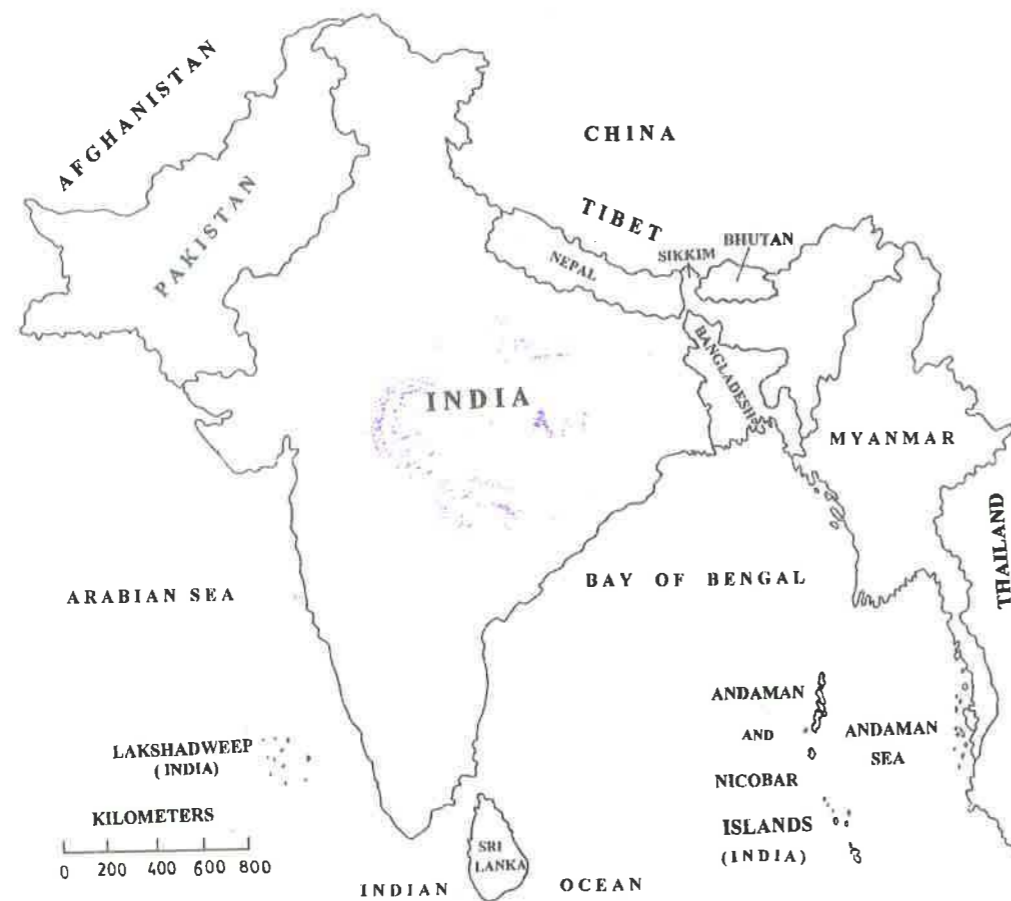


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Map of South Asia: The nematodes parasitic in birds (including poultry) reported to date from South Asia — Bangladesh, Bhutan, India, Myanmar, Nepal, Pakistan and Sri Lanka.

NEMATODE PARASITES OF BIRDS (INCLUDING POULTRY) FROM SOUTH ASIA



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the classification of birds, I have mainly followed Ali and Ripley (2001) and Ripley II (1961), though other works like Baker (1922, 1924, 1926-31), Barnes (1981), Ali and Ripley (1983), Manakadan *et al.* (1998) and Ali (2002) have also been consulted. The common names and the authors of record of the hosts, whether or not given by the original authors, have been given/revised as per these books. Such details for few of the hosts (particularly those from zoos) are not available, possibly because of their origin not being of Indian subcontinent.

My sincere thanks to all the authors, whose works have been followed here. Thanks are also due to Drs Durette-Dusset, Veena Tandon, Upma Bagai, KC Pandey, Nirupama Agrawal, PC Gupta, A Chakraborty, R Mahajan, HS Banyal, DC Kalia and Anu Parmar, in helping me to procure the literature.

I am alone responsible for the omissions (which inevitably would be) of records and other mistakes. It is hoped that readers would draw the author's attention to any such missing records and errors for future incorporations. Criticism of the book in any form would help in its subsequent improvement.

Wife Arun, son-in-law Sumeet, daughter Shikha and son K aran provided encouragement and help in their own ways, which need appreciation.

Lastly, my sincere thanks to the publishers for the cooperation.

May 2005

M.L. Sood

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Introduction

Bird parasitology is helping to understand modern concepts of host-parasite evolution and the enormous diversity of parasites (different groups) and to exchange the ideas between evolutionary biologists and parasitologists (Clayton and Moore, 1997). Before these (and other similar) observations could be applied in the context of avian nematodes from South Asia, there is need to consolidate the complete information available to date, on the reported over 465 species (in addition to unclassified/unidentified and *sp. inq.*) described under about 75 genera, 25 families and 17 superfamilies.

The principle contributors after the publication of Fauna of British India Series (Nematoda: Baylis, 1936; 1939) are: Ali, MM (1968-71), Ali, SM and co-workers (1956, 1960-61, 1965, 1968-70), Bilqees and co-workers (1977, 1983, 1985), Chakravarty and co-workers (1938, 1944, 1959, 1962), Devamma (Ramnivas, D) (1975, 1977-81, 1984-85), Fotedar and co-workers (1965, 1972, 1980, 1986), Gupta, NK and co-workers (1969-70), Gupta, SP and co-workers (1960, 1972, 1975-80), Gupta, V and co-workers (1983, 1985-89), Ilyas (1974, 1979-82), Jairajpuri and co-workers (1967, 1969-71, 73), Jehan (1970-72), Kumar, P and co-workers (1975-77, 1979-80), Majumdar, G and co-worker (1963-64), Naidu (1978, 1981, 1983), Nandi and co-workers (1984-85, 1987, 1989), Rasheed (1960), Rathore and co-workers (1984-86), Sanwal (1951-52), Sharma, RK (1968, 1970-71, 1973) Singh, SN (1948-49), Soota and co-workers (1970-72, 1980-81), Sultana (1961-62, 1964) etc.

As with that in other vertebrate groups, the widely scattered literature on avian nematode parasites from Indian subcontinent, published in journals, mostly inaccessible, covers mainly the morphology and taxonomy of the parasites from different regions, with little or no biological information. Parasitic diagnosis, pathology and treatment of diseases of captive (in zoological gardens) birds are still quite unexplored. *Ascaridia galli* and *Heterakis gallinae*, the common nematode parasites of poultry from this region, which could serve as excellent models for understanding various aspects of host-parasite relationship and others, have not been much explored.

It is hoped that the present maiden attempt, giving complete morphological account, together with the additional published information, on any aspect of all the nematode parasites (adult, larval, 'unidentified') of birds (including poultry) from South Asia, will serve as a useful reckoner for future workers, ready to undertake the much needed 'revisionary work' of the various taxa and research in the aforecited challenging fields.