Chapter - 1

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The fishes are mainly recognized as protein rich diet for human beings and has importance as a supplement to ill-balance cereal diets. The global phenomenon of population increase has put constraints on the available food stuffs all over the world. Fishes constitutes an important part of the profession of man. The current need to expand the world supply of food for the increasing population has resulted in the development of intensive production rates of fish can be maintained by checking the parasitic infestation. The popularity of fishes has been mentioned in our religious books also. All digenetic trematodes (flukes) are parasites and virtually all vertebrates serve as host for one or more species of these parasites.

Studies on helminthic infection of vertebrates particularly fishes have drawn the attention of researchers and scientists to think more all over the world. In our country too, research on taxonomy of helminths particularly trematodes has attracted the attention of various workers during the last eight decades. The problem was tackled in a random manner in the past and we seldom found any concerted systematic approach on this problem. However, in the past five decades more methodical work has been done and instead of picking up host animal in a random manner fishes and other vertebrates have been systematically examined for possible helminthic infection. In our state, about seventy fresh water species are known existing in various
bodies of water. Nearly all of them have been repeatedly examined in the last eight decades bringing to light numerous species of digeneans harbouring various organs of fish body. It is a well known fact that helminthic infection varies from place to place primarily due to changes in the occurrence of intermediate hosts from locality to locality. There is still tremendous scope for taking up the problem in the areas not yet been taken up and the possibilities of finding new forms from fresh water fishes of eastern U.P. are far from remote. On the other hand about 2000 species of fishes are known to occur in the seas around our country. The number of these fishes is said to be higher because a large number is still to be accounted unidentified. Our first record of a systematic analysis of digeneans from marine fishes comes from the pioneer work of Srivastava (1933-42). Then again after about four decades work was taken up by few workers though in a much smaller magnitude.

The control of harmful parasitic infection in fishes may not be only of academic value but also indicates the practical importance as parasitic infections have attributed heavy losses by the way of fish mortality, loss of their body-weight, affecting sexual capabilities with consequent devaluation of market prices of the food fishes.

Among the variety of parasites invading fishes, helminths assume special significance because they not only infect and destroy the fishes but some times utilize them as intermediate host so as to
reach finally to the birds and human or other mammals and therefore causing several serious disease to them, like ink-spot, opisthorchiasis, felinus etc.

Till recently about 300 species of marine fishes have been reported to harbour digenetic trematodes. These species too require repeated examination, particularly at regular intervals in all seasons, as certain about more infections. It will require a long time and concerted effort to examine all the species of fishes, found in the seas around India in order to bring light to the digenetic termatodes present in them. It is high time that a systematic beginning is made.

With the above aspect of the problem in mind, my supervisor advised me to examine the marine fishes of Kanyakumari (Tamil Nadu), Thiruvananthapuram and Vizhinjam, (Kerala) which have never been tapped before, besides the fresh water fishes of Jaunpur where negligible work has been done. The survey in all the two areas resulted in the procurement of a large number of digenetic trematodes besides other helminths. Twelve species of new digenean and a large number of known forms were also collected and studied some of them from new hosts and localities as mentioned in the table of parasites. The thesis make a modest beginning and much still remains to be done.