



CHAPTER- 1

INTRODUCTION

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Fishes form the most important source of the natural protein rich food. It is more nutritive and palatable than vegetable foods. The global phenomenon of population increase has put constraints on the available food stocks all over the world. Although with rapid increase in population their has been a tremendous growth in agricultural production, yet the ratios of these two factors have left a deep unbridgeable gap forcing mankind to search for other food resources provided by the nature. The failure to bridge the gap between food output and alarmingly increasing population has directed mankinds attention towards the fish fauna, which could solve the food problem of the masses to considerable extent. The greatest problem for increasing fish production and making available uncontaminated fishes for human consumption are the fish diseases, induced by parasitic infection carried by the fishes. It is well known that the majority of fishes are infected by helminthes particularly digenetic trematodes. The presence of these parasites within the body of the fish, damage them in

various ways. They reduce the growth rate and food value of the fish and shorten the life span of their host fish.

Studies on helminthic infestation of vertebrates particularly fishes has drawn the attention of researchers all over the world. In our country too, research on taxonomy of helminthes particularly digenetic trematodes has attracted the attention of various workers during the last six decades. The problem was tackled in a random manner in the past and we seldom found any concerted, systematic approach to this problem. However in the past three decades more methodical work has been done and instead of picking up host animals in a random manner, fishes and other vertebrates have been systematically examined for possible helminthic infection. In our province (U.P.) about seventy fresh water fish species are known to exist in various bodies of water. Nearly all of them have been repeatedly examined in the last six decades bringing to light numerous species of digeneans harbouring various organs of fish body. It is 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 are for form remote. On the other hands about 2000 species of fishes are known to occur in the seas around our country, the number of these fishes said to be higher because a large number is still to be accounted for and identified. Our first record of a systematic analysis of digeneans from marine fishes comes from the pioneering work of Srivastava (1933-1942). Then again after about two decades work was taken up by few workers though in a much smaller magnitude. 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, to ascertain about more infections. It will be require a long time and concerted effort to examine all these species of fishes, found in the seas around India, in order to bring to light the digenetic trematodes present in them. It is high time that a systematic beginning is made.

With the above aspects of the problem in mind my supervisor advised me to examine the marine fishes of Puri

(Orissa) where a lot of work has been done in the past, beside the fresh water fishes of Raibaraly which remained untouched till the author took up the problems. The survey in all the two areas resulted in the procurement of a large number of digenetic termatodes besides other helminthes. Fifteen species of new digeneans form the basis of the present thesis. A large number of known forms were also collected and studied (though not included in the thesis) some of them from new hosts and localities as mentioned in the table of parasite host list of known forms. The thesis makes a modest beginning and much still remains to be done.