Studies on the biology of some marine food fishes include the following investigations on four different species namely Sillago sihama (Forskal), Opisthopterus tardoore (Curier), Sardinella albella (Valenciennes) and Rastrelliger canagurta (Curier):

(a) Breeding and its related aspects such as fecundity, condition factor, ova diameter frequencies, sex ratio and so on. (b) Growth rate (c) Food and feeding habits (d) Fishery and finishing methods and (e) Morphometric studies on Opisthopterus tardoore.

Time and duration of spawning in the species noted above vary to some extent from one another. Sillago sihama and Opisthopterus tardoore have long breeding seasons lasting for about six to seven months. In Sardinella albella the spawning season is relatively short and seems to be confined to about four months during the monsoons - June to September. The cycles of the condition factor in these species where investigations on this aspect were made seem mainly related to seasonal changes in the gonad condition. There is a secondary fall in the 'K' values of larger individuals which may indicate the onset of maturity. The minimum size at first maturity was also determined by following
five maturity stages in various months. Size frequency distribution of the unspawned eggs in maturing ovaries of *Sillago sihama*, *Opisthopterus tardoore* and *Sardinella albella* revealed that there is no spawning periodicity in these species. Each individual seems to spawn only once a year.

Growth rate in most of the species was studied on the basis of length frequency distribution. In *Sillago sihama* age reading has also been made by the otolith. All species seem to grow rapidly during the first two years of their lives. In subsequent years, however, the growth slows down progressively.

Each species has a particular type of food preference. In *Sillago sihama*, there is a reduced food intake during the spawning months which is followed by intensive feeding after the spawning.

In *Opisthopterus tardoore*, morphometric studies have indicated that the population of this species is composed of more than one stock and the fishery of this species around karwar is supported by at least three different stocks.

Fishing methods for each species vary from place to place. Generally indigenous gears are employed for the capture of these fishes. There is no Government mechanised fishing in those areas from where the material for the
present study was obtained.

The importance of the above mentioned work in this country has already been emphasized in the earlier part of the thesis. Any work connected with the biology of fishes is vital to an understanding of fishery management and exploitation. It is unfortunate that no adequate information exists on the natural history of the common food fishes of India.

In the light of the importance of the work and the paucity of literature on the subject, practically all the observations presented in this thesis can be claimed to be original. In making these observations, the author has utilized practically all the sources (references) available on fishery biology of not only the species under investigation but also the classical literature on other species which was found important and helpful during the course of the present work.

The author greatly hopes that the work presented here will enhance the knowledge on the biology of the four species under investigation. Needless to say that similar work on other important species of India whether marine, estuarine or fresh water is clearly needed.