SOME ASPECTS OF DIVERSITY OF BIVALVE AND GASTROPOD
MOLLUSCS ON THE COAST OF RAIGAD DISTRICT, MAHARASHTRA
STATE
PREFACE

Amongst invertebrates the phylum Mollusca includes a seemingly infinite
variety of the forms in their evolution (Mac Donald, Encyclopedia of Shells, 1982).
Many Authorities believe that the phylum comprises more than 1, 00,000 species and
only the Arthropoda includes more-thus making it one of the largest and most
important phylum. Utilization molluscs for varied purposes are represented by a large
number of species accruing in abundance in the shallow coastal waters of the seas,
estuaries and brackish water habitats. Mussels, scallops, oyster, clams and other
bivalve molluscs (Lamellibranchiata), abalones, snails and other univalves
(Gastropoda) are used by man for varied purpose from very ancient times.

The coast of Maharashtra State with its creeks, muddy bays, rocky inshore
regions, estuaries and backwaters produced excellent molluscs and offer an attractive
field for fisheries enterprise. Many of the clams, oysters, mussels and different
gastropods species from regular fisheries of considerable local importance along the
coast. The meat is widely eaten, even considered delicious by those who developed
tastes for it. Besides the edibility value and the utility of the meat as bait in fishing,
the shells are used in cement, lime and paint industries and different sizes of shells are
used for preparing ornamental and decorative goods.

Indiscriminate exploitation of these living resources, unplanned coastal
contour alterations and pollution in many coastal regions of the state are causing
major threats to these molluscs. In addition growth of tourism along the coastal
regions, estuaries and backwaters in attractive coastal areas is damaging the potential
production of these molluscs.

With the recognition of the importance of the molluscan diversity on the coast
of Maharashtra State the study on these molluscs is gaining importance. However,
such studies are rarely undertaken in many regions and contribution in the knowledge
on molluscan diversity from Konkan coastal region is merge. The reasons probably
are lack of appropriate survey for alive molluscan species, unawareness amongst the
fishermen/ women in overexploitation, lack of several policy issues in exploitation and marking of the molluscs and lack of trained man power to educate the fishermen/ women regarding conservation of the biodiversity.

There is an urgent need to pay adequate attention on the species-wise diversity on the molluscs of the coast of Maharashtra, in the view of taxonomy database and effective conservation and management strategies for sustainable utilization.

With the afore mentioned lacunae and paucity of information on molluscs form the coast of Maharashtra State that that the present study is aimed to understand coastal distribution of alive bivalve molluscs from different localities of Raigad district coast with respect to different zonation. In this study, open coast, estuaries, and backwaters, including the mangroves spread area will be surveyed and sizes of molluscs with population densities and species habitat description will be obtained. Anthropogenic impact on the species distribution will be obtained along with the data on variations in environmental parameters viz. temperature, pH, salinity, dissolved oxygen and tidal impact. In the view of potential productivity of the molluscs species from the mangrove areas, the mangrove species will be identified with an approximate spread area in the given locality.

Based on this study in different seasons viz. post-monsoon (October), winter (January,) summer (April), and monsoon (August) and the knowledge gathered from the existing literature, knowledge obtained from fishermen / women and from visits to different shellfish landing centers and marketing areas, taxonomically identified species will be categorized as importance of molluscs- ecological, edible, commercial, biochemical and trade mass uses. From the coast species occurring in abundance and rare will be identified and those species, which are common in different localities, will be listed. Likewise mangroves areas with wide distribution and patchy distribution and those with abundance will be noted. The probable reasons of the molluscsan species with rich and poor beds in different localities will be identified along with the data on the species endangered and threaten from different localities. The molluscsan species taxonomically identified, species habitat/ localities, and those of the mangroves will be photographed. In addition to the above study, the molluscs will be identified from special conservation measures of Raigad district.
The different methods of sampling of bivalve molluscs from different coastal regions and zonation are widely used in the Marine Research Laboratory of this University Department at Ratnagiri. The taxonomy identification will be based on the previous studies carried out by the researcher from the Laboratory. Method to be adapted for analysis of environmental parameters are also known. The data on molluscan diversity and other relevant information will be gathered over a period of two years and during the third year the data will be processed in the form of thesis to submitted to University for the award of Ph.D. degree.