

Zooplankton

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A review on some important aspects of zooplankton community in the Mandovi and Zuari estuaries is presented. Both these estuaries have more or less similar zooplankton fauna with nearly 20 different taxonomic groups. Crustaceans in general and copepods in particular, dominate the zooplankton community. Species belonging to the copepod families – Acartidae, Pseudodiaptomidae and Paracalanidae are common in these estuaries. Other important groups are larvae of decapods and cirriped, sergestids, cladocerans, fish eggs and larvae, chaetognaths, copelates, gastropod larvae, cumaceans, hydromedusae, and amphipods. From the monthly data at seven locations, a clear seasonal cycle is not apparent, but, a consistent feature seen is that both biomass and abundance attain their lowest annual values during June-August. This is the time when the summer monsoon is active, runoff is high, and salinity is at its lowest during the year. The low abundance and biomass during the monsoon could be a consequence of the following three processes. First, there is the physical mechanism of flushing of the estuary because of the large runoff that replaces the water in the estuary many times over during the rainy season. This effect is particularly high in the Mandovi, whose runoff is higher and estuarine volume lower than that of the Zuari. Second, salinity is low in the estuary at this time of the year. As noted earlier, 50% of the copepods live in salinity range of 25–36 psu. Such salinities can be expected only near the mouth of the two estuaries in the region of the bays. The third could be the availability of food: phytoplankton concentration is at its lowest during the rainy season. The smaller component of zooplankton (microzooplankton), abundant in the Mandovi and Zuari, are to be addressed further. There are not many systematic studies on zooplankton from the Mandovi and Zuari estuaries that show the seasonal cycle. In summary, our understanding of zooplankton in the two estuaries remains poor at this stage. Critically needed are field experiments that would describe the zooplankton dynamics with more certainty than what the present data are capable of doing.