

**M.S.38. RADHA DEVI, A. – Studies on Cumacea – 1984 –
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The Cumacea are small crustaceans ranging in length from 0.5 mm to 35.0mm having a world wide distribution occurring in the oceans from tidal limit to about 8000m depth. Majority are marine in habitat; a few are found in estuaries and brackish water also. Cumaceans form an important constituent of the food item of the bottom feeding fishes especially during their larval and post-larval stages. They are also known as indicators of hydrographic conditions in the sea.

The thesis is based on few International collections of cumacea from the Indian, Atlantic and pacific oceans taken during 1962-1974 and some collections from the Indian coasts obtained during 1945-1983. The International collections constitute specimens obtained from 25 stations in the Indian Ocean during International Indian Ocean Expedition and deposited in the Smithsonian Institution, Washington, specimens from 6 stations also by 110E from the Indian Ocean and deposited in the Indian Ocean Biological centre at Cochin, specimens from 8 stations in the Philippine Islands collected by S1-Doty Philippine Project, specimens from 21 stations in the Gulf of Mexico received from Mexico Oceanic Sorting centre and materials from 8 stations from Red Sea collected by Israel South Red Sea Expedition. The specimens from the Indian coasts were collected from 29 stations near Visakhapatnam, Tuticorin, Portonovo, Capecomorin, Vizhingam, Trivandrum, Quilon, Purakkad, Cochin, Calicut, Karwar and Laccadive Islands.

The taxonomy of 77 species belonging to 5 families and 20 genera are dealt with; 9 species namely *Eocuma striata*, *Bodotria platybasis*, *B. Ocellata*, *B. cochinensis*, *pseudocyclaspis granulata*, *p. mexicansis*, *Campylaspis minuta*, *C. robusta* and *Oxyurostylis atlantica* have been described as new species; a new genus *pseudocyclaspis* under the family Bodotriidae has been created for accommodating two species. Besides systematics, distribution of all species

collected, vertical and diurnal migration, the biology of the common species and the salinity tolerance of two species are dealt with. Along the Indian coasts, Vizhinjom (South West Coast) and Portonovo (East coast) are the two areas from where large number of cumaceans are obtained. Though cumaceans are generally benthic organisms found in a deposit formed of silty sand, many species are often collected from the surface waters during night in the inshore regions. The different methods of collection of cumacea from the substratum as well as from the surface waters are given. In the Indian region cumacea are abundant along the coastal areas and they show close affinity with those of the West pacific coast especially those from the Gulf of Siam.