MOLLUSCAN COMPOSITION AT VELLAR ESTUARY, PORTONOVO COAST

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The seasonal variation of gastropods and bivalves in the Vellar estuary of Portonovo (11°30'N-79°49'E) coast was studied during July 2004 to June 2005. The study was carried out seasonally during premonsoon (July-September), monsoon (October-December), postmonsoon (January-March) and summer (April-June). During the course of the study, it was noticed that the distribution of organisms showed marked differences in relation to water level. The gastropods such as *Babylonia* spp., *Natica* spp. and *Chicoreus* sp. were found at low water mark and *Cerithidea cingulata* was observed only at high water mark.

Among the gastropods, a total of 15 species coming under 11 genera and eight families were noticed. They are, *Clithon (Pictoneritina) oualeniensis* (Lesson), *Cerithidea (Cerithidiopsilla) cingulata* (Gmelin), *Natica tigrina* (Roding), *Polynices didyma* (Roding), *Babylonia spirata spirata* (Linne), *B. zeylonica* (Bruguiere), *Hemifusus pugilinus* (Born), *Nassarius dorsata* (Roding), *N. stolatus* Gmelin, *N. (Niothanigellus) jacksonianus* (Quoy & Gaimard), *Umbonium vestiarium* (Linne), *Cymatium rhinocereos (*Linne), *C. cingulatum* (Lamarck), *Chicoreus virgineus* (Roding) and *Telescopium telescopium* (Linne). *Nassarius stolatus*, *N. dorsata* and *Babylonia spirata spirata* and *Umbonium vestiarium* were dominant near the Vellar estuary mouth during the premonsoon season. *Cerithidea cingulata*, *Natica tigrina* and *Polynices didyma* were observed in the Vellar estuary, opposite to Marine Biological Station during premonsoon and postmonsoon. *Hemifusus pugilinus*, *Chicoreus virgensis*, *Cymatium rhinocereos* and *C. cingulatum* were dominant away from the Biological Station, i.e. on eastern side during premonsoon, postmonsoon and summer. In general, the maximum number of gastropods, at all sites, were observed during the months of April (874), August (712) and March (571) and the minimum number of gastropods were recorded during the months of October (26) and November (20).

Twelve species of bivalves were recorded, namely, *Anadara (Tegillarca) granosa* (Linn), *A. rhombea* (Born), *Scapharca inequivalvis* (Bruguiere), *Modiolus metcalfei* (Hanley), *Perna viridis* (Linne), *Placenta placenta* (Linne), *Saccostrea cucullata* (Born), *Crassostrea madrasensis* Preston, *Meretrix meretrix* Linne, *M. casta* (Chemnitz), *Katelysia opima* (Gmelin) and *Sanguiolaria diphos* Gmelin. Bivalves were recorded during the months of April (981), March (582), August (762) and September (96). Among all the bivalves *Meretrix casta* dominated near the mouth of Vellar estuary followed by *Katelysia opima* and *Meretrix meretrix*. *Meretrix casta* was dominating near Biological Station during the period of premonsoon and postmonsoon. *Crassostrea madrasensis* and *Saccostrea cucullata* were dominant during the months of July-September and February-March. On the western side of Vellar estuary *Katelysia opima* were highly dominant during premonsoon (August-September) and postmonsoon (January-March).

From the study it was observed that almost all the gastropods and bivalves were abundant during premonsoon, postmonsoon and summer months. The maximum numbers of *Meretrix* spp. and *Katelysia opima* were recorded during premonsoon and postmonsoon because of favourable environmental conditions like nutrient rich coastal waters. Jayabal (1984) and Kalyanasundaram (1982) have suggested that *Meretrix meretrix*, *M. casta* and *Katelysia opima* were abundant during premonsoon and postmonsoon. *Umbonium vestiarium* were dominating near the mouth of the estuary during all seasons, except monsoon, because of the downfall of salinity. *Cerithidea* (*Cerithideopsilla*) *cingulata* are abundant during premonsoon, postmonsoon and summer seasons at high water mark, at the same time during monsoon, it is found minimum due to heavy floods. The peak breeding occurs from May to August near the mouth of Vellar estuary and biological station which have higher salinity, suitable habitat and soil texture which influence the diverse population and also help in breeding. Kalyanasundaram (1982) reported that observation on the gonad of bivalves revealed that they have extended spawning period from March to September. The decrease in population during monsoon was due to unfavourable environmental conditions. Jayabal & Kalyani (1984) have suggested that the decrease in bivalve landing during monsoon might be due to the adverse conditions for fishing. From the present study, it infers the populations of both gastropods and bivalves were predominantly present during pre-monsoon, post-monsoon and summer.

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