CHECK-LIST OF ESTUARINE AND MARINE BIVALVES OF PORTO NOVO WATERS

R. JAYABAL AND M. KALYANI
Centre of Advanced Study in Marine Biology, Parangipettai 608 502, Tamil Nadu

ABSTRACT

Surveys were conducted in Vellar estuary and adjacent waters during the period 1981-82. The check-list of estuarine and marine bivalves is presented and distribution of bivalves tabulated.

Key-words : Bivalves, check-list, Porto Novo.

Hornell (1917, 1951) made a detailed study on the distribution, biology and ecology of marine and estuarine molluscs of Madras Presidency. Ramamorthy (1954) gave an account of the hydrobiological factors and the fauna of the Vellar estuary. The marine fauna of the Gulf of Kutch was reported by Kundu (1965). Upto recent years studies have been conducted only on the biology, ecology and biochemistry of the commercially important bivalves from Porto Novo waters. So far, no attempt has been made to study on the distribution pattern of the available species. The present study is an attempt in this direction.

Three surveys were conducted in Vellar estuary and adjacent waters (Lat. 11°29' N; Long. 79°46' E) during the period 1981-82. The sediments of both marine and estuarine regions were sieved and both adults and spat of bivalves collected. In deeper parts of the estuary, Peterson's grab was used and in shallow areas and inter-tidal regions specimens were collected with the help of shovel or by hand picking.

The present list includes 3 orders, 15 families and 38 species.

Order : Taxodonta
Series : Arcacea
Family : Arcidae
A. granosa
A. rhombea Born
A. gubernaculum Reeve
A. inequivivvis Bruguierre
A. tortuosa Linnaeus
A. concamera Bruguierre

Order : Anisomyaria
Series : Mytilacea
Family : Mytilidae
Perna viridis Linnaeus
Perna indicia
Modiolus metcalfei Hanley
Series: Pteriaceae
Family: Pteriidae
*Pinacta fucata* Gould (shells only collected)

Family: Pinnidae
*Pinna pectinata* Linnaeus
*Pinna bicolor* Gmelin

Series: Pectinacea
Family: Pectinidae
*Pecten tranquilaricus* Gmelin
*Amusium pleuronectes* Linnaeus

Series: Anomacea
Family: Anomidae
*Placenta placenta* Linnaeus

Series: Ostracea
Family: Ostreidae
*Crassostrea madrasensis* Preston
*Crassostrea cucullata*

Order: Eulamellibranchiata
Series: Cardiacea
Family: Cardiidae
*Cardium coronatum*

Series: Veneracea
Family: Veneridae
*Meretrix meretrix* Linnaeus
*M. casta* Chemnitz
*Katelysia optima* Gmelin
*Sunetta meroe* Linnaeus
*S. scripta* Linnaeus
*Dosinia excisa* Gmelin
*Paphia textile* Gmelin

Series: Tellinacea
Family: Donacidae
*Donax cuneatus* Linnaeus
*D. scortum* Linnaeus

Family: Tellinidae
*Tellina ala* Hanley
*T. cuspis* Hanley
*T. nobilis* Hanley
*T. angulata* Gmelin
*T. immaculata* Philippi

Series: Solanacea
Family: Solenidae
*Solen lamarkii* Deshayes
*Siliqua radiata* Linnaeus
Seria: Adameacea
Family: Pholadidae
  Pholas orientalis Gmelin
  Martesia striata Linnaeus

Series: Pandoracea
Family: Laternulidae
  Laternula anathina Linnaeus

Family: Psammobiidae
  Psammobia radiata Philippi
  Sanguinolaria diphos Gmelin

Table I - Distribution of bivalves in Porto Novo waters

<table>
<thead>
<tr>
<th>Species</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anadara granosa</td>
<td>Estuarine and Backwater</td>
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<tr>
<td>A. rhombea</td>
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<td>A. gubernaculum</td>
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<td>A. inequivalis</td>
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<td>A. tortuosa</td>
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<td>A. concomera</td>
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<td>Perna viridis</td>
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<td>Modiolus metcalfei</td>
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<tr>
<td>Pinctada fucata</td>
<td>Marine</td>
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<td>P. bicolor</td>
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<td>Dosinia excisa</td>
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<tr>
<td>Sunetta meroe</td>
<td>Marine</td>
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<tr>
<td>Pholas orientalis</td>
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<tr>
<td>Sanguinolaria diphos</td>
<td>Estuarine</td>
</tr>
</tbody>
</table>

The distribution pattern of the bivalves in Porto Novo waters are presented in Table I. In Porto Novo waters bivalve resources are distributed in estuarine, marine and backwater habitats. Oyster beds are present
opposite to the Marine Biological Station and Killai backwaters. Clams like *Meretrix* sp. and *Katelysia opima* form beds in Navapettai region, 9 km upstream from the mouth of Vellar estuary. In other regions of the Vellar estuary the clams are distributed discontinuously. Generally, most of the bivalves in Porto Novo waters breed during February-September and the fresh recruitment to the population starts from March or April onwards. Clams and cockles are of good value among the edible molluscs of India. Natarajan, Devadoss and Muniyandi (1979) estimated the total landings of molluscan resources for the period 1973-'74 of Porto Novo waters. Shell fishes are estimated to be 64.4% of the total landings, 55.2% of which is from clams alone.

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REFERENCES


Hornell, J., 1951. *Indian Molluscs*. Published by the Bombay Natural History Society.

