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A CHECKLIST OF MARINE BIVALVES FROM PHUKET ISLAND,  
ADJACENT MAINLAND AND OFFSHORE ISLANDS,  
WESTERN PENINSULAR THAILAND

by

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# A CHECKLIST OF MARINE BIVALVES FROM PHUKET ISLAND, ADJACENT MAINLAND AND OFFSHORE ISLANDS, WESTERN PENINSULAR THAILAND

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## ABSTRACT

Collections of marine bivalve molluscs were made from Phuket Island, the adjacent mainland and offshore islands during 1971 and 1972, and 1974 to 1976. In total 241 species were identified and 156 species have been confirmed by an authoritative specialist. A systematic checklist is provided here with brief ecological notes on the habitat(s) from which each species was collected.

## INTRODUCTION

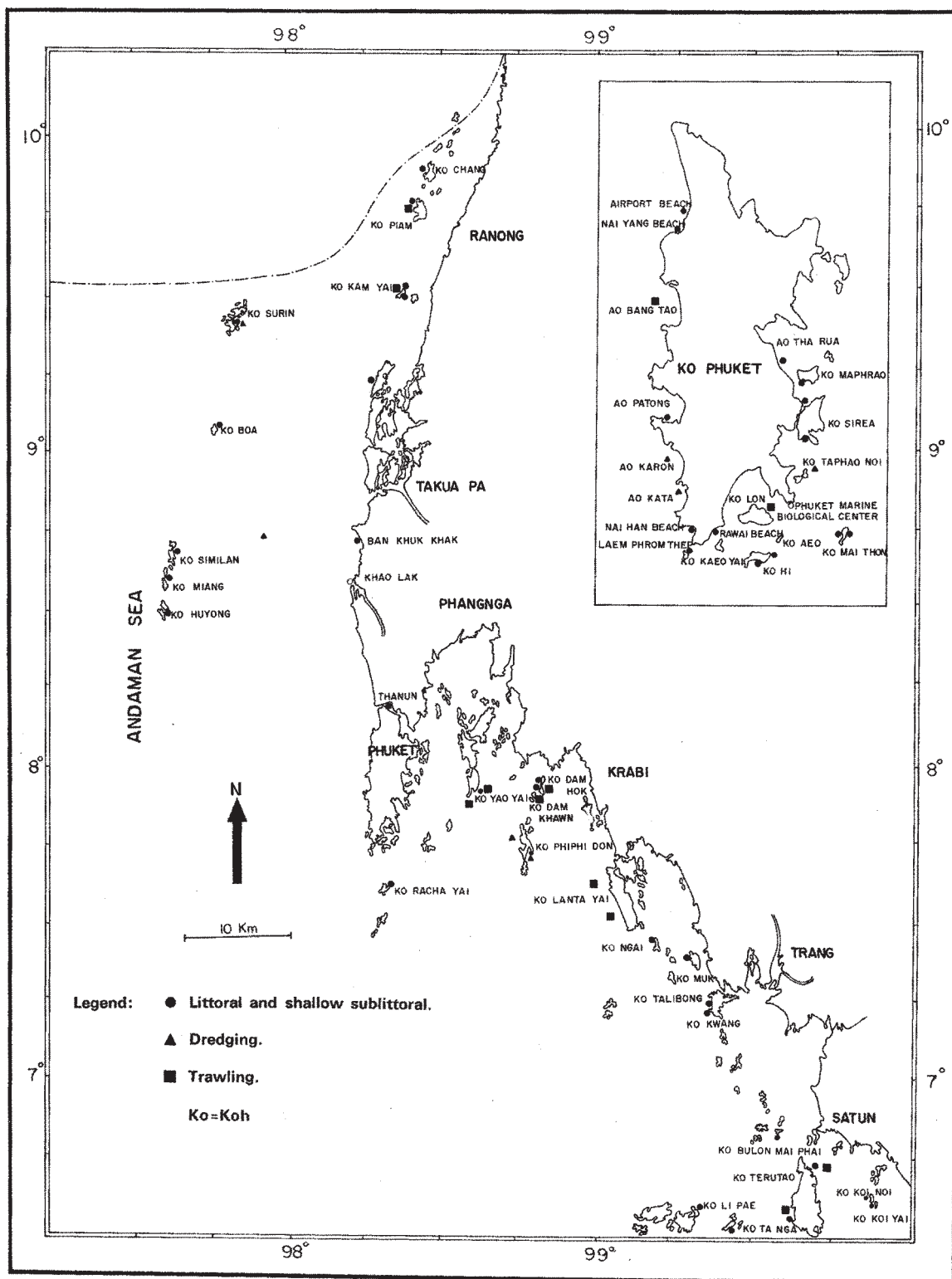
A collection of marine molluscs was made from Phuket Island ( $7^{\circ}45'N$  to  $8^{\circ}15'N$ ,  $98^{\circ}15'E$  to  $98^{\circ}30'E$ ), from the adjacent mainland of Phangnga Province, and from offshore islands: Koh Chang ( $9^{\circ}55'N$ ,  $98^{\circ}27'E$ ) in the north to Koh Tarutao ( $6^{\circ}30'N$ ,  $99^{\circ}40'E$ ) in the south, along the west coast of peninsular Thailand (see Map 1). A preliminary collection was made during 1971 and 1972, with subsequent intensive collecting from the middle of 1974 until the middle of 1977. The collection of marine shelled gastropod molluscs has been treated separately (Tantanasiriwong, 1978). This paper deals solely with the marine bivalve molluscs collected from this study area.

Very few data are available on the marine bivalves of Thailand. Suvatti (1950, 1966) provided a very generalized checklist of molluscan fauna of Thailand. Amatyakul (1958) and Chaitiamwong *et al.* (1971) reviewed some bivalve molluscs in Thai waters that are of commercial importance and other comprehensive literature on edible species is available (Thiemmedh, 1960; Department of Fisheries, Bangkok, 1969 and Davidson, 1976). Nielsen (1976) described some bivalve species from a reef flat at Phuket Island, Thailand, all of which were found during the present study. Very recently, many ecological studies have been made on selected molluscan taxa, or taxa within a selected biotope, particularly in the littoral areas of

Phuket Island, the adjacent mainland and offshore islands (Frith *et al.*, 1976; Frith, 1977 and Isran-kura, 1976). Chuang (1961, 1973) also provided further ecological data on the molluscan faunas of Malaysia and Singapore, many of which are found in Thai waters.

Bivalve molluscs were collected from the littoral zone (which included the littoral fringe area) either during low water or, by snorkling, during high water and from the sublittoral zone by snorkling in shallower depths or by dredging or trawling in depths ranging from 8 to 80 metres. Littoral zone collections were made from coral reefs, sandy, muddy and rocky shores and mangrove swamps. Those of the sublittoral zone were made from coral reefs and sandy-mud/muddy-sand substrates. The littoral and sublittoral areas from which collections were made are indicated in Map 1.

The aim of the present investigation was to provide a comprehensive checklist of the marine bivalve molluscs of the west coast of peninsular Thailand, and to give some indication of the habitats from which the collections were made. In total 241 species were collected. The majority of specimens were collected live; those found dead are, however, indicated by an asterisk (\*) in the following checklist. It is hoped that such a list will form a basis for more intensive research in the future on selected taxa.



Map 1—Map to show the collecting localities within the study area on the west coast of peninsular Thailand.

The systematic arrangement of the following checklist follows that of Moore (1969) with one exception: members of the genus *Placuna* are listed under the family Placunidae and not with members of the family Anomiidae. Initially all specimens were identified by using several of the publications given under References. Approximately 156 of the species, mostly those that were taxonomically difficult, were subsequently sent to an authoritative specialist for identification confirmation. These species are indicated by a plus (+) in the checklist. The relevant publications used for the identifications of the remaining 77 species are marked with an asterisk in the references.

All specimens collected are registered, with details of collecting dates and sites within the study areas, in the Reference Collection of the Phuket Marine Biological Center.

#### ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to Mrs. Solene Whybrow, Mollusca Section, British Museum (Natural History) for her help in confirming the identifications of my specimens, and to Dr. D.W. Frith for criticizing the manuscript and providing useful comments during its preparation. I am grateful to Mr. Banjong Mianmanus for his help with the field work.

### CHECKLIST OF MARINE BIVALVES

#### Subclass **CRYPTODONTA**

##### Order **SOLEMYOIDA**

##### Superfamily **SOLEMYACEA**

##### Family **SOLEMYIDAE**

*Acharax japonica* (Dunker, 1833) Littoral: Burrowing in muddy sand landward of coral reefs. +

#### Subclass **PTERIOMORPHIA**

##### Order **ARCOIDA**

##### Superfamily **ARCACEA**

##### Family **ARCIDAE**

*Arca avellana* Lamarck, 1819 Littoral: Attached to shale by byssus threads. +  
*A. boucardi* Jousseume, 1894 Sublittoral: Dredged from sandy mud bottom at a depth of 22 to 26 metres. +  
*A. navicularis* Bruguière, 1789 Sublittoral: Trawled from mud bottom at a depth of 8 to 15 metres. +  
*A. ventricosa* Lamarck, 1819 Littoral: Attached to corals by byssus threads. +  
*Barbatia fusca* (Bruguière, 1789) Littoral: Attached to underside of corals. +  
*B. helblingi* Bruguière, 1789 Littoral: Attached to underside of corals. +  
*B. lacerata* (Bruguière, 1789) Littoral and sublittoral: Attached to corals between tide marks and down to a depth of 2 metres. +

\* denotes dead specimen collected

- B. tenella* (Reeve, 1844) Littoral: Attached to underside of corals. +
- B. yamamotoi* Sakurai & Habe, 1961 Littoral: Attached to underside of corals. +
- Trisidos semitorta* (Lamarck, 1819) Sublittoral: Dredged from shell sand bottom, with living corals *Heteropsamma michelini* and *Cycloseris cyclolites*, at a depth of 20 to 26 metres. +
- Anadara antiquata* (L., 1758) Littoral and sublittoral: On mud bottom between tide marks, and down to a depth of 26 metres. +
- A. clathrata* (Reeve, 1844) Sublittoral: Trawled from mud bottom at a depth of 26 metres. +
- A. ferruginea* (Reeve, 1844) Sublittoral: Trawled from mud bottom at a depth of 30 metres. +
- A. granosa* L., 1758 Littoral: On mud flats seaward of mangrove forests. +
- A. trocheli* (Dunker) Littoral: On mud flats seaward of mangrove forests. +
- Scapharca inaequalis* (Bruguère, 1789) Littoral: Dredged from muddy sand bottom at a depth of 22 metres. +
- S. vellicata* (Reeve, 1844) Sublittoral: Dredged from muddy sand bottom at a depth of 22 metres. +

#### Family CUCULLAEIDAE

- Cucullaea labiata* (Solander, 1786) Sublittoral: Dredged from mud bottom at a depth of 26 metres. +

#### Family NOETIIDAE

- Striarca afra* (Gmelin, 1791) Littoral: Attached to underside of corals. +
- S. pectunculiformis* (Dunker, 1866) Littoral: On mud flats seaward of mangrove forests. +

#### Superfamily LIMOPSACEA

##### Family LIMOPSIDAE

- Limopsis multistriata* (Forsk., 1775) Sublittoral: Dredged from sandy mud bottom at a depth of 40 metres. +

##### Family GLYCYMERIDIDAE

- Glycymeris amamiensis* (Kuroda) Sublittoral: Dredged from sandy mud bottom at a depth of 22 to 40 metres. +
- G. pilsbryi* (Yokoyama, 1920) Sublittoral: Dredged from sandy mud bottom at a depth of 40 metres. +
- G. reevei* (Mayer, 1868) Sublittoral: Dredged from muddy sand bottom at a depth of 12 to 40 metres. +
- G. sp.* Sublittoral: Dredged from sandy mud bottom at a depth of 40 metres.
- Melaxinaea hoylei* (Melvill & Standen) Sublittoral: Dredged from sandy mud bottom at a depth of 40 metres.

Order **MYTILOIDA**

Superfamily **MYTILACEA**

Family **MYTILIDAE**

- Brachidontes variabilis* (Krauss, 1848) Littoral: Attached to *Rhizophora apiculata* prop roots in mangrove forests, and to gravel in rock crevices. +
- Perna viridis* (L. 1758) Sublittoral: Attached to rocks at a depth of 5 to 8 metres. +
- Gregariella coralliophaga* (Gmelin, 1791) Littoral: Boring into *Portites* sp. +
- \**G. striatula* (Hanley, 1843) Littoral: Attached to sand on reef flats. +
- Musculus mirandus* (Smith, 1884) Littoral: On reef flats. +
- Musculista senhousi* (Benson, 1842) Littoral: Clustered together on mud flats seaward of mangrove forests. +
- Septifer bilocularis* (L. 1758) Littoral: Attached to corals on reef flats. +
- ? *S. excisus* (Wiegmann, 1837) Littoral: Attached to corals on reef flats. +
- Lithophaga malaccana* (Reeve, 1858) Littoral: Boring into *Porties* sp. +
- L. nasuta* (Philippi, 1846) Littoral: Boring into *Porites* sp. +
- L. teres* (Philippi, 1846) Littoral: Boring into *Porites* sp. +
- L. zitteliana* Dunker, 1882 Littoral: Boring into *Porites* sp. +
- Modiolus agripetus* (Iredale, 1939) Sublittoral: Attached to rocks at a depth of 8 metres. +
- M. flavidus* (Dunker, 1856) Littoral: On reef flats. +
- M. metcalfei* (Hanley, 1843) Sublittoral: Dredged from mud bottom at a depth of 22 metres. +
- M. plumescens* (Dunker, 1868) Littoral: On reef flats. +
- M. philippinarum* (Hanley, 1843) Littoral: On reef flats. +
- Botula cinnamomea* (Lamarck, 1819) Littoral: Boring into *Porites* sp. +

Superfamily **PINNACEA**

Family **PINNIDAE**

- Pinna bicolor* Gmelin 1791 Littoral and sublittoral: Imbedded in muddy sand between tide marks and down to a depth of 8 metres.
- Atrina pectinata* (L., 1767) Littoral: Imbedded in sand landward of coral reefs. +
- A. vexillum* (Born, 1778) Littoral: Imbedded in sand landward of coral reefs.

Order **PTERIOIDA**

Superfamily **PTERIACEA**

Family **PTERIIDAE**

- Pteria? breviaalata* (Dunker, 1872) Sublittoral: Attached to other shells species at a depth of 8 metres. +
- P. coturnix* (Dunker, 1879) Sublittoral: Dredged from sandy mud bottom at a depth of 8 to 22 metres.
- \**P. ? semisagita* (Lamarck, 1818) Sublittoral: Trawled from mud bottom at a depth of 80 metres. +

- Electroma alacorvi* (Dillwyn, 1817) Littoral: Attached to corals on reef flats. +  
*Pinctada chemnitzii* (Philippi, 1849) Sublittoral: Attached to other shells species at a depth of 8 metres. +  
*P. margaritifera* (L., 1758) Littoral and sublittoral: On coral reefs between tide marks, and down to a depth of 4 metres. +  
*P. martensi* (Dunker, 1872) Littoral: Attached to corals. +  
*P. maxima* (Jameson, 1901) Sublittoral: On sand bottom at a depth of 4 metres. +  
*P. radiata* (Leach, 1814) Littoral: Attached to rocks. +

#### Family ISOGNOMONIDAE

- Isognomon ehippium* (L., 1758) Littoral: Attached to *Rhizophora apiculata* prop roots in mangrove forests. +  
*I. isognomum* (L., 1758) Littoral: Attached to corals on reef flats.  
*I. legumen* (Gmelin, 1791) Littoral: Attached to shale on reef flats.  
*I. perna* (L., 1767) Littoral: Attached to shale on reef flats. +

#### Family MALLEIDAE

- Malleus albus* Lamarck, 1819 Sublittoral: Dredged from mud bottom at a depth of 22 metres.  
*M. malleus* (L., 1758) Sublittoral: On reef flats at a depth of 1 metre.  
*M. regula* (Forsk., 1775) Littoral: On reef flats. +

#### Superfamily PECTINACEA

#### Family PECTINIDAE

- Chlamys albolineata* (Sowerby, 1825) Littoral: Beneath corals. +  
*C. senatoria* (Gmelin, 1791) Sublittoral: Trawled from mud bottom at a depth of 8 to 22 metres. +  
*C. sp.* Sublittoral: Trawled from mud bottom at a depth of 30 metres.  
*Pendum spondyloideum* (Gmelin, 1791) Littoral: In crevices of *Porites* sp. +  
*Pecten pyxidatus* (Born, 1778) Sublittoral: Trawled from mud bottom at a depth of 30 metres. +  
*Amusium pleuronectus* (L., 1758) Sublittoral: Trawled from mud bottom at a depth of 30 metres.

#### Family PLACUNIDAE

- Placuna placenta* (L., 1758) Littoral and sublittoral: On mud flats between tide marks and down to a depth of 20 metres. +

#### Family PLICATULIDAE

- Plicatula australis* Lamarck, 1819 Littoral: Cemented on to the surface of shale fragments.  
*P. muricata* Sowerby, 1873 Sublittoral: Dredged from muddy sand bottom at a depth of 26 metres.  
*P. plicata* (L., 1758) Littoral: Cemented on to the surface of shale fragments. +  
*P. simplex* (Gould, 1861) Sublittoral: Dredged from muddy sand bottom at a depth of 26 metres. +



Family SPONDYLIDAE

*Spondylus anacanthus* Mawe, 1823 Sublittoral: Dredged from mud bottom at a depth of 17 to 22 metres.

*S. butleri* (Reeve) Littoral: Cemented on to corals.

*S. ducalis* Röding, 1798 Littoral: Cemented on to corals. +

*S. hystrix* Röding, 1798 Littoral: Cemented on to corals. +

Superfamily ANOMIACEA

Family ANOMIIDAE

*Anomia achaeus* Gray, 1849 Sublittoral: Attached to shells of *Pinna bicolor* at a depth of 8 metres. +

*A. sp.* Littoral: Attached to underside of corals.

*Enigmonia aenigmatica* (Holten, 1803) Littoral: Attached to lower trunks and roots of mangrove trees, mostly *Rhizophora apiculata*. +

Superfamily LIMACEA

Family LIMIDAE

*Lima lima* (L., 1767) Littoral: Beneath and in crevices of corals.

*L. cf. orientalis* Adams & Reeve, 1850 Littoral: Beneath corals.

*Ctenoides annulatus* (Lamarck, 1819) Littoral: Beneath corals. +

*Limaria fragilis* (Gmelin, 1791) Littoral: Beneath corals. +

Superfamily OSTREACEA

Family GRYPHAEIDAE

*Hyotissa hyotis* (L., 1758) Littoral and sublittoral: On reef flats between tide marks, and down to a depth of 5 metres.

*H. numisma* (Lamarck, 1818) Sublittoral: Cemented on to shale block at a depth of 8 metres. +

Family OSTREIDAE

*Crassostrea gigas* (Thunberg, 1793) Sublittoral: Cemented in deep crevices of coral heads of *Porites lutea* at a depth of 2 metres. +

*C. sp.* Littoral: Cemented on to the lower surface of shale blocks.

*Saccostrea cucullata* (Born, 1778) Littoral: Cemented on to shale of rocky shores and to *Rhizophora apiculata* prop roots in mangrove forests. +

*S. echinata* (Quoy & Gaimard, 1835) Littoral: Cemented on to shale of rocky shores.

*Lopha cristagalli* (L., 1758) Littoral: Cemented on to corals and *Alectryonella plicatula*.

*L. folium* (L., 1758) Sublittoral: Cemented on to stems of Gorgonacea at a depth of 26 metres.

*Alectryonella plicatula* (Gmelin, 1791) Littoral and sublittoral: Cemented on to shale blocks between tide marks and down to a depth of 8 metres. +



Subclass **PALAEOHETERODONTA**

Order **UNIONOIDA**

Superfamily **UNIONACEA**

Family **UNIONIDAE**

*Ensidens ingallsianus* (Lea, 1852) Littoral: On sandy mud flats landward of mangrove forests. +

Subclass **HETERODONTA**

Order **VENEROIDA**

Superfamily **LUCINACEA**

Family **LUCINIDAE**

*Codakia punctata* (L., 1758) Littoral: Buried in sand between shale blocks. +

*Ctena divergens* (Philippi, 1850) Littoral: In coarse sand between shale blocks. +

\**Anodontia edentula* (L., 1758) Littoral: On mud flats seaward of mangrove forests. +

*Pseudomiltha corrugata* (Deshayes, 1843) Littoral: On mud flats seaward of mangrove forests. +

*Pillucina pisidium* (Dunker) Littoral: In muddy sand seaward of reef flats.

Family **FIMBRIIDAE**

\**Fimbria fimbriata* (L., 1758) Littoral: On sandy shores. +

Family **UNGULINIDAE**

*Diplodonta globosa* (Forsk., 1775) Littoral: On mud substrates of mangrove forest areas and sand flats landward of mangrove forests. +

*D.* sp. Littoral: In coarse sand of reef flats.

Superfamily **CHAMACEA**

Family **CHAMDAEI**

*Chama aspersa* Reeve, 1846 Littoral: Cemented on to the lower surface of shale fragments in coarse sand. +

*C. asperella* Lamarck, 1819 Littoral: Cemented on to corals. +

*C. brassica* Reeve, 1847 Littoral: Cemented on to corals.

*C. imbricata* Broderip, 1834 Sublittoral: On coral reefs.

*C. iostoma* Conrad, 1837 Littoral: Cemented on to shale blocks.

*C. lazarus* L. Sublittoral: Cemented on to corals.

*C. multisquamosa* Reeve, 1846 Littoral: Cemented on to corals. +

*C. pacifica* Broderip, 1834 Littoral: Cemented on to corals. +

*C. reflexa* Reeve, 1846 Littoral: Cemented on to corals.

Superfamily **LEPTONACEA**

Family **GALEOMMATIDAE**

- Galeomma argentea* Deshayes, 1855 Littoral: Underside of corals. +  
*G. obockense* Jousseume, 1888 Littoral: Underside of corals. +  
*Scintilla* sp. Littoral: Underside of corals.

Superfamily **CARDITACEA**

Family **CARDITIDAE**

- Cardita leana* Dunker, 1860 Littoral: Attached to corals on reef flats.  
*C. variegata* Bruguière, 1792 Littoral: Attached to corals on reef flats. +  
*Beguina semiorbiculata* (L., 1758) Littoral: On reef flats around low water mark. +

Superfamily **CRASSATELLACEA**

Family **CRASSATELLIDAE**

- Crassatella radiata* (Sowerby, 1825) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +  
*C. ziczac* Reeve, 1842 Sublittoral: Dredged from muddy sand bottom at a depth of 26 to 40 metres. +

Superfamily **CARDIACEA**

Family **CARDIIDAE**

- Vepricardium asiaticum* (Bruguière, 1789) Sublittoral: Trawled from mud bottom at a depth of 12 metres. +  
*V. multispinosum* Sowerby, 1838 Sublittoral: Dredged from muddy sand bottom at a depth of 26 to 40 metres. +  
*V. setosum* (Redfield, 1846) Littoral: On reef flats. +  
*Trachycardium flavum* (L., 1758) Littoral: In sand among corals.  
*T. maculosum* (Wood) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +  
*T. rubicundum* (Reeve) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +  
*Fragum carinatum* (Lynge, 1909) Littoral: In sand among corals.  
*F. fragum* (L., 1758) Littoral: In fine sand around high water mark.  
*F. subretusa* (Sowerby) Sublittoral: Dredged from shell sand bottom at a depth of 20 metres.  
*F. unedo* (L., 1758) Littoral: In coarse sand of reef flats.  
*Corculum cardissa* (L., 1758) Littoral: In coarse sand of reef flats.  
*Ctenocardia adamsi* (A. Adams & Reeve, 1850) Sublittoral: Dredged from sandy mud bottom at a depth of 40 to 80 metres. +  
*Nemocardium bechei* (Reeve, 1847) Sublittoral: Dredged from sandy mud bottom at a depth of 80 metres.

*N. exasperatum* (Sowerby) Sublittoral: Dredged from sandy mud bottom at a depth of 40 metres.

*Discors lyratum* (Sowerby, 1841) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres.

*Laevicardium attenuatum* (Sowerby) Sublittoral: Dredged from mud bottom at a depth of 40 metres.

*L. australe* (Sowerby, 1841) Sublittoral: Dredged from shell sand bottom at a depth of 26 metres.

*L. bullata* (L.) Sublittoral: Trawled from mud bottom at a depth of 20 to 26 metres. +

#### Superfamily TRIDACNACEA

##### Family TRIDACNIDAE

*Tridacna crocea* Lamarck, 1819 Littoral: Embedded in *Porites* sp.

\**T. gigas* (L., 1758) Sublittoral: On corals reefs at a depth of 7 metres.

*T. maxima* (Röding, 1798) Littoral: Attached to corals.

*T. squamosa* Lamarck, 1819 Littoral: On coral reefs.

#### Superfamily MACTRACEA

##### Family MACTRIDAE

*Maetra achatina* Dillwyn 1817 Sublittoral: Dredged from shell sand or mud bottom at a depth of 20 to 26 metres. +

*M. angulifera* Deshayes, 1854 Littoral: In sand among corals.

*M. dolabrata* (Reeve) Sublittoral: Dredged from mud bottom at a depth of 15 metres.

*M. incongrua* Deshayes, 1854 Littoral: On sand flats landward of coral reefs. +

*M. lilacea* Lamarck, 1818 Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +

*Oxyperas lentigenosa* (Gould, 1852) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +

\**Lutraria maxima* Jonas, 1844 Littoral: On sandy shores.

#### Family MESODESMATIDAE

*Atactodea glabrata* (Gmelin, 1791) Littoral: In coarse sand above high water mark. +

*Caecella horsfieldi* Gray, 1853 Littoral: On sand flats seaward of mangrove forests. +

*C. transversalis* Deshayes, 1854 Littoral: In coarse sand above high water mark. +

#### Superfamily SOLENACEA

##### Family SOLENIDAE

*Solen delesserti* Chemnitz Littoral: Burrowing in mud substrates landward of mangrove forests. +

*S. grandis* Dunker, 1861 Littoral: On sand shores. +

*S. roseomaculatus* Pilsbry, 1901 Sublittoral: Dredged from gravelly sand bottom at a depth of 20 to 30 metres. +

Family CULTELLIDAE

- Cultellus attenuatus* Dunker, 1861 Littoral: On mud flats seaward of mangrove forests. +  
*C. lacteus* (Spengler, 1794) Littoral: On muddy sand flats. +  
*Phaxas cultellus* (L., 1758) Sublittoral: Dredged from sandy mud bottom at a depth of 26 metres. +  
*Siliqua radiata* (L., 1758) Littoral: On sandy shores. +

Superfamily TELLINACEA

Family TELLINIDAE

- Tellina (Arcopaginula) inflata* (Gmelin, 1791) Sublittoral: Dredged from sand mud bottom at a depth of 26 metres. +  
*T. (Cyclotellina) pretiosa* (Deshayes, 1855) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +  
*T. (Cyclotellina) remies* L., 1758 Littoral: In coarse sand among coral rubble. +  
*T. (Pharaonella) perrieri* (Bertin, 1878) Littoral: In coarse sand above high water mark. +  
*T. (Pharaonella) pulcherrima* (Sowerby, 1825) Sublittoral: Dredged from shell sand or sandy mud bottom at a depth of 20 to 26 metres. +  
*T. (Pharaonella) rastella* Hanley, 1844 Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +  
*T. (Quidnipagus) palatum* (Iredale, 1929) Littoral: In coarse sand among corals. +  
*T. (Scutarcopagia) scobinata* L., 1758 Littoral: In coarse sand among coral rubble. +  
*T. (Serratina) capsoides* Lamarck, 1818 Littoral: On muddy sand flats seaward of mangrove forests. +  
*T. (Tellinella) staurella* Lamarck, 1818 Littoral: In coarse sand among coral rubble. +  
*T. (Tellinides) opalina* Gmelin, 1791 Littoral: On muddy sand flats seaward of mangrove forests. +  
*Macoma dispar* (Conrad, 1837) Littoral: On sand flats landward of coral reefs. +  
*Macalia bruguieri* (Hanley, 1844) Littoral: In coarse sand among coral rubble. +

Family DONACIDAE

- Donax cuneatus* (L., 1758) Littoral: Burrowing in coarse sand uppermost of sandy shores. +  
*D. faba* Gmelin, 1791 Littoral: Burrowing in coarse sand uppermost of sandy shores. +  
*\*D. scortum* L., 1758 Littoral: On sandy shores. +

Family PSAMMOBIIDAE

- ? *Gari elongata* (Lamarck) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +  
*\*G. maculosa* (Lamarck, 1818) Littoral: On reef flats. +  
*G. minor* (Deshayes) Littoral: On muddy sand flats seaward of mangrove forests. +  
*G. radiata* (Dunker, 1845) Littoral: In coarse sand coral rubble. +  
*G. sibogai* Prashad Sublittoral: Dredged from gravel bottom at a depth of 20 to 30 metres. +  
*G. squamosa* (Lamarck, 1818) Sublittoral: Dredged from mud bottom at a depth of 40 metres. +  
*Asaphis dichotoma* (Anton, 1838) Littoral: In coarse sand among coral rubble. +

Family SEMELIDAE

- Semele carnicolor* (Hanley, 1844) Littoral: Burrowing in sand between rocks.  
*S. cordiformis* (Holten, 1802) Littoral: Burrowing in muddy sand. +  
*S. zebuensis* (Hanley, 1844) Sublittoral: Dredged from shell sand bottom at a depth  
of 26 metres. +

Family SOLECURTIDAE

- Sinonovacula constricta* (Lamarck, 1818) Littoral: On mud flats seaward of mangrove  
forests.

Superfamily ARCTICACEA

Family TRAPEZIIDAE

- Trapezium angulatum* (Lamarck, 1819) Littoral: On reef flats. +  
*T. sublaevigatum* (Lamarck, 1819) Littoral: In rock crevices. +  
*Coralliophaga coralliophaga* (Gmelin, 1791) Littoral: Boring in *Porites* sp.

Superfamily GLOSSACEA

Family GLOSSIDAE

- Meiocardia moltkiana* (Spenglar, 1783) Sublittoral: Dredged from shell sand bottom  
at a depth of 20 to 26 metres. +  
*M. tetragona* (Adams & Reeve, 1850) Sublittoral: Dredged from mud bottom at a depth  
of 40 metres.

Superfamily CORBICULACEA

Family CORBICULIDAE

- Geloina erosa* (Solander, 1788) Littoral: On muddy sand flats landward of mangrove  
forests. +

Superfamily VENERACEA

Family VENERIDAE

- Antigona lamellaris* Schumacher, 1817 Sublittoral: Dredged from shell sand bottom at a  
depth of 20 to 26 metres. +  
*Periglypta reticulata* (L., 1758) Littoral: Burrowing in muddy sand of reef flats.  
*P. puerpera* (L., 1717) Littoral: Burrowing in muddy sand of reef flats.  
*Circe scripta* (L., 1758) Sublittoral: Dredged and trawled from sandy mud bottom at a  
depth of 10 to 22 metres. +  
*?Gouldia philippinarum* (Hanley, 1844) Sublittoral: Dredged from mud bottom at a  
depth of 40 metres. +  
*Gafrarium dispar* (Dillwyn, 1817) Littoral: In coarse sand among coral rubble.  
*G. divaricatum* (Gmelin, 1791) Littoral: In coarse sand among coral rubble. +  
*G. pectinatum* (L., 1758) Littoral: In coarse sand among coral rubble.  
*G. tumidum* Röding, 1798 Littoral: In coarse sand among coral rubble.

- Sunetta meroe* (L., 1758) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +
- Meretrix lusoria* (Röding, 1798) Littoral and sublittoral: On muddy sand flats between tide marks and down to a depth of 10 metres. +
- M. meretrix* (L., 1758) Littoral: On muddy sand flats seaward of mangrove forests. +
- Pitar citrina* (Lamarck, 1818) Littoral: In coarse sand among coral rubble. +
- P. hebraea* (Lamarck, 1818) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 30 metres. +
- Amiantis hagenowi* (Dunker) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 30 metres. +
- Callista chinensis* (Holten, 1802) Sublittoral: Dredged from mud bottom at a depth of 40 metres. +
- ? *C. chione* (L., 1758) Littoral: On muddy sand flats. +
- Dosinia angulosa* (Philippi, 1847) Littoral: On mud flats. +
- D. exasperata* (Philippi, 1847) Littoral: On mud flats. +
- D. histrio* (Gmelin, 1790) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +
- Tapes literatus* (L., 1767) Littoral: In coarse sand landward of reef flats. +
- T. philippinarum* (Adams & Reeve, 1850) Littoral: In coarse sand among coral rubble. +
- Lioconcha ornata* (Dillwyn, 1817) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +
- Irus irus* (L., 1758) Littoral: In shale crevices. +
- Marcia japonica* (Gmelin, 1791) Littoral: On muddy sand flats seaward of mangrove forests. +
- M. opima* (Gmelin, 1791) Littoral: On mud flats seaward of mangrove forests. +
- Paphia gallus* (Gmelin, 1791) Sublittoral: On mud flats below low water mark and down to a depth of 20 metres. +
- P. rotundata* (L., 1758) Sublittoral: Dredged from muddy sand bottom at a depth of 22 metres. +
- P. ? semirugata* (Philippi, 1847) Littoral: On muddy sand flats seaward of mangrove forests. +
- P. undulata* (Born, 1778) Sublittoral: On mud flats below low water mark. +
- Callanaitis callophylla* (Philippi, 1836) Sublittoral: On mud flats below low water mark. +
- Placamen tiara* (Dillwyn, 1817) Sublittoral: Dredged from gravel bottom at a depth of 30 metres. +
- Timoclea imbricata* (Sowerby, 1853) Sublittoral: Found associated with squillid stomatopods on mud bottom at a depth of 12 metres. +
- T. marica* (L., 1758) Sublittoral: Dredged from shell sand bottom at a depth of 20 to 26 metres. +

#### Family PETRICOLIDAE

- \*? *Petricola aequistriatus* (Sowerby, 1874) Littoral: Boring in shale.
- \**P. lapicida* (Gmelin, 1791) Littoral: Boring in *Porites* sp.
- P. monstrosa* (Gmelin, 1791) Littoral: Boring in shale.

Family GLAUCONOMIDAE

*Glaucanome virens* (L.) Littoral: On mud substrates landward of mangrove forests. +

Order MYOIDA

Superfamily MYACEA

Family MYIDAE

*Mya* sp. Littoral : Boring into corals.

Family CORBULIDAE

*Corbula crassa* Hinds, 1843 Littoral: In coarse sand among coral rubble. +

*C. ? erythron* Lamarck, 1818 Sublittoral: Dredged from shell sand or sandy mud bottom at a depth of 20 to 26 metres. +

*C. modesta* Hinds, 1843 Littoral: In coarse sand among coral rubble. +

Superfamily GASTROCHAENACEA

Family GASTROCHAENIDAE

*Gastrochaena cuneiformis* Spengler, 1783 Littoral: Boring into *Porites* sp.

Superfamily PHOLADACEA

Family PHOLADIDAE

*Barnea (Anchomasa) dilatata* Souleyet Sublittoral: Burrowing in mud flats below low water mark. +

*Parapholas quadrizonata* (Spengler, 1792) Littoral: Boring into *Porites* sp. +

*Jouannetia globulosa* (Quoy & Gaimard, 1835) Littoral: Boring into *Porites* sp. +

Family TEREDINIDAE

*Teredo* sp. Littoral : Boring into mangrove trees.

Subclass AMOMALODESMATA

Order PHOLADOMYOIDA

Superfamily PANDORACEA

Family LATERNULIDAE

*Laternula truncata* (Lamarck) Littoral: On mud substrates landward of mangrove forests. +



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