

SOME SEA SHELLS OF THE COASTAL REGION OF HUNEISH ISLAND SOUTHERN RED SEA , YEMEN

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ABSTRACT

Sixteen species belonging to 9 families of gastropods and bivalves have been recorded from Huneish island, Yemen. Measurements, diagnosis and coloured photos for every specimen were provided .

INTRODUCTION :

Huneish island lies in the Southern part of the Red Sea between 13.5⁰ N – 14⁰ N and 42.5⁰ E – 43⁰ E (Fig.1) to the north of the strait of Bab al-Mandab, it was been formed from volcanic rocks in the early Tertiary rifting (Alasdir, J. & Stephen, M., 1987). The shores of the studying area are rocky, parts of which are sandy. A total of 950 species of molluscs were occurring in the whole Red Sea basin, about 850 species have been recorded from the southern and central parts (Masaller, 1979). A large number of scientists have studied this group (see Mastaller, 1987, for previous works in the Red Sea areas) .

The aim of the present study is to through some light on the species composition of gastropods and bivalves in the coastal region of Huneish island and to report on, their occurrence and distribution, which were not done before at Huneish island .

MATERIAL AND METHODS :

Materials of this investigation were collected by Yemeni scientific team from the departement of oceanography, Faculty of Science, Sana`a Univesity, who participated in the METEOR International Scientific Expedition to the Southern parts of the Red Sea on 1994. Part of this sample was collected from Huneish island for the first time (Fig. 2)

The investigated area extends from the upper most zone (the splash area or supra-littoral zone) along with 15 m down within the intertidal zone. The inspected site comprised a quadrant (500 x 500 m) dissecting the shore. Molluscan samples were collected at all coastal sites. The shells were obtained from all inspected habitats either by hand or by snorkeling methods whenever possible. The molluscan samples were divided into two major groups vize Gastropoda and Bivalvea. Identification was carried out with the aid of (Key environment of the Red Sea; illustrated guide for molluscs of Oman; mollusca from Dahlak Archipelago ...etc) .

RESULTS :

A total of 16 species of sea shells were identified and illustrated with photographs for each specimen, one species was recorded for the first time from the Red Sea, vize *Engina mactanensis*. This paper is a first in a serious of articles comprising all identified species will be published respectively.

Phylum : **Mollusca**

Subclass : **Prosobranchia**

Class : **Gastropoda**

Order : **Archeogastropoda**

Superfamily : **Fissurellacea** (Keyhole Limpets)

Family : **Fissurellidae**

Diodora funiculata:(Reeve, 1850)(Plate I,A)

Flattish shell, densely ribbed, ribs somewhat granular in, about 20 rather stronger ribs with many weak ones between,

up to 55mm in height. Exterior brownish with eleven deeper brown rays, muscle scare brown often surrounded with a yellow ring. Distribution.Common



Fig. (1) : Map of sampling area .



Fig. (2): Part of map showing Huneish island, magnified .

Superfamily: **Trochacea**

Family: **Trochidae** (Top shell)

Clanculus puniceus (Philippi, 1846)
(plate I, B)

Sculpture fine with two rows of numerous black gemmules, less coarse and not interspaced with white. Umbilicus narrower, outer lip with a tooth inside upper margin instead of bifurcating ridge. Up to 25 mm. Uncommon.

Superfamily: **Neritacea**

Family: **Neritidae**

Nerita textilis (Gmelin, 1979) = *Nerita plexa* Dillwyn (plate I, C)

Coarsely ribbed with cord-like ribs crossed by growth lines, up to 50 mm. Exterior white or cream flecked with dark grey or black. Inner edge of aperture denticular, columella shelf and operculum granular, outer lip denticulate within. Distribution general. Common.

Nerita longii (Recluze, 1842) (plate I, D)

Very globose, flatty ridged shell of few whorls, colour usually light brown to black. Columella coarsely ridged and denticulate, white to yellow. Operculum granulose, up to 35 mm. Distribution general on rocks. Common.

Order: **Mesogastropoda**

Superfamily: **Cerithiacea**

Family: **Architectonicidae**

Architectonica perspectiva (Linnaeus, 1758) (plate I, E)

Whorls axially incised with fine lines on upper half. Upper ridge, top wide and next narrow ridge marked with squarish brown blotches on mushroom background. Base paler with fine brown dots on outer ridges and round umbilicus up to 60 mm, Distribution general. Common.

Family: **Modulidae**

Modulus tectum (Gmelin, 1791) (plate I, F)

Solid shell with depressed spire. Globose and white in color with a white aperture and columella. Operculum corneous, thin circular. Up to 30 mm. Found living in sand in shallow waters.

Family: **Cerithiidae**

Cerithium columna (Sowerby, 1830)
(plate I, G)

Small brown ceriths, up to 18 mm in height, with constriction of body whorl above mouth. Operculum oval and completely fills aperture. Distribution general. Uncommon. Found at low tide on sand or on seaweeds.

Family: **Strombidae**

Strombus gibberulus (Linnaeus, 1758)
(plate II, A)

Shell brownish in color, sometimes with a brown line below suture. Interior of outer lip pink to purple. Pink interior is a characteristic of Red Sea subspecies *Strombus gibberulus albus* (Mastaller, 1987), quite often found in the Indian Ocean species, but lack very pale body colour of Red Sea subspecies. Up to 65 mm. Distribution general. Uncommon.

Superfamily: **Cypraeacea**

Family: **Cypraeidae**

Cypraea annulus (Linnaeus, 1758) (plate II, B)

Shell small and solid, flattish cream coloured with orange ring around dorsum. Up to 30 mm. Occurred in shallow water usually under rocks or rubble. Rare.

Cypraea nebrites (Melvill, 1888) (plate II, C)

Humped shell with pale spots on darker brownish green background. Margin brown spotted with darker brown and with a large brown blotch on either side. Up to 40 mm. Found in rocky crevices and under stones or in coral, sometimes above low tide level. Distribution general. Fairly common.

Cypraea carneola (Linnaeus, 1758) (plate II, D)

Shell pinkish to pale brown, banded with deeper colour and with mauve between teeth. Up to 70 mm. Some authors consider Northern Indian Ocean species to belong to subspecies *Cypraea carneola crassa* Gmelin (Mastaller, 1987). Distribution general. Common, and

found at low tide in rock crevices and under stones or in branches of coral .

Superfamily: **Naticacea**

Family: **Naticidae** (Moon Shells or Necklace Shells)

Mamilla melanostoma (Gmelin, 1791) (plate II, E)

Usually elongate brownish shell banded with darker brown round very narrow umbilicus and a thick umbilical, very dark brown callus. Aperture elongate, interior brownish, incompletely closed by horny operculum. Height up to 45 mm. Distribution general. Uncommon.

Order: **Neogastropoda**

Superfamily: **Buccinacea**

Family: **Nassariidae** (Dog Whelks or Basket Whelks)

Nassarius arcularius plicatus (Reading, 1798) (plate II, F)

Coarse slanting ribs crossed more or less by fine spiral striae, shoulders tuberculate. White columella callus spreads over body whorl. Externally, colour cream to grey or brown. Up to 28 mm. Distribution general. Very common.

Subclass: **Pulmonata**

Order: **Basommatophora**

Superfamily: **Siphonariacea**

Family: **Siphonariidae** (False Limpets)

Siphonaria tenuicostula (Smith, 1903) (plate II, G)

Moderately domed shells, finely ribbed, alternating ribs a little coarser than

intermediate ones. White ribs on brown shells, sometimes encrusted with lime. A single, not double rib over siphonal groove. Up to 15 mm. Found at low tide in large numbers.

Class: **Bivalvia**

Subclass: **Pteriomorpha**

Order: **Mytiloida**

Superfamily: **Mytilacea**

Family: **Pinnidae** (Pen shells)

Atrina vexillum (Born, 1778) (plate III, A, B)

Shells wedge-shaped, flag shaped in older specimens like present specimen with extension to ventral margin suggesting a flag blowing in wind. Shell moderately strong, usually dark and dull in colour and with absolet ribs, well distinguished in fresh specimens. Hinge ligament very thick and black. Up to 180 mm. Distribution general. Common.

Subclass: **Heterodonta**

Order: **Veneroida**

Superfamily: **Lucinacea**

Family: **Lucinidae**

Codakia tigrina (Linnaeus,1758) (plate III, C)

Exterior of shell with a cancellated appearance, and beautiful white. Interior yellow to yellow-white. Up to 80 mm. Distribution general. Uncommon .

Plate I



A



B



C



D



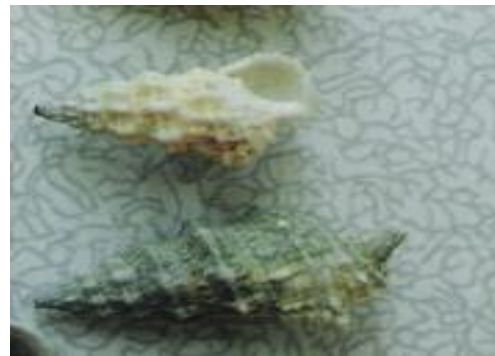
E



F



G



G

A : *Diodora funiculata*

B : *Clanculus puniceus*

C : *Nerita textilis*

D : *Nerita longi*

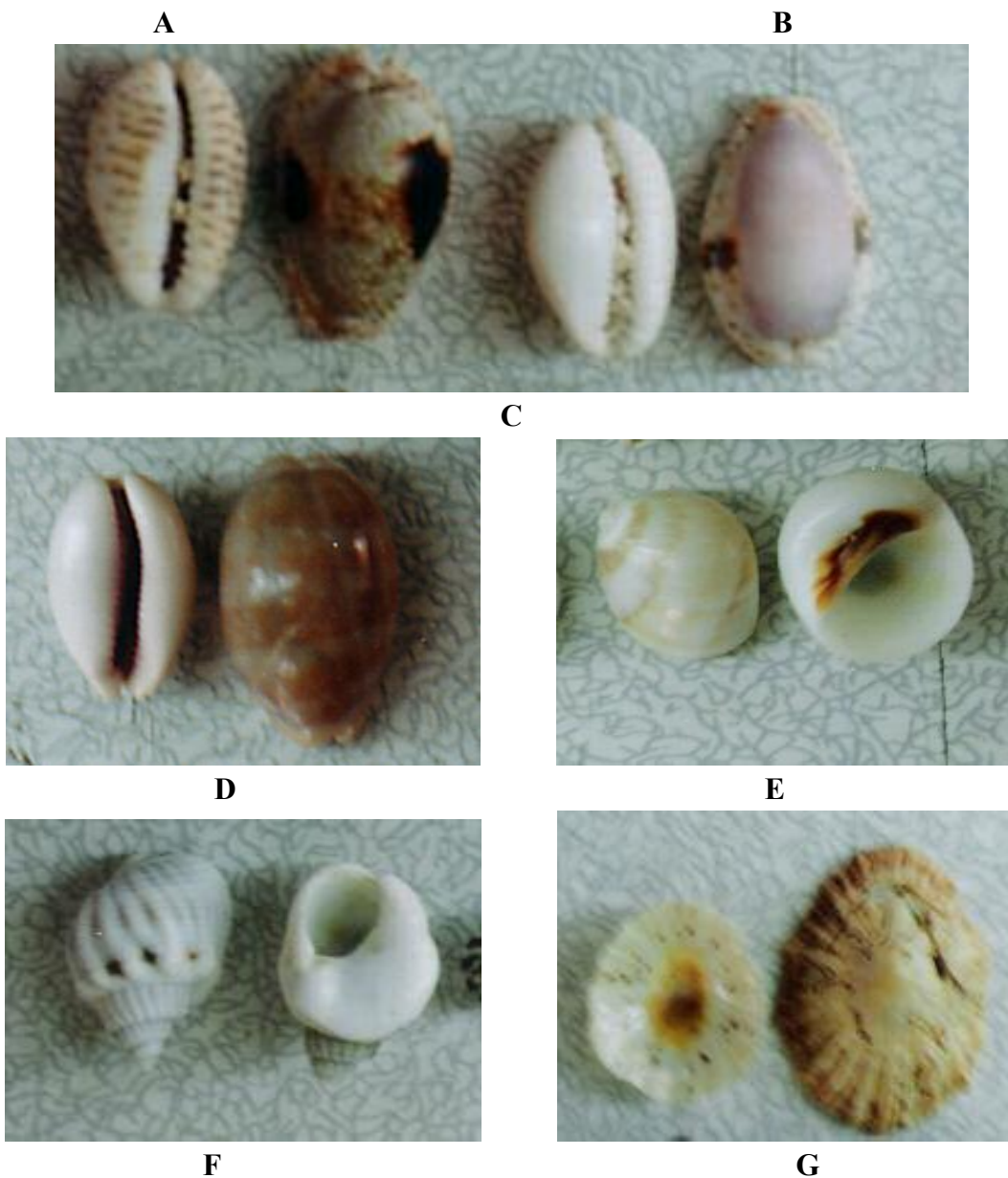
E : *Architectonica perspectiva*

F : *Modulus tectum*

G : *Cerithium columna*

Plate II





A : *Strombus gibberulus*

B : *Cypraea annulus*

C : *Cypraea nebrites*

D : *Cypraea carneola*

E : *Mamilla melanostoma*

F : *Nassarius arcularius*

G : *Siphonaria tenuicostulata*

Plate III





A : *Atrina vexillum*(ventral view)
B : *Atrina vexillum*(dorsal view)
C : *Codakia tigrina* (dorsal & ventral views)

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بعض الأصداف البحرية من المنطقة الساحلية لجزيرة حنيش

جنوب البحر الأحمر ضمن المنطقة الإقليمية اليمنية

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الخلاصة

تم تسجيل ستة عشر نوعاً تعود لـ 9 عوائل من كل من بطنية أقدام وثنائية المصراع البحرية من جزيرة حنيش جنوب البحر الأحمر. وصفت الأنواع بصورة مختصرة مع ذكر بعض خصائصها المهمة والقياسات المطلوبة، وقد تم تصوير كل نوع منها من جهتين، إضافة إلى التطرق إلى توزيعها وأهميتها البيئية .