

AN ILLUSTRATED GUIDE TO
COMMON SHELLS
OF SAN SALVADOR ISLAND,
BAHAMAS

by
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San Salvador, Bahamas

Cover photo: The Living Rough Lima on the reef at San Sal.
Photo by Colin Tozer.

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DEDICATION

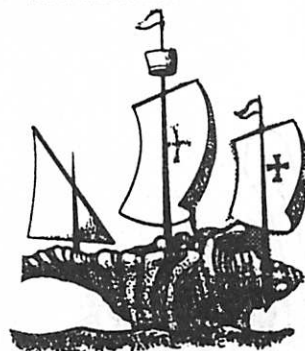
To my father, Arthur A. Moulton, who taught me the joys and enrichment of nature, as we walked hand in hand through the New England woods of my childhood searching for elusive mayflowers and ladyslippers. To my sons, Richard and Scott and my grandson Rob, who allowed me to share my joy in shelling with them while they were growing up. And most of all to my husband, Rev. Donald W. Lawson, who has been my love for 50 years and has supported and encouraged me in everything I wanted to do. He walked with me along the beaches, snorkeled with me in the not-so-still waters, and generally found the best shell of the trip. To you all, my deepest thanks for your love and encouragement.

ACKNOWLEDGMENTS

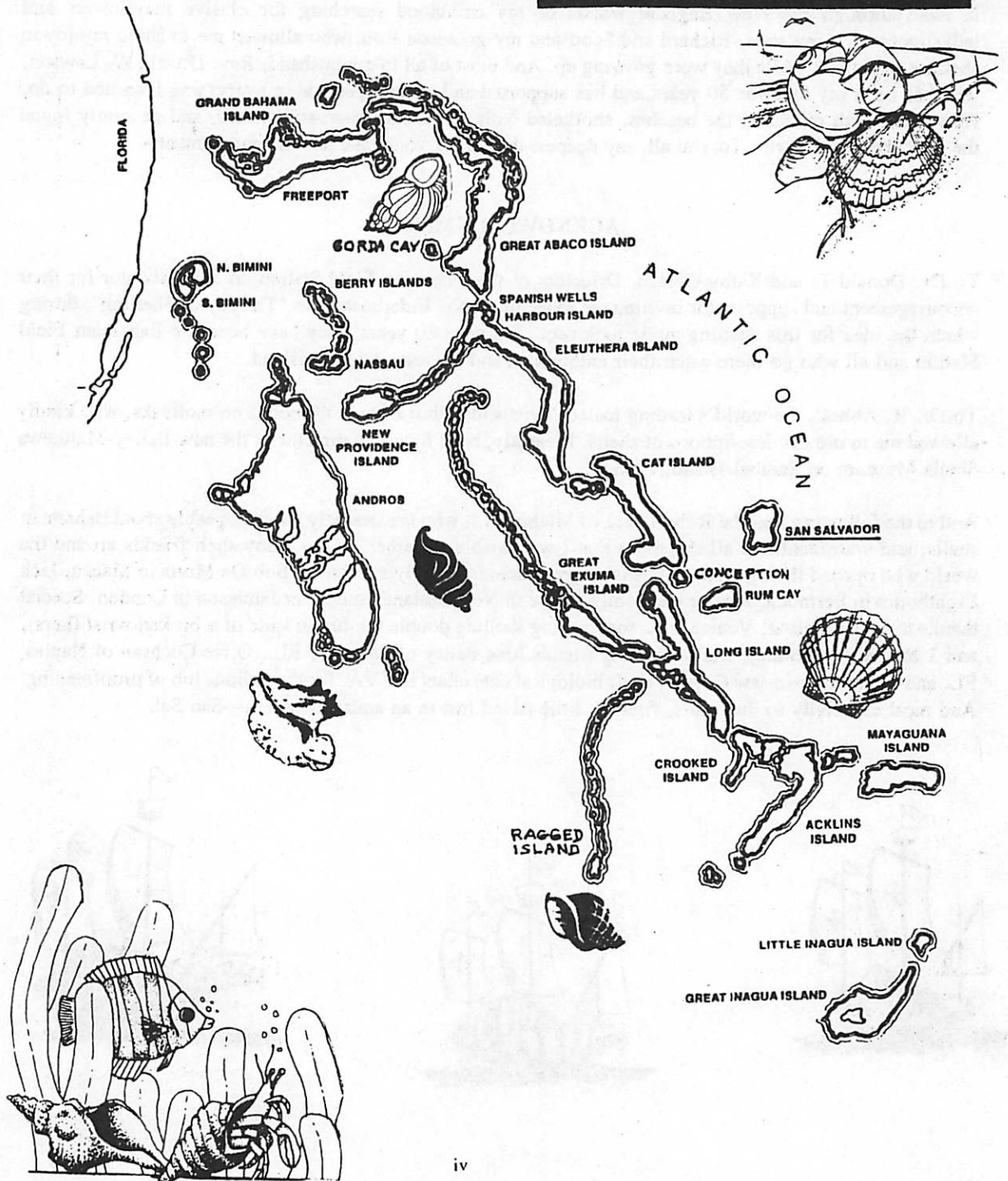
To Dr. Donald T. and Kathy Gerace, Directors of the Bahamian Field Station on San Salvador for their encouragement and support, for inviting me to lecture to the Elderhostels on "The Joy of Shelling", during which the idea for this shelling guide took root. For over 20 years, they have been the Bahamian Field Station and all who go there catch their enthusiasm and dedication to the island.

To Dr. R. Abbott, the world's leading malacologist and author of over 40 books on mollusks, who kindly allowed me to use his descriptions of shells. Presently, he is founding director of the new Bailey-Matthews Shells Museum on Sanibel Island, Florida.

And to the following friends: Robert Pace of Miami, FL., who is extremely knowledgeable about Bahamian shells, and who identified all the shells that I was unable to name. To my many shell friends around the world who opened their homes and hearts to me encouraging my avocation: Bob Da Motta in Macau, Jack Lightbourn in Bermuda, Hunter and Molly Seelye in New Zealand, and Peter Jamieson in London. Special thanks to Bet Hamilton, Venice, FL. for making shelling double the fun in spite of a broken wrist (hers), and 2 broken ribs (mine); and to shelling friends June Bailey of Sarasota, FL., Olive Cochran of Naples, FL. and my brother-in-law Gordon Hall, biological consultant to TVA, for the tedious job of proofreading. And most especially to that quiet, friendly little island lost in an aquamarine sea---San Sal.



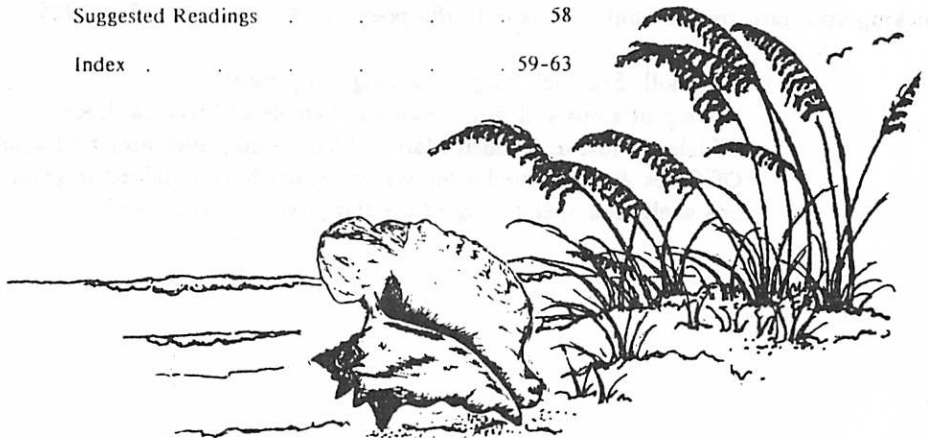
The Bahamas





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INTRODUCTION

The shells of San Salvador belong to the Caribbean Province which extends from the southern half of Florida to Bahia, Brazil, and includes the Gulf of Mexico, Bermuda, and the West Indies. Many endemic species are being found in the Bahamas, which are believed to have evolved during the late Pleistocene Period, less than one million years ago, when the Bahamas Platform was isolated from the rest of the Caribbean by sea-level drops. The Bahamas Platform was one of last Caribbean areas to be studied in detail and is proving to contain some of the richest molluscan fauna in the Western Atlantic. New species are constantly being discovered in deep water in baited lobster pots and digging in coral rubble by scuba divers.

This guide is only a beginning and is by no means complete, but it lists 225 of the more common species which can be found dead on the beach or crabbed in shallow water by the novice sheller. On San Sal so many dead species wash up on the beach that it is unnecessary for the beginning sheller to take even one live shell. For the more advanced collector, leading malacologists advise taking only one or at the most two live shells of each species, thus not harming local populations. 215 species are described and illustrated. Also found but not described: *Acmaea pustulata f. pulcherrima*, *Bulla occidentalis*, *Cerithium eburneum alicae* (new sp.), *Cerithium lutosum* (freak), *Crassispira fuscescens*, *Epitonium principis*, *Hyalina pallida*, *Muricopsis caribaea*, *Neritina virginea*, *Rissoina decussata*.

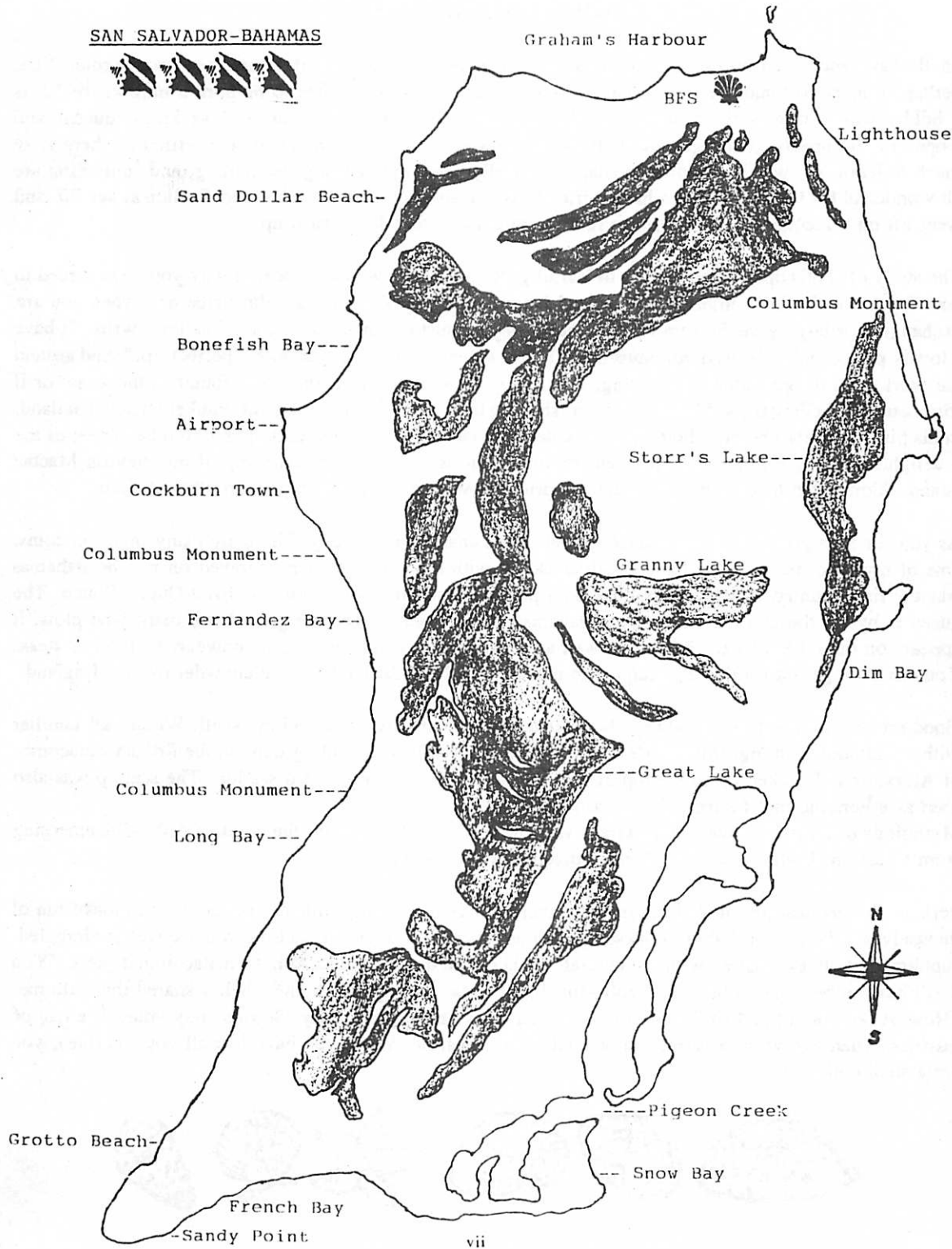
LOCALES: CLOCKWISE AROUND SAN SAL

To the right of the pier, about 1 mile east of the Bahamian Field Station, live tulips have been sighted while snorkeling and several octopus holes usually surrounded by dead shells. The east coast has few shells. I have found sunrise tellin halves on the beach at Dim Bay. Snow Bay has small shells at the high tide line, such as emerald nerites and rice shells. At French Bay snorkeling in eel grass, we have seen live chanks, helmets, and Queen conchs. There is also a shallow water reef to the right of the pier with rock shells on it. At Sandy Point, many dead bi-valves wash up; some quite beach worn. Fernandez Bay offers a long stretch of beach, with the most species on the island. I have found fresh dead flamingo tongues, cowries, cones, olivellas, doves, and many uncommon small shells in good condition. Snorkeling off the Columbus Monument nearest town we have seen helmets, augers, olivellas, etc. At Sand Dollar Beach on the ironshore are live rock shells. Just over the peninsula at the north end are many bivalves on the beach. In front of the B.F.S. are live periwinkles and nerites. Occasionally a nice, dead, larger shell washes in, such as a reticulated cowrie-helmet or a rooster-tail conch.

Whenever I shell San Sal, which is as often as possible, and walk the long stretches of deserted beach picking up a rare find, I think of this beautiful poem by Amy Lowell (1874-1925).

Sea shell, Sea shell sing me a song, oh please:
A song of ships and sailor men and parrots and tropical trees.
Of islands lost in Spanish Main, which no man ever may find again
Of fishes & corals under the waves, & sea horses stabled in great green caves.
Sea shell, Sea shells, sing of the things you know so well.

SAN SALVADOR-BAHAMAS



THE JOY OF SHELLING

Shells have enchanted humans as far back as written records go. Robert Louis Stevenson wrote, "It is perhaps a more fortunate destiny to have a taste for collecting shells than to be born a millionaire." It is a hobby which attracts the youngest toddler and retirees in their 80's, as well as kings, queens and emperors. It appeals to all ages and both sexes. It is especially enchanting for the retired as there is so much to learn, as well as keeping in shape physically. Walking, wading, swimming, and snorkeling are all wonderful for the body. I even have a friend, who qualified for her SCUBA certification at age 70, and went off on a Jacques Cousteau trip to find the rare shells that don't wash up.

The study of shells opens many doors to learning. Remember how you wondered why you were forced to take 4 years of Latin in high school, a dead language? Every shell has a Latin name and when you are exchanging or buying shells from foreign countries you must use the Latin name. You don't write, "I have a lovely pink conch." Instead you must say, "I have a gem *Strombus gigas* with a perfect lip." And around the world you do go: either by writing, looking up a locale where a shell was found in the atlas, or if fortunate, on shelling trips. Memories of our shelling trips: the Indian boatman on Phuket Island, Thailand, in his pink crocheted beret, who took us to a deserted islet to shell and bound up my bloodied knee; or the 4 delightful young Philipinos who went shelling with us at 5:30 every morning of our stay on Mactan Island. Along with these trips, you establish priceless worldwide friendships with other shellers.

As your interest grows, you can branch out into numismatics or philately. There are many shells on coins. One of my favorites is the Bahamian Silver Dollar with the Queen Conch engraved on it. The Bahamas was the first country to depict a mollusk on a postage stamp in 1859, with a stylized Queen Conch. The queen is by far the favorite shell of the Bahamas, being used to decorate graves and mark land plots. It appears on their 1973 Coat of Arms as well as on their dinner table as conch chowder, fritters, or steak. You can even get into collecting recipes from abalone in New Zealand to clam chowder in New England.

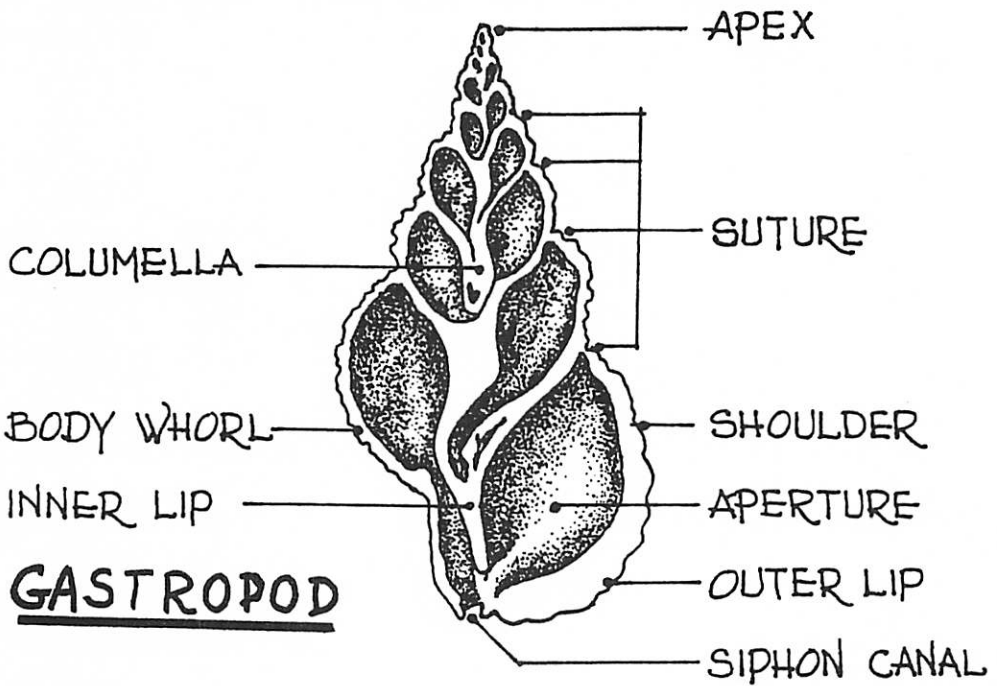
Good art and architecture has always fascinated me and here also you find the shell. We are all familiar with the famous painting, Botticelli's "Birth of Venus." While deep underground in the Roman Catacombs of Alexandria, I looked up to the top of a column and there was a stylized scallop. The scallop was also used as a heraldic motif during the Crusades.

Mythology becomes involved, and a Greek vase of about 370 B.C. depicts the goddess Aphrodite emerging from a scallop. Perhaps, that is where Botticelli got his inspiration.

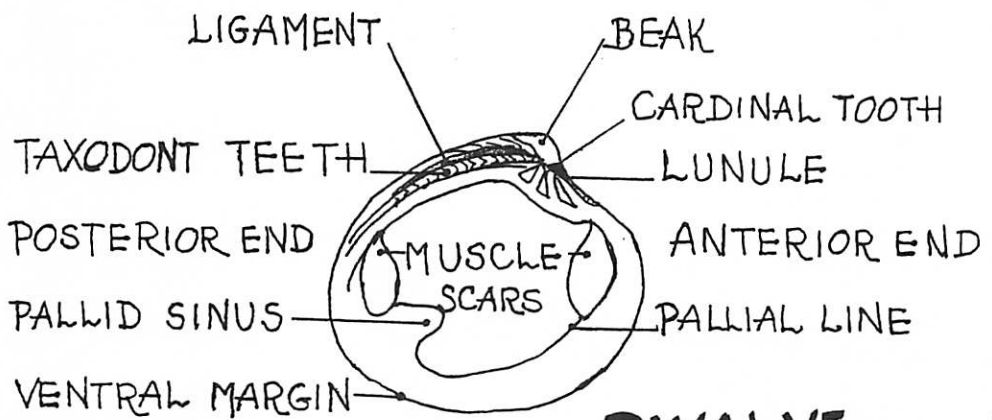
Perhaps the greatest joy of shelling is that it increases your sense of humor. Shellers love to make fun of themselves, which is probably the best thing to do when after a day of shelling you are wet, bedraggled, sunburnt, totally exhausted, with a few scratches here and there. Tucker Abbott, malacologist, says, "You don't have to be crazy to be a shell collector, but it certainly helps." Another sheller shared this with me. "How to become a Shell Collector: First you must have a basic curiosity. Second, buy yourself a bag of marbles. Then everytime you pick up a shell, drop a marble. When you have lost all your marbles, you are a shell collector!"



° PARTS OF A SHELL °



GASTROPOD



BIVALVE

GASTROPODS---CLASS GASTROPODA

KEYHOLE LIMPETS---FAMILY FISSURELLIDAE

The keyhole limpets have an anal hole at the top of the shell. In primitive forms, this hole is a slit in the anterior edge of the shell. As the shell develops the slit is filled in at the front edge and becomes a hole. In adults the hole is located near the apex. Water is drawn in the underside, passes over the two gills and then passes out through the hole. The family is vegetarian, usually browsing at night on algae-covered rocks in the intertidal zone.

Emarginula pumilia (A. Adams, 1851)

Pygmy Emarginula

Range: S.E. Florida to Brazil

Length: 1/3 to 1/2 inch

Color: White

Has a narrow short slit in the anterior end, 11 to 13 ribs with 2 or 3 smaller ones in between. Moderately common on rocks from 6 to 90 feet.



Hemitoma octoradiata (Gmelin, 1791)

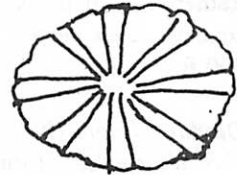
Eight-rayed Emarginula

Range: S.E. Florida to Brazil

Length: 1 inch

Color: White, cream or gray

Eight main radical ribs, crudely nodulated. Secondary and tertiary ribs appear in older specimens. Interior of shell glossy olive-green to purplish brown with white margin. Common on rocks just below low tide mark.



Hemitoma emarginata (Blainville, 1825)

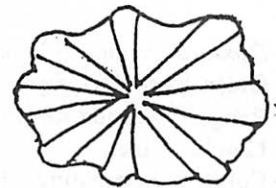
Emarginate Emarginula

Range: S.E. Florida to Lesser Antilles

Length: 1 to 1 1/4 inches

Color: White to gray.

Strongly cancellated by 8 main ribs and not-so-strong concentric cords, thus forming squarish pits on the surface. An uncommon rock-dweller found from low tide to 400 ft.



Diodora cayenensis (Lamarck, 1822)

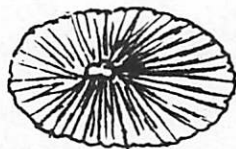
Cayenne Keyhole Limpet

Range: Maryland to Brazil

Length: 1 to 2 inches

Color: White to dark gray

Keyhole just in front and slightly lower than apex. Many radial ribs with fourth one larger. Interior white or bluish gray. A deep pit on the inside behind the callus of the opening. Common intertidally to moderately deep water.



Diodora listeri (Orbigny, 1842)

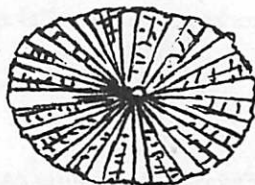
Lister's Keyhole Limpet

Range: South half of Florida to Brazil

Length: 1 to 2 inches

Color: White, cream or gray.

Similar to *D. cayenensis* but every second rib is larger, concentric threads are more distinct and by crossing the ribs, form little squares. Radial ribs often have nodules or scales. Found intertidally.



Diodora minuta (Lamarck, 1822)

Dwarf Keyhole Limpet

Range: S.E. Florida, West Indies Brazil

Length: 1/2 inch

Color: White and black.

Rather thin, depressed. Raised slightly at center so shell rests on its ends. Short front slope slightly concave, back slope convex. Many ribs entirely or partly black. Uncommon. Occurs in rocky areas, 6 to 400 ft.



Diodora dysoni (Reeve, 1850)

Dyson's Keyhole Limpet

Range: Florida, Bahamas, Brazil

Length: 1/2 to 3/4 inch

Color: Milky white or cream

With 8 solid, broken or dotted black rays. Base ovate. Straight sides. Black orifice is almost triangular. Apex slightly in front of middle. 8 strong ribs. Moderately common on reefs under rocks.



Diodora viridula (Lamarck, 1822)

Green Keyhole Limpet

Range: Florida Keys to lower Caribbean

Length: 1 inch

Color: Alternating white and green rays

Narrow at front end. 18 to 20 main ribs. Keyhole long, narrow, stained with black. Interior polished bluish or greenish gray. Attached to intertidal rocks. Uncommon in the Bahamas.



Lucapina sowerbii (Sowerby, 1835)

Sowerby's Fleshy Limpet

Range: S. E. Florida, West Indies, Brazil

Length: 3/4 inch

Color: White to buff

Oblong with about 60 large and small radiating ribs, 7-9 small spotted rays of pale brown. Outside of orifice not stained. Fairly common under rocks at low-tide zone to offshore. Usually occurs in pairs.



Lucapina suffusa (Reeve, 1850)

Cancellare Fleshy Limpet

Range: S. half of Florida, West Indies, Brazil

Length: 1 to 1 1/2 inches

Color: Mauve to pinkish

Oblong and low in outline with bluish-black orifice. Inside grayish to dirty-white. Larger than *L. sowerbii* but similar shape. Not uncommon under rocks.



Lucapina aegis (Reeve, 1850)

Aegis Fleshy Limpet

Range: Florida, Bahamas, Cuba to Brazil

Length: 1 to 1 1/3 inches

Color: Olive green

Oblong with narrow, oblong keyhole, its length 1/8 of shell. 40 radial ribs with 8 darker broken rays. Uncommon, intertidal to 60 ft.



Lucapina philippiana (Finlay, 1930)

Philippi's Fleshy Limpet

Range: S.E. Florida to Virgin Islands

Length: 2/3 inch

Color: Cream or white

Elongate, narrow with large, oblong keyhole located in anterior 1/3 of shell. Finely sculptured with about 38 beaded riblets. Freckled with rusty-brown. Uncommon, shore to 350 ft.



Fissurella nodosa (Born, 1778)

Knobby Keyhole Limpet

Range: Lower Florida Keys-West Indies

Length: 1 to 1 1/2 inches

Color: White to brown

Twenty to twenty-two strongly nodulated, radiating ribs. Margin strongly crenulated. Orifice long and contracted in middle. Uncommon in the Bahamas on rocks between tidelines.



Fissurella barbadensis (Gmelin, 1791)

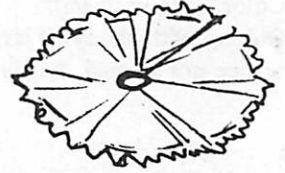
Barbados Keyhole Limpet

Range: S. E. Florida, West Indies, Brazil

Length: 1 to 1 3/4 inches

Color: Variable, grayish white to brownish-pink

Irregular radiating ribs. Orifice almost round. Outside blotched with purple-brown. Inside has concentric bands of green and white. Abundant on wave-dashed rocks at low tide level.



Fissirella angusta (Gmelin, 1791)

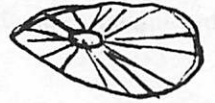
Pointed Keyhole Limpet

Range: Florida Keys' Bahamas

Length: 3/4 to 1 inch

Color: Brownish or pinkish buff

Similar to *F. barbadensis* but flatter and pointed in front. Internal callus reddish brown. Frequently covered with calcareous algae. Intertidal species.



Fissurella fascicularis (Lamarck, 1822)

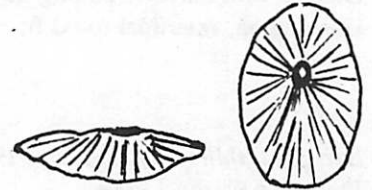
Wobbly Keyhole Limpet

Range: S.E. Florida and West Indies

Length: 3/4 to 1 1/4 inches.

Color: dark pink

Spaces between the ribs are white. Broadly oval with both ends elevated, so it can be rocked on a flat table. Orifice is keyhole in shape and towards the anterior end. Moderately common in small potholes in the intertidal zone.



TRUE LIMPETS---FAMILY ACMAEIDAE

The low, flat shell and strong muscular foot permits limpets to adhere to shore rocks during the roughest weather. Rocky shores throughout the world are inhabited by many hundreds of species of limpets, despite the fact that their simple cape-shaped shells look alike. Their breeding season extends from April to September. The sexes are separate. Very small eggs are imbedded on top of rocks in layer of mucus exuded by the sole of the foot. By spring they reach sexual maturity.

Acmaea antillarum (Sowerby 1831)

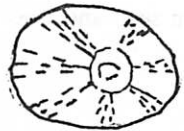
Antillean Limpet

Range: Lower FL. Keys, West Indies

Length: 1/3 to 1 inch

Color: Whitish

Flat and rather thin, oval in outline, narrower at anterior end. Numerous radial threads. A few or many narrow or wide radial rays of brownish green. Dark or light brown callus inside. Found abundantly in the West Indies on shore rocks.



Acmaea pustulata (Helbling, 1779)

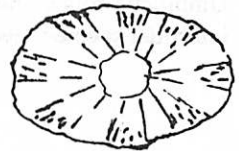
Spotted Limpet

Range: S.E. Florida, West Indies

Length: 1/2 to 1 inch

Color: Chalk-white

Oval, moderately flat, thick shell with coarse radial ribs. Interior glossy-white with yellow callus. Exterior flecked with red-brown dots. Common on intertidal coral rocks down to 30 ft.



Acmaea leucopleura (Gmelin 1791)

Black-ribbed Limpet

Range: Florida Keys, West Indies

Length: 1/2 inch

Color: White ribs on black

Moderately high with roundish sides, 15-20 white ribs. Interior white with central brown callus. Moderately common on rocks intertidally.



TOP SHELLS---FAMILY TROCHIDAE

Calliostoma jububinum (Gmelin, 1791)

Jujube Top-shell

Range: Florida, Bahamas, West Indies

Length: 3/4 to 1 1/4 inch

Color: Brown to reddish brown

With white spots above suture, numerous beaded spiral cords. Umbilicus small, deep. Moderately common in sand and weeds. Washed up on beach; often have top broken off.



Cittarium pica (Linné, 1758)

West Indian Top

Range: Bahamas, West Indies

Length: 2 to 4 inches

Color: Black splotches on dirty white.

Umbilicus round, narrow and very deep. Operculum horny, large and round. Abundant rock-dwelling, intertidal species feeding on algae.



TEGULA---FAMILY TROCHIDAE

Tegula fasciata (Born, 1778)

Smooth Atlantic Tegula

Range: S. Florida, West Indies, Brazil

Length: 1/2 to 3/4 inches

Color: yellowish to brown

With fine mottling of reds, browns and black. Interior of deep, round, smooth umbilicus and callus are white. Two teeth at base of columella. Moderately common under rocks at low tide. A small red tegula (1/4 inch) found in the Bahamas is call *Tegula grunere*.



Tegula lividomaculata (C.B. Adams, 1845)

West Indian Tegula

Range: Florida Keys, West Indies

Length: 3/4 inch

Color: Grayish to brownish white

Whorls have many fine spiral threads flecked with white. Not glossy. Umbilicus furrowed on its sides by 2 spiral cords, one ending at the columella in fairly sizeable bead. Common under rocks in West Indies.



Tegula excavata (Lamarck, 1822)

Green-based Tegula

Range: Lower Florida Keys-Caribbean

Length: 1/2 inch

Color: Bluish-gray

With iridescent-green circle around very deep, narrow umbilicus. Thin outer lip. Rare in Bahamas, very common in the West Indies.



TURBAN SHELLS---FAMILY TURBINIDAE

Turban shells have heavy shells and strong, limy opercula by which many can be identified. Almost all are tropical, shallow water mollusks that feed on marine algae. Eggs are shed into the sea; larvae are free-swimming.

Turbo castanea Gmelin, 1791

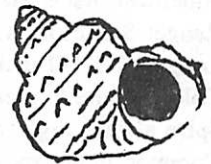
Chestnut Turban

Range: N.C. to Brazil

Length: 1 to 1 1/2 inch

Color: orange, green, brown, gray

Banded with flamelike white spots. Aperture white. Lower lip projects downward. Heavy callus on columella, operculum calcareous. Common shallow-water species. Found under rocks.



Turbo canaliculatus Hermann, 1781

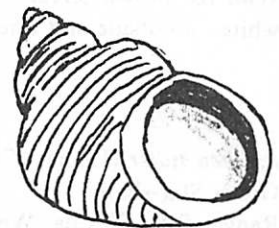
Channeled Turban

Range: Lower FL. Keys, West Indies

Length: 2 to 3 inches

Color: Tan

Spotted with white, orange and dark brown. A deep smooth channel runs just below the suture. Surface glossy. 16-18 strong, spiral, smooth cords on body whorl. Aperture white. Uncommon 5-40 ft.



Arene cruentata Mühlfeld, 1829

Star Arene

Range: S.E. Florida, West Indies

Length: 1/4 to 1/2 inch

Color: White

With small, bright-red patches on top of whorls. 4-6 angular whorls, with periphery bearing strong triangular spines. Aperture circular, pearly within. Umbilicus deep, bordered by 3 beaded cords. Uncommon.



Astraea phoebia Röding, 1798

Long-spined Star-shell

Range: Florida, West Indies, Brazil

Length: 2 to 2 1/2 inches

Color: White, yellowish, light brown

Inside of aperture silvery pearl. Low, nearly flat below. Flat, triangular spines at periphery of whorls. A common, shallow-water species found in turtle grass beds.



Astraea americana (Gmelin, 1791)

American Star-shell

Range: S.E. Florida, Bahamas

Length: 1-1 1/2 inches

Color: White to cream

Spire always high. Sides flat. Numerous long, wavy, weak axial ribs. Base has 5-8 fine, spiral threads. Common under rocks at low tide.



Astraea caelata (Gmelin, 1791)

Carved Star-shell

Range: S.E. Florida, West Indies

Length: 2 to 3 inches

Color: Cream to greenish

With red-brown streaks. Strong, revolving ridges crossed by scale-like spines. Operculum oval, thick, white on outside and finely pustulose. Moderately common in shallow water on coral rubble or reefs.



Astraea tuber (Linné, 1767)

Green Star-shell

Range: S.E. Florida, West Indies

Length: 1 to 2 inches

Color: Green and white cross-hatched

Low, blunt, smooth axial ridges. Smooth base. Operculum with thick, circled, tapering ridge, like a large comma. Common from 4 to 30 feet in coral reefs.



NERITES---FAMILY NERITIDAE

Nerites are a tropical family common in the Bahamas. They are sturdy and solid with flat columella bearing teeth, folds or pimples. Operculum calcareous and with a peglike projection which inserts into the muscle of the snail. Egg capsules are 1 mm. or less, dome-shaped and laid on rocks. Adults cling to wave-washed rocks.

Nerita peloronta Linné, 1758

Bleeding Tooth

Range: S.E. Florida, West Indies

Length: 3/4 to 1 1/2 inches

Color: grayish yellow

With zigzags of black and red. Characterized by the blood-red parietal area which bears 1 to 2 whitish teeth. Abundant along rocky shores facing open ocean. A popular souvenir.



Nerita versicolor Gmelin, 1791

Four-toothed Nerite

Range: Florida, West Indies

Length: 3/4 to 1 inch

Color: Dirty white

Irregular spots of black and red arranged in spiral rows. Parietal area slightly convex, white to yellowish with 4 strong teeth.



Nerita tessellata Gmelin, 1791

Tessellate Nerite

Range: Florida, West Indies, Brazil

Length: 3/4 inch

Color: Irregularly spotted black and white

Coarsely sculptured with spiral cords. Parietal area concave, bluish white and bearing 2 weak teeth in the middle. Black operculum. Common under rocks at low tide.



Nerita fulgurans Gmelin, 1791

Antillean Nerite

Range: S.E. Florida, West Indies, Brazil

Length: 3/4 to 1 inch

Color: Lighter than tessellata

Yellowish gray operculum. Color patterns blurred. Mouth relatively wide, teeth more prominent. A salt-to brackish-water inhabitant. Uncommon.



Puperita pupa (Linné, 1767)

Zebra Nerite

Range: S.E. Florida, West Indies

Length: 1/3 to 1/2 inch

Color: White and black stripes

Thin, smooth. Aperture and smooth operculum yellow. Lives in small, placid pools above the high-water mark. Beach worn specimens are often bright yellow.



Smaragdia viridis (Linné, 1758)

Emerald Nerite

Range: S.E. Florida, West Indies

Length: 1/4 inch

Color: Pea green

Glossy, smooth, often with tiny chalk-white bars. Locally common on turtle grass from 6 to 60 feet.



PERIWINKLES---FAMILY LITTORINIDAE

All true periwinkles are strictly littoral snails, having a variety of habitats from rocks at the low tide line to wharf pilings, grasses and mangrove roots at and above the tide line. They serve as food for man, birds and crabs. Many survive for long periods out of high water, and it is believed that a number of present day land snails have evolved from ancient representatives of this family.

Littorina ziczac (Gmelin, 1791)

Zigzag Periwinkle

Range: S.E. Florida, Carribean

Length: 1/2 to 3/4 inch

Color: Whitish to bluish gray

With irregular, slanting zigzag stripes of brown.

Upper whorls have 20-26 fine spiral lines. Common in the intertidal zone in rock crevices.



Littorina mespillum (Mühlfeld, 1824)

Dwarf Periwinkle

Range: Florida Keys-Caribbean

Length: Under 1/4 inch

Color: Dark brown

Glossy-brown columella and aperture. Low spire. Lives in splash pools from high tide line to 6 or 7 feet above.



Littorina lineolata (Orbigny, 1840)

Lineolate Periwinkle

Range: Florida Keys-Caribbean

Length: 1/3 inch

Color: Zebra brown stripes

Aperture about 1/2 the total length. Similar to ziczac but broader and heavier. Eight to eleven spiral lines on upper whorls. Common in intertidal area on rocks near high tide mark.



Littorina nebulosa (Lamarck, 1822)

Cloudy Periwinkle

Range: Florida to Brazil

Length: 1/2 to 3/4 inch

Color: Dull grayish white

Columellar area long, wide, smooth and tinged with purplish mauve, as is the aperture sometimes. Moderately common in intertidal zone.



Littorina angulifera (Lamarck, 1822)

Angulate Periwinkle

Range: S. Florida to Brazil

Length: 1 inch

Color: white, yellow, orange to red-brown with darker, wavy, vertical, oblique stripes.

Smooth, thin shell, but strong. Columella pale purplish with whitish edges. Common in mangrove areas, on roots. Also above high tide mark clinging to wharf pilings and sea-walls.



Tectarius muricatus (Linné, 1758)

Beaded Periwinkle

Range: Florida Keys, West Indies

Length: 1/2 to 1 inch

Color: Pale bluish gray

Shell thick with numerous spiral rows of neat, small, white beads. Columella creamy. Aperture interior reddish brown. Common on rocks from high tide mark to several dozen feet above.



Nodilittorina tuberculata (Menke, 1828)

Common Pricly-winkle

Range: S. Florida, West Indies

Length: 1/2 to 3/4 inch

Color: Brownish gray

Rounded base. Several spiral rows of small, fairly sharp nodules on whorls. Columella brown, flattened. A common rock-dwelling species found near the high tide line.



Echininus nodulosus (Pfeiffer, 1839)

False Prickly-winkle

Range: S.E. Florida, West Indies

Length: 1/2 to 1 inch

Color: Grayish brown

Heavy with square base. Whorls with 2 rows of sharp nodules, 2 or 3 rows of smaller, blunt nodules. Lives well above the high tide mark on rocky shores.



TRUNCATELLA---FAMILY TRUNCATELLIDAE

Shells less than 10 mm, elongate-cylindrical and in the adult form with top whorls knocked off. Usually a translucent, glossy tan, smooth or with fine axial riblets. Found live high on beach under rotted leaves where there is shade.

Truncatella pulchella (Pfeiffer, 1839)

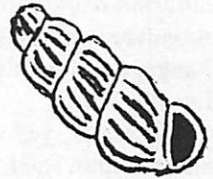
Beautiful Truncatella

Range: S. Florida, West Indies

Length: 3 to 6 mm.

Color: Horn-colored

Outer lip greatly thickened, with 17 to 40 axial riblets. Found dead on shore at N. end of Storr's Lake, a highly saline pond.



WORM SHELLS---FAMILY TURRITELLIDAE

Shell begins as turritella-like snail but soon uncoils as it grows. Often lives on sponges.

Vermicularia spirata (Philippi, 1836)

West Indian Worm

Range: S.E. Florida, West Indies

Length: to 3 or 4 inches

Color: opaque amber

Evenly and closely spiraled for about 1/4 inch, then becomes drawn out in its wormlike dextral coiling. Common in shallow water.



Serpulorbis decussatus (Gmelin, 1791)

Decussate Worm

Range: N. C. to West Indies

Length: 1 to 3 inches

Color: Yellowish brown

Heavy, worm-tube in appearance. Coarsely sculptured with irregular longitudinal cords. Attached to stones and other shells.



PLANAXIS---FAMILY PLANAXIDAE

Planaxis nucleus (Bruguère, 1789)

Black Atlantic Planaxis

Range: S.E. Florida, West Indies

Length: 1/2 inch

Color: dark brown to black

Shell thick, polished, with numerous incised spiral lines strongest at base. Columella area scooped out. Aperture purplish, ridged within. Common among intertidal rocks.



MODULUS---FAMILY MODULIDAE

Modulus modulus (Linné, 1758)

Atlantic Modulus

Range: N.C. to Brazil

Length: 1/2 inch

Color: Grayish white

Small and sturdy, low-spired, with numerous low, slanting, axial ribs. Base has 5 strong spiral cords. Columella tooth purple-tinged. Abundant among weeds in shallow water.



Modulus carchedonius (Lamarck, 1822)

Angled Modulus

Range: Bahamas, Caribbean

Length: 1/2 inch

Color: White and brown

Strongly angled at periphery. Spiral cords smaller than modulus. Lacks strong axial ribs and columella tooth not colored. Uncommon in shallow water.



HORN SHELLS---FAMILY POTAMIDIDAE

Horn shells are elongate and have a horny, round operculum with many whorls. They prefer brackish water and intertidal mud.

Cerithidea costata (da Costa, 1778)

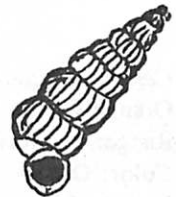
Costate Horn Shell

Range: S. Florida, West Indies

Length: 1/2 inch

Color: Translucent, pale, yellow-brown

Strong with 25-30 axial ribs on next to last whorl. Common on mud flats and in mangroves.



Batillaria minima (Gmelin, 1791)

False Cerith

Range: S. Florida to Brazil

Length: 1/2 to 3/4 inch

Color: Variable

Black, gray, often with black or white spiral lines. Usually sculptured with nodules, swellings and uneven spiral threads. Common on mud in inter-tidal zone. On San Sal found dead in highly saline lakes.



CERITHS---FAMILY CERITHIDAE

Ceriths live in shallow water. The horny operculum has only a few whorls. They serve as food for fish and waterfowl. Often crabbed in tidepools.

Cerithium muscarum (Say, 1832)

Fly-specked Cerith

Range: S. Florida, West Indies

Length: 1 inch

Color: slate to brown-gray

Moderately elongate, with 9-11 nodulated axial ribs and several fine, spiral threads which bear many brown speckles. Siphonal canal long and twisted to left. Common on grass in shallow, brackish bays.



Cerithium litteratum (Born, 1778)

Stocky Cerith

Range: S. Florida, Brazil

Length: 1 inch

Color: Whitish

With spiral rows of many black or reddish squares. Wide and stubby with numerous coarse, spiral threads and 9-12 prominent nodules along the suture. Common in shallow water in sand and weedy areas.



Cerithium litteratum forma *semiferrugineum* Lamarck, 1822

Orange Cerith

Range: S. Florida, Bahamas, Bermuda

Color: Orange

Length: 3/4 to 1 inch

Heavier, smoother form with bright orange-brown to rust mottlings. Found in deeper offshore reef waters.



Cerithium eburneum Bruguière, 1792

Ivory Cerith

Range: S.E. Florida, Bahamas

Length: 3/4 to 1 inch

Color: White or cream

Sometimes with reddish brown blotches. Each whorl has from 4 to 6 spiral rows of small rounded beads, slightly larger in the middle row. Very common in shallow water and grassy areas.



Cerithium eburneum forma *algicola* C. B. Adams, 1845

Middle-spined Cerith

Range: Bahamas to Brazil

Length: 1 inch

Color: White or cream

A spiral row of 9-12 fairly large, pointed heads midway between sutures. The middle row bears the largest spires. Common in shallow water.



Seila adamsi (H.C. Lea, 1845)

Adams' Minature Cerith

Range: Massachusetts to Brazil

Length: 1/4 to 1/2 inch

Color: Dark brown to orange brown

Long, slender, flat-sided. About a dozen whorls with 3 spiral cords on each whorl. Base smoothish, concave. Outer lip fragile, suture indistinct. Common from shore to 240 feet.



PURPLE SEA-SNAIL---FAMILY JANTHINIDAE

Living on the ocean's surface these snails are fragile, purple, trochoid-shaped shells. They produce a bubble float and the animal hangs upside down from the float. They wash ashore during storms and are often found above high tide line, dead in seaweed.

Janthina janthina (Linné, 1758)

Common Purple Sea-snail

Range: Both coasts U.S., Bahamas

Length: 1 to 1 1/2 inches

Color: Purple

Purplish white above, deep violet below. Thin and fragile; rather low-spined with slightly angular whorls. Found after storms in springtime.



WENTLETRAP---FAMILY EPITONIIDAE

There are over 200 living species and about as many fossil. Spawn consists of strings of capsules in tough strands 2 to 9 " long. Larvae hatch in 9 days. Some suck juices of live sea anemones. Live in all seas from low-tide line to depths of over 3,000 feet.

Opalia pumilio (Mörch, 1874)

Pumilio Wentletrap

Range: N.C. to Brazil

Length: 5 to 10 mm.

Color: Whitish amber

Elongate with 14-16 rounded ribs on body whorl. Outer lip very thick and rounded. Fairly common from just offshore to 600 ft.



Epitonium lamellosum (Lamarck, 1822)

Lamellose Wentletrap

Range: S. Florida, Caribbean

Length: 3/4 to 1 1/4 inches

Color: Whitish

With irregular brown markings. 11 whorls. Ribs blade-like, thin and high always white. Fairly strong raised thread on base. Moderately common from low tide to 200 ft.



HOOF SHELL---FAMILY HIPPONICIDAE

Shell cap-shaped, apex eroded away, sculpture of radial ribs. Muscular impression on inside horseshoe shaped.

Hipponix antiquatus (Linné, 1767)

White Hoof-shell

Range: Florida to Brazil

Length: 1/2 inch

Color: White

Heavy for size, cap-shaped, whorls spiral and glassy-white. Horseshoe-shaped muscle scar inside. Moderately common in the Bahamas. Found clinging under rocks and other shells in intertidal zone.



CUP & SAUCER---FAMILY CREPIDULIDAE

Cheilea equestris (Linné, 1758)

False Cup & Saucer

Range: Florida to Brazil

Length: 1/2 to 1 inch

Color: Dull white

Cap shaped with an internal, delicate, deep cup which has its anterior 1/3 neatly sliced away. The base of the cup is attached near the inside center but slightly off in the direction in which the apex points. Uncommon on rocks below tide line to 60 ft.



CARRIER SHELLS---FAMILY XENOPHORIDAE

Has peculiar habit of cementing to its own shell fragments of other shells, stones and bits of coral as camouflage or reinforcement.

Xenophora conchyliophora (Born, 1780)

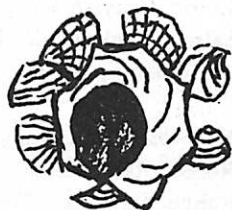
Atlantic Carrier-shell

Range: N.C. to Brazil

Length: 2 inches

Color: Tan

Heavy, base flattish. From above with its attached rubble and shells it looks like a small heap of marine trash. Uncommon in 3 to 20 ft. near coral.



CONCH---FAMILY STROMBIDAE

Shells large with flaring outer lip which has a small U-shaped indentation or "stromboid notch" at the base. Operculum sickle-shaped. Feed on marine algae. Eggs laid in long, intertwining, thin tubes of gelatinous material.

Strombus gigas Linné, 1758

Queen or Pink Conch

Range: S.E. Florida, West Indies

Length: 6 to 12 inches

Color: Rich pink, yellow or peach in aperture

Covered with brownish periostracum, which flakes off when dry. Large, flaring outer lip in adults. Found at 6 to 40 ft. often near eel grass. A common food staple in the Bahamas, it appears on the seal of the country. (In Florida it cannot be taken live.)



Strombus costatus Gmlin, 1791

Milk Conch

Range: S. Florida to Brazil

Length: 4 to 7 inches

Color: Yellowish white

Rarely orange or mauve. Heavy with low, blunt spines. Outer lip highly glazed with cream-white enamel. Common in shallow water to 20 ft.



Strombus raninus Gmlin, 1791

Hank-wing Conch

Range: S.E. Florida, West Indies

Length: 2 to 4 inches

Color: Grayish with brown mottling

Salmon pink inside. Bluntly spinose, solid. The largest spines are the last two on body whorl. Aperture and outer lip glazed. Fairly common in grassy shallow water.



Strombus gallus Linné, 1758

Rooster-tail Conch

Range: Bahamas, West Indies

Length: 4 to 6 inches

Color: Maculate brown and yellow-orange

Inside of lip salmon, orange, rarely lavender. Long extension or wing of the outer lip, higher spire. 3 to 5 moderately long spines on body whorl. Uncommon in 6 to 30 ft. of water.



TRIVIA---FAMILY ERATOIDAE

Resembling miniature cowries, but characterized by strong wrinkles or riblets running around the shell from the slitlike aperture to the center back. Found in rocky areas where they are associated with compound ascidians, such as sea squirts, in which they lay their eggs.

Trivia pediculus (Linné, 1758)

Coffee Bean Trivia

Range: N.C. to Brazil

Length: 1/2 inch

Color: Brownish pink

Three pairs of large, irregular, dark brown spots on the back. Has 16 to 19 (usually 17) riblets crossing the outer lip. The center pair of spots on the back are the largest. Common intertidally to 150 ft.



Trivia suffusa (Gray, 1822)

Suffuse Trivia

Range: S. E. Florida to Brazil

Length: 1/4 to 1/3 inch

Color: Bright pink

With suffused brownish splotches and fine specklings. Anterior canal with weak pinkish blotch on each side. Riblets on back somewhat beaded. Outer lip white and crossed by 18 to 23 riblets. Quite common in the Bahamas at 60 to 300 ft.



Trivia quadripunctata (Gray, 1827)

Four-spotted Trivia

Range: S.E. Florida to Caribbean

Length: 1/8 to 1/4 inch

Color Bright pink

Similar to *suffusa*, but smaller and had 2 to 4 very small red-brown dots on center line of back. Common species on beaches with dots worn away and pink faded, and in shallow water.



Trivia nix (Schilder, 1922)

White Globe Trivia

Range: Florida to Brazil

Length: 3/8 inch

Color: Pure white

22 to 26 riblets. Back with a strong groove interrupting the riblets. The largest and most globular of the white species in its range. Uncommon in the Bahamas at 90 to 300 ft.



COWRIES--FAMILY CYPRAEIDAE

Well-known for their smooth, glossy colorful shells. Of 200 or more species only 4 are found in the Bahamas. Females sit on the clumps of egg capsules, which are laid in protective rock crevices. Shells are ovate with a long narrow aperture bounded by curled-in, toothed outer lips. Used as money by early man.

Cypraea zebra Linné, 1758

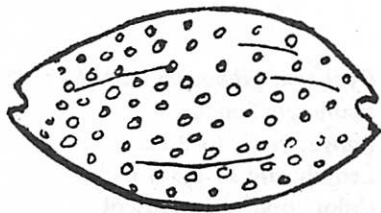
Measled Cowrie

Range: S.E. Florida to Brazil

Length: 2 to 3 1/2 inches

Color: Brown

With large, round, white dots over back. Towards base of shell these dots have a brown center. Moderately common near protective rocks in shallow water.



Cypraea cervus Linné, 1771

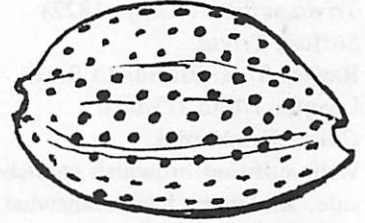
Atlantic Deer Cowrie

Range: N.C. to Cuba

Length: 3 to 7 inches

Color: Light brown

Smaller and more numerous spots. Larger, more inflated than zebra. Moderately common from low tide mark to 30 ft.



Cypraea cinerea Gmelin, 1791

Atlantic Gray Cowrie

Range: N.C. to Bahia, Brazil

Length: 3/4 to 1 1/2 inches

Color: Brownish mauve

Black spots and short streaks may freckle the sides. Base cream to old ivory. White, light mauve-brown between some of the teeth. Moderately common under rocks on shallow reefs.



Cypraea spurca acicularis Gmelin, 1791

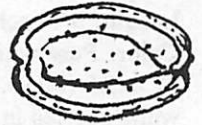
Atlantic Yellow Cowrie

Range: N.C. to Brazil

Length: 1/2 to 1 1/4 inches

Color: Flecked with orange-brown and white

Moderately common under rocks at low tide. Flatter than cinerea. Base and teeth ivory-white.



SIMNIA & CYPHOMA---FAMILY OVULIDAE

Simnia uniplicata (Sowerby, 1848)

Single-toothed Simnia

Range: Virginia to Brazil

Color: Lavender or yellow

Lives on sea fans and whips and matches their color for camouflage. Elongate, spindle-shaped, long toothless aperture. Short, twisted ridge at end of columella. Moderately common.



Cyphoma gibbosum (Linné, 1758)

Flamingo Tongue

Range: N.C. to Brazil

Length: 3/4 to 1 3/4 inches

Color: orange or apricot

With small white rectangle on back. Glossy-smooth, chubby, with swollen ridge running over the back. Beautiful mantle with black rings. Fairly common on sea fans.



Cyphoma intermedium (Sowerby, 1828)

Intermediate Cyphoma

Range: Florida to Brazil

Length: 1 1/4 inches

Color: White

Thick, inrolled smooth outer lip. Lives on sea fans and sea rods. Uncommon.



MOON SHELLS---FAMILY NATICIDAE

Shells solid, glossy, ovate, with a buttonlike callus filling the aperture. Bore into clams and can eat 3 or 4 a day. Lay a circular sand-collar egg capsule. Leave a broad, meandering trail over sandbars.

Polinices lacteus (Guilding, 1834)

Milk Moon

Range: N.C. to Brazil

Length: 3/4 to 1 1/2 inches

Color: Glossy milk-white

Shell thick. A heavy callus extends along the aperture wall and borders the deep umbilicus. Operculum horny, yellow or amber. Common in sandy, intertidal areas.



Sinum perspectivum (Say, 1831)

Common Baby's Ear

Range: Maryland to Brazil

Color: Dull white

Length: 1 to 2 inches

Very flat, with very large white aperture and strongly curved columella. Numerous fine spiral lines on top of whorls. Animal fully envelopes the shell. Commonly found in shallow, sandy areas.



Natica livida Pfeiffer, 1840

Livid Natica

Range: S.E. Florida to Brazil

Length: 1/2 inch

Color: Gray to tan

With darker gray bands. Brown aperture and columella. Smooth white operculum. Moderately common on sandy flats to 50 feet.



Natica canrena (Linné, 1758)

Colorful Atlantic Natica

Range: N.C. to Brazil

Length: 1 to 2 inches

Often with axial, wavy brown lines with 4 spiral rows of squarish brown spots. A voracious carnivore most active at night. Moderately common in sand in shallow water.



Stigmaulax sulcatus f. *cancellatus* Hermann, 1781

Sulcate Natica

Range: S.E. Florida to Brazil

Length: 1/2 to 3/4 inch

Color: White, marbled with light brown

A colorful form with beaded ribs. Umbilicus with large, white spiral, rounded cord in the lower section.

Uncommon in shallow water.



BONNETS and HELMETS---FAMILY CASSIDAE

Large shells usually having strong, glossy varices and a broad, well-developed parietal shield. Operculum is fan-shaped. Many members of this family feed on sea-urchins and sand dollars, also starfish.

Sconsia striata (Lamarck, 1816)

Royal Bonnet

Range: S.E. Florida to Brazil

Length: 1 1/2 to 2 1/2 inches

Color: White with brown spots

Shell hard, polished, often with numerous fine, spiral incised lines. 4 or 5 rows of brownish spots.

Uncommon from 300 to 1,200 feet.



Phalium granulatum (Born, 1778)

Scotch Bonnet

Range: N.C. to Brazil

Length: 1 1/2 to 3 inches

Color: White with beige dots

About 20 spiral groves on body whorl. Weak axial ribs sometimes present. Columella shield has numerous fine pustules. Not uncommon washed ashore. It is the state shell of North Carolina.



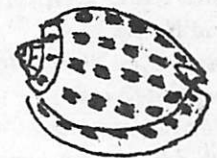
Phalium cicatricosum Gmelin, 1791

Smooth Scotch Bonnet

Range: Florida to Brazil

Length & color: Same as Scotch Bonnet

Surface is smooth. Columella shield has pustules. Fairly common in shallow water.



Casmaria ponderosa atlantica Clench, 1944

Atlantic Casmaria

Range: Florida and Caribbean

Length: 1 inch

Color: Glossy white

With 4 rows of weak, squarish red-brown spots on last whorl, and with 5 to 9 minute prickles on lower half of outer lip. Rare in 6 to 500 feet.



Cassis tuberosa (Linné, 1758)

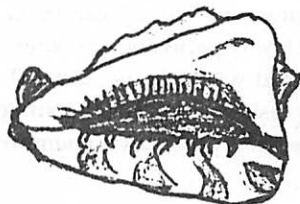
King Helmet

Range: N.C. to Brazil

Length: 4 to 9 inches

Color: Brownish-cream

With black-brown patches on lip and a large brown patch at center of the triangular parietal shield. Common in the Bahamas from shallow water to 30 feet.



Cassis madagascariensis Lamarck, 1822

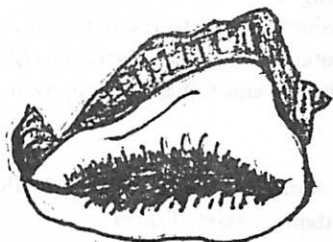
Queen or Emperor Helmet

Range: N.C. to Greater Antilles

Length: 4 to 14 inches

Color: Pale cream

The largest Cassis, it has black between teeth on parietal shield which is pale to deep salmon. Three spiral rows of large blunt spines. Moderately common from 10 to 60 feet in sand in the Bahamas.



Cassis flammea (Linné, 1758)

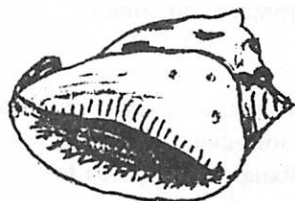
Flame Helmet

Range: Lower Florida Keys to Brazil

Length: 3 to 5 inches

Color: Pale cream

Has an ovate parietal shield and lacks brown between the teeth of outer lip. Last whorl is without spiral threads. Fairly common in the Bahamas in shallow water.



Cypraecassis testiculus (Linné, 1758)

Retriculated Cowrie-Helmet

Range: N.C. to Brazil

Length: 1 to 3 inches

Color: Reddish-brown crisscrossing

With orange columellar shield heavy and smooth. Longitudinal ridges crossed by spiral grooves producing a reticulated surface. Reef inhabitant from below low water level to 20 ft. Not uncommon.



TRITONS---FAMILY CYMATIIDAE

Tritons are widespread in the oceanic world, mostly in tropical seas. Nearly all of them grow a very hairy or horny periostracum outer covering, which protects them from boring sponges. The aperture is generally armed with "shelly" teeth. Tritons of tropical reefs are used as horns in Eastern religious ceremonies and by fishermen in many parts of the world. A small hole is drilled in the side of the spire and when blown the shell produces a sound resembling the cornet. They feed on starfish.

Cymatium femorale (Linné, 1758)

Angular Triton

Range: S.E. Florida to Brazil

Length: 3 to 8 inches

Color: Brown to reddish orange

Outer lip flaring. Varices large, wing-shaped and with white knobs. Surface spirally corded. Inner lip smooth and white. Uncommon in eel grass from 3 to 30 feet.



Cymatium pileare (Linné, 1758)

Atlantic Hairy Triton

Range: S.C. to Brazil

Length: 1 1/2 to 4 inches

Color: Reddish brown

Old varices strong, rounded and beaded. Spiral sculpture of squarish, irregularly sized, weakly beaded cords. Aperture orange-brown with white teeth. Periostracum thick, matted and brown. Moderately common on coral reefs.



Cymatium nicobaricum (Röding, 1798)

Gold-mouthed Triton

Range: S.E. Florida to Brazil

Length: 3/4 to 2 1/2 inches

Color: gray with brown flecks

Orange mouth with white teeth. Coarsely corrugated by spiral, noded cords. 6 nuclear whorls, strongly convex. A common shallow water species found under rocks.



Cymatium muricinum (Röding, 1798)

Knobbed Triton

Range: S.E. Florida to Brazil

Length: 1 to 2 inches

Color: Ash-gray

Sometimes dark-brown with narrow cream, spiral band. Characterized by a thickened cream parietal shield and a long, bent-back siphonal canal. Inside of aperture brownish red to yellowish white. Not uncommon in intertidal sand and seaweed areas.



Cymatium caribbaeum Clench & Turner, 1957

Dog-head Triton

Range: S.C. to Brazil

Length: 1 1/2 to 2 1/2 inches

Color: orange-brown

With globular whorls which are squarish at the shoulder. Siphonal canal long and slender. Outer lip and parietal wall peach to flesh color. Not uncommon in shallow water in weeds and sandy bottoms where it roams at night.



Charonia variegata (Lamarck, 1816)

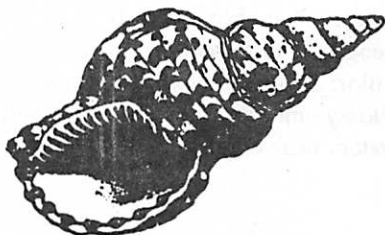
Trumpet Triton

Range: S.E. Florida to Brazil

Length: 6 to 13 inches

Color: Speckled brown and white

One of the largest Bahamian snails. Outer lip has small pairs of white teeth. Inner lip has uneven, white ridges. Adults usually have a swollen, angular shoulder on the last whorl. Moderately rare below low water in crevices and hollows in coral reef.



FROG SHELLS---FAMILY BURSIDAE

Frog shells are carnivorous inhabitants of the rocky, subtidal zone. Has a shelly channel at the upper end of the aperture. The outer lip is thick, with small teeth. Eggs are laid in tightly packed spirals of urn-shaped, horny capsules, usually under rocks.

Bursa thomae (Orbigny, 1842)

St. Thomas Frog

Range: S.C. to Brazil

Length: 1/2 to 1 inch

Color: Light beige

Characterized by the varices being placed axially one below the other and by the bright mauve aperture. Outer lip bears 8 or 9 white, elongate teeth. Uncommon under rocks on offshore reefs.



Bursa granularis (Roding, 1798)

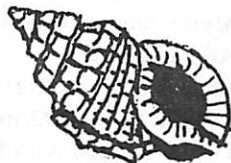
Granular Frog

Range: S. E. Florida, Caribbean

Length: 3/4 to 2 inches

Color: orange-brown

With 3 narrow, white bands which appear as prominent white squares on the varices, which are axially placed one below the other. White teeth in yellowish aperture. Fairly common among rocks on coral reefs.



TUNS ---FAMILY TONNIDAE

Tuns have light but strong shells. Large, with spiral ridges, and 3 or 4 smooth, golden-brown embryonic whorls. Operculum is lost in adult stage. They feed on sea cucumbers. Occasionally found washed up on beach.

Tonna maculosa (Dillwyn, 1817)

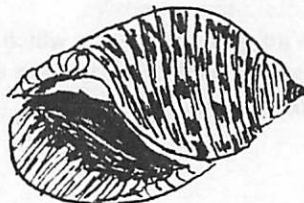
Atlantic Partridge Tun

Range: S. E. Florida to Brazil

Length: 2 to 5 inches

Color: Brown and white speckled

Glossy-smooth whorls with fine spiral gooves. Aperture tan. Moderately common. Lives in warm shallow waters near coral reefs.



Tonna galea (Linné, 1758)

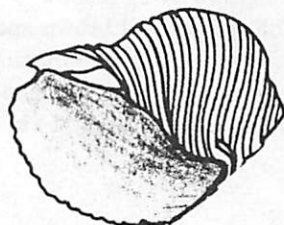
Giant Tun

Range: N.C. to Brazil

Length: 5 to 7 inches

Color: White to light tan

19 to 21 broad, flattish ribs. Suture forms a deep channel. Lip easily broken. Uncommon. Lives on sandy bottoms offshore from 3 to 40 feet deep.



MUREX---FAMILY MURICIDAE

Murex are carnivorous snails characterized by strong, spiny shells. Most live in shallow water. They prey on live bivalves or freshly killed sea animals. The suction of the foot and the prying action of the strong outer lip forces open clams and oysters. Most produce a yellowish fluid, which when exposed to sun, turns to deep purple. This Royal Tyrian Purple was used by Phoenicians and early Romans to dye ceremonial robes. A very popular family with collectors.

Murex pomum Gmelin, 1791

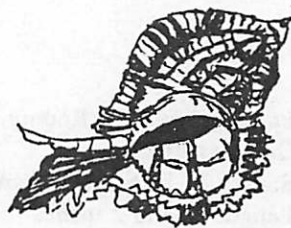
Apple Murex

Range: N.C. to Brazil

Length: 2 to 4 1/2 inches

Color: Spotted with brown to yellowish tan

Sturdy with a rough surface. Aperture glossy ivory to orange with dark brown splotch on upper end of parietal wall. Outer lip crenulate with 3 or 4 daubs of dark-brown. A very common shallow water species. Found in eel grass at French Bay, San Sal.



Murex macgintyi M. Smith, 1938

Tom McGinty's Murex
Range: Florida to Brazil
Length: 3/4 inch

Color: whitish to brown

With darker spiral bands. Oval-elongate with 6 or 7 spinose varices. Spiral rounded cords are present between varices. Uncommon in range but often found dead on Fernandez Beach, San Sal.



Morula nodulosa (C. B. Adams, 1845)

Blackberry Drupe
Range: S.C. to Brazil
Length: 1/2 to 1 inch

Color: Black

Elongate, grossly studded with round black beads. Aperture purplish black. Outer lip thick with 4 to 5 large, white beads. Common shallow water species found under rocks.



Purpura patula (Linné, 1758)

Wide-mouthed Purpura
Range: S.E. Florida and Caribbean
Length: 2 to 3 1/2 inches

Color: Dull rusty gray

Columella salmon-pink. Inner borders of aperture spotted blackish-brown. Animal exudes a harmless permanent violet liquid which stains your hands. Common in West Indies. Found on ironshore of Sand Dollar Beach, San Sal.



Thais rustica (Lamarck, 1822)

Rustic Rock-shell
Range: S.E Florida to Brazil
Length: 1 1/2 inches

Color: Dirty gray to dull brown

Two spiral rows of blunt spires, one on-shoulder, the other at center of body whorl. Interior of aperture, whitish margined with spots of dark brown along outer lip. Aperture always white. Common near shore.



Thais deltoidea (Lamarck, 1822)

Deltoid Rock-shell
Range: S. Florida to Brazil
Length: 1 to 2 inches

Color: Grayish white

Mottled with black. Heavy and coarsely sculptured with 2 spiral rows of large, blunt spines. Parietal wall tinted with lavender. Interior of aperture glossy-white. Abundant on intertidal rocks.



Muricopsis (Risomurex) rosea (Reeve, 1856)

Rosey Murex

Range: Bahamas, Caribbean

Length: 1/2 inch

Color: Rose and black

Nuclear whorls pink and then alternating rows of black and rose with all rows beaded. Interior of aperture rose. Sometimes found crabbed in tide-pools. An uncommon, attractive little shell.



Favartia cellulosa (Conrad, 1846)

Pitted Murex

Range: N. C. to Brazil

Length : 1 inch

Color: Dull gray-white

Rough with 5 to 7 poorly developed fluted varices. Siphonal canal strongly upturned. Aperture small and almost round. Found in shallow, intertidal waters near oyster beds. Its main food is mussels.



Favartia alveata (Keiner, 1842)

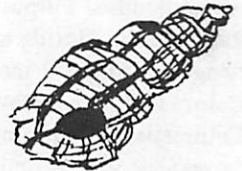
Frilly Dwarf Triton

Range: Florida Keys to Brazil

Length: 3/4 to 1 inch

Color: Whitish

Sometimes banded with brown. Body whorl with 6 to 7 frilled varices and a series of strong revolving ridges. Suture deep. Outer lip delicately frilled. Moderately common, just off shore in small reef crevices.



Muricopsis oxytatus (M. Smith, 1938)

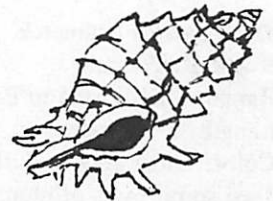
Hexagonal Murex

Range: Florida to Caribbean

Length: 1 to 1 1/2 inches.

Color: White, pink, lilac, orange

One of these colors or a combination of two, such as pink and white. Elongate, heavy with high spire and sharply spinose on each of 6 or 7 axial ribs on each whorl. Aperture white. Moderately common from 6 to 180 ft. on rocky bottom.



Pterotyphis triangularis (A. Adams, 1856)

Triangular Typhus

Range: Lower Florida keys to Panama

Length: 3/4 inch

Color: white

With 3 varices per whorl, tubes within the varices. Shell sculptured. Aperture white. Uncommon in shallow water. The only specimen found on San Sal was dead on Fernandez Beach.



CORAL SHELLS--FAMILY CORALLIOPHILIDAE

Coral shells contain less than a dozen American species. They live with corals and sea fans and lack a radula. The sturdy ovate shells are usually very variable in shape.

Coralliophila abbreviata (Lamarck, 1816)

Short Coral-shell

Range: S. E. Florida to Brazil

Length: 3/4 to 2 inches

Color: Grayish white

Solid, rather misshapen with rounded or squared shoulders. Has numerous spiral threads bearing microscopic scales. A common species found living at the bases of corals and sea fans.



Coralliophila caribaea Abbott, 1958

Caribbean Coral-shell

Range: S.C. to Brazil

Length: 1/2 to 1 inch

Color: White

Somewhat triangular in shape because of the angular shoulder or body whorl and rather flat-sided spine. Aperture usually white with a touch of purple within. Operculum wine-red. It occurs commonly in nests under or in holdfasts of seafans.



DOVES---FAMILY COLUMBELLIDAE

Solid small shells. There are approximately 400 worldwide species. They are locally abundant living in shallows and associated with algae and rock habitats. Feed on soft algae as they cling to seaweeds.

Columbella mercatoria (Linné, 1758)

Common Dove

Range: N.E. Florida to Brazil

Length: 1/2 to 3/4 inch

Color: Variable

Highly colored with white and brown, interrupted spiral bars over yellow, pink or orange background. Outer lip thick bearing about a dozen white teeth. An abundant shallow water species in San Sal, found under rocks.



Pyrene ovulata (Lamarck, 1822)

Ovate Dove

Range: Bahamas to Barbados

Length: 3/4 inch

Color: Black to brown

With sparse white splotches. Solid, ovoid with rounded shoulder. Spire concave with a nucleus of 3 to 4 smooth, milk-white whorls. Spiral sculpture of minute cords. Periostracum thick. Uncommon in West Indies. Fairly common on San Sal at Fernandez Beach.



Pyrene ovuloides (C. B. Adams, 1850)

C.B. Adams' Dove

Range: Bahamas and Caribbean

Color: Orange-brown

With irregular blotches of white. Similar to ovulata but usually larger, always much more slender, with higher, concave spire. Uncommon.



Nitidella nitida (Lamarck, 1822)

Glossy Dove

Range: S.E. Florida to Brazil

Length: 1/2 inch

Color: White

With heavy mottlings of light yellow to mauve-brown. Characterized by the long aperture (3/4 of shell), and by the very glossy finish. Outer lip has 7 small teeth. Common on San Sal on rocks at low tide and dead on Fernandez Beach.



Mitrella ocellata (Gmelin, 1791)

White-spotted Dove

Range: S.E. Florida to Brazil

Length: 1/2 inch

Color: dark black-brown

With numerous small white dots which may be quite large just below the suture. Smooth. Outer lip thick, with 5 or 6 small white teeth. Aperture short, narrow, purplish-brown within. When beach worn the color is reddish to yellowish brown. Common under rocks at low tide.



BAILYA, ENGINA, TRITON, CANTHARUS---FAMILY BUCCINIDAE

Bailya intricata (Dall, 1884)

Intricate Baily-shell

Range: Southern Florida, Bahamas

Length: 1/2 inch

Color: Pure white

Fairly strong with cancellate sculpturing. Last whorl with 12 to 14 low axial ribs which are crossed by about a dozen spiral cords. At their intersection there are small beads. Outer lip with a frilled, round varix. Columella smooth. Whorls slightly shouldered. Uncommon from 6 to 300 ft.



Bailya parva (C.B. Adams, 1850)

Range: Bahamas and West Indies

Length: 3/4 inch

Color: Flesh

With irregular pale brown and white revolving stripes. Whorls rounded, deeply sutured. Sculptured with 10 to 12 narrow, rounded axial ribs per whorl. Whorls are not shouldered. Columella smooth and glossy. Uncommon, in shallow water under rocks.



Engina turbinella (Kiener, 1835)

White-spotted Engina

Range: S.E. Florida to Brazil

Length: 1/3 to 1/2 inch

Color: Dark purple-brown

With about 10 low, white knobs per whorl. Base with 2 to 4 spiral rows of much smaller knobs. Aperture thickened and constricted by 4 to 5 whitish teeth on outer lip. Common under rocks at low tide.



Colubraria lanceolata (Menke, 1828)

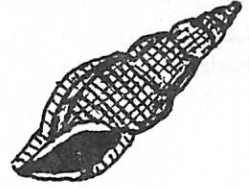
Arrow Dwarf Triton

Range: N.C. to Brazil

Length: 3/4 to 1 inch

Color: Ash-gray

Occasionally orange-brown smudges. Slender with 7 whorls. Aperture long and narrow. Varix strong and curled back. Parietal shield elevated into collar. Sculpture finely cancellate and beaded. Nucleus brown. Uncommon on rocky bottom just offshore.



Pisania pusio (Linné, 1758)

Minature Triton Trumpet

Range: S.E. Florida to Brazil

Length: 1 to 1 1/2 inches

Color: Purplish brown

With narrow spiral bands of irregular dark and light spots commonly chevron shaped. Sturdy with glossy finish. Outer lip weakly toothed within, small white swollen tooth near top of aperture. Moderately common below water line near coral reefs.



Pisania tinctoria (Conrad, 1846)

Tinted Cantharus

Range: N.C. to Brazil

Length: 3/4 to 1 1/4 inches

Color: Variegated

With yellow-brown, blue-gray and milky white. Heavy, spire conic. Aperture with small canal at top. Inside of outer lip with small teeth which are strongest near top. Axial ribs and spiral cords weak. Fairly common in shallow water.



CATHARUS---FAMILY BUCCINIDAE

Catharus multangulus (Philippi, 1848)

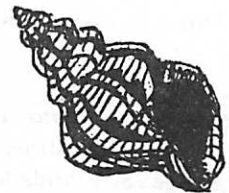
False Drill

Range: N.C. to Cuba

Length: 1 to 1 1/4 inches

Color: Gray

With red-brown specklings. Sometimes solid yellow-orange. Rather broad, with short, fairly open siphonal canal. Outer lip sharp, finely crenulated. At base of columella there is a single small fold, Moderately common. Feeds on barnacles.



NASSA---FAMILY NASSARIIDAE

Nassarius albus (Say, 1826)

Variable Nassa

Range: N.C. to Brazil

Length: 1/2 inch

Color: Pure white

Occasionally with spiral bands of light yellow-brown. 8 to 12 strong axial ribs per shouldered whorl. Parietal shield enamel-white. Common from low tide to 30 feet.



LATIRUS AND TULIP---FAMILY FASCIOLARIIDAE

Leucozonia nassa (Gmelin, 1791)

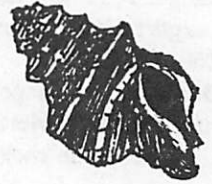
Chestnut Latirus

Range: Florida to Brazil

Length: 1 1/2 inches

Color: Chestnut brown

With faint narrow band of white at base terminating in small spine on outer lip. Heavy, squat, with whorls shouldered by 9 large nodules. Common among rocks at low tide.



Leucozonia ocellata (Gmelin, 1791)

White-spotted Latirus

Range: S.E. Florida to Brazil

Length: 3/4 inch

Color: Dark brown to black

Row of 8 large, white rounded nodules at periphery and 3 or 4 rows of smaller white squares on base. Common Caribbean intertidal species found under rocks.



Latirus infundibulum (Gmelin, 1791)

Brown-lined Latirus

Range: Florida to Brazil

Length: 3 inches

Color: Tan to light brown

Heavy. 3 weak folds on columella. Small darker brown, wavy, glossy smooth spiral cords. 7 or 8 strong axial nodules per whorl. Umbilicus imperfect, sometimes funnel-shaped. Moderately common in West Indies from 6 to 180 ft.



Latirus angulatus (Röding, 1798)

Short-tailed Latirus

Range: S. Florida to Brazil

Length: 1 to 2 1/2 inches

Color: Light chestnut

Rather broad, with short siphonal canal. 8 or 9 rounded, long axial ribs crossed by numerous spiral threads. Moderately common in the West Indies.



Fasciolaria tulipa (Linné, 1758)

True Tulip

Range: N.C. to Brazil

Length: 3 to 8 inches

Color: Orange, red or more commonly brown

Striped and splotched with color. An aggressive carnivore feeding on other snails and bi-valves. Siphonal canal well developed. A large brown horny operculum. 2 or 3 crinkled threads follow just below the suture. Moderately common in shallow water of quiet bays with sand and weed bottoms such as east Graham's Harbor, San Sal.



OLIVELLA--- FAMILY OLIVIDAE

Olivella nivea (Gmelin, 1791)

West Indian Dwarf Olive

Range: S.E. Florida to Brazil

Length: 1/2 to 1 inch

Color: Shiny cream-white

With orange, tan or purple markings just below suture. About 7 whorls, apex sharply pointed. Suture channel deep and fairly wide. Common from shore to 150 ft. in sand. Abundant dead on beaches.



Olivella floralia (Duclos, 1853)

Common Rice Olive

Range: N.C. to Brazil

Length: 1/3 inch

Color: Glossy white

Slender with sharp apex. Suture narrowly and deeply grooved. Columella with numerous, very small folds. Resembles a grain of rice. Common in shallow water, 3 to 30 ft. Many dead on beaches.



MITERS AND VEXILLUM---FAMILY MITRIDAE

A spindle-shaped shell with an acutely pointed spire and with strongly plaited columella. Many miters are very colorful, particularly those from warm tropical waters. The shallow-water miters are generally nocturnal, hiding during the day under rocks and corals. Many feed on worms and clams using their long, retractable proboscis.

Mitra barbadensis (Gmelin, 1791)

Barbados Miter

Range: S.E. Florida to Brazil

Length: 1 to 1 1/2 inches

Color: Yellow brown to fawn

Slender, with aperture wide below and 1/2 the length of the shell. Columella with 5 slanting folds. Sides of spire almost flat. Weak spiral threads are present. A common species under rocks on reefs facing open ocean.



Mitra nodulosa (Gmelin, 1791)

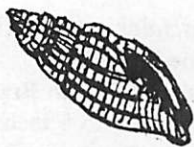
Beaded Miter

Range: N.C. to Brazil

Length: 3/4 to 1 inch

Color: Orange to brown-orange

Solid. Glossy. About 17 axial riblets, rather neatly beaded. Suture deep and whorls slightly shouldered. 3 columella folds large and white. A common species frequently washed ashore or found under rocks at low tide.



Vexillum hendersoni (Dall, 1927)

Henderson's Miter

Range: Georgia to West Indies

Length: 1/2 to 3/4 inch

Color: Pinkish gray

With upper 1/2 of whorl bearing a wide, lighter, spiral band. Fusiform in shape, with 8 whorls each bearing a dozen sharp axial ribs which extend half way down the whorl. Columella with 4 folds. Moderately common offshore down to 2,400 ft.



Vexillum histrio Reeve, 1844

Show-off Miter

Range: S.E. Florida to Brazil

Length 1/2 inch

Color: Red, black, white

Rather fusiform in shape with axial ribs. 4 columella folds. Moderately common below low water line under rocks in sand.



Vexillum puella (Reeve, 1845)

Maiden Miter

Range: N.C. to Caribbean

Length: 1/3 inch

Color: Purple-brown

With irregular white splotches below the suture, and with a strong reticulated sculpturing. Uncommon, just off shore.



Vexillum cubanum (Aguayo & Rehder, 1936)

Cuban Miter

Range: Bahamas to Cuba

Length: 1/2 inch

Color: Milky white

With brown and gray bands and 11 ribs. Found dead on Fernandez Beach, San Sal.



Vexillum dermestinum (Lamarck, 1811)

Range: Bahamas & Caribbean

Length: 1/3 inch

Color: Brown and white

Numerous fine ribs. Brown bands alternate with white spotted bands. Found dead on Fernandez Beach, San Sal.



Vexillum variatum Reeve, 1845

Range: Bahamas & Caribbean

Length: 1/2 inch

Color: White, light and dark brown

Eleven strong ribs, slightly shouldered. Found dead on Fernandez Beach, San Sal.



WEST INDIAN CHANK---FAMILY TURBINELLIDAE

Turbinella angulata (Lightfoot, 1786)

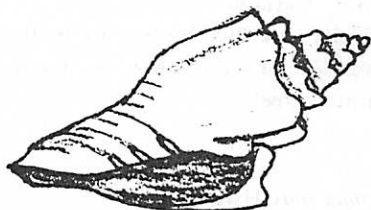
West Indian Chank

Range: Bahamas to Panama

Length: 7 to 14 inches

Color: Cream white

With thick, light brown periostracum. Interior often tinged with glossy pinkish cream or deep orange. Columella bears strong widely spaced folds. Common in the Bahamas. Found on eel grass at French Bay snorkeling. One of the largest Bahamian shells.



GUILDING'S LYRIA---FAMILY VOLUTIDAE

Enaeta cylleniformis (Sowerby, 1844)

Guilding's Lyria

Range: S.E. Florida to Brazil

Length: 1/2 inch

Color: White

With light yellow specks. Outer lip thickened within. Lower part of columella with 3 small teeth. Siphonal canal slightly turned back. Not uncommon in sand just offshore.



ATLANTIC MORUM--- FAMILY HARPIDAE

Morum oniscus (Linné, 1767)

Atlantic Morum

Range: S.E. Florida to Brazil

Color: White

With speckings of brown. Whorls with 3 spiral rows of rather prominent, bulbous, low tubercles. Shell heavy, rough. Parietal wall has tiny white pustules. Common below the low-tide mark under old coral. Commonly found dead on San Sal beaches.



CONES---FAMILY CONIDAE

The family contains close to 500 species and is very popular with collectors. New Caribbean cones are constantly being discovered by scuba divers. Generally solid, with a long aperture and typical conic outline. All species possess a poison and in a very few cases, cones in the Indo-Pacific area have inflicted fatal stings to humans. Atlantic cones are not harmful, but caution should be used in picking up live cones and do not store in your bath suit! They feed on worms and other mollusks actively at night.

Conus regius Gmelin, 1791

Crown Cone

Range: S. Florida to Brazil

Length: 1 1/2 to 2 1/2 inches

Color: Variable

Usually a mottled brown and white, with darker brown bands. (Form *citrinus* is yellow brown.) Spire low, shoulders of whorls low, irregular knobs or tubercles. Interior of aperture is white. Moderately common on outer reefs.



Conus mus Hwass, 1792

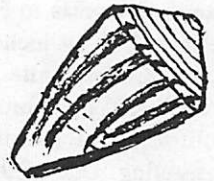
Mouse Cone

Range: S.E. Florida and West Indies

Length: 1 to 1 1/2 inches

Color: Dull blue-gray

With olive green or brown mottlings. Periostracum thick, velvety, yellowish to green-brown. Spire elevated somewhat. Shoulder whorls with low, irregular white knobs, between which are brown splotches. Very common in intertidal areas.



Conus jaspideus Gmelin, 1791

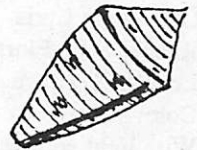
Jasper Cone

Range: S. Florida to Brazil

Length: 1/2 to 3/4 inch

Color: Variable

Nuclear whorls may be white, tan or purple. Usually brightly hued with reddish-brown or yellowish mottlings. Shell spindle-shaped, spire rather high. Numerous spiral lines cut around sides. A very common species found on sandy bottoms and abundant dead on San Sal beaches.



Conus flavescens Sowerby, 1834

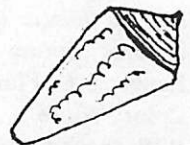
Bahama Cone

Range: S.E. Florida and Caribbean

Length: 1 to 1 1/2 inches

Color: White with orange.

Color and pattern quite variable, generally mottled. Uncommon. One shell found dead on Fernandez Beach, San Sal.



AUGERS---FAMILY TEREBRIDAE

These long, slender shells are sand-dwelling carnivores. They are closely related to cones in having a poison gland and a harpoon-like radular tooth. Most live in shallow waters in sandy mud or coral sand. Intertidal species feed on young clams.

Terebra dislocata (Say, 1822)

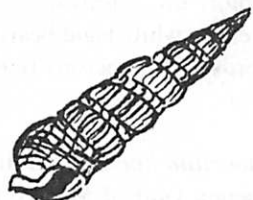
Common American Auger

Range: Maryland to Brazil

Length: 1 1/2 to 2 inches

Color: Dirty pink-gray

Sometimes orange-cream. Whorls with about 25 axial ribs per whorl, which are divided 1/3 to 1/2 their length by a deep cut, spiral line. Many show prominent, squarish, raised spiral cords between ribs. Columella has 2 fused spiral folds near base. Common in shallow water.



Terebra protexta Conrad, 1845

Fine-ribbed Auger

Range: N.C. to Brazil

Length: 5/8 inch

Color: Dull white

About 13 whorls and well-indented suture. Whorls in spire slightly concave with about 22 fine axial ribs running from suture to suture. These are broken weakly by 7 to 9 incised spiral lines. Fairly common at 12 to 90 feet.



Terebra hastata (Gmelin, 1791)

Shiny Atlantic Auger

Range: S.E. Florida to Brazil

Length: 1 1/4 to 1 1/2 inches

Color: Golden tan

With white band below suture. Nucleus white. Columella white and smooth. Highly glossy finish. Numerous axial ribs which extend from suture to suture. This is the "fattest" species in the Western Atlantic and is fairly common on San Sal in sand.



TURRIDS---FAMILY TURRIDAE

A very large and diverse group of gastropods. Most have a slit notch or U-shaped canal at top of outer lip, known as the "turrid notch." They are usually spindle-shaped, with a long spire and straight anterior canal.

Crassispira cubana Melvill, 1923

Cuban Turrid

Range: S. Florida and Caribbean

Length: 3/4 inch

Color: Brown-black

With a slight sheen. 14 to 16 short, white beaded axial ribs per whorl. Spiral threads numerous and fine. Subsutural cord is white-spotted. Not uncommon, below water under rocks.



Crassispira albomaculata (Orbigny, 1842)

White-banded Drillia

Range: Florida to West Indies

Length: 1/2 inch

Color: Black-brown

Yellow-white band bearing about 13 knobs per whorl. Last whorl with 2 or 3 spiral white bands. 2 smooth cords and numerous fine striae on the black portions. Fairly common in shallow water under rocks.



Inodrillia nucleata (Dall, 1881)

Range: Gulf of Mexico to Lesser Antilles

Length: 1 inch

Color: White

High spire, curved axial ribs, short siphonal canal. Sinus deep U-shaped and somewhat tubular. A deep water species.



PYRAM---FAMILY PYRAMIDELLIDAE

Pyramidella dolabrata (Linné, 1758)

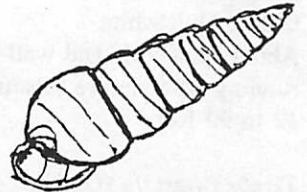
Giant Atlantic Pyrum

Range: S.E. Florida to Brazil

Length: 3/4 to 1 inch

Color: Opaque-white

With 3 fine, spiral lines of brown (yellow when dead), one of which is just above the suture. Solid and glossy smooth. Columella large with 2 or 3 strong folds. Uncommon in sand from 6 to 180 feet.



BUBBLES---FAMILY BULLIDAE

All have rather large bodies that more or less envelop the shell, which in many species is fragile and even rudimentary. They are generally carnivorous, swallowing their prey alive, after which it is crushed by strong, limy plates lining the gizzard. Bubbles are hermaphroditic, laying jellylike ribbons in which are embedded many thousands of small eggs.

Bulla striata Bruguière, 1792

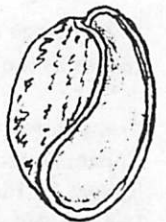
Common Atlantic Bubble

Range: Florida to Brazil

Length: 1/2 to 1 inch

Color: Whitish brown

With irregular darker brown markings. Columella usually with a brown-stained callus. Shell smooth, varying from fragile to quite strong, and cylindrical to fairly swollen. Common on grassy mud flats.



Haminoea glabra (A. Adams, 1850)

Paper Bubble

Range: West Indies

Length: 3/8 inch

Color: White

Thin, globose, with the spire concealed. Apertural lip arising on the left side of the perforation and angled near its insertion. Common intertidally.



CLASS SCAPHOPODA TUSK SHELLS---FAMILY DENTALIDAE

Simple mollusks producing a tubular calcareous shell open at both ends, the larger end for the long, conical foot, genital opening, mouth and clusters of feeding appendages. Radula present. No eyes or tentacles. Somewhat resembles an elephant's tusk. They live buried in mud with the narrow posterior end of their shell protruding into the water.

Dentalium eboreum Conrad, 1846

Ivory Tusk

Range: N.C. to West Indies

Length: 1 to 2 1/2 inches

Color: Ivory white

Shell glossy. Apical slit narrow and on the convex side. Narrow end has about 20 fine scratches. Common intertidally.



CLASS POLYPLACOPHORA CHITONS---FAMILY CHITONIDAE

Rock-dwelling marine mollusks having 8 shelly plates that arise embryologically from a single shell gland. The rather primitive animal is encircled by a leathery border, the girdle, which holds the shelly plates in place. Underneath is a large, broad foot and head that lacks eyes and tentacles. There is a well-developed radula. Sexes are separate. Most of the 500 species are herbivorous.

Acanthopleura granulata Gmelin, 1791

Fuzzy Chiton

Range: S. Florida and West Indies

Length: 3 inches

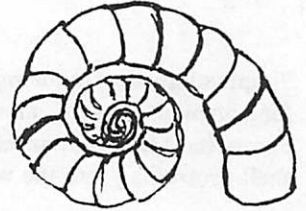
Color: Gray

Girdle with bands of black and a thick, coarse covering of low, hairlike spines. Valves usually eroded, but perfect ones are brown with granular surface. Underside of valves are light green, with middle valve having a rather large black splotch behind the sinus. Common on upper intertidal rocks. Used as food and bait in the Bahamas.



CLASS CEPHALOPODA
SPIRULA---FAMILY SPIRULIDAE

The class includes the most active and highly evolved of the mollusks: the squids, nautilus and octopuses. The squid animal producing the spirula is very rarely captured. Normally, this 1 1/2 inch long squid lives at depths from 600 to 3,000 feet. When disturbed, the spirula withdraws its head, 8 arms and 2 tentacles within the cylinder-shaped mouth cavity. The animal usually hovers in a vertical position with the tentacles hanging downward. The shell has 25 to 37 gas and air-filled chambers, with a delicate tube running through them. When the animal dies, the body rots away and the shell floats to the surface of the ocean.



Spirula spirula (Linné, 1758)

Common Spirula

Range: Cape Cod to West Indies

Length: 1 inch

Color: White

The rather fragile shell is a chambered cone coiled in a flat spiral, with the coils not in contact. Each small chamber is divided from its neighbor by a nacreous-white, concave, fragile septum or wall. These shells are cast high up on beaches because of their lightness.

LAND SNAILS

The next three shells are not marine shells but land snails. They are included as they are often found on San Sal beaches and therefore are often confused with seashells.

Melampus coffeus (Linné, 1758)

Coffee Melampus

Range: S. Florida to Brazil

Length: 3/4 inch

Color: Brown

With white bands. Aperture usually has folds or teeth. Operculum absent. Upper shoulders of shell lacking spiral incised lines. Found in areas of mangroves on mud flats. Washed up dead on beach. (Until recently this was classified as a marine snail.)



Cerion watlingense Dall, 1907

Watling's Cerion

Range: N.W. San Sal (Formerly Watling's Island)

Length: 1 inch

Color: White and brown

They are often called "peanut shells" because of their shape. They are more active during rains or at night. Rats and birds are their enemy. Abundant in a large colony at Sand Dollar Beach, San Sal living on roots of sea grapes and beach plums. Another colony of cerion exist near the S.E. corner of San Sal, north of Fortune Hill Plantation. These are pure white.



Hemitrochus variens (Menke, 1829)

Variable Cepolis

Range: Florida Keys and Bahamas

Length: 1/2 inch

Color: White

Circled by brightly colored bands of yellow and brown. Pink flush in aperture. Have no teeth in aperture and are generally globose. Common all over San Sal on shrubs near the shore, but are more fragile and not as abundant as the cerion.



BIVALVES---CLASS PELECYPODA

Mollusks with 2 shelly valves hinged at the top, without head or radula. Usually with a hatched-shaped foot. The second largest group having over 20,000 living species. Some groups such as mussels and pen shells, spin a byssus, a clump of chitinous threads that serve as an anchor. Eggs and sperm of bivalves are shed into open sea water. The developing young are free-swimming for days or weeks before settling to the bottom.

ARKS---FAMILY ARCIDAE

Common, worldwide clams, most living in warm, shallow seas. The strong, boxlike shells are usually heavily ribbed, and covered with a feltlike, blackish periostracum. The hinge is straight and bears many small taxodont teeth. Between the backs and on the upper surface is a black, horny ligament.

Arca zebra (Swainson, 1833)

Turkey Wing

Range: N.C. to Brazil

Length: 2 to 3 inches

Color: White tan

With zebra-stripe markings of reddish-brown. Periostracum matted brown. Ribs of irregular sizes. A common species which attaches itself to rocks from 3 to 25 ft. Washed ashore after storms.



Arca imbricata Bruguière, 1789

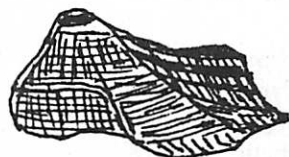
Mossy Ark

Range: N.C. to Brazil

Length: 1 to 2 1/2 inches

Color: Brown and white

Periostracum dark brown and shaggy. Surface crisscrossed, except for 6 to 8 finely beaded posterior ribs. Very large byssal opening. Lacks zebra stripes. Commonly attached to underside of rocks in shallow water.



Barbatia cancellaria (Lamarck, 1819)

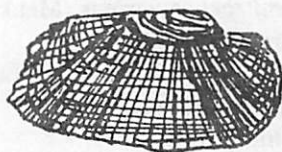
Red-brown Ark

Range: S. Florida to Brazil

Length: 1 to 1 1/2 inches

Color: Dark red-brown

Crisscrossed surface. Periostracum arranged in radial rows of fine tufts. Interior brownish, exterior darker. Common attached to underside of rocks from low tide to 12 feet.



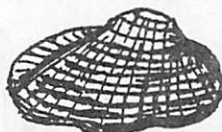
Barbatia domingensis (Lamarck, 1819)

White Minature Ark

Range: N.C. to Brazil

Length: 1/2 to 3/4 inch

Somewhat box-shaped with thin periostracum. Surface has a coarse network. Posterior ends dip downward. Ligament long and very narrow. Common under rocks and sponges, below tide line.



Andara transversa (Say, 1822)

Transverse Ark

Range: Cape Cod to Caribbean

Length: 1/2 to 1 1/2 inches

Color: White to gray

With gray-brown periostracum. Left valve overlaps right. Ligament fairly long, moderately narrow, rough or pustulose. 30 to 35 ribs per valve. Common below low tide on rocks in sandy mud.



Noetia ponderosa (Say, 1822)

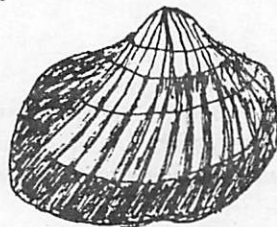
Ponderous Ark

Range: Virginia to Bahamas

Length: 2 to 2 1/2 inches

Color: White

With thick, black periostracum. Also as high as long. 27 to 31 ribs per valve. Ribs are raised, square and divided by a fine-cut line. Posterior muscle scar raised to form a weak flange. A common shallow-water sand dweller.



BITTERSWEETS---FAMILY GLYCYMERIDIAE

Bittersweet clams are related to arks but have colorful, compressed, oval shells with relatively fewer teeth in hinge. Shell is heavy and beaks curve inward slightly. Hinge heavy with numerous small teeth. This is an ancient group, having evolved some 150 million years ago.

Glycymeris undata (Linné, 1758)

Atlantic Bittersweet

Range: N.C. to Brazil

Length: 2 inches

Color: Cream to white

With bold splotches of nut-brown. Heavy and smooth. Beaks at about the middle of the ligamental area. Valves rounded with numerous weak ribs. Common in sand at 3 to 8 feet.



Glycymeris decussata (Linné, 1758)

Decussate Bittersweet

Range: S.E. Florida to Brazil

Length: 2 inches

Color: White and brown spotted

Shell is inequilateral. Ribs smooth with fairly strong radial scratches. The beaks point posteriorly. Nearly all the ligament is on the anterior portion of the shell. Moderately common on sandy bottoms 6 to 200 feet.



Glycymeris pectinata (Gmelin, 1791)

Comb Bittersweet

Range: N.C. to Brazil

Length: 1/2 to 1 inch

Color: Gray

Spotted with brown. 20 to 40 well-rounded raised ribs that lack scratches. Ligament area evenly placed on both sides of beak. Common on sandy bottoms in shallow water.



TRUE MUSSELS---FAMILY MYTILIDAE

True mussels are thin shelled, valves the same size, umbones curled toward the front end. Hinge is smooth or with a few minute teeth. Periostracum prominent, brown or black, usually hairy, byssus usually strong.

Brachidontes modiolus (Linné, 1767)

Yellow Mussel

Range: S. Florida to Caribbean

Length: 1 1/4 inches

Color: Yellow brown

Inside mottled a metallic purplish white. Elongate, with numerous wavy, fine axial ribs. Anterior end has 4 tiny white teeth. Bordering the ligament are 30 very small teeth on edge of shell. Common 6 to 30 feet.



Brachidontes exustus (Linné, 1758)

Scorched Mussel

Range: N.C. to Uruguay

Length: 3/4 inch

Color: Dark brown

Inside mottled with metallic purple and white. Smaller and wider than yellow mussel, with only 2 tiny purple teeth at anterior end. Beyond the ligament, the edge of the shell has teeth. Prefers slightly brackish waters. Abundant on rocks and pilings.



Branchidontes domingensis (Lamarck, 1819)

Domingo Mussel

Range: S.E. Florida to Caribbean

Length: 1 inch

Color: Black

With black periostracum. Thicker than exustus, more arched and with fewer radial ribs. Attached to rocks and shells in oceanic, subtidal, wavetossed areas.



Modiolus americanus (Leach, 1815)

Tulip Mussel

Range: S.C. to Brazil

Length: 2 to 4 inches

Color: Chestnut brown

With white oblique streak in middle and with rose, purple rays. Smooth, thin but strong. Ventral area has large brown splotch. Periostracum brown and often hairy. Dull white interior, sometimes stained with blue, rose or light brown. Common in clumps on rocks in 3 to 18 feet.



PEN SHELLS---FAMILY PINNIDAE

Pinna carnea Gmelin, 1791

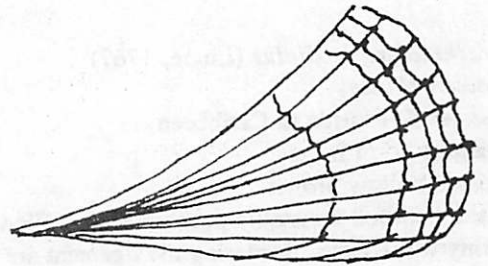
Amber Pen Shell

Range: S.E. Florida to Brazil

Length: 4 to 11 inches

Color: Light orange-amber

Shell thin, very fragile, rather narrow, with about 10 radial ridges which may be spiny or smooth. Common in the Bahamas usually found deeply buried in fine coral sand.



WING OYSTERS---FAMILY PTERIDAE

Pteria colymbus (Röding, 1798)

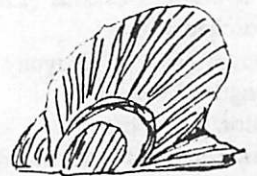
Atlantic Wing Oyster

Length: 1 1/2 to 3 inches

Range: N.C. to Brazil

Color: Variable

Brown, black or brownish purple with broken, radial lines of cream or white. Obliquely oval with a long extension of the hinge toward the posterior end. Left valve inflated. Right valve flatter with a strong anterior notch for the byssus. Interior pearly. Common from low water, sometimes attached to sea whips. Named after Christopher Columbus!



Pinctada imbricata Röding, 1798

Atlantic Pearl Oyster

Range: S.C. to Brazil

Length: 1/2 to 3 inches

Color: Tan

With mottlings of purplish brown or black. Rarely tinted with dull rose or green. Moderately inflated to flattish, thin-shelled and brittle. Interior a beautiful mother-of-pearl. Posterior wing very short. Common in shallow water attached to rocks and sea fans.



TREE OYSTERS---FAMILY ISOGNOMONIDAE

Isognomon alatus (Gmelin, 1791)

Flat Tree Oyster

Range: S. Florida to Brazil

Length: 1/2 to 2 inches

Color: Drab purplish gray

With a few wavy, radial stripes of light purplish brown. Valves extremely flat, with rough to smooth growth lines. Interior moderately pearly with stains of purplish brown. Found in compact clumps on mangrove tree roots and wharf pilings.



MALLEUS---FAMILY MALLEIDAE

Malleus candeanus (Orbigny, 1842)

American Malleus

Range: S. Florida to W. Columbia

Length: 1/2 to 11 inches

Color: Dark purple-black

With areas of yellowish white. Brittle, elongate, usually distorted, but characterized by a median, longitudinal ridge on the inside of valves. Lives in old cracks and crevices of rock or coral in protected areas from 30 to 400 ft. Moderately common, but usually overlooked by collectors.



SCALLOPS---FAMILY PECTINIDAE

A very popular family with collectors. There are about 350 species. They have a single, fused adductor muscle, and a hinge bearing a socket-like arrangement. Foot greatly reduced. True scallops include several edible, and commercially important bivalves. In true scallops the ears on the hinge line are about equal in size and the bottom valve is very deeply convex, while the upper valve is almost flat. The knobs and heavy ribs serve as strengthening structures against marauding fish.



Chlamys sentis (Reeve, 1853)

Sentis Scallop

Range: N.C. to Brazil

Length: 1 to 1 1/2 inches

Color: Brilliant

Purple, red, vermillion, orange, white or mottled near the beaks. Valves rather flat. One hinge ear small, the other twice as large. With about 50 ribs. Common under rocks below low tide mark.



Chlamys ornata (Lamarck, 1819)

Ornate Scallop

Range: S.E. Florida to Brazil

Length: 1 to 1 1/2 inches

Color: Ivory

With strong maculations of maroon or purple. 18 high ribs, separated by 2 small, scaly cords on upper valve. Lower valve has 18 groups of 3 closely spaced riblets. Interior usually white. An uncommon species found in reef waters under ledges.



Chlamys imbricata (Gmelin, 1791)

Little Knobby Scallop

Range: S.E. Florida to Caribbean

Length: 1 to 1 3/4 inches

Color: Dirty white

With small, squarish red or purple blotches. Interior yellow with purple stains. Upper valve almost flat and fairly thin. 8 to 10 ribs with prominent cup-shaped, delicate, distantly spaced scales. Attached to underside of rocks in 10 to 20 feet of water.



Lyropecten antillarum (Recluz, 1853)

Antillean Scallop

Range: S.E. Florida and West Indies

Length: 1/2 to 1 inch

Color: Pastel yellow, tawny orange

Commonly with chalk-white mottlings, flecks or stripes. Valves fragile, both nearly flat. Only about 11 to 15 moderately rounded, low ribs. Growth lines exceedingly fine. Ears uneven. Found uncommonly in shallow water.



Lyropecten nodosus (Linné, 1758)

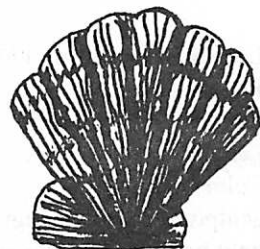
Lion's Paw

Range: N.C. to Brazil

Length: 3 to 6 inches

Color: Dark maroon-red

May be bright red, orange or rarely yellow. Rather heavy and strong-shelled 7 to 9 large coarse ribs which have large, hollow nodules. Entire shell also has numerous, much smaller riblets. Fairly common offshore. Only specimen found on Fernandez Beach, San Sal thus far was a juvenile.



SPONDYLUS---FAMILY SPONDYLIDAE

Spondylus americanus Hermann, 1781

Atlantic Thorny Oyster

Range: N.C. to Brazil

Length: 3 to 5 inches

Color: Variable

White with yellow, red or purple, sometimes all rose, cream or pink. Spines two or less inches, usually standing fairly erect. Large spinose specimens are found clinging to old wrecks and sea walls in fairly deep water, 30 to 150 feet. Has been called the chrysanthemum shell.



LIMAS---FAMILY LIMIDAE

Lima lima (Linné, 1758)

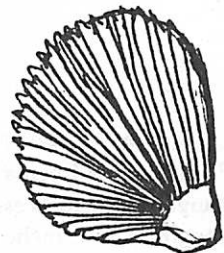
Spiny Lima

Range: S.E. Florida to Brazil

Length: 1 to 1 1/2 inches

Color: White

Sculpture of 26 to 33 even, radial ribs bearing many erect, sharp spines. The posterior ear is much smaller than the anterior one. Moderately common under coral stones in shallow water to 450 ft.



Lima scabra (Born, 1778)

Rough Lima

Range: S.C. to Brazil

Length: 1 to 3 inches

Color: White

Sculpture coarse, irregular rows of short, bar-like ribs, like shingles on roof. Periostracum thin, dark to light brown. Common under rocks in shallow water at low tide to 450 feet. Common at Sandy Point, San Sal, dead on beach.



LOPHO---FAMILY OSTREIDAE

Lopha frons (Linné, 1758)

Frons Oyster

Range: Florida to Brazil

Length: 1 to 2 inches

Color: Purplish red

Interior translucent white. Radial plicate sculpture and sharply folded valve margins. Muscle scars located well up towards hinge. Beaks somewhat curved. Often elongate and attached to stems of gorgonians by a series of clasping projections of the shell. Common 6 to 60 feet. Nickname: Coon Oyster.



on flat surface---on twig

LUCINES---FAMILY LUCINIDEA

This family has world-wide distribution and many Caribbean species closely resemble those in far away oceans. Easily recognized by long, narrow anterior muscle scar and absence of a pallid sinus. The worm-shaped foot is 6 times as long as the shell. With it the clam manufactures a mucus-lined, sandy tube that serves as an inhalant water conduit.

Linga pensylvanica (Linné, 1758)

Pennsylvania Lucina

Range: N.C. to West Indies

Length: 1 to 2 inches

Color: Pure white

With a thin yellowish periostracum. Ovate, usually quite inflated. Concentric ridges very delicate and distinct. Furrow from the break to the posterior edge of valve very pronounced. Moderately common in shallow water. Beach worn specimens become smooth and shiny white.



Codakia orbicularis (Linné, 1758)

Tiger Lucine

Range: Florida to Brazil

Length: 2 1/2 to 3 1/2 inches

Color: White

Interior white to pale yellow, commonly with a rose tinge on hinge ends and margins of valves. Thick and strong. Beaks and 1/4 inch of subsequent growth smooth. Rest of shell roughly sculptured by numerous coarse radial threads which are crossed by finer concentric threads. Very common on sand 6 to 200 feet.



Divaricella quadrisulcata (Orbigny, 1842)

Cross-hatched Lucina

Range: Massachusetts to Brazil

Length: 1/2 to 3/4 inch

Color: Glossy white

Almost circular. Moderately inflated. Sculpture of fine criss-cross impressed lines. Inner margins finely scalloped. Muscle scar football-shaped. A very common species washed ashore on Sandy Point, San Sal. Occurs in sand from 6 to 200 feet.



Divaricella dentata (Wood, 1815)

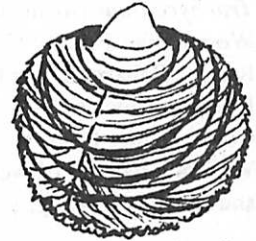
Dentate Lucina

Range: S.E. Florida to Caribbean

Length: 1/2 to 1 inch

Color: White

Similar to Cross-hatched Lucina but has dentate edges, is flatter and has 4 to 5 growth stoppages showing prominently. Has an anterior muscle scar that is cucumber shaped. Moderately common in shallow water.



JEWEL BOXES---FAMILY CHAMIDAE

Chama macerophylla (Gmelin, 1791)

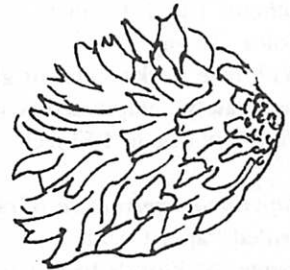
Leafy Jewel Box

Range: N.C. to Brazil

Length: 2 to 3 inches

Color: Variable

Lemon yellow, reddish brown, deep purple, orange, white or a combination of these colors. Even in beach worn valves the color is brilliant. Inner edges of valves have tiny, axial ridges. Scalelike fronds have minute radial lines. Common in 3 to 100 feet of water, growing on pilings, seawalls and old ropes.



COCKLES---FAMILY CARDIIDAE

The well-known cockles are worldwide in distribution and the family contains over 200 living species. All are heart-shaped when viewed from either end. All have strong hinge teeth with well developed posterior laterals and a large external ligament. The 2 siphons are short, and the foot long and muscular enough to permit the cockle to move about in short leaps. They are generally found in sand from the intertidal zone to a considerable depth.

Trachycardium magnum (Linné, 1758)

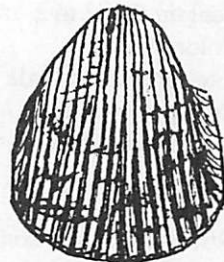
Magnum Cockle

Range: Florida Keys to Brazil

Length: 2 to 3 1/2 inches

Color: Light cream

With irregular patches of red brown. Interior china white with deepest part flushed with orange buff. The posterior margin is pale yellow, merging into pale purple at the extreme end. Elongate with 32 to 35 mostly smooth ribs. Posterior ribs have small, toothlike scales. Uncommon in the West Indies.



Trachycardium isocardia (Linné, 1758)

West Indian Prickly Cockle

Range: Bahamas, West Indies

Length: 2 inches

Color: White to gray

With odd patches of weak yellow, brown or dull purple. Interior glossy hued with salmon. Has large scales and 32 to 37 strong, prickly radial ribs. A common shallow water species.



Papyridea soleniformis (Bruguière, 1789)

Spiny Paper Cockle

Range: N.C. to Brazil

Length: 1 to 1 3/4 inches

Color: Tawny

With rose flecks. Interior glossy, mottled with violet and white, rarely solid pastel orange. Fairly fragile, moderately compressed, with 12 low, weakly prickled ribs, and gaping posteriorly. Moderately common from low tide to 100 feet.



Papyridea semisulcata (Gray, 1825)

Friiled Paper Cockle

Range: S. Florida to Brazil

Length: 1/3 to 1/2 inch

Color: White

Rarely orange. Very obese with 8 to 12 long denticulations at the dorsal and posterior edges. Uncommon from the low tide line to 250 feet.



Americardia media (Linné, 1758)

Atlantic Strawberry Cockle

Range: N.C. to Brazil

Length: 1 to 2 inches

Color: White

With mottlings of reddish brown. Squarish in outline, thick, inflated with 33 to 36 strong radial ribs covered with close-set, chevron-shaped plates. The posterior slope is pushed in somewhat and is slightly concave. Common in water 6 to 600 feet. Valves often found on Fernandez Beach, San Sal.



Laevicardium laevigatum (Linné, 1758)

Common Egg Cockle

Range: N.C. to Brazil

Length: 1 to 2 inches

Color: Glossy white

But may rose-tinted, mottled brown or flushed with purple, yellow or burnt orange. Interior similarly colored. With about 60 very fine, subdued radial ribs. A common shallow water species.



TELLINS---FAMILY TELLINIDAE

Tellins are laterally compressed clams, generally shiny, often quite colorful, and rounded to elongate shape. The pallid sinus scar on the inside of the shell is wide and deep. The horny brown ligament is external. With long slender siphons they are detritus feeders. They have a slight twist at the posterior end and 2 cardinal teeth in the hinge. All are mud or sand dwellers.

Tellina radiata Linné, 1758

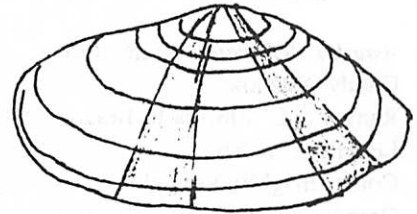
Sunrise Tellin

Range: S.C. to the Guianas

Length: 2 to 4 inches

Color: Variable

Creamy white or rayed with pale red or yellow. The beaks are moderately inflated, smooth and very highly polished. Interior flushed with yellow. Lives offshore to 48 feet. One of the most colorful shells on San Sal.



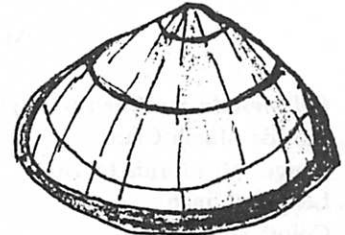
Tellina laevigata Linné, 1758

Smooth Tellin

Range: N.C. to Lower Caribbean

Color: White

Faintly rayed or banded with soft creamy orange. Inside polished white to yellowish. Oval to slightly elongate, moderately compressed, strong with a glossy smooth surface. Both anterior and posterior lateral teeth present. Fairly common in the Bahamas in sand from 6 to 45 feet.



Tellina listeri Röding, 1798

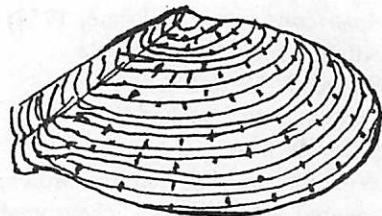
Speckled Tellin

Range: N.C. to Brazil

Length: 2 1/2 to 3 1/2 inches

Color: White

With numerous small, prominent, zigzag specklings of purplish brown. Shell elongate, not polished, with many evenly spaced, concentric growth lines. Interior yellowish. Very common in coarse sand in shallow areas 6 to 300 ft.



Tellina fausta Pulteney, 1799

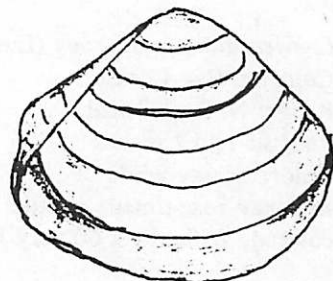
Faust Tellin

Range: N.C. to Low Caribbean

Length: 2 to 4 inches

Color: Semi-glossy white

Inside highly glossed enamel-white with yellow flush. Oval, moderately inflated, very heavy and smooth except for small rough concentric growth lines. Hinge strong. Moderately common in sand near eel grass beds from 6 to 90 feet.



GAUDY ASAPHIS---FAMILY PSAMMOBIIDAE

Asaphis deflorata (Linné, 1758)

Gaudy Asaphis

Range: S.E. Florida to Brazil

Length: 2 inches

Color: Brightly variable

Orange, purple, white, red or rose. Moderately inflated. Numerous coarse, irregularly sized radial threads. Beaks inflated and rolled under themselves a little. A moderately common, colorful, intertidal species in gravel.



MARSH CLAMS---FAMILY CORBICULIDAE

Polymesoda maritima (Orbigny, 1842)

Florida Marsh Clam

Range: N. Florida to Texas and Bahamas

Length: 1 inch

Color: Dull white

Flushed with purple or pink. Interior white or purple. Oval to elongate. Beaks never eroded. With 2 long, slender anterior and posterior laterals. Brackish warm water in mud. In Storr's Lake, San Sal, at south end.



VENUS CLAMS--FAMILY VENERIDAE

These clams are equivalve and generally egg or heart-shaped. All have their beaks placed at and pointing towards the anterior end. Many are beautifully sculptured and brilliantly colored. Ligament is external. Hinge is strong. Three well-developed primary cardinal teeth in each valve. Two muscle scars on each valve connected by a distinct pallial line. Commercially important in many areas.

Periglypta listeri (Gray, 1838)

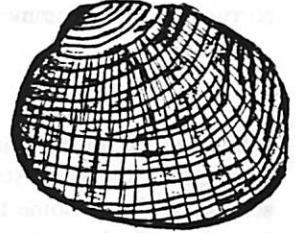
Princess Venus

Range: S.E. Florida and West Indies

Length: 2 to 4 inches

Color: Cream

Maculated with brown. Numerous fine radial riblets that cross the concentric raised ribs, giving the surface a beaded appearance. Posterior muscle scar usually stained brown. Each side of lunule is bounded by a long, deep, narrow furrow. Moderately common in sand, 6 to 36 feet.



Chione cancellata (Linné, 1767)

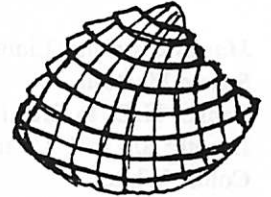
Cross-barred Venus

Range: N.C. to Brazil

Length: 1 to 1 3/4 inches

Color: White to gray

Internally glossy white with suffusion of purplish blue. Heavy with strong, curved, leaflike, raised, concentric ridges and numerous coarse radial ribs. A very common shallow water species from 6 to 30 feet. Beach worn specimens have a cancellate sculpturing.



Chione intapurpurea (Conrad, 1849)

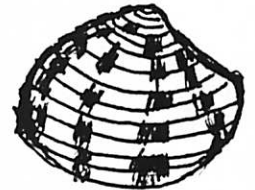
Lady-in-waiting Venus

Range: N.C. to Brazil

Length: 1 to 1/2 inches

Color: Glossy white

Interior white with violet markings on posterior 1/3. Exterior with crowded, smooth, low, rounded concentric ribs and numerous radial threads. Serrate along lower edge, giving a somewhat crisscrossed appearance. Uncommon 12 to 60 feet.



Chione paphia (Linné, 1767)

King Venus

Range: Bahamas to Brazil

Length: 1 1/2 inches

Color: Creamy white

Flecked with brown. Thick, solid with 10 to 12 concentric ribs which are thin at the ends. Dorsal margin of lunule strongly curved. Moderately common in sand 6 to 60 feet.



Anomalocardia brasiliana (Gmelin, 1791)

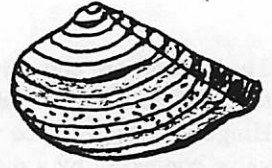
W.I. Pointed Venus

Range: Bahamas to Brazil

Length: 3/4 to 1 1/2 inches

Color: Yellowish white

Variably shaded and spotted with purple or brown. Heavy, moderately elongate with concentric, corrugated ribs. Common in shallow water.



BORING CLAMS—FAMILY PHOLADIDAE

White-shelled boring clams with an anterior pedal gape, which may or may not be closed by a calcareous covering in the adult stage. Hinge teeth usually lacking. Anterior adductor muscle protected above by accessory plates. Some forms have large, fingerlike, calcareous projections, one in each valve, extending from beneath the umbones to which the foot muscles are attached. Frequently found in wood and large seeds around the world in warm water.

Martesia striata (Linné, 1758)

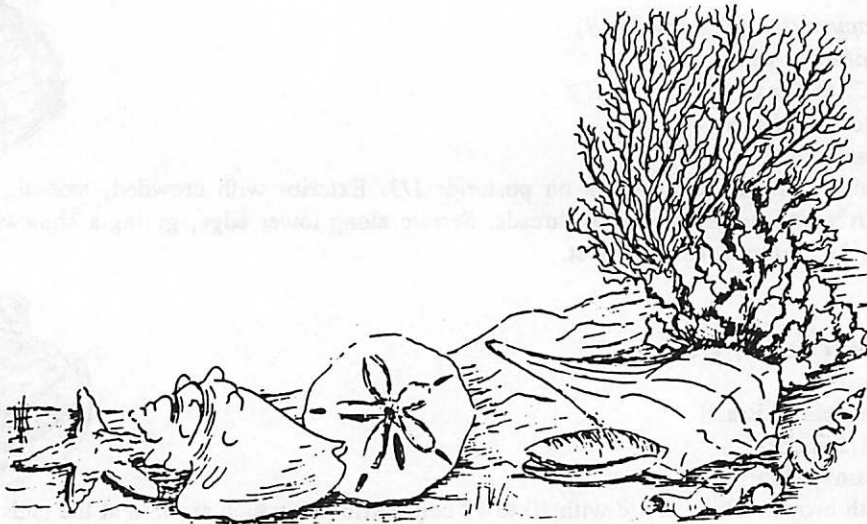
Striate Martesia

Range: N.C. to Brazil

Length: 3/4 to 1 3/4 inches

Color: White

Long, pear-shaped, producing a round, shelly callus over the foot gape in the adult. Numerous, finely denticulate riblets. Very common. Bores into wood or soft stone. A very destructive borer.



GLOSSARY OF MALACOLOGICAL TERMS

- Adductor muscle** - one of two large muscles inside a bivalve that enable the shell to close.
- Albino** - A shell which lacks normal pigmentation; unnaturally white.
- Anterior** - Front end, where the foot usually protrudes.
- Anomaly** - A shell whose form deviates from normal.
- Anus** - Opening through which waste products of digestion are excreted.
- Aperture** - The opening in the body whorl of a gastropod which provides an outlet for the body.
- Apex** - In gastropods, the tip of the spire.
- Apical** - Referring to the apex or tip of the spire.
-
- Beak/ Umbo** - First formed part of a bivalve usually located above the hinge.
- Bivalves** - Mollusks with hinged halves or valves.
- Body whorl** - Largest and last formed whorl of a gastropod's shell.
- Bottom feeder** - Mollusks which gather food from the bottom.
- Brackish** - Salty, but less so than sea water.
- Byssus** - Threads spun by the foot of certain bivalves by which the shell attaches itself to rocks or other solid matter.
-
- Cancellate** - The resultant surface structure formed from spiral and vertical cords intersecting at right angles.
- Cardinal teeth** - The main teeth of bivalves, situated centrally near the umbones.
- Carnivore** - A flesh eating animal.
- Conchology** - The study of shells.
- Columella** - The column in the center of a gastropod shell.
- Crenulate** - Scalloped outer-lip margin with fine wrinkling.
- Crustaceans** - Crabs, lobsters, shrimp, barnacles, etc.
-
- Denticle** - Small, tooth-like protruberance.
- Deposit feeder** - Animal that derives nourishment by swallowing mud or sand, digesting whatever food particles it contains.
- Detritus** - Material that comes from the decay of plants and animals.
- Dorsal** - The back, or upper surface of a shell. In gastropods opposite the aperture.
-
- Echinoderms** - Sand dollars, sea stars, sea cucumbers, sea urchins, etc.
- Emarginate** - Margin with fine indentations or notches.
- Endemic** - Confined to a particular area or geographical region.
- Estuary** - Area where salt and fresh water meet, producing brackish water.
- Exoskeleton** - An external skeleton. Shell of a mollusk, sea horse, crab etc.
-
- Fissure** - Cleft or slit.
- Flange** - Rib-like structure which reinforces the juncture of two other structural elements.
- Fold** - A ridge on the columellar wall.
- Foot** - The muscular undersurface of the mollusk body upon which the animal rests or moves.

Gastropod - A mollusk with one shell and a ventral muscular foot on which it moves.
Gorgonian - Soft coral such as sea whips and sea fans.
Granulose/ Granulate - Covered with fine pustules or granules.
Growth line - A series of elevated, concentric lines or ridges indicating earlier growth margins.

Habitat - A mollusk's natural home.
Herbivore - An animal that feeds entirely on plants.
Holotype - The single specimen on which the characteristics of a given species are based.

Imbricate - Scales which overlap like tiles of a roof.
Incised - Deeply or sharply grooved.
Inequilateral - Valves on either side of umbones which are unequal in size or shape.
Inflexed - Turning inwards, same as incurved.
Inhalent siphon - Tubular appendage which facilitates water intake.
Intertidal - Zone along shore between high and low tide marks.
Invertebrate - Animal without a backbone.
Ironshore - Unevenly weathered, black lime rock found along shoreline.

Juvenile - Immature; not fully developed.

Labial - Refers to the inner lip.
Labrum - The outer lip of the aperture.
Lamellate/ Lamellose - Covered with scales or plates.
Lanceolate - Extending to a point at both ends.
Larvae - Microscopic, free-swimming young, which do not yet resemble their parents.
Lateral - Arising from the side or margin of a structure.
Ligament - A horny band, usually behind the beaks, which holds the halves together.
Lunule - A broad or narrow, heart-shaped depression anterior to the umbones in certain bivalve species.

Maculation - Blotches or spots regularly or irregularly arranged.
Malacology - The study of mollusks, including the soft parts.
Mantle - The fleshy outer layer of the molluscan body which secretes the shell.
Mollusk - An invertebrate marine animal which usually has a shell.

Nacreous - Lustrous is appearance, like mother-of-pearl.
Nebulous - Cloudy, indistinct
Nodule/Node - A small knob or protruberance.
Nuclear - Protoconch or larval whorls, which constitutes the apex in gastropod shells.
Nudibranch - A shell-less gastropod.

Omnivore - An animal that eats both plants and animals.
Operculum - A horny or shelly plate situated on the foot of many gastropods, which wholly or partially closes the aperture where the animal is retracted into the shell.
Orifice - An opening or cavity.

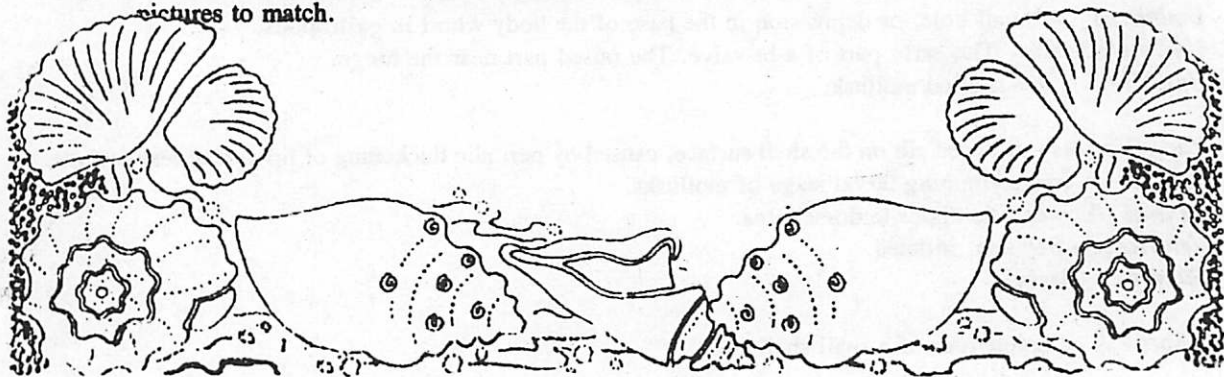
- Pallial** - Refers to mantle or gill regions.
- Paratype** - One of the specimens left in a type series after the holotype has been selected.
- Parietal wall** - Area on whorl near columella.
- Pelagic** - Free swimming; used frequently in reference to the veliger stages of many molluscan species.
- Perlostracum** - The outer skin of a shell. May be smooth or hairy.
- Plicate** - Folded or plaited.
- Proboscis** - Long, flexible snout where mouth is.
- Protoconch** - Shell formed in egg of a snail, frequently different from adult. Becomes apex of the shell.
- Pustulose** - Marked with pimple-like projections.
- Radial** - Lines of color or sculpture fanning out from the beaks to margins of a bivalve.
- Radula** - Rasp or file like organ armed with toothlike projections in a long ribbon-like arrangement.
- Reticulate** - Marked with a netted pattern.
- Rugose** - Strongly wrinkled.
- Sinistral** - Turning counterclockwise, "left-handed". Mostly gastropods are right-handed so a left-handed one is usually very rare.
- Siphon** - A tubular structure through which water enters or leaves the mantle cavity.
- Spinose** - With spines.
- Spire** - The upper whorls from apex to the top of the body whorl.
- Striated** - Marked with rows of fine grooves or threads, usually microscopic.
- Subtidal** - The zone below the low tide line.
- Suffused** - Overspreading, as with color, to cover the surface, but not totally, like a blush.
- Suture** - A spiral line or groove where one whorl touches the other.
- Symbiotic** - Dissimilar organisms living together in a mutually advantageous situation.
- Teeth** - In bivalves, the shelly spikes on dorsal margin of valve that fit into corresponding sockets of opposite valve.
- Tentacle** - A long, flexible structure, usually on the head or around the mouth of certain invertebrates which is used as a sense organ.
- Truncate** - Having end cut off squarely.
- Tubercles** - Small raised tube-like projections.
- Turbinate** - Conical with a round base.
- Umbilicus** - A small hole, or depression in the base of the body whorl in gastropods.
- Umbo/Umboes** - The early part of a bi-valve. The raised part near the hinge.
- Univalve** - A one shelled mollusk.
- Varix/Varices** - A raised rib on the shell surface, caused by periodic thickening of lip during rest periods.
- Veliger** - A free swimming larval stage of mollusks.
- Ventral** - Lower side opposite dorsal area.
- Ventricose** - Swollen, inflated.
- Vitreous** - Glassy.
- Whorl** - A complete turn of a snail shell.

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