

Student Report
Amber Quill
Chimney Worm tube worm
Diapatra cuprea

1. Introduction This worm is 12 inches long, 3/8 in round, and looks somewhat like Christmas tree because of the shape of the antennas and plumes on the worms body.



Diapatra cuprea is found in coastal areas from Massachusetts to Florida and Louisiana as well as in the Gulf of Mexico. (Malcom 1999; Knopf 1981)

2. How tube worms make their living

They hide in their tubes which are made of mucus crushed shells and rocks, when a small creature comes wondering past they simply reach out and eat them.

3. Prey

Hungry fish serve as the prey of these worms.

4. Reproductive strategy

5. Interesting life history facts

This worm lives in a tube created by itself. The worms live in colonies of camouflaged dens. They crawl to the back of this hole during low tide and wait for the water to come again.

6. Ecological roles

This group of worms is definitely apart of the detritivors. It preys on any small animal that dares to come near its dens opening. Then this animal is eaten by fish so its link is near the bottom of the food chain but in the detritivors section.

7. Identifying characteristics

The worm is about 12 in long on average and about 3/8 in round. It has four antennas on its oval shaped mouth and 35 plumes sticking out of it sides. It has the ability to regenerate portions of its body. It can bite so be careful if ever u handle this fury thing.

8. classification

Kingdom: [Animalia](#)

Phylum: [Annelida](#)

Class: [Polychaeta](#)

Order: [Aciculata](#)

Suborder: [Eunicida](#)

Family: [Onuphidae](#)

Genus: [Diapatra](#)

Species: **Diopatra cuprea**

9. references

http://animaldiversity.ummz.umich.edu/site/accounts/information/Diopatra_cuprea.html

http://images.google.com/images?um=1&hl=en&rls=com.microsoft:en-us:IE-SearchBox&rlz=1I7ADRA_en&tbs=isch:1&q=Diopatra+cuprea&sa=N&start=18&ndsp=18

<http://www.springerlink.com/content/k15502211324w166/>

**Student Report
Crystal Harbuck**

**Common name: *NONE*
Scientific name: *Bugula neretina***

<p>1. Introduction: <i>Bugula neretina</i>, and other bryozoans, are one of the main organisms to encrust and foul ships, piers, buoys and other man-made marine surfaces and structures.</p>			
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2. How bugula makes a living: *Bugula neretina* provide a habitat for many species of juvenile fishes and their invertebrate prey such as polychaete worms, amphipods, and copepods.

3. Who eats bugula: Nudibranchs, sea urchins, and fish.

4. Reproductive strategy: Zooids of *B. neretina* possess both male and female reproductive organs. Egg maturation, ovulation, and transfer to the ovicells take place about halfway through the life of the zooid. Sperm is released just before the zooid dies. Within the ovicell, the fertilized egg develops into an embryo which in turn develops into a larva. Nutrition is provided to the embryo via the ovicell. Larval release commonly occurs at dawn, with a ciliated, free-swimming larva being released. After settling to the substratum, it metamorphoses and develops into a bushy colony by rapid asexual budding. Two generations are produced in a year.

5. Interesting facts: *Bugula neretina* colonies are the source of a novel chemical compound (bryostatin) which has been shown to be effective against leukemia and a number of other kinds of cancer and are presently undergoing clinical trials.

6. Ecological role: As suspension feeders, they act as living filters in the marine environment. Bryozoan colonies located in 1 square meter of sea grass bed could potentially filter and recirculate an average of 48,000 gallons of seawater per day.

7. Identifying characteristics: *Bugula neretina* forms flexible bushy colonies, branching biserial, to about 10cm high and is purplish-brown in color.

8. Classification:

Kingdom	Phylum/Division:	Class:	Order:	Family:	Genus:
Animalia	Ectoprocta	Gymnolaemata	Cheilostomata	Bugulidae	Bugula

9. Resources:

<http://www.neptunediving.com/media/download/marinebiology/Lophophorata.pdf>

<http://www.bing.com/images/search?q=bugula+neretina&FORM=BIFD#>

http://www.sms.si.edu/irlspec/Bugula_neriti.htm

<http://www.marine.csiro.au/crimp/nimpis/spSummary.asp?txa=6929>

<http://www.issg.org/database/species/ecology.asp?si=1080&fr=1&sts=&lang=EN>



Student Report
Denae Bailey

Horseshoe Crab

1. **Introduction.** “horseshoe crab large, primitive marine arthropod related to the spider , sometimes called a king crab (a name also used for the largest of the edible true crabs). The heavy dark brown exoskeleton, or carapace, is domed and shaped like a horseshoe. The body is divided into a broad, flattened, semicircular front part (the prosoma), a tapering middle part (the opisthosoma), and a pointed, spiky taillike part (the telson).”



pair of pincerlike chelicera that are used to crush worms and other invertebrates taken as food They spawn on sandy beaches in spring and summer.”

3. **Who eats Horseshoe Crabs?** “Horseshoe crab eggs are important food for migratory shore birds that pass over the Delaware Bay during the spring mating season. Fish also eat the juveniles or recent molts. In the 1900s, horseshoe crabs were dried for use as fertilizer and poultry food supplements before the advent of artificial fertilizers. The medical profession uses an extract from the horseshoe crab's blue, copper-based blood called lysate to test the purity of medicines. Certain properties of the shell have also been used to speed blood clotting and to make absorbable sutures. ‘’

4. **Reproductive strategy.** “Each spring during the high tides of the new and full moons, thousands of horseshoe crabs descend on the Delaware Bay shoreline to spawn. Males, two-thirds the size of their mates, cluster along the water's edge as the females arrive. With glove-like claws on its first pair of legs, the male hangs on to the female's shell and is pulled up the beach to the high tide line. The female pauses every few feet to dig a hole and deposit as many as 20,000 pearly green, birdshot-sized eggs. The male then fertilizes the eggs as he is pulled over the nest. After the spawning is complete, the crabs leave and the waves wash sand over the nest.”

5. **Interesting Life history facts.** “Despite their size and intimidating appearance, horseshoe crabs are not dangerous. A horseshoe crab's tail, while menacing, is not a weapon. Instead, the tail is used to plow the crab through the sand and muck, to act as a rudder, and to right the crab when it accidentally tips over. The horseshoe crab's central mouth is surrounded by its legs and while harmless, it is advisable to handle a horseshoe crab with care since you could pinch your fingers between the two parts of its shell while holding it. Horseshoe crabs have 2 compound eyes on the top of their shells with a range of about 3 feet. The eyes are used for locating mates. Horseshoe crabs can swim upside down in the open ocean using their dozen legs (most with claws) and a flap hiding nearly 200 flattened gills to propel themselves. Horseshoe crabs feed mostly at night and burrow for worms and mollusks. They will, however, feed at any time. Horseshoe crabs grow by molting and emerge 25 percent larger with each molt. After 16 molts (usually between 9 and 12 years) they will be fully grown adults.”

6. **Ecological Role.** Horseshoe crabs play an important ecological role in the food web. A decline in the

number of horseshoe crabs will impact other species, particularly shorebirds and sea turtles, a federally-listed threatened species that uses the Chesapeake Bay as a summer nursery area. Shorebirds primarily feed on horseshoe crab eggs exposed on the surface, but sufficient surface eggs are available only if horseshoe crabs are spawning at high densities. Therefore, adequate spawning densities must be maintained to ensure availability of horseshoe crab eggs for shorebirds. Sea turtles feed on adult horseshoe crabs, but their diet depends on relative abundance of the prey species.

7. Identifying Characteristics. “Horseshoe crabs have 2 compound eyes on the top of their shells with a range of about 3 feet. The eyes are used for locating mates. Horseshoe crabs grow by molting and emerge 25 percent larger with each molt. After 16 molts (usually between 9 and 12 years) they will be fully grown adults.”

8. Classification.

Kingdom:	<u>Animalia</u>
Phylum:	<u>Arthropoda</u>
Subphylum:	<u>Chelicerata</u>
Class:	<u>Xiphosura</u>
Order:	Xiphosurida
Family:	Limulidae

9. References: <http://www.beach-net.com/horseshoe/Bayhorsecrab.html>

<http://www.horseshoecrab.org/con/con.html>

<http://www.ceoe.udel.edu/horseshoecrab/History/biology.html>

<http://horseshoecrab.org/sightings/>

Pinfish (*Lagodon rhomboids*)

1. **Introduction:** “small mouth with incisor-like teeth; distinctive black spot behind the gill cover; body bluish-silver with blue and orange-yellow horizontal stripes, yellow fins.”

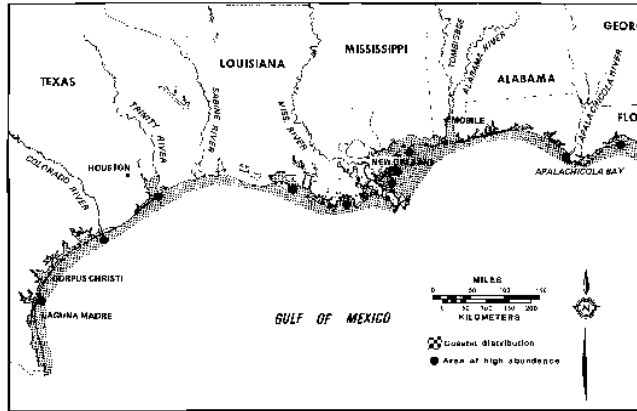
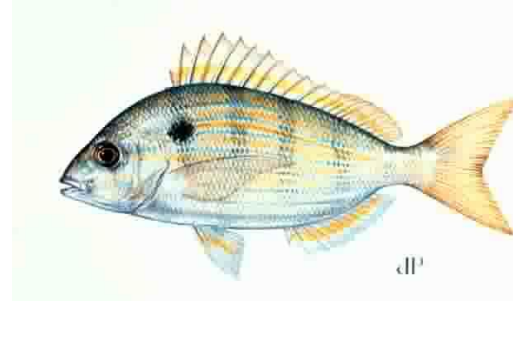


Figure 2. Distribution of the pinfish in the northern Gulf of Mexico.

2. Located: in the northern parts of the Gulf of Mexico.

3. Who eats the pinfish: Larval pinfish feed mainly on calanoid copepods (Stoner 1979).

4. Reproductive strategy: “Pinfish embryos develop rapidly in the egg. Yolksac larvae are 2.3 mm long 48 h after emergence (at 18°C) and 2.9 mm long when their yolksac is absorbed (in about 96 h) (Schimmel 1977). The larvae begin to migrate shoreward when they are about 11 mm long (Johnson 1978) and grow from 18 mm in March to 52 mm by June in northwest Florida (Zilberberg 1966). In northwest Florida, the daily growth of age 0 pinfish was 0.32 mm in spring, 0.23 mm in summer, and 0.1 mm in fall.”

5. Ecological Role: The high abundance of pinfish in many inshore coastal waters and estuaries is certain to have broad ecological effects on the aquatic flora and fauna. Pinfish are numerically dominant among fish in seagrass habitat in shallow subtidal areas of Gulf of Mexico and the southeast Atlantic coast (Stoner 1980). The intensity of pinfish predation on amphipods in seagrass communities in spring and summer probably limit amphipod abundance there.

7. Ecological Role: Food Habits and Predation

“Known predators on pinfish are 1 ladyfish (Gunter 1945), porpoises (Springer 1957), spotted seatrout (Breuer 1962), alligatorgar (Goodyear 1967), and gulf flounder (Ashton 1980). Juvenile pinfish 20 to 80 mm long selectively feed on amphipods in Apalachee Bay,”

8. Classification:

Class.. Osteichthyes
 Order.. Perciformes
 Family Sparidae

References:

- http://myfwc.com/wildlifehabitats/saltwaterfish_porgpinfish.htm
- http://www.nwrc.usgs.gov/wdb/pub/species_profiles/82_11-026.pdf

fish picture; floridafishandhunt.com

Student Report
Gabriel Velez-Nunez
Blue Crab
Callinectes sapidus

Introduction: Prized by humans for their sweet, tender meat, these wide-ranging, ten-legged crustaceans are among the most heavily harvested creatures on the planet.



2. How the Blue Crab makes a living ? They feed on almost anything they can get hold of, including mussels, snails, fish, plants, and even carrion and smaller blue crabs.

3. Who eats Blue Crabs? A lot of sea animals eat blue crabs

4. Reproductive strategy? Female blue crabs mate only once in their lives.

5. interesting life history fact : Blue crabs are extremely sensitive to environmental and habitat changes, and many populations, particularly in the Chesapeake Bay in the eastern United States, have experienced severe declines. Blue crabs also play a key role in managing the populations of the animals they prey on, and constant overharvesting has had wide-ranging negative effects on the ecosystems they inhabit. For this reason, comprehensive management schemes are in place in several parts of the blue crab's range.

6. Ecological Role:

Blue crabs make up the most important and valuable commercial fishery in the Bay. They also play an important ecological role as both predator and prey in the Bay ecosystem.

7. Identifying characteristics. Size: 4 in (10.2 cm) long; 9 in (23 cm) wide

Shape : Size relative to a tea cup.

Distinguishing characteristics. The blue crab is so named because of its sapphire-tinted claws. Its shell, or carapace, is actually a mottled brownish color, and mature females have red highlights on the tips of their pincers.

8. Classification

Kingdom:	Animalia
Phylum:	Arthropoda
Subphylum:	Crustacea
Class:	Malacostraca
Order:	Decapoda
Suborder:	Pleocyemata
Infraorder:	Brachyura
Family:	Portunidae
Genus:	Callinectes
Species:	<i>C. sapidus</i>

9. References : http://en.wikipedia.org/wiki/Blue_crab
<http://animals.nationalgeographic.com/animals/invertebrates/blue-crab.html>
<http://www.chesapeakebay.net/bluecrabmanagement.aspx?menuitem=14769>

Scallop

Kason Keesling

Scallop Latin Name- *Patinopecten (Mizuhopecten) essoensis*

1.Introduction- Scallops are a [cosmopolitan](#) family, found in all of the world's oceans. Many scallops are highly prized as a food source. The brightly-colored, fan-shaped shells of some scallops with their radiating fluted pattern are valued by shell collectors.



2.How the Scallop makes a living

Most scallops are [filter feeders](#), and eat [plankton](#). Coincidentally, the plankton can include scallop larvae. Siphons bring water over a filtering structure, where food becomes trapped in mucus. Next, the [cilia](#) on the structure moves the food toward the mouth. Then, the food is digested in the stomach and digestive gland. Waste is passed on through the intestine and exits via the anus.

3.Who eats the Scallop

By far the largest wild scallop fishery is for the Atlantic sea scallop (*Placopecten magellanicus*) found off northeastern United States and eastern Canada. Most of the rest of the world's production of scallops are from Japan (wild, enhanced, and aquaculture), and China (mostly cultured Atlantic bay scallops). Scallops are most commonly harvested using [scallop dredges](#) or bottom trawls. Recently scallops harvested by [divers](#), hand-caught on the ocean floor, have entered the marketplace. In contrast to scallops captured by a dredge across the sea floor, diver scallops tend to be less gritty. Rays are also the seas largest predator of the scallop.

4.Reproductive strategy:

Red roe is that of a female, and white, that of a male. Spermatozoa and ova are released freely into the water during mating season and fertilized ova sink to the bottom. After several weeks, the immature scallop hatches and the larvae drift in the plankton until settling to the bottom again to grow,

5. Interesting life history facts.

On the east coast of the [United States](#), over the last 100 years, the populations of bay scallops have greatly diminished. This decrease is due to several factors, but probably is mostly due to reduction in sea grasses (to which bay scallop spat attach) due to increased coastal development and concomitant nutrient runoff. Another possible factor is reduction of sharks from overfishing. A variety of sharks used to feed on [rays](#), which are a main predator of bay scallops. With the shark population reduced, in some places almost eliminated, the rays have been free to dine on scallops to the point of greatly decreasing their numbers.

6. Ecological Role.

Most scallops are [filter feeders](#), and eat [plankton](#). Like the true oysters (family [Ostreidae](#)), scallops have a central [adductor](#) muscle, and thus the inside of their shells has a characteristic central scar, marking the point of attachment for this muscle. The [adductor muscle](#) of scallops is larger and more developed than that of [oysters](#), because they are active swimmers; scallops are in fact the only [migratory bivalve](#).

7. Identifying characteristics.

The brightly-colored, fan-shaped shells of some scallops with their radiating fluted pattern



8. Classification.

Scientific classification

Kingdom: *Animalia*

Phylum: *Mollusca*

Class: *Bivalvia*

Order: *Ostreoida*

Suborder: *Pectinina*

Superfamily: *Pectinoidea*

Family: *Pectinidae*

9. References:

<http://en.wikipedia.org/wiki/Scallop>

http://www.capmel.com/scallop_season_open.htm

<http://www.floridawildlifemagazine.com/pdfs/may06scallops.pdf>

Student Report: Comb Jelly Mnemiopsis Mccradyi
Lindsey Selders

Common Name: Comb Jelly Mnemiopsis Mccradyi
Scientific Name: Mnemiopsis mccradyi

1. Introduction: An oval shaped, transparent bioluminescent organism that does not sting. Also, known as the sea walnut



2. How a Comb Jelly Mnemiopsis Mccradyi makes a living?

“Comb jellies, such as this Warty comb jelly (*Mnemiopsis mccradyi*), feed primarily on small crustaceans and mollusks in the plankton.” “Comb jellies will eat other comb jellies larger than themselves by biting off chunks with special cilia structures in their mouths.” “Most jellies can detect chemical traces in the water that allow them to locate food, and many are equipped with a gravity-sensitive structure, called a statocyst, that gives them a sense of up and down in the water.” They drift in open waters. They range naturally from “North Carolina south to the West Indies, and the Gulf of Mexico.”

3. Who eats the Comb Jelly Mnemiopsis Mccradyi?

Other comb jellies that are larger than itself. Comb Jellies are “voracious predators on other jellies, some can expand their stomachs to hold prey nearly half their own size.” “Many other predators are [vertebrates](#), including species of [birds](#) and [fish](#).”

4. Reproductive Strategy:

Most comb jellies release their eggs and sperm into the water. Fertilization takes place outside the body. Almost all comb jellies fertilize themselves. The larvae swim freely during their transformation into adults.

5) Interesting Life history facts:

“Comb jellies either actively seek their prey or wait in ambush for it”. “Comb jellies are

extremely fragile transparent bioluminescence organisms that do not sting.” “There are invasive in the Black Sea, the Caspian Sea, the North Sea, and the Baltic Sea.” Mnemiopsis is a carnivore.

6) Ecological role:

“Jellies can be very sensitive to water quality during certain points in their life cycle. Changes in the health of jelly populations may be a tip-off to larger environmental problems.”

7) Identifying Characteristics:

“Comb jellies are extremely fragile transparent bioluminescence organisms that do not sting.” Comb Jellies “range from Florida through the West Indies. It is about the same size and shape as *M. leidy*, but is greenish-tan, less transparent, and sometimes has 2 brown spots on each side.” Comb jellies are “oval-shaped animals with eight rows of tiny comb like plates that they beat to move themselves through the water.” “The animal’s thin skin stretches over a body that’s more than 95% water (no bones or shells to weigh it down).” “Comb jelly *Mnemiopsis Mccradyi* has a length of 2.5-7.5 cm (about 1-3 inches).” “Each comb consists of thousands of cilia which beat rapidly to propel the organism through the water. In juveniles have a pair of retractile tentacles used to catch prey that maybe much longer than their body length. In adults the tentacles are reduced”.

8) Classification:

Kingdom	Animalia
Phylum	Ctenophora Eschscholtz,
Class	Tentaculata Eschscholtz,
Order	Lobata Eschscholtz,
Family	Bolinopsidae
Genus	Mnemiopsis
Species	Mnemiopsis mccradyi

9) References:

http://sanctuaries.noaa.gov/pgallery/pggrays/living/living_15.html

http://www.enature.com/flashcard/show_flash_card.asp?recordNumber=SC0127

http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=53918

<http://www.montereybayaquarium.org/animals/AnimalDetails.aspx>

<http://animals.jrank.org/pages/1498/Comb-Jellies-Ctenophora-BEHAVIOR-REPRODUCTION.html>

<http://www.bio.georgiasouthern.edu>

Hermit crab



Introduction

Hermit crabs are decapod crustaceans of the superfamily Paguroidea they are not closely related to true crabs. Hermit crabs are quite commonly seen in the intertidal zone: for example, in tide pools.

How hermit crab makes a living:

Its habit of living in a second hand shell gives rise to the popular name "hermit crab", by analogy to a hermit who lives alone. Of about five hundred known species, most are aquatic and live in varying depths of saltwater, from shallow reefs and shorelines to deep sea bottoms. However, tropical areas host some terrestrials. The king crabs in the family Lithodidae were formerly considered to be derived hermit crabs, but are now placed in a separate superfamily.

What does hermit crab eat?

Hermit crabs are omnivorous scavengers. They like variety in their diet, especially salty and sugary snacks. You will find them as pets in homes or in offices as they scavenge the algae and debris in the aquarium. The answer to the question 'What do hermit crabs eat?' is: They eat almost everything. They are usually not choosy about the food they eat. The location of the food becomes an important point as far as feeding is concerned. They tend to locate food either by smelling it or by seeing the other crabs feeding on it.

Reproductive strategy

The male's reproductive organs are located near and just below the heart and open to the outside at the base of the hindmost pair of walking legs. In the female, they are located at the base of the middle pair of walking legs. Females usually lay their eggs shortly after copulating, but they can also store sperm for many months. The eggs become fertilized as they passing through the chamber holding the sperm just before laying. The mother carries the eggs in a mass attached to her abdomen inside the shell. The number of eggs is usually large, but depends on the animal's size.

Interesting life history facts

The fossil record of in situ hermit crabs using gastropod shells stretches back to the Late Cretaceous. Before that time, at least some hermit crabs used ammonites' shells instead, as shown by a specimen of [Palaeopagurus vandenengeli](#) from the Speeton Clay, Yorkshire, UK from the Lower Cretaceous.

Ecological Role

As hermit crabs grow they require larger shells. Since suitable intact gastropod shells are sometimes a limited resource, there is often vigorous competition among hermit crabs for shells. The availability of empty shells at any given place depends on the relative abundance of gastropods and hermit crabs, matched for size. An equally important issue is the population of organisms that prey upon gastropods and leave the shells intact. A hermit crab with a too-small shell cannot grow as fast as those with well-fitting shells, and is more likely to be eaten if it cannot retract completely into the shell. For some larger marine species, supporting one or more sea anemones on the shell can scare away predators. The sea anemone benefits because it is in position to consume fragments of the hermit crab's meals.

Identifying characteristics

Hermit crabs have long, soft abdomens which are protected from predators by a salvaged empty seashell carried on the crab's back, into which the crab's whole body can retract. Most frequently hermit crabs use the shells of sea snails; the tip of the hermit crab's abdomen is adapted to clasp strongly onto the columella of the snail shell. As the hermit crab grows in size, it has to find a larger shell and abandon the previous one. This habit of living in a second hand shell gives rise to the popular name "hermit crab", by analogy to a hermit who lives alone of about five hundred known species, most are aquatic and live in varying depths of saltwater, from shallow reefs and shorelines to deep sea bottoms. However, tropical areas host some terrestrials. The king crabs in the family Lithodidae were formerly considered to be derived hermit crabs, but are now placed in a separate superfamily

Classification

Kingdom:	Animalia
Phylum:	Arthropoda
Subphylum:	Crustacea
Class:	Malacostraca
Order:	Decapoda

Suborder: Pleocyemata

Infraorder: Anomura

Superfamily: Paguroidea

Reference

http://en.wikipedia.org/wiki/Hermit_crab

Student Report
Robert Boies

Ladyfish
Elops saurus

1. **Introduction:** "The Ladyfish is a coastal pelagic species, aggregating close to shore. It is a twilight predator feeding on small fishes."



2. **How the Ladyfish makes a living:** "The ladyfish feeds mainly on crustaceans and small fishes in shallow water areas with muddy bottoms."
3. **Who eats the Ladyfish:** "Relatively large size protects adult ladyfish from most would-be predators, although some mortality occurs via predation by piscivorous birds, sharks, dolphins, and alligators (Zale and Merrifield 1989). Pelagic eggs and larvae are susceptible to predation by small fish and carnivorous zooplankton (Zale and Merrifield 1989)."
4. **Reproductive Strategy:** "Ladyfish are known to be offshore spawners (McBride et al. 2001). Field larval collections analyzed by Hildenbrand (1943) suggest that offshore spawning occurs in the fall."
5. **Interesting life history facts:** Ladyfish are often misidentified as juvenile tarpon or bonefish because of similar appearances. Also ladyfish are very popular with anglers because of variety of fish that will eat them.
6. **Ecological Role:** Ladyfish are voracious predators that spend most of their time eating. They feed on small fish and crustaceans, while larger game fish feed on them.
7. **Identifying characteristics:** "The ladyfish, *Elops saurus*, is a medium-sized fish with an elongate body covered with small, silvery scales."
8. **Classification:**

Kingdom: [Animalia](#) Phylum: [Chordata](#) Class: [Actinopterygii](#) Order: [Elopiformes](#)

Family: [Elopidae](#) Genus: *Elops* Species: *Elops saurus*

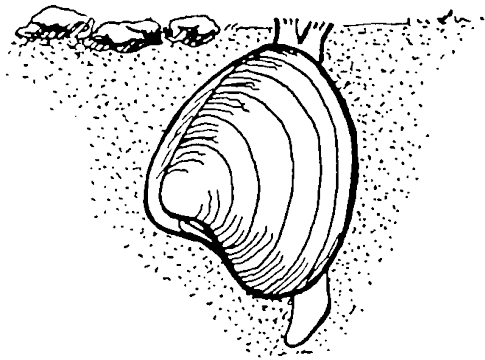
9. **References:**
<http://data.gbif.org/species/13528529>
<http://www.fishbase.org/summary/speciessummary.php?id=175>
<http://data.gbif.org/species/13528529>
http://www.sms.si.edu/irLspec/Elops_saurus.htm
http://zipcodezoo.com/Animals/E/Elops_saurus/

Robert Hoffman

Hard Clam / Round Clam / Hard Shelled Clam
Quahog *Mercenaria mercenaria*

2. How Quahog *Mercenaria mercenaria* makes a living: Suspension feeder, the Quahog lives in the sandy bottoms of coastal areas, filtering the water. They are also found (in decreasing order of abundance) on sand flats, sand/mud flats and on muddy bottoms. Hard clams feed primarily on single celled algae and diatoms which are taken in by the inhalant siphon, filtered

1. Introduction: The hard clam, *Mercenaria mercenaria*, is among the most commercially important species of invertebrate, has a large, heavy shell that ranges from being a pale brownish color to shades of gray and white with a series of growth rings. The interior of the shell is colored a deep purple around the posterior edge and hinge.



over the gills, and eventually passed to the mouth via ciliary tracts.

3. Who eats Quahog *Mercenaria mercenaria*: Humans are the primary consumer of the Hard Clam, among various other fish, mammals, and reptiles.

4. Reproductive Strategy: *Mercenaria mercenaria* is a [protandric hermaphrodite](#), with the male line developing first. Approximately 98% of all juvenile clams begin life as males; however, with increased age and size, sex ratios in the population even out, and approximately half of the males later change to females. The hard clam spawns during summer throughout its geographic range.

5. Interesting life history facts: *Mercenaria* enter "hibernation" when exposed to temperatures below four degrees C. The distribution of bivalves is particularly influenced by variations in salinity due to the fact that most bivalves are unable to emigrate from the adverse environmental conditions which occur when salinity drops. The tolerance of *M. mercenaria* to decreases in salinity INCREASES with the age of the clam, but is inversely proportional to temperature. Thus, development and survival rates decrease sharply when salinity is low and temperature is high.

6. Ecological Role: They feed primarily on single cell algae and diatoms, thus assisting in keeping the population of these fast growers in check. They server to help clean the waters, and their borrowing helps to stir detritus up in the bottom soil.

7. Identifying characteristics: *Mercenaria* has a large, heavy shell that ranges from being a pale brownish color to shades of gray and white with a series of growth rings. The interior of the shell is colored a deep purple around the posterior edge and hinge.

8. Classification:

Kingdom: [Animalia](#)

Phylum:	Mollusca
Class:	Bivalvia
Order:	Veneroida
Family:	Veneridae
Genus:	Mercenaria
Species:	<i>M. mercenaria</i>

9. References:

http://www.sms.si.edu/IRLSpec/Mercen_mercen.htm

<http://www.ciesm.org/atlas/Mercenariamercenaria.html>

<http://www.marinespecies.org/aphia.php?p=taxdetails&id=141919>

<http://www.quahog.com/quahog.html>

Dasyatis pastinaca

STINGRAY



Overview

Characterized by their flattened shape and long, spine-bearing tails, stingrays are unique elasmobranchs and cartilaginous cousins of the sharks. Stingrays have pectoral fins that are fused to the sides of their rostrum or "head." External gill openings are located on the stingray's ventral side or "underside." There are about 200 species of stingrays.

How It Makes a Living

These animals are predators, and they eat all types of plankton and also fish, that they catch near or upon the bottom of the ocean or rivers.

Reproductive Strategy

Mating season occurs in the winter. Most rays are viviparous, bearing live young in "litters" of five to ten. The female holds the embryos in the womb without a placenta. Instead, the embryos absorb nutrients from a yolk sac, and after the sac is depleted the mother provides uterine milk..

Interesting Life History Facts

Some adult rays may be no larger than a human palm, while other species, like the short-tail stingray, may have a body of six feet in diameter, and an overall length, including their tail, of fourteen feet. Stingrays can vary from gray to bright red in color and be plain or patterned. Dasyatids are propelled by motion of their large pectoral fin (commonly mistaken as "wings").

Ecological Role

Ecologically, stingrays are important components of aquatic [food chains](#), consuming [mollusks](#), [crustaceans](#), tube anemones, [amphipods](#), and small fish, while being preyed upon by a multitude of [sharks](#), such as the white, tiger, and bull sharks, and even [alligators](#) in the case of freshwater species (Passarelli and Piercy 2008). While they provide some culinary value for humans, one of their chief values may be more internal—the wonder and beauty provided by their unique form, swimming behavior, and colors.

Identifying Characteristics

The most distinctive features of this sting ray, among other Gulf of Maine fishes, are its very long, whiplash-like tail without dorsal fins, and the long, saw-edged spine or spines with which the upper side of its tail is armed. The disc is rhomboid, about $1\frac{1}{5}$ to $1\frac{1}{3}$ times as broad as it is long; the anterior angle is much blunter than a right angle ($130\text{-}140^\circ$); and the tip of the snout projects very little if at all. The anterior margins of the disc are nearly straight, the posterior margins are only slightly convex, and the posterior corners are abruptly rounded or even angular. The tail, measured from the center of the cloaca, is about $2\frac{1}{2}$ times as long as the body from cloaca to snout. The lower side of the tail has a narrow fold of skin extending rearward from below the origin of the tail spine for a distance about as [page 75] long as from its own origin to the cloaca; the upper side of the tail is rounded, except for a low ridge close behind the spine (or spines). The spear-pointed tail spines, of which there are 1, 2, or sometimes 3, are situated well back on the tail. One spine that we examined had about 40 saw teeth on each edge.

Classification

Kingdom: [Animalia](#)

Phylum: [Chordata](#)

Class: [Chondrichthyes](#)

Subclass: Elasmobranchii

Order: [Rajiformes](#)

or Myliobatiformes

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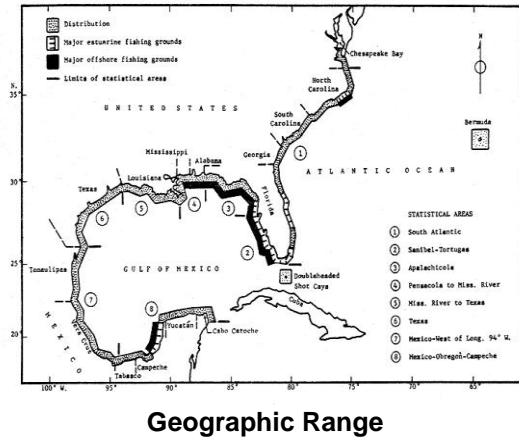
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Student Report

Victoria Williams

Florida Fighting Conch (*Strombus alatus*)

1. Introduction: The conch is a sea creature, a mollusk, that has an external shell composed of calcium carbonate and can be a variation of colors. It also, contains shell pines. The base foot has a sharp serrated spike, which serves as protection.



2. How conch makes a living: The Florida Fighting Conch lives in the coral sand beds and eats algae such as diatoms. They prefer to stay in the sand and will slightly burrow, although not deep enough to disturb anaerobic areas deep within the sand. Fighting conch are more active at night, so they are less visible during the day time,

3. Who eats conch? Conch are preyed upon by crabs, lobster, octopus, turtles, sharks, rays, and of course their most dangerous predators, humans.

4. Reproductive strategy. When the Fighting conch reaches sexual maturity, it grows a flared lip on its shell. The fighting conch lay eggs in long, gelatinous strands. The fighting conch can be at least ten years old.

5. Interesting life history facts. The conch is a major Hindu article of prayer, used as a trumpeting announcement of all sorts. The God of Preservation, Vishnu, is said to hold a special conch, Panchajanya, that represents life as it has come out of life-giving waters. The warriors of ancient India would have blow conchs to announce battle, such as is famously represented in the beginning of the war of Kurukshetra in the Mahabharata, the famous Hindu epic. The conch shell is a deep part of Hindu symbolic and religious tradition. To this day, all Hindus use the conch as a part of their religious practices, blowing it during worship at specific points, accompanied by ceremonial bells.

6. Ecological Role. Fighting conch are known as herbivorous detritivores because they will eat both live and decaying vegetable matter. They will eat all algae growing on the surface of the live sand bed as well as other detritus on the bottom.

7. Identifying characteristics. Conchs have spirally constructed shells. Depending on a species (or aberrant growth patterns), shell growth can be sinistral (left-handed) or dextral (right-handed). Conchs have long eye stalks, a long and narrow aperture, and a siphonal canal with an indentation near the anterior end called a stromboid notch, and a foot ending in a pointed, sickle-shaped, horny operculum. They grow a flared lip on their shells upon reaching sexual

maturity. Conchs also have a characteristic leaping motion, using their pointed, sickle-shaped, horny operculum to propel themselves forward.

8. Classification.

Kingdom:	Animalia
Phylum:	Mollusca
Class:	Gastropoda
Order:	Neotaenioglossa
Family:	Strombidae
Genus:	<i>Strumbus</i>

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