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Chapter Four

Flora and Fauna

Birds



American oystercatcher



Barn owl



Barred owl



Black-crowned night heron



Black skimmer

American kestrel *Falco sparverius*

This bird is a small falcon that is about the size of a jay. It is also known as the Sparrow Hawk.

American oystercatcher *Haematopus palliatus*

This is a larger shorebird, up to twenty-one inches, with a long bright orange- red beak and orange legs. This bird is very common in shelly/sandy areas and is known for being noisy.

Barn owl *Tyto alba*

A common owl, this is the only owl with a light colored, heart shaped face. It has dark eyes and no ear tufts.

Barred owl *Strix varia*

This owl can reach up to twenty-four inches, and is greyish-brown in color. This owl prefers wooded areas.

Black-Crowned night heron *Nycticorax nycticorax*

These birds are characterized by their squat bodies, and red eyes. They feed mostly at dusk, therefore they appear inactive during the day. They roost in trees, on shores and in marshes.

Black skimmer *Rynchops niger*

This distinctive black-and-white bird, with a knife-like red bill tipped in black, nests on sand fill from newly dredged areas. The lower bill is slightly longer than the upper. They are most likely to be seen skimming along the top of the water with the lower bill in the water to catch fish.

Birds

Blue-winged teal *Anas discors*

This is a small marsh duck that prefers fresher water estuarine areas. The male is characterized by a white facial crescent and a large chalky blue patch on the forewing.

*Blue-winged teal***Boat-tailed grackle** *Quiscalus major*

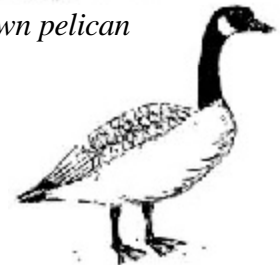
Large, iridescent blackbird with a long tail. Prefers coastal areas.

*Boat-tail grackle***Brown pelican** *Pelecanus occidentalis*

One of the larger, well known shorebirds, pelicans have a wingspan of up to six and one half feet. They are known for diving headfirst into water to catch food (fish).

*Brown pelican***Canada goose** *Branta canadensis*

This large black-and-white bird can be recognized by its characteristic “honking” call and V-shaped migratory flights. Canada goose populations have been reduced because of nesting habitat destruction in the upper northeast and Canada.

*Canada goose***Cardinal** *Richmondena cardinalis*

The state bird of North Carolina feeds on the fruits of shrub thicket plants, grapes, blackberries, and insects. Adult females are brownish, with the males being bright red.

*Cardinal***Cedar waxwing** *Bombycilla cedrorum*

A small, sleek, crested, brown bird with a yellow band at the tip of the tail. This bird tends to flock in big groups. Their favorite foods include berries and insects.

*Cedar waxwing*

Birds



Clapper rail



Common loon



Common tern



Double-crested comorant



Dowitcher

Clapper rail *Rallus longirostris*

This large gray-brown bird, about the size of a hen, is also known as a “marsh hen “. They prefer to run or creep through the marsh rather than fly.

Common loon *Gavia immer*

Large swimming birds that fly slower than ducks, have noticeably setback legs, which are used as rudders in the water. Common in winter.

Common tern *Sterna hirundo*

Small tern with a black capped head and a red/dark orange bill. Very common along the coast, and easily mistaken for a forester’s tern.

Double-crested cormorant *Phalacrocorax auritus*

Common swimming bird has a long snake-like neck. This bird is often seen perched on pilings, docks and rocks, spreading its wings to dry.

Dowitcher *Limnodromus griseus*

A medium sized (up to twelve inches), rusty colored wading bird. Has a long beak that it uses like a sewing machine to probe the mud for invertebrates.

Dunlin *Calidris alpina*

This smaller (up to nine inches) wading bird is noted for its slight downward droop at the tip of the beak. In the winter (when it is common to the US coast) it has a rusty-red back and black patch on the belly.



Dunlin

Birds

God wit *Limosa fedora*

this larger wading shorebird winters on the Eastern Atlantic Coast. It is known for its long, slightly upturned bill.

*Godwit***Great blue heron** *Ardea herodias*

This large gray-blue wading bird has a yellowish bill. It captures fish by patiently watching shallow waters then snapping up the prey with great accuracy.

Great blue heron**Great egret** *Casmerodius albus*

This tall white wading bird is known for its yellow bill and black legs and feet.

*Great egret and snowy egret***Great horned owl** *Bubo virginianu*

A very large owl with ear tufts, this owl can reach twenty-five inches tall. These birds are barred beneath and have a distinct white throat bib.

*Great horned owl***Green heron** *Butorides straitus*

This heron is smaller and very dark in color. It has short greenish-yellow or orange legs and prefers more inland waters than the other herons.

*Green heron*

Birds



Herring gull



Hooded merganser



Laughing gull



Least tern



Little blue heron

Herring Gull *Larus argentatus*

A common gull with flesh-colored legs. The herring gull is a winter scavenger and helps clean the beaches of dead plant and animal matter.

Hooded merganser *Lophodytes cucullatus*

The male has a white fan shaped crest on a black head and the female has a tawny crest on a dusky head. The male has a white breast with two black bars whereas the female is small and dusky. They are diving ducks.

Kingfisher *Megaceryle*

This greyish-blue bird is a solitary bird that perches above water waiting to catch fish. These birds eat fish and small insects.



Kingfisher

Laughing Gull *Larus atricilla*

This relatively small gull earns its name from the sound that it makes – seemingly laughing at everything. In the summer the entire head is black, and along with its small size, it is easily recognizable.

Least tern *Terna albifrons*

This very small tern has a yellow bill and feet. In the winter it is hard to tell apart from other terns except for the yellow feet.

Little blue heron *Florida caerulea*

This is a petite heron, usually slate-blue- grey as an adult, but white as an immature bird. They wade on long legs and hunt for fish and small invertebrates.

Birds

Long-billed curlew *Numenius americanus*

This shorebird can obtain a size of twenty six inches and has a very long sickle shaped, down-curved bill.

Louisiana heron *Hydrandassa tricolor*

This heron is also known as the tri-color heron. It has a dark back and wings and white belly and rump. It hunts small fish and invertebrates in the shallows.

Mallard duck *Anas platyrhynchos*

Males and females look different, with males having a glossy green head and a white ring around the neck. The female is brownish. Both have orange feet. Very common in our coastal areas.

Northern flicker *Colaptes auratus*

Known as a yellow-shafted flicker, this bird is in the same family as woodpeckers. It has a tan colored face with a red crescent on the nape and a black patch on the chest. It has golden yellow under the wings and tail.

Northern pintail *Anas acuta*

This slender duck has a very pointed tail, especially the males. It is known to feed on seeds of aquatic plants and, in winter, on small aquatic animals, such as snails or small crabs



Northern pintail



Long-billed curlew



Louisiana heron



Mallard duck



Northern flicker

Birds



Osprey



Painted bunting



Peregrine falcon



Piping plover

Osprey *Pandion haliaetus*

This summer resident of estuarine areas is dark with a white underbody. Ospreys feed almost entirely on fish by hovering over water and diving headfirst upon the prey, which is captured with sharp claws called talons.

Painted bunting *Passerina ciris*

One of the most brightly colored birds in North America, this summer resident primarily eats insects, wild fruits and the seeds of weeds.

Peregrine falcon *Falco perigrinus*

Thick, heavy dark "side burns" under each eye, this falcon is characterized by the darker, greyer back. He is barred and spotted underneath.

Piping plover *Charadrius melodus*

This small peep is a sand colored bird of no more than about 7 inches. In the winter months this birds legs are a dark yellow and the bill is dark. A dark ring around the neck helps identify it.

Prothonotary warbler *Protonotaria citrea*

This yellow bird is commonly found in wooded swamps and feeds mainly on insects.

*Prothonotary warbler***Red-bellied woodpecker** *Melanerpes carolinus*

This woodpecker is a permanent resident of wooded and swampy areas. It has a black and white striped back and a red cap on the head. The red on the belly can very seldom be seen.

*Red-bellied woodpecker***Redhead** *Aythya americana*

This duck, distinguished by the males' brick-red head, yellow eyes and bluish bill, has suffered from overhunting and habitat destruction. It primarily feeds at night on aquatic weeds and nests in marshes.

*Redhead***Red-tailed hawk** *Buteo jamaicensis*

Named for its red tail that is easier to see in flight, this hawk feeds on small rodents and large insects.

*Red-tailed hawk***Ring-billed gull** *Larus delawarensis*

This gull is smaller than many of the gulls, and the adults are white with gray wings and backs. The bill is yellow with a ring around the tip.

*Ring-billed gull*

Birds



Royal tern



Sandwich tern



Sedgewren



Shoveler

Royal tern *Sterna maxima*

This is a large tern that has an orange bill and a black crest on the head. Common in tidal areas along the coast.

Sandwich tern *Sterna sandvicensis*

This tern is commonly found nesting in areas where there are royal terns. They have black bills with a yellow tip.

Seaside sparrow *Ammospiza maritima*

This small bird favors the marsh for feeding on young crabs and snails. Like the clapper rail, it often runs rather than flies.

Sedge wren *Cistothorus platensis*

Also known as the short billed marsh wren, this wren is common in the grassy marshes of North Carolina. This bird has an upturned tail and a short bill and feeds on insects.

Shoveler *Anas clypeata*

This duck has an obviously large bill, which it uses for feeding in the water, shifting food from the mud it dredges up. The males have green heads, while the females are an indescrpt brown. In flight there is a blue mark on the wings.

Birds

Snowy egret *Egretta thula*

A white heron with a slender black bill and yellow feet.. At the turn of the century this bird was hunted almost to extinction for its plumage.

Whimbrel *Numenius phaeopus*

A migrating shorebird, this long-legged bird eats fiddler crabs and other small invertebrates.

White ibis *Eudocimus albus*

This wading bird is unique in that it has a long decurved red bill and legs. The body is white except in immatures, which is darker.

Willet *Catoptrophorus semipalmatus*

This vocal bird nests in the dense upper marsh grasses, and is easily identified in flight by a striking black and white pattern on its wings.

Yellow-rumped warbler *Dendroica coronata*

Also known as the Myrtle warbler. This is a common winter resident, with the yellow rump being easy to identify. It also has yellow patches on the head and sides. This little bird feeds on the berries of the bayberry and wax myrtle, both common plants in the estuary.



Yellow-rumped warbler



Snowy egret



Whimbrel

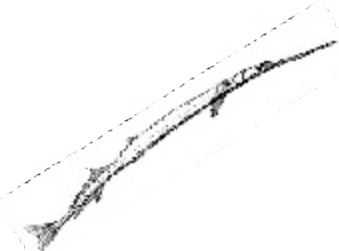


White ibis



Willet

Fish

*Atlantic croaker**Atlantic menhaden**Atlantic needlefish**Atlantic silverside**Atlantic sturgeon**Bighead searobin***Atlantic croaker** *micropogonias undulatus*

One of the most common estuarine fishes on the Atlantic coast. This fish was so named because of the croaking sound it makes.

Atlantic menhaden *Brevoortia tyrannus*

More pounds of menhaden are caught per year than any other fish. Other names for this fish are pogy, bunker and fatback. The fish is used for bait and processed and used for pet food and fishmeal. The oil is used for making paint and cosmetics.

Atlantic needlefish *strongylura marina*

This fish has a long narrow body, with an elongated jaw full of teeth. Needlefish are very common and can be seen at night around piers, pilings and jetties.

Atlantic silverside *Menidia menidia*

Small schooling fish found along sandy seashores. They are important as baitfish

Atlantic sturgeon *Acipenser ohrhynchus*

Once a very important and common fish along the East coast, the sturgeon has declined due to over fishing, water quality, and damming of rivers and streams. These fish can reach weights of 800 pounds.

Bighead searobin *prionotur tribulus*

This broad-headed, bottom dwelling fish uses its lower fins to “walk” along the bottom in search of food. The searobin is not usually eaten in this area.

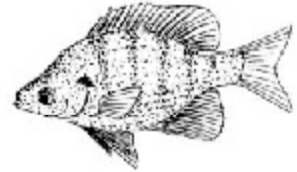
Fish

Bluefish *Pomatomus saltatrix*

This ocean fish comes into estuarine areas to feed and is very aggressive when in large schools, snapping at anything that moves including bathers.

*Bluefish***Bluegill** *Lepomis macrochirus*

A common and popular freshwater species, this is one of many panfish found in Currituck Sound.

*Bluegill***Bullhead** *Ictalurus spp*

A scavenger and close relative of the catfish. The fish has so-called “whiskers” (properly known as barbules) that aid in sensing bottom conditions in muddy water.

*Bullhead***Butterfish** *Peprilus triacanthus*

One of the few animals that feed on jellyfish. These small (fourteen inches maximum) fish travel in schools.

*Butterfish***Channel catfish** *Ictalurus punctatus*

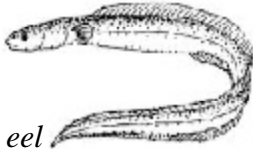
This fish is widely distributed in warm, fresh water areas throughout the east coast. Known as a great sportfish and popular to eat, this fish has been introduced into other areas.

*Channel catfish***Clearnose skate** *Raja eglanteria*

This skate is one of the most common in the southeastern United States. The name is derived from the clear spaces on either side of the snout. They also have spines on the midridge of the back and a few on the pectoral fins and near the eyes. Sport fishermen consider them a nuisance.

*Clearnose skate*

Fish



Conger eel

Conger eel *Conger oceanius*

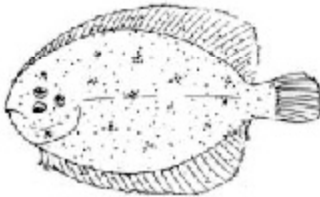
The conger eel has an elongated snout, and a large dorsal fin. This eel can reach lengths of 5-7 feet and is common in inshore waters of the Atlantic coast.



Dusky pipefish

Dusky pipefish *Syngnathus floridae*

This olive-brown fish can grow up to 10 inches. The body and tail are divided into rings. This is a popular aquarium fish.



Hogchoker

Hogchoker *Trinectes maculatus*

This flatfish is very unique in that it has a texture that feels like it is hairy. The rough scales make these fish able to stick to almost anything. This is an inshore fish that only obtains a length of 8 inches.



Inshore lizardfish

Inshore lizardfish *Synodus foetens*

This small fish has a long body, a pointed head and sharp teeth.



Killifish

Killifish *Fundulus spp*

This one to four inch fish lives in very shallow tidal waters and creeks and can withstand low oxygen that can occur in isolated pools on hot summer days.



Largemouth bass

Largemouth bass *micropterus salmoides*

This is typically a freshwater species, but can tolerate the low salinity waters of Currituck Sound. Some specimens of this popular sport fish grow larger than 10 pounds.

Fish

Lined seahorse *Hippocampus erectus*

The seahorse swims erect with head bent downward and tail curled. The male has a brood pouch and incubates the eggs.

*Lined seahorse***Mosquitofish** *Gambusia affinis*

This small silvery fish, with a black diamond pattern, prefers areas with dense vegetation. They are important in mosquito control.

*Mosquitofish***Northern pipefish** *Syngnathus fuscus*

This dark pipefish can grow to one foot in length and have from 30-36 tail rings.

*Northern pipefish***Northern puffer** *Sphoeroides maculatus*

Puffers are named for their ability to swallow water or air and become very round and large, a habit that scare off predators. They are also very poisonous when eaten.

*Northern puffer***Oyster toad** *Opsanus tau*

A fish with an attitude! He is a belligerent, bottom-lurker who prefers reefs, jetties and wrecks. He can live among litter and tolerate polluted water.

*Oyster toad***Pigfish** *Othopristis chrysoptera*

A hardy fish with a dorsal fin spotted with bronze. He also has a yellow tail with a dusky tip.

*Pigfish***Pinfish** *Lagodon rhomboides*

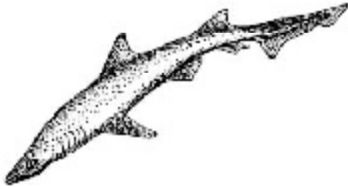
Other names for this fish are porgy, scup, bream, shiner and sailors choice. It has a distinctive black spot behind the gill cover.

*Pinfish*

Fish



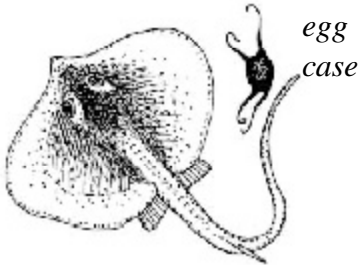
Planehead filefish



Smooth dogfish shark



Southern flounder



Southern stingray



Spanish mackerel

Planehead filefish *Monacanthus hispidus*

Filefish are also known as “leatherjackets”. They have small, turretlike eyes that are capable of rotating independently.

Smooth dogfish shark *Mustelus canis*

Abundant Atlantic coast shark weighing about 3 pounds. It feeds on crabs, lobsters and small fish.

Southern flounder *Paralichthys lethostigma*

This flounder is abundant in the South Atlantic and is also known as a southern fluke.

Southern stingray *dasyatis americana*

This is the most common stingray in the estuary along our coast. It can reach a size of 6 feet across.

Spanish mackerel *Scomberomorus maculatus*

This is a staple food fish of the southern waters. It has been known to jump into boats.

Spot *Leiostomus xanthurus*

This fish averages 8 inches with a head like a croaker and a spot just behind the gill edge.



Spot

Striped bass *Morone saxatilis*

Another popular game fish in Currituck Sound, this fish spend part of their life in the ocean and then swims up rivers to spawn.

Striped mullet *Mugil cephalus*

This fish is a vegetarian and lives on grasses. Instead of a stomach it has a gizzard comparable to that of a chicken.

Summer flounder *Paralichthys dentatus*

Also known as a fluke, this flounder has a very large mouth with prominent canine teeth. The eyes are usually on the left side.

White catfish *Ictalurus catus*

This is a fresh water bottom fish that will inhabit low-salinity estuaries. Although it eats other fish it also eats mayfly larvae and pondweed. This has become a popular eating fish.

White mullet *Mugil curema*

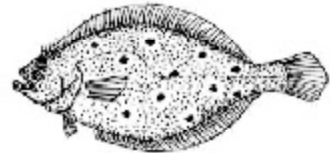
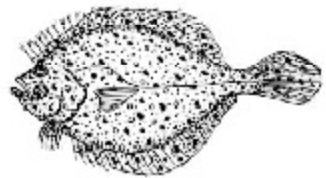
In the fall, the young mullet leave the estuaries and migrate along the beaches. The fishermen see the schools of fish and set their nets around them. Because of the enormous weight of the fish, trucks and tractors are used to pull in the net.

White perch *Morone americanus*

This is a popular commercial fish. It lives in brackish or fresh water. During the spawning season a 10 inch female may lay 230,000 eggs which may incubate for as long as 6 days in cooler water or 30 hours in warmer water.

Windowpane flounder *Scophthalmus aquosus*

A bottom dwelling flatfish, this flounder has eyes and color patterns on the left side. This good eating fish grows to 18 inches and can live in water as deep as 150 feet.

Fish*Striped bass**Striped mullet**Summer flounder**White catfish**White mullet**White perch**Windowpane flounder*

Vertebrates



Anole

Anole *Anolis carolinensis*

This arboreal lizard can change color from a light green to a dull olive or brown, depending on the situation. When the male is courting he extends his bright pink throat fan.



Atlantic bottlenose dolphin

Atlantic bottlenose dolphin *Tursiops truncatus*

This marine mammal must periodically come to the surface to breathe air. They often visit the estuary with their young to catch fish.



Corn snake

Corn snake *Elaphe guttata*

This is a beautiful, secretive snake that often hides in stump holes and in burrows of other animals.



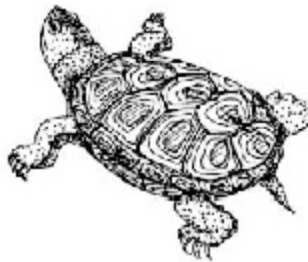
Cotton mouse

Cotton mouse *Peromyscus gossypinus*

This nocturnal rodent is a skillful climber and a strong swimmer. He needs these skills to survive in the wet areas in which he lives.

Diamondback terrapin *Malaclemys terrapin*

This turtle, with a distinctive shell that has diamond-shaped scales, consumes dead fish, crustaceans and mollusks. It is often seen in brackish water estuaries.



Diamondback terrapin

Vertebrates

Eastern box turtle *Terapene caarolina*

The shell on his turtle is brown, mottled with yellow or orange. You can normally tell a male by his red eyes.

*Eastern box turtle***Eastern cottontail** *Sylvilagus floridanus*

This is a common rabbit. It is active at night, and prefers grazing on dune grass and young shoots.

*Eastern cottontail***Eastern glass lizard** *Ophisaurus ventralis*

This large legless lizard lays her eggs in a shallow depression under a log and remains with them until they hatch.

*Eastern glass lizard***Feral horse** *Equus caballus*

Feral horses are domesticated horses that have been left to turn wild. They have adapted to eating cordgrass and some flowering plants. When the freshwater springs run dry, they are able to find and dig for water.

*Feral horse***Gray fox** *Urocyon cinereoargenteus*

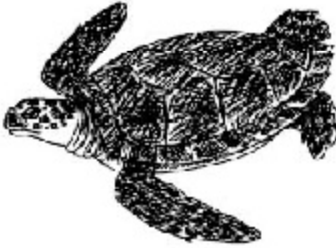
Often the gray fox is misidentified as a red fox due to the fact he has reddish patches of fur on the flanks, neck, legs and underside of the tail. The gray fox can be identified by the black tip of his tail.

*Gray fox*

Vertebrates



Green tree frog



Green turtle



House mouse



Loggerhead sea turtle



Marsh rabbit

Green tree frog *Hyla cinerea*

These frogs are well camouflaged and rest motionless during the day.

Green turtle *Chelonia mydas*

This large sea turtle migrates long distances across open sea, but spends most of his time in shallow water feeding on eel grass.

House mouse *Mus musculus*

This mouse lives in close association with humans. He likes to live where food and nesting space is available. They have as many as 13 littlers a year consisting of 3-12 in a litter.

Loggerhead sea turtle, *Caretta caretta*

This marine turtle commonly grows to 300 pounds. One of its favorite foods is jellyfish. The female nests on the barrier island beaches.

Marsh rabbit *Sylvilagus palustris*

This mammal is commonly found in wet areas where it feeds on grasses. Its brown fur provides camouflage from predators.

Vertebrates

Meadow mouse *Microtus pennsylvanica*

This small nocturnal rodent feeds on dune grasses and digs burrows beneath grass clumps.

*Meadow mouse***Mink** *Mustela vison*

Mink have very lustrous fur. They sometimes make their homes in abandoned beaver dens.

*Mink***Muskrat** *Ondontra*

This large rodent has glossy brown fur. They are excellent swimmers and can swim forward or backward.

*Muskrat***Norway rat** *Rattus norvegicus*

This large rat can grow up to 18" long. It lives in a tunnel system with 10 to 12 other individuals in a cooperative society.

*Norway rat***Nutria** *Myocastor coypus*

This large rodent often floats just under the water with only his eyes and nose exposed. The nutria is native to South America and was first introduced here on the Gulf of Mexico.

*Nutria***Raccoon** *Procyon lotor*

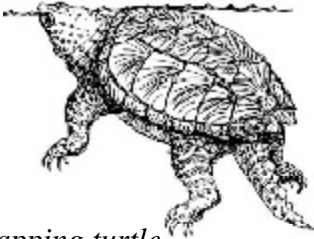
This common nocturnal mammal lives in wooded areas and forages in the salt marshes for shellfish, crab and fish.

*Raccoon*

Vertebrates



River otter



Snapping turtle



Toad



Virginia opossum

River otter *Lutra canadensis*

This otter has webbed feet and a long thick tail. He swims rapidly and on land runs quickly.

Snapping turtle *Chelydra serpentina*

These big turtles can weigh up to 57 pounds. On land they are very aggressive and will bite.

Toad *Bufo spp*

This amphibian spends the first part of its life as a gill-breathing tadpole in pond waters. Adult toads may travel miles over land to find new ponds for breeding.

Virginia opossum *Didelphis virginiana*

This abundant marsupial is nocturnal and lives a solitary life except for mating.

White-tailed deer *Odocoileus virginianus*

This animal forages the marsh for grasses and other plants. Young spotted deer, known as fawns, are protected from predators because they have no scent.



White-tailed deer

Invertebrates

Arrow shrimp *Tozeuma carolinensis*

This is a very elongated shrimp with a long rostrum that lives in grass beds. Usually camouflaged in red, green or brown.



Arrow shrimp

Atlantic auger *Terebra dislocata*

This intertidal mollusk lives in sandy or muddy areas. This snail is under 2 inches long.



Atlantic auger

Atlantic bay scallop *Argopecten irradians concentricus*

A mollusk that depends on eelgrass beds for survival during early development. The scallop can "jet-propel" itself by rapidly closing its shells and pushing backward. The bivalve also has small blue "eyes" which primarily sense differences between light and dark.

Atlantic bay scallop



Atlantic razor clam *Ensis directus*

This long bivalve has a rectangle shape and is found on tidal flats. This is considered to be an edible bivalve, but is not widely harvested for this.



Atlantic razor clam

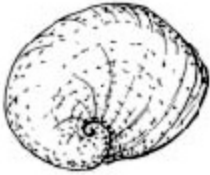
Atlantic oyster drill *Urosalpinx cinerea*

This carnivore is a big threat to the oyster population because they prey on oysters by "drilling" a hole through the shell with its tongue or radula, and devours the soft flesh inside.



Atlantic oyster drill

Invertebrates



Baby's ear



Banded tulip



Beach flea



Bloodworm



Blue crab

Baby's ear *Sinum perspectivum*

This predatory snail lives on sandy bottoms, usually burried. The body cannot contract all the way into the shell.

Banded tulip *Fasciolaria lilium hunteria*

This predatory mollusk can bore through shells of various species and then consume the soft animal inside. The spiral line on its shell is the most reconizable feature for identification.

Beach flea *Talorchestia longicornis*

This amphipod scavenger of the upper beach lives in drift line debris or sand burrows.

Blood worm *Glycera americana*

These segmented worms are known to eject their stomach and attach their four jaws to feed on small marine invertebrates.

Blue Crab *Callinectes sapidus*

The blue crab is named for the color of his claws. This is an important commercial species especially when molting or in the 'soft shell' stage.

Brackish-water fiddler *Uca minax*

This fiddler has reddish joints and lives in saltmarsh cordgrass or needlerush.



Brackish-water fiddler

Invertebrates

Brittle star *Ophiophragnus wurdemani*

The small brittle star lives in the intertidal mud. It can be cream, grey or brown in color.

Cannonball jellyfish *Stomolophus*

This jellyfish is a large, firm jelly. The bottom usually is a reddish-brown with no tentacles underneath. It is not a stinging variety.

Channeled whelk *Busycon canaliculatum*

This is one of the most common whelks in North Carolina. This is a large snail often obtaining a length of 12 inches.

Comb jelly *Mnemiopsis sp*

Although gelatinous like a jellyfish, this very different animal does not sting. It is a voracious predator consuming fish and other comb jellies.

Common starfish *Asterias forbesii*

More properly known as a sea star because it is an echinoderm, not a fish. A starfish moves by sets of tube feet and preys on mollusks which it can open with its strong appendages.

Coquina *Donax variabilis*

Hundreds of these tiny clams can be seen on the sand after a wave washes over the beach. Their multi-colored shells are usually an inch or less in length.



Brittle star



Cannonball jellyfish



Channeled whelk, egg case



Comb jelly



Common starfish



Coquina

Invertebrates



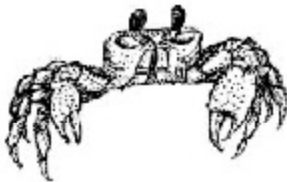
Eastern oyster



False angel wing



Flat-clawed hermit crab



Ghost crab



Giant Atlantic cockle

Digger wasp *Bembex sp*

This insect nests in the dune sands and captures other insects to feed its larvae.

Eastern oyster *Crassostrea virginica*

The oyster is a very important commercial seafood species. Young oysters, known as spat, are mobile but eventually attach to a hard surface where they spend the rest of their lives.

False angel wing *Petricola pholadiformis*

The elongated shell of this bivalve is white with sharp ridges. It can be found intertidally burrowed in peat or clayish mud with only one end exposed.

Flat-clawed hermit crab *Pagurus longicarpus*

This crab is characterized by large flat claws, the right usually being somewhat larger.

Ghost crab *Ocypode quadrata*

This crustacean is most active at night when it scavenges the beach for dead and decaying matter. It moves side-ways. The ghost crab has eyes perched on stalks so it can see from behind mounds of sand.

Giant Atlantic cockle *Dinocardium robustum*

This large bivalve prefers sand flats where they can burrow. It has an extensive foot that is used for burrowing.

Invertebrates

Goose barnacle *Lepas anatifera*

This barnacle is a crustacean related to shrimp and crabs but highly modified for a sedentary existence. They are covered with hard limey plates, four of which are moveable and serve as doors. They attach themselves to hard surfaces.

Grass shrimp *Palaemonetes pugio*

A very common shrimp in estuaries. They are small and transparent.

Horseshoe crab *Limulus polyphemus*

Not really a crab but more closely related to spiders, this ancient animal looks formidable. The males are always smaller than the females.

Keyhole limpet *Diodora cayensis*

A single shelled mollusk that lives in the intertidal zone, this animal can clamp its shell very tightly to a hard surface for protection against predators.

Keyhole urchin *Mellita quinquesperforata*

This is commonly called a sand dollar. This organism is found on sand bottoms where it shuffles through loose sediments feeding on diatoms and other micro-organisms. The live animal is a brown felt with very short spines.

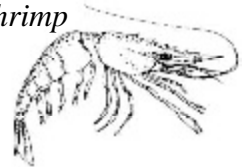
Knobbed whelk *Busycon carica*

This whelk is a common snail in North Carolina's estuaries. This predator has knobs on the top spiral and the opening is to the right.



Goose barnacle

Grass shrimp



Horseshoe crab



Keyhole limpet



Keyhole urchin



Knobbed whelk

Invertebrates



Lettered olive



Lightning whelk



Lugworm



Mantis shrimp



Marsh periwinkle

Lettered olive *Oliva sayana*

A long snail that has a zig-zag pattern on its shell. It can be up to 3 inches long.

Lightning whelk *Busycon contrarium*

This common snail is very similar to the knobbed whelk except that the opening is to the left.

Lugworm *Arenicola marina*

This segmented worm is brown-green and can usually be found burrowed in the mud on the tidal flats. It lays a long mass of egg cases that are connected to the burrow by one end.

Mantis shrimp *Squilla empusa*

This is a larger shrimp with large powerful claws. They are fierce predators.

Marsh periwinkle. *Littorina irrorata*

This pale-colored snail grazes on algae-coated stalks of salt marsh cordgrass.

Mole crab *Emerita talpoida*

This small crustacean is sometimes called a “sand fiddler”. They burrow in the wet sand of ocean beaches.



Mole crab

Invertebrates

Moon jelly *Aurelia aurita*

This is a harmless jellyfish with a transparent body and small tentacles.

Moon snail *Polinices duplicatus*

This snail has a greyish shell that swirls to the center and resembles an eye.

Mud fiddler *Uca pugnax*

This small crustacean burrows into the marsh sediments and feeds on organic material scraped from the soil.

Northern quahog clam *Mercenaria mercenaria*

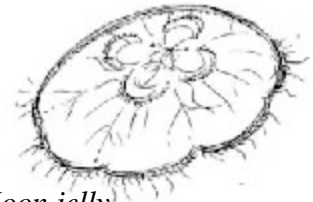
This very important commercial mollusk is able to bury in the sediments by digging with structures known as “feet”

Parchment tube worms *Chaetopterus variopedatu*

This polychaete worm lives in a tube with chimneys protruding above the sediment surface. Though seldom seen, when the worm is visible its luminescent body is distinctive.

Pink shrimp *Penaeus*

These larger shrimp are commonly harvested for commercial use. As young they live in estuaries and as adults they migrate out to sea.



Moon jelly



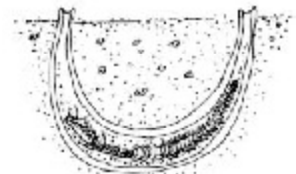
Moon snail and egg case



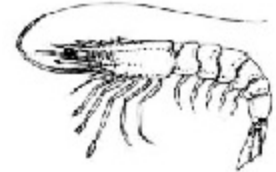
Mud fiddler



Northern quahog clam



Parchment tube worms



Pink shrimp

Invertebrates



Purple sea urchin



Redbeard sponge



Ribbed mussel



Rock barnacle



Sand fiddler crab



Sand shrimp

Purple sea urchin *Arbacia punctulata*

A very common urchin that has reddish-purple spines. The animal attaches itself to hard surfaces where it grazes on algae and sponges.

Red beard sponge *Microciona prolifera*

This primitive multicellular animal has a red crusty body. It is porous so that plankton and detritus can be drawn in.

Ribbed mussel *Geukensia demissa*

A marsh bivalve distinguished by its prominent radial ribs anchors itself with strong threads to salt marsh cordgrass and other objects.

Rock barnacle *Balanus sp*

A crustacean that anchors to one spot to feed on plankton and detritus. The barnacle's body consists of six calcareous plates and feathery appendages.

Sand fiddler crab *Uca pugilator*

Like its low marsh counterpart, the male crab has one large and one small claw while the female has two small claws. The large claw is to attract the females to the "nuptial chamber".

Sand shrimp *Crangon semtemspinosa*

This small shrimp is a more Northern shrimp that lives primarily in the estuaries. It normally grows no larger than 3 inches.

Invertebrates

Saw-toothed pen shell *Atrina serrata* This unique bivalve is fan shaped and found on tidal flats and in sea grass beds. This bivalve is found with just a small portion of the wide part of its shell exposed above the mud.

Sea anemone *Aiptasia spp*

This is a soft-bodied, columnar animal with unbranched tentacles. Typical anemones have an oral disk surrounded by rings of stinging tentacles..

Sea pork *Amaroucium sp*

This colonial tunicate is primarily a subtidal species. When it dies, the colorful zooids pop out and the tunic bleaches a creamy white, hence the name sea pork.

Sea squirt *Styela plicata*

The sea squirt is closely related to fish because it had a primitive spinal cord in its early stages. The grape-like clusters of adults squirt water when disturbed.

Sea whip *Leptogorgia virgulata*

This soft coral is usually fan or bush shaped. It is found intertidally, often attached to hard surfaces, and can be yellow, purple, orange or red. The outer crust is hard like coral protecting the polyps inside.

Southern quahog *Mercinaria campenchiensis*

This bivalve is almost identical to the northern quahog except it is larger and thicker. The inside lacks the purple coloration seen in the northern species.



Saw-toothed pen shell



Sea anemone



Sea pork



Sea squirt



Sea whip



Southern quahog

Invertebrates



Speckled crab



Spider crab



Stone crab



Striped hermit crab



Sunray venus



White sea urchin

Speckled crab *Arenaeus cribrarius*

This small crab is usually greyish or tan with white spots. It lives buried in the sand in the intertidal zone.

Spider crab *Libinia emarginata*

These crabs are known for their long legs (up to one foot) and live in the intertidal zone. They are brownish with hairy growths covering the shell.

Stone crab *Menippe mercinaria*

These crabs are known for their thick shells and hefty claws. Younga re typically found offshore, while adults move into estuaries and burrow in the mud.

Striped hermit crab *Clibanarius vittatus*

This hermit crab is one of the larger hermit crabs that occupies larger snail shells. It has brown and white stripes on the claws.

Sunray venus *Macrocallista nimbosa*

This clam has a bright purplish sunburst design on its shell. It prefers to live in clean sandy flats where the wave action is not too heavy.

Velvet ant *Dasymutilla sp*

This wingless, furry wasp can inflict a painful sting. Its hairy body insulates it from the heat.

White sea urchin *Lytechinus variegatus*

Often thought to be dangerous because of its pin-cushion appearance, this relative of a starfish primarily feeds on algae, bottom- dwelling invertebrates, and dead fish.

Vegetation

American beach grass *Ammophila breviligulata*

This primary dune grass is used to try to stabilize dunes. This is a northern grass that is not as common in North Carolina.

Bacopa *Bacopa monnieri*

This perennial herb can be found along edges of brackish to freshwater marshes. It has small white flowers in the summer and fall.

Bald cypress *Taxodium distichum*

This coniferous tree is one of the few trees that tolerates constant water, including brackish water. This tree obtains heights upwards of 140 feet and its primary characteristic is the “knees” which arise from the roots of the trees.

Bayberry *Myrica pensylvanica*

This evergreen is found in the northern sections of the North Carolina coast. It has larger berries than its close relative, the wax myrtle, and the berries are used for candles.

Beach morning glory *Ipomoea pes-caprae*

Long prostrate runner with round, smooth, succulent leaves and funnel-shaped purple flowers.



Beach morning glory



American beach grass



Bacopa



Bald cypress



Bayberry

Vegetation



Black gum



Black needlerush



Broomsedge



Bulrush



Catbriar



Cattail

Black gum *Nyssaceae sylvatica*

This common deciduous tree has broad leaves and lives in moist soil such as swamps and wetlands.

Black needlerush *Juncus roemerianus*

Looking like a darning needle with a sharp point, this rush changes from green to gray with age, giving dense mature stands a dark appearance.

Broomsedge *Andropogon virginicus*

This hardy grass invades disturbed areas in both the Coastal Plain and the Piedmont.

Bulrush *Scirpus spp*

Also known as “three-square” because many of the plants have triangular stems. This is not a grass nor a true rush, but more properly classified as part of the sedge family.

Catbriar *Smilax bona-nox*

A woody low-climbing vine with spiny green stems. Young shoots are edible.

Cattail *Typha spp*

This common marsh plant is not a grass, despite its long, ribbon-like leaves. It has prominent “furry” brown clusters of fruits which resemble a tail.

Croton *Croton punctatus*

This flowering weed is in the poinsettia family. Croton likes a warm climate .

Disticulus *Distichlis spicata*

This grass can be found abundantly in salt marshes and the surrounding areas. This grass does not get very tall, but can easily be identified by all of the leaves growing in one plane.

Duck potato *Sagittaria falcata*

This plant is distinguished by its three petaled white flowers. It is an example of an emergent, a plant that is rooted in the pond bottom and grows above the water surface.

Dune spurge *Euphorbia polygonifolia*

This plant, a relative of the poinsettia, is found along coastal dunes.

Eastern red cedar *Juniperus virginiana*

This normally tall tree grows shrubby on dunes. The male flowers are golden brown and the female flowers are purplish. The cones are berry-like and dark blue.

Gaillardia *Gaillardia pulchella*

A relative of the sunflower, this introduced wildflower may have bright red or yellow flowering heads.

Vegetation



Croton



Disticulus



Duck potato



Dune spurge



Eastern red cedar



Gaillardia

Vegetation

*Giant cordgrass**Glasswort**Glasswort southern**Groundsel tree**Hercule's club**Live oak***Giant cordgrass** *Spartina cynosuroides*

This coarse grass often grows more than six feet tall.

Glasswort *Salicornia virginica*

This saltmarsh plant is a low-growing perennial that is fleshy. Often it grows in mats along high tide areas of the saltmarsh. This salty tasting plant can be used in salads. It turns to a brilliant red in the fall.

Glasswort southern *Salicornia perennis*

This salt-marsh plant, also called pickleweed, is a low-growing edible plant.

Groundsel tree *Baccharis halimifolia*

This shrub, or small tree, also called Silverling, grows on the edges of salt marsh or dunes. In summer the upper plant has clusters of tiny buds on long stems. A member of the Aster family.

Hercule's club *Zanthoxylum clava-herculis*

This shrub or small tree has sharp spines on trunk and branches. It has large groups of white or greenish-white flowers in large groups.

Live Oak *Quercus virginiana*

This oak with thick, leathery elliptical leaves may live for hundreds of years and grow very large in diameter.

Loblolly pine *Pinus taeda*

A common pine of the Piedmont, this tree does well in maritime forests where there is little salt spray and an open canopy.

Marsh elder *Iva imbricate*

This shrub of the upper marsh can be distinguished by the serrated edges of its thick, succulent leaves.

Marsh mallow *Hibiscuss moscheutos*

This tall plant is easily recognized by its saucer size flowers.

Panic grass *Panicum sp*

This medium size grass can grow to be several feet tall. It is common in salt marshes and upper tidal marshes.

Pennywort *Hydrocotyle bonariensis*

A creeping herb in the same family as the carrot, this plant has a characteristic round leaf and can densely cover open sandy areas..

Poison ivy *Rhus radicans*

This very common plant is found in drier, upland areas, including dunes. Contact with the plant results in blistering of the skin in many people.

*Poison ivy***Vegetation***Loblolly pine**Marsh elder**Marsh mallow**Panic grass**Pennywort*

Vegetation



Prickly pear



Red bay



Reed



Saltmarsh cordgrass



Saltmeadow hay

Prickly pear *Opuntia humifusa*

Found in dry, sandy areas of North Carolina, this flat, fleshy cactus has very broad lobes as well as spines. The peeled fruit is edible.

Red bay *Persea borbonia*

This evergreen has broad leaves and small flowers. Also known as a swamp bay, this tree prefers very wet soil.

Reed *Phragmites communism*

Often more than six feet tall, this grass is common throughout the world in disturbed marsh areas and filled sites.

Saltmarsh cordgrass *Spartina alterniflora*

The decomposed remains of this grass are a primary food source for estuarine organisms. This grass grows 5 feet tall.

Saltmeadow hay *Spartina patens*

This thin grass can grow in dense clumps. Wind-blown swirls of it are called “cowlicks”.

Sand primrose *Oenothera humifusa*

This low-growing plant with four yellowish petals has well-developed tap roots to reach and store water.

Sassafras *Sassafras albidum*

A low growing tree found throughout eastern North Carolina, this tree has flowers in March and April before the leaves sprout. The roots are used for making root beer.



Sassafras

Sea beach amaranth *Amaranthus pumilus*

This low growing plant is rare in North Carolina. It tends to be seen on beach dunes growing low to the ground.

Sea elder *Iva imbricate*

This salt-spray tolerant, succulent member of the aster family occasionally grows at the very front of the dunes

Sea lavender *Limonium carolinianum*

Best known by its delicate purple flowers, when not in bloom this plant can be recognized by its basal leaves which form a rosette.

Sea oats *Uniola paniculata*

This grass is the primary dune builder of the North Carolina coast. These plants have extensive roots and runners.

Sea ox-eye *Borrichia frutescens*

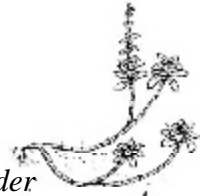
This plant resembles a small sunflower with thick waxy leaves. Typically it is found growing above the high tide line in dense colonies.

Sea rocket *Cakile harperi*

This short, flowering plant is found growing in the upper salt marsh and along coastal beaches.



Vegetation

*Seabeach amaranth**Sea elder**Sea lavender**Sea oats**Sea ox-eye*

Vegetation

Seaside Goldenrod



Seaside goldenrod *Solidago sempervirens*

A tall forb with clusters of showy yellow flowers, this plant is very attractive to insects.

Sweet gum



Sweet gum *Liquidambar styraciflua*

This broad leaved deciduous tree is found in tidal swamps and wetlands. The spiny fruit balls identify this tree.

Virginia creeper



Virginia creeper *Parthenocissus quinquefolia*

This climbing vine has leaflets attached to a stem, like fingers are attached to the palm of a hand. Its fleshy blue to black fruits are produced in the fall.

Wax myrtle *Myrica cerifera*

A hardy shrub that has berries and leaves that are aromatic when crushed.



Yaupon *Ilex vomitoria*

Female plants of this large shrub, produce bright red berries. Its elliptical leaves can be used to make a strong tea.

Wax myrtle



Yucca *Yucca filamentosa*

This plant known as Spanish bayonet, has sharp pointed leaves. The flowers are white, bell-shaped and edible.

Yaupon



Yucca

Aquatic vegetation

Bushy pondweed *Najas guadalupensis*

This sub-merged water plant is rooted on the bottom of shallow, relatively fresh water. This plant is leafy and has small flowers in the summer.

Chenille-weed seaweed *Dasya spp*

Bushy, purple to red, and freely branched this is abundant in the winter in our area.

Deadman's fingers *Codium spp* This tubular green algae grows in branching clusters that look like the fingers of a hand. Large clumps of this seaweed can break off and choke shellfish beds.

Dictyota *Dictyota dictyota*

This common brown algae of estuarine areas is easily recognized by the regularly forking or dichotomous branching of the plant body.

Ectocarpus *ectocarpus spp*

Brown algae.

Bushy pondweed



Chenille-weed seaweed



Deadman's fingers



Dictyota



Ectocarpus

Aquatic vegetation



Eelgrass

Eurasian water-milfoil



Hypnea



Peacock's tail



Sago pondweed



Eelgrass *Zostera marina*

Although its flowers are difficult to see, this is an estuarine flowering plant. Dense colonies of this ecologically important plant provide cover for fish and shellfish and serve as food for waterfowl.

Eurasian water-milfoil *Myriophyllum spicatum*

This aquatic weed has grown extensively since being introduced into Currituck Sound .

Hypnea *Hypnea spp*

A densely branched plant commonly found in the summer months on jetties and rocks.

Peacock's tail *Padina vickersias*

It has leafy, fanlike fronds growing on intertidal rocks or other hard surfaces

Sago pondweed *Potamogeton pectinatus*

This plant is found rooted in fresh and brackish shallow water. The stems are long and thin with the leaves also being long and thin.

Aquatic vegetation

Sea hair *Enteromorpha spp*

This filamentous, green algae is found in the intertidal zone on hard substrates and can tolerate wide ranges of salinity and water levels.

Sea lettuce *Ulva lactuca*

This thin green algae is grown in the Orient for use in soups

Sewing thread seaweed *Gracilaria spp*

This red algae has an intricate, highly branched plant body. Like other algae, it contains chlorophyll, but pigments determine its color.

Water lily *Nymphaea odorata*

The large flat leaves of this plant float on the surface of ponds. Its pink or white flowers bloom from June to September.

Widgeongrass *Ruppia maritima*

Only common seagrass with many leaves extending from a single stalk.

Wild celery *Vallisneria americans*

Also called “tape grass” because of its ribbon-like leaves, this aquatic plant is a favorite food of migratory water fowl.



Wild celery



Sea hair



Sea lettuce



Sewing thread seaweed



Water lily

Widgeongrass



Glossary

Ecology- science in which the relationship of animals and their environment is studied

Ecosystem- all the communities that live in an area together with the abiotic factors in the environment

Abiotic factors - a nonliving part in the environment

Barrier islands - a long, narrow wave-built island separated from the mainland by a lagoon

Inlet- waterway that joins the ocean to a sound

Tidal flats- sandy or muddy area between barrier islands and the mainland that is covered by water during high tide and exposed at low tide.

Maritime forest- forest shaped by salt spray and winds off the ocean

Basin- a structure used for holding water (natural or man made)

Physical weathering- disintegration of exposed objects caused by wind, waves, etc.

Chemical weathering- decomposition of earth's material at or near the surface

Labrador current- cold water current that flows south from the North Atlantic

Gulf stream- a northward moving current up the eastern coast of the U.S. consisting of warmer water (compared to surrounding water)

Habitat- a place where a particular plant or animal lives

Succession- act of following a sequence or order

Erosion- slow decomposition of an object exposed to earth's factors

Detritus- decomposed plant material

Feral- a once domesticated animal turned wild

Salt pan- an undrained natural depression in which water gathers and leaves a deposit of salt evaporation

Swale- a low lying or depressed and often wet stretch of land

Brackish- somewhat salty

Aquifer- water reserve

Sedge- A local term for a pond or swale. It is dominated by vegetatively by marsh grass.

Invertebrate- animal without a backbone

Jetty- a structure built from the shore into a body of water to protect a harbor or a navigable passage from being shoaled by deposition of longshore drift material

Polychaeta-class of annelid worms that includes most of the marine segmented worms

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Guidelines for Visitors

The North Carolina Coastal Reserve has many beautiful, intriguing areas to visit. However, these natural areas have characteristics for which visitors should be prepared. All habitats, particularly the marshes, thickets, and forests, have insects. Chiggers, ticks, no-see-ums, and mosquitoes can be especially bothersome in the summer. Extensive wet and muddy areas (and razor-sharp oysters) make closed-toed shoes essential. The sun can be harsh at all times of the year, so appropriate clothing and sunscreen are appropriate.

To protect the plants, animals, lands, and waters of the reserve, visitors are asked to follow the rules described below.

- Target shooting, hydraulic clam dredging, use of vehicles outside of specified upland routes, and illegal fishing, hunting, and trapping are not allowed in the reserve.
- Research projects and equipment must not be disturbed.
- Camping is only allowed on Masonboro Island site.
- Personal property not authorized by the Division of Coastal Management may not be kept in the reserve for more than two days.
- Non-game animals must not be disturbed or taken from the reserve. Vegetation may not be cut or altered unless it is necessary for a research or education project approved by the North Carolina National Estuarine Research Reserve.
- Written permission from NCNERR is required for all scientific research projects and collection activities.
- Polluting the waters of the reserve, by disposing of solid and liquid wastes, for example, is prohibited.
- Activities that would disturb the natural condition and animals of the reserve are not allowed. Prohibited activities include mining, using the land for commercial or industrial purposes, timber harvesting, ditching and draining and making excessive amounts of noise.
- Pets should be kept on a leash at all times.
- Fires are allowed only below the mean high tide mark. Pits must be filled with beach sand.