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Photo by Amanda Stein

Species Gallery

There are over 1000 documented species sightings in the Rookery Bay NERR. More than 50 of these are threatened or endangered, and over 40 are non-natives, many of them invasive. Microinvertebrates and phytoplankton have not been extensively studied nor catalogued.

Maintaining high natural biodiversity is an important management objective at RBNERR. Recognizing, or using keys to identify (ID) many species is a first step towards understanding community structures endemic to this area.

In the slide show offered here, and also available as printable ID cards, several of the more common and a few of the special interest species are presented with a brief description. Species lists cross-referenced for habitat type can be found on each individual habitat page (see directory).

More Information?

Slide Show

Species ID Cards (PDF)

List of Species Photos Available

Click on link to view

Alligator
Black Mangrove
Bobcat
Butterfly Orchid
Buttonwood
Cattle Egret
Christmasberry
Cinnamon Fern
Cocoplum
Coin Vine
Dog Flower
Cooter
Cypress
Deer, buck
Deer, doe
Eastern Phoebe
Giant Wild Pine
Glasswort
Giant Leather Fern
Golden Leather Fern
Great Blue Heron
Green Tree Frog
Gumbo Limbo
Hog Plum
Horn Worm
Least Tern
Leopard Crab
Water Primrose
Partridge Pea
Pencil Tree
Pickerelweed
Queen Butterfly
Railroad Vine
Red Mangrove
Resurrection Fern
Roseate Spoonbill
Grassy Arrowhead
Saltbush
Saw Palmetto
Seagrape
Sea Oxeye Daisye
Sea Purslane
Sedge
Small (Showy) Rattlebox
Softshell Turtle
Soldier Moss
Stiff-leaved Bromeliad
Strangler Fig
Swamp Lily
Swamp Thistle
Twisted Air Plant
White Mangrove
White Peacock Butterfly
Wild Batchelor's Button
Wild Coffee
Zebra Long-wing Butterfly

Rookery Bay
National Estuarine Research Reserve

Species Identification Cards

There are over 1000 documented species sightings in the Rookery Bay NERR. More than 50 of these are threatened or endangered, and over 40 are non-natives, many of them invasive. Microinvertebrates and phytoplankton have not been extensively studied nor catalogued. Several of the more common and a few of the special interest species are presented with a brief description.

Avicennia germinans
BLACK MANGROVE

Leaves

Pneumatophores

If you find small finger-like projections rising from the soil near a southern Florida coast, there is a black mangrove tree or forest nearby. These are called pneumatophores and have lenticels, allowing the roots to get oxygen. Black mangroves leaves have a gray underside and the bark is often darker than other mangrove species. Blacks tolerate the highest salinity of the three Florida mangroves and a crust of salt is often present on the leaves. These trees can be found a short distance inland from the shore and scattered throughout saltmarshes. They are intolerant of freezing temperatures.

Alligator mississippiensis
ALLIGATOR

Young gator w/yellow striped tail

The American alligator is a species of special concern in Florida and a federally listed threatened species. They prefer freshwater, but are found in brackish water where the coast and inland waters meet. Young gators have yellow striped tails that disappear with age. Alligators are distinguished from crocodiles by the round shape of their snout.

Crotalaria pumila
SMALL RATTLE BOX

Sometimes called showy rattlebox, this herb lives on beach dunes and in pinelands. It has flowers all year and has alternate petioled leaves. It is a member of the bean and pea family.

Anartia jatrophae
WHITE PEACOCK

This tropical butterfly lives in open and disturbed areas. *Anartia* lives in south Florida year round, but ventures into northern Florida during warm months. Its wing span is about 3 to 5” and it eats mainly bacopa and verbenas.

Danaus gilippus
QUEEN BUTTERFLY

Queens prefer brushy areas and feed on milkweed and milkweed family vines. They live year round in south Florida, rarely migrating to northern Florida. In Texas and Mexico however, Queens mass migrate south in the fall.

Borrichia frutescens
SEA OXEYE DAISY

This flowering rhizome lives above the mean high water line in coastal high marshes and dunes. It is tolerant of sediment buildup and provides resistance to erosion. *Borrichia* seeds provide food for birds and small mammals.

Ipomoea pes-caprae
RAILROAD VINE

This creeping vine is found in dune swales, at the high edge of beaches and on the edge of coastal marshes. Dense growth acts as a soil stabilizer. It is sensitive to freezing temperatures and prefers moist sand.

Lynx rufus
BOBCAT

Florida bobcats live in swampy areas, but evidence of scratching is often found in RBNERR's scrub areas adjacent to marsh. Peak hunting occurs at dawn and dusk, corresponding to peak activity of hare and rabbit, their main prey species. Bobcats generally breed between February and June. The litter size usually consists of 1-6 young after a gestation period of 60 days. You are more likely to see bobcat scat than a bobcat.

Odocoileus virginianus
DEER, BUCK

Deer are a tan or reddish-brown in the summer and greyish-brown in the winter. Adult males can attain lengths of over six feet and weight of up to three hundred pounds. Bucks grow a new set of antlers every year, shedding the old ones after the rut (breeding season) is over. Deer live primarily in wooded and brushy areas, and forage on woody plants, shrubs, fruit, and grass. The best time to see a deer is during the summer (after the fawns have been born), early in the morning away from highly developed areas.

Encyclia tampensis
BUTTERFLY ORCHID

The butterfly orchid is Florida's most common wild orchid. While it is protected by law (collection from the wild is prohibited), private growers propagate and share it. Orchids are usually found growing on mangroves, pond apples, oaks, and pines. They have one to three leaves, from a few inches to a foot or more in length, growing from a gray-green pseudobulb. Several flowers appear alternately on a tall, thin stalk, flowering from spring to fall. Many variations in bloom color have been found.

Euphorbia tirucalli
PENCIL TREE

Leaves

The pencil tree, or milkbush, is native to Africa. It has multiple trunks that support an abundance of pencil-thin succulent green branches. The leaves are extremely small and shed quickly. The true flowers, which are centered within a group of petal-like bracts, are inconspicuous. The pencil tree requires very little water but a great deal of sunlight. When any part of the pencil tree is cut, it oozes a white sap that can cause dermatitis. Placing a crushed branch in a river will stupefy fish.

Bubulcus ibis

CATTLE EGRET

The cattle egret, originally from Africa, is a white heron (50 cm in length) with a yellow bill. During breeding season it has yellow-orange plumes on head, neck and back. Egrets spend the day in wet pastures. They eat grasshoppers and beetles and remove ticks and flies from the backs of cattle. Egrets nest in mangroves or other trees near rivers.

Lycium carolinianum

CHRISTMAS BERRY

The Christmas berry is a coastal marsh shrub with thorns and very small alternating succulent leaves. The flowers are lavender or white, and the berries are shiny and red.

Dalbergia ecastophyllum

COIN VINE

Coin vine is a shrub that grows to about 4 m tall, but resembles a reclining or trailing vine. The wide spread sparse branches are brownish with alternate leaves, about 6-12 cm long. The flowers are white, and fragrant. The coin vine prefers dry sunny areas.

Osmunda cinnamomea

CINNAMON FERN

The cinnamon fern grows on poorly drained low ground in wet marshy woods, swamps, ditches, and streambanks. Cinnamon ferns exhibit good fire tolerance and rapid rhizome growth after fires. Its fronds are bright green turning to brown in the fall and winter.

Commelina spp.
DAYFLOWER

The dayflower is a perennial flowering from July to September, tolerant to flooding and frost. They are recognizable by their periwhinkle blue flowers with three unequal petals that bloom every morning but wilt by dusk. They grow in pine flatwoods and marshes.

Pseudemys floridana peninsularis
COOTER

The cooter is a large (12-16" carapace) freshwater turtle that eats algae. The carapace is more flat than domed. It is brown or olive with yellow markings, which are difficult to distinguish because they are covered with the algae.

Cypress seeds

Taxodium ascendens
CYPRESS

Text with ecological significance, community/ habitat, distinguishing featuresCypress, a deciduous tree, commonly grows in swamps, along creeks, and in wetland areas. Cypress can grow over 100' in height and over 3' in diameter, developing a large buttressed, tapered trunk with above ground "knees" (cone-like growths) extending from the roots. However, growth is often stunted in southwest Florida. The leaves are lacey and yellow-green. It has brown, fibrous bark similar to that of cedars.

Sayornis phoebe
EASTERN PHOEBE

The Eastern Phoebe is medium-sized flycatcher. It ranges from 142-168 mm, and the male is usually larger than the female, with darker feathers. The head, back and wings of the adults are olive or grayish-brown, and the chest, belly and under wings are cream colored. Juveniles have white bars on their wings. The bill is black. The Eastern Phoebe lives in woodlands and in woody vegetation.

Tillandsia utriculata
GIANT WILD PINE

The name giant wild pine is very misleading; the giant wild pine is an airplant that does not even necessarily grow on pines. The giant wild pine is an endangered species that grows in dry and mesic hammocks, cypress swamps, and pinelands. The giant wild pine produces a single flower spike, releases seed and dies. Without man or the Mexican bromeliad weevil, the giant wild pine can live up to 20 years.

Hepatus epheliticus
LEOPARD CRAB

The leopard crab, or calico box crab, is a subtidal species and lives mostly off-shore. They occasionally wash onto the beach, but are more often caught in nets thrown from boats. These crabs are easily identified by their distinctive large red and brown spots. Anemones sometimes lodge on their carapace.

Salicornia virginica
GLASSWORT

Glasswort is a native herb common in salt marshes, beach dunes, mangroves and salt flats. Early settlers in Florida cooked and pickled glasswort because of its high salt content. Glasswort is a succulent groundcover with a horizontal main stem and erect, lateral branches that look like strung beads.

Acrostichum danaeifolium
GIANT LEATHER FERN

The giant leather fern grows along canals, ditches, sloughs, ponds and areas with generally moist soil. It prefers full sun for at least part of the day but will grow where shaded. The fronds are two meters long or longer, and grow in large clumps, arching to more or less erect in the middle of the clump. The pinnae, or leaves, are very close together on the frond and helps to distinguish between this leather fern and the golden leather fern.

Manduca sexta
HORNWORM

The adult hornworm is a voracious eater. Three to five hornworms have been observed to strip all the leaves from a stressed white mangrove in a day. The hornworm gets its name from the thick “horn” on the rear of the larva. Unlike other caterpillars that hang their cocoons from trees, the hornworm drops to the ground and burrows underground and forms its 45 to 60 mm reddish brown cocoon there. As an adult the hornworms are dull gray moths with orange-yellow markings along the abdomen.

Litoria caerulea
GREEN TREE FROG

The green tree frog, native to Australia, can be found most often on rocks and trees and on the ground near water. As the name suggests, the green tree frog has green skin, very smooth and slick to the touch. The fingers and toes have large discs and are webbed. Some have white spots on their back, sides and limbs. The green tree frogs mate between November and February, and after hatching the tadpoles take about six weeks to reach full maturity.

Cassia fasciculate
PARTRIDGE PEA

This small flower is found on plants that grow in the underbrush in scrub and dry flatwoods. It grows up to two feet, with yellow flowers alternating up the stem and bloom from July to September. These flowers fold from the center at night or when touched. The leaves resemble a fern.

Ludwigia hexapetala
WATER PRIMROSE

Primrose is a perennial herb that can be found creeping along the shoreline, floating on the water surface, or growing upright. It forms thick sprawling mats with bright yellow, five petal flowers that bloom throughout the summer, and willow-like alternating leaves. The water primrose is aggressively invasive.

Pontederia cordata
PICKERELWEED

The pickerelweed is an aquatic herb found in many shallow (rarely more than 3 foot deep) depressional marshes. Only 10cm of the plant itself are emergent, although the plants create large mats over the water. Mostly blue but occasionally white flowers are arranged into conical spikes that bloom from July to August. Above water the leaves are 18cm and heart-shaped; below water they are 4.5cm ribbons.

Sagittaria graminea
GRASSY ARROWHEAD

The grassy arrowhead gets its name from its long, narrow, needle-shaped leaves. This shallow (less than one foot) water plant has small, three petal white flowers that bloom from June through August. It is nottolerant of frosts, alkali water, and strong lime or salt contents. While it is usually found in water, it can grow in rich damp soil.

Baccharis halimifolia
SALTBUSH

Saltbush grows in any soil, wet or dry, at the edge of salt and freshwater marshes, and old fields. It is a woody shrub that grows to 4m tall with gray branches and grayish green alternating 3-4cm long leaves. It's small, flat flowers bloom in the fall, grouped in bell shaped, 5-6mm heads. Its fruit is small with a cottony or feathery skin.

Chrysobalanus icaco
COCOPLUM

This native shrub of South Florida and the West Indies freezes at 26-27°F but returns from the roots. The flowers are not showy nor are the fruits, which are about 1" in diameter and either yellow, pink, red or black. They have a spongey pulp surrounding the seed, which is edible raw or roasted and tastes similar to an almond. The fruit can be cooked and made into preserves.

Cyperus articulatus
JOINTED FLAT SEDGE

Sedges are a grass-like herb that form tufts in moist or wet soil, such as marshes, swamps, prairies, and floodplains. The triangular stems have flat spikes at the top. When not flowering with the wide feathery white flower, sedges can be differentiated from other grasses by sharp edges. Sawgrass is also a sedge with saw-like edges.

Sesuvium portulacastrum
SEA PURSLANE

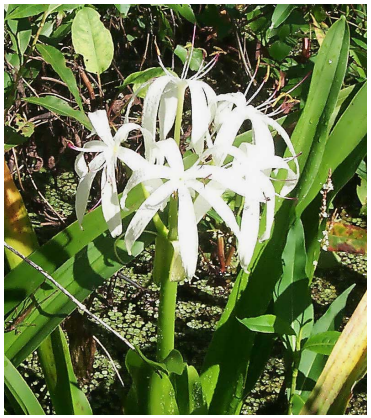
Sea purslane is most often found within mangroves, saltmarsh and in the ecotone between beach and mangrove. This groundcover forms a low dense mat with branching green, red or yellow stems. The leaves are small, narrow, green and fleshy. Leaves are edible and add salty crunch to salads. Please avoid use of all wild edibles in areas where mosquito spraying has recently occurred.

Tillandsia fasciculate
STIFF LEAVED BROMELIAD

Stiff leaved wild pines, a bromeliad, are the most common air plants, and can be found thriving in clusters on (mostly) oak trees throughout Southern Florida. Their distinct plated flower starts out white, but as they bloom from January to late summer, the flower becomes a bright red or purple. The leaves are arranged similarly to the flower; alternating up the stem and plated over each other.

Apalone mutica
SOFT SHELL TURTLE

The smooth softshell grows to a carapace length of 14 inches in females, and half that in males. Softshells have a flat and leathery carapace with very flexible edges. Adult males are usually gray or brown with dots and dashes on the back. Adult females have drab coloration and large dark blotches. Both sexes have two light lines on the side of their head; one behind the eye and one that starts under their snout. Softshells are found in rivers. Sandbars are important for basking and egg laying sites.



Crinum americanum
SWAMP LILY

The swamp lily is a fragrant herb that emerges each year from a deeply rooted bulb. The long leaves appear to be arranged in a spiral from the base of the stem when viewed from above. The flowers are white with six petals. The fruit is large (4-6cm wide), with many large fleshy seeds. They grow in any moist or wet soil, and bloom through spring and summer.

Cirsium muticum
SWAMP THISTLE

The swamp thistle can be found in any soil that is wet and can reach heights of 3m on thick stems that are often covered with cobwebby hairs. The spiny leaves are usually painful and the stems end in large heads of pink or purple disk-shaped flowers. These flowers bloom in the fall, and during the rest of the year this plant can easily be identified by the spiny leaves.

Tillandsia flexuosa
TWISTED AIR PLANT

The twisted air plant, or banded air plant, is a mass of gray tentacle-looking leaves, and its appearance is much like that of an octopus. These air plants prefer a drier atmosphere, and are found in many forest flatlands. As with most Floridian air plants, they are endangered by rapidly shrinking habitat and predation by the exotic Florida bromeliad weevil.

Coccoloba uvifera
SEA GRAPE

Seagrape is a tropical plant, native to coastal hammocks, coastal scrub, coastal grasslands and beach strands, that can grow to reach heights of 50 feet. On the beach, where it is usually found, the salt content stunts its growth, and it grows as a diffuse, sprawling shrub, with stout branches and no distinct trunk. The shiny, evergreen leaves are leathery, rounded, red-veined, and about 8" in diameter. The fragrant white flowers are very small. Female trees bear reddish fruits that are pear-shaped and fleshy, hang down in grape-like clusters and attract birds.

Polygala nana
WILD BATCHELOR'S BUTTON

Wild bachelor's button, also known as candy root or dwarf milkwort, can be found in moist pinelands, often growing up between dead pine needles. This herb is most easily recognizable by its fuzzy yellow ball shaped flowers that bloom from March to October, and teardrop-shaped spatulate leaves.

Psychotria nervosa
WILD COFFEE

Wild coffee is a 3m shrub that can be found growing in higher areas of swamps, coastal shell mounds, and pine flatwoods. It has bright, shiny green leaves, sessile clusters of white flowers, and red fruit.

Heliconius charitonius
ZEBRA (LONGWING) BUTTERFLY

Zebras prefer the edges of woodlands and hammocks and passion vines are their favorite food. They live year round in south Florida and are common in disturbed habitats. Unlike other butterflies, this black and yellow butterfly has a "home"; one branch on one tree that it prefers above all others, and when they are alarmed they make a distinct creaking sound.

Odocoileus virginianus
DEER, DOE

Deer are a tan or reddish-brown in the summer and greyish-brown in the winter. Their belly, throat, nose band, eye ring and insides of the ears are white. In the spring, after a gestation period of seven months, one to two fawns are born in a den and are kept hidden for the first two weeks. Fawns lose their white spots during the fall mating season.

Acrostichum aureum
GOLDEN LEATHER FERN

This leather fern is rare and occurs only in southwest Florida. The golden leather fern grows in brackish water, salt marshes mangroves and coastal hammocks. They prefer sun, but can survive equally well in shaded areas. The pinnae, or leaves, are more widely spaces along the frond than the giant leather fern.

Bursera simaruba
GUMBO LIMBO

The gumbo limbo is instantly recognized by the red to silver-red peeling bark that it displays and the distinct smell of turpentine. It is tolerant of a wide variation of soil types and moisture, but is not frost hardy. It can reach heights of 50 feet or more. In the spring it blooms very small (3/16 inch) green flowers, and in the summer it produces red, half-foot long, foot ball shaped fruit that are much sought after by parrots and mockingbirds.

Ardea herodias wardi
GREAT BLUE HERON

The great blue heron lives in and around salt and freshwater environments. They are blue gray in color with a black stripe above each eye extending to the back of the neck as a plume. The legs are long and gray. They grow to 54 inches in length and have a wingspread of up to 6 feet. Great blue herons nest together in colonies, otherwise known as a heronry (with 15 to 161 active nests per heronry) in the tops of trees.

Prunus rivularis
HOG PLUM

The hog plum is a shrub/small tree that can be found in open areas where soils are well-drained. In the late spring they produce a 1/2" to 3/4" red/yellow fruit that makes an excellent wine and jelly, although the fruit contains hydrocyanic acid and should not be consumed in excess. The young tender green stems are edible raw, with a strong sour taste. Its yellow, half-inch fragrant flowers bloom from late spring to early fall, and its dense, thorny, foliage provides excellent protective cover from predators.

Sterna antillarum
LEAST TERN

The least tern is the largest tern in all of North America, with a body length of 8.5 inches and a wingspan of 20 inches. They are found near the coast and feed by dropping into water for small fish. Its bill is yellow with a very small black tip. Its wings, lower back and forked tail are all dark grey, its smooth cap and eye-rings are black, and the rest of its body is white. It has yellow legs, and there is virtually no visual way of identifying gender.

Rhizophora mangle
RED MANGROVE

The red mangrove is the largest of Florida mangroves, and usually the one that reaches farthest out into the water. The red mangrove is easily identified by its prop roots. Its leaves are elliptical, rounded at the outer end and narrowing toward the base, dark green and very shiny on the upper surface, thick, and two to six inches long by one to two inches broad. The propagule is an elongated leathery inch-long pod that carries a seed which usually germinates before falling from the tree.

Polypodium polypodioides
RESURRECTION FERN

Picture caption

The resurrection fern gets its name from its behavior during droughts. As it gets dry the fern curls up and dies, but at the first rain it comes back full-bloom. The resurrection fern grows on trees as an air plant (not a parasite), but occasionally forms colonies on well-drained soil.

Serenoa repens
SAW PALMETTO

The saw palmetto is a small, scrubby palm tree that typically grows to a height of 6 to 10 feet with large, 2 to 3 foot high, spiny-toothed leaves that form a circular, fan-shaped crown on the tree. The 1 inch long berries are a deep red-brown to black color and are wrinkled, oblong and about a half-inch in diameter, and have many medicinal properties. It grows in a wide range of habitats from seaside sand dunes and dry scrub to moist forests, pine flat woods and even wetlands.

Ajaia ajaja
ROSEATE SPOONBILL

These birds are pink and white with scarlet-tinted wings. The neck is white, legs and eyes red, and tail feathers yellow to orange. The 6 - 7 inch bill is flattened like a spatula. They can be found in remote swamplands surrounded by dense aquatic plants or mangrove forests, usually nesting with ibises, herons and egrets. They eat the crustaceans, insects and larvae, mollusks, amphibians, fish, aquatic plants and seeds that can be found in and near the water.

Ficus aurea
STRANGLER FIG

The strangler fig is an epiphyte that can be found in wetlands, cypress swamps, borders of mangrove swamps, and upland forest communities. Although it is usually a multi-trunked parasitic growth that wraps around (and eventually kills) its host, it can also be found as a free-standing evergreen tree. Both forms have a milky white sap, smooth gray bark, dark green leathery leaves, and both bear red-purple figs.

Conocarpus erectus
BUTTONWOOD

Not a true mangrove, the buttonwood is usually found at the higher elevations of the marsh, in association with white mangroves. Buttonwoods are trees with dark gray bark that can reach heights of 18m. Leaves are elliptic, leathery and smooth green, or may be “downy”, sharply pointed with two salt glands at the base. Flowers are green and borne in dense heads. Fruit are purplish in color, round to oval in shape.

Laguncularia racemosa
WHITE MANGROVE

Leaves opposite and rounded with a small notch at the tip

This is the smallest of the mangroves, found most often mixed with other mangroves, along the eddge of marsh and hammock. It is usually the first mangrove to seed in a disturbed or restored brackish wetland. It has no prop roots or pneumataphores, but under extreme oxygen limitations develops adventitious roots.