

Florida mangroves

The Florida Mangrove is found on the gulf coast of Florida.

It consists of over 220 fish species, 181 bird species, 24 reptiles and 18 mammal species. Mangroves act as physical traps and also provide attachment surfaces for different marine organisms. Many of these attached organisms filter water through their bodies and, in turn, trap and cycle nutrients.

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Abiotic Conditions of the ecosystem

Abiotic Factors



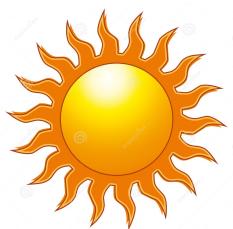
Climate: Mangroves only grow on the tropical and temperate coastlines. They don't grow in coastlines when the winters degrees goes below 40 degrees Celsius.

Soil: Mangroves grow in all sorts of soil. The soils are made up of sand, slit and clay in different combinations of rich organic matter. The soils are usually saline, poorly drained and are without oxygen.

Salinity: Mangroves grow best in saline-rich water. Mangroves live in a saline environment and depend on fresh water to maintain the best salinity balance and to provide extra inorganic nutrients in terrestrial run-off

Ocean Currents: Helps give out mangrove propagules. As the currents spread the seeds it helps keep the swamp full of trees in a lot of different areas

Florida mangrove food web



Examples of symbiosis in the Florida Mangroves

There are 3 types of symbiosis in Florida's Mangroves. They are Mutualism, commensalism, parasitism.

Mutualism is when both species benefit from each other. An example of Mutualism in a mangrove is when lichen grows on a mangrove tree. The Lichen is made up of fungus and algae. The fungus gets food from the algae when it goes through photosynthesis and the algae gets a place to live.

Parasitism involves one organism living off another organism and harming it. Mistletoe which grows on a mangrove tree is an example of parasitism. The mistletoe grows into the bark of the tree, and takes some of the mangrove tree food. The mangrove tree loses some of its food and ultimately gets hurt.

Commensalism is a relationship in which one species benefits and the other species is neither helped nor harmed. In a mangrove a commensalism is an oyster and a mangrove pneumatophore. The oyster has a good place to live, and no risk has been done to the mangrove.



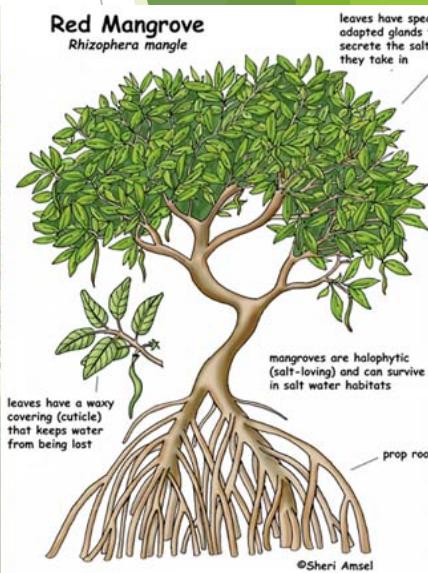
Examples of adaptations to abiotic conditions which allows organisms to survive

Root adaptations is an example which allow mangroves to survive in the soft sediments along the shoreline. Root adaptations improve the resilience of mangrove trees along shorelines in the soft sediments.

Specialised root structures allow mangroves to live in sediments which are poor in oxygen.

The mangrove trees are adapted by complex root systems to live in oxygen-poor or anaerobic sediments.

Another example of the adaptions are the adaptions of salt exclusion or salt excretion which allows mangroves to live where other plants cannot. The salinity effectively limit competition from other plants, while mangroves have salt exclusion or salt excretion adaptations allowing them to survive in these environments.



- **How the abiotic conditions are changing (particularly how humans impact the abiotic conditions of the ecosystem).**

The abiotic conditions of the Florida mangroves are impacted by dredging, water pollution from oil spills, herbicides and urban development

Dredging takes place when the aerial roots are submerged it then suffocates the mangroves which prevents oxygen from entering the system of the root.

Herbicides, oil spills, and other types of pollutants may kill mangroves. Oil spills cause mangrove damage by covering the roots, reducing oxygen transport to underground roots.

Urban development of areas in and around mangroves contributes to the loss of this ecosystem and other related ecosystems of wetlands.



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