

SEAGRASS: A HIDDEN TREASURE

*"The seagrass whispers secrets
and rustles with intrigues..."*

*-taken from "Owl Island Walking"
by Monika Roleff, 2006*

Tim Carruthers

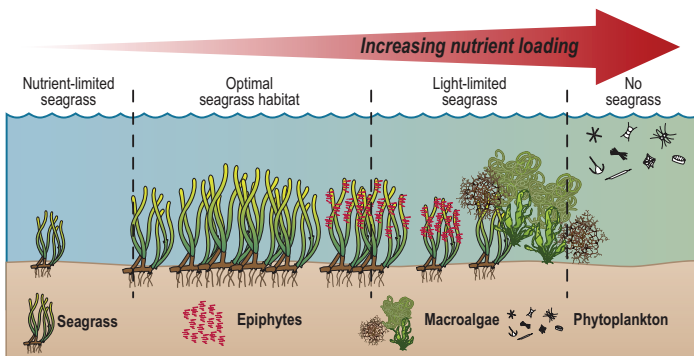
Turtle grass (*Thalassia testudinum*) near Isla Escudo de Veraguas in Panama.

Seagrass is a valuable oceanic resource capable of indicating change, providing a food source, and creating a safe habitat for sea life.

INDICATORS OF CHANGE

Seagrass is sensitive to environmental changes because of its high light requirement, among the highest of any plant in the world.

Like the canaries that were used to detect deadly gases in the coal mines, seagrasses, nicknamed "coastal canaries," are a valuable tool in the detection of harmful changes in the ocean.



Seagrasses are associated with decreased light resulting from increased nutrients which increase growth and phytoplankton and block light.

SEAGRASS AS FOOD

Seagrass is a direct source of food for sea turtles, geese, dugongs, and manatees.

Decomposing pieces of seagrass, or detritus, drift downward and provide nutrients for creatures who have a very limited food supply in deep ocean canyons.

Seagrass meadows also support the commercial seafood industry. This includes seafood such as lobster, salmon, blue crab, mussels, oysters, clams, and shrimp. When seagrass is lost due to increased nutrients, so is the sea life dependent upon it.

Seagrass meadows provide income and sustenance for many coastal peoples.



R.P. van Dam

Green Sea Turtle (*Chelonia mydas*) eating seagrass.



Michelle Waycott

Fishing in a seagrass meadow in Zanzibar, East Africa.

SEAGRASS AS HABITAT

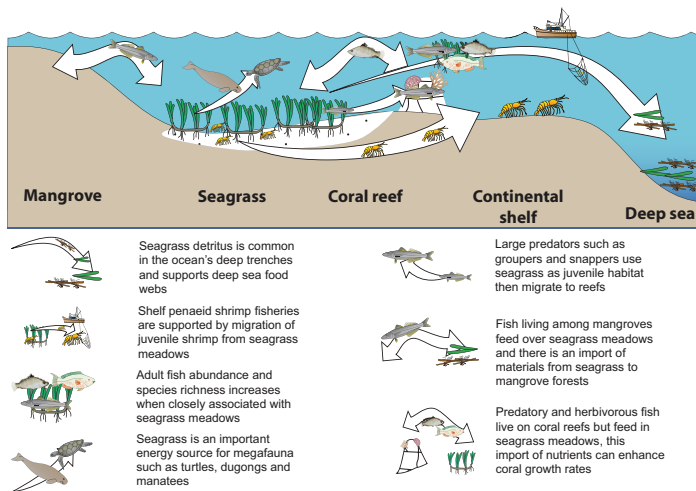
Seagrass provides a protective habitat, as well as a nursery, for many species of sea life.

One benefit of living in a seagrass meadow is its location away from reefs, where many dangerous predators roam.

Seagrass meadows are widespread and can be found around the world in both temperate and tropical ecosystems. Their locations span from southern Australia to Alaska.

Even though many sea creatures depend on seagrass at some point in their life, very few use it throughout their life. After benefiting from the safety and protection of the meadows, many species move on to live in other kinds of habitats such as coral reefs and mangrove forests.

TROPICAL SEAGRASS ECOSYSTEMS

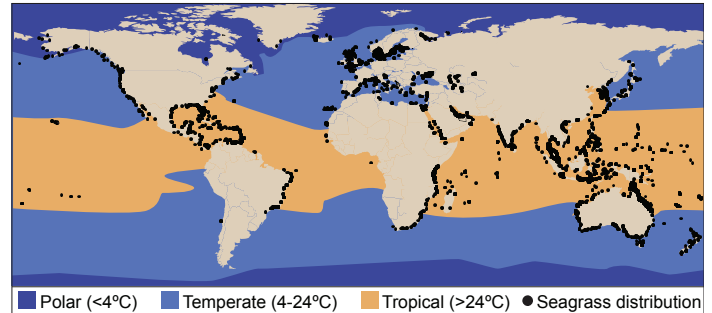


Trophic transfers involve movement of juveniles to other environments.

FUN FACTS ABOUT SEAGRASS:

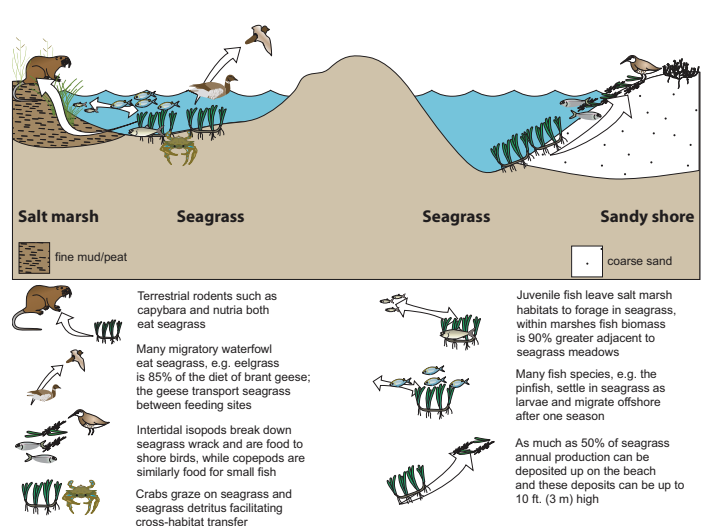
- Some fish, such as pinfish, pretend to be seagrass
- You can see dugongs eating seagrass from satellite imagery
- Darwin's grandfather, Erasmus Darwin, published a poem about seagrass in 1798
- Seagrass has been used as fuel, upholstery, and to thatch roofs in several places in the world
- *Posidonia* is named after the Greek ruler of the sea, Poseidon
- *Ruppia maritima*, or Widgeon Grass, is often mistaken for a solely freshwater plant but it is a seagrass closely related to *Posidonia*

SEAGRASS HABITATS ARE BOTH TEMPERATE AND TROPICAL



Map shows the global distribution of seagrass in relation to mean ocean temperature (*adapted from Orth et al., Bioscience, 2006*).

TEMPERATE SEAGRASS ECOSYSTEMS



Seagrass is removed from the temperate ecosystem and becomes food for birds and wrack. It also plays a role in nutrient cycling.

FOR MORE INFORMATION

This fact sheet was produced by the National Center for Ecological Analysis and Synthesis (NCEAS) Global Seagrass Trajectories Working Group and the Integration and Application Network (IAN) at the University of Maryland Center for Environmental Science (www.ian.umces.edu).



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