

# SEAGRASS: A HIDDEN TREASURE

Keith Ellenbogen

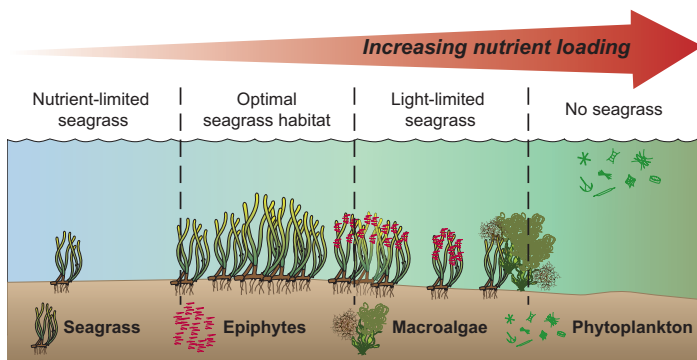


*Seagrass is a valuable coastal resource capable of indicating change, providing a food source, and creating a safe habitat for sea life.*

## COASTAL WATERS FORECASTING

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.



adapted from Wazniak et al. 2007. Ecological Applications 17(5): 564-578

Increasing nutrients initially may increase seagrass growth, but eventually results in macroalgae and phytoplankton growth, which block light to seagrass.

## 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.



Giuseppe Di Carlo

Seagrass supports coastal fisheries.

## SEAGRASS AS HABITAT

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

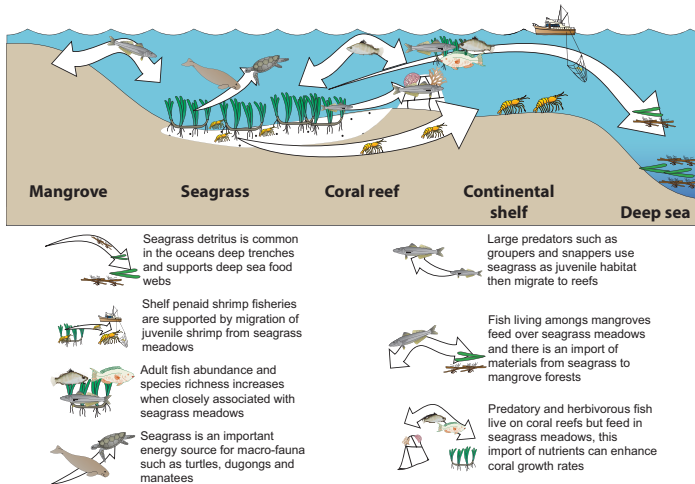
One benefit of living in a seagrass meadow is its location away from reefs, where many dangerous predators roam.

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.

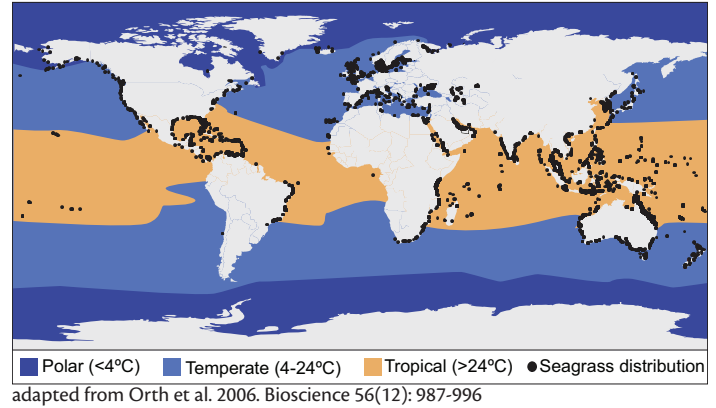


adapted from Heck et al. 2008. Ecosystems 11(7): 1198-1210

## 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 oceanica* is named after the Greek ruler of the sea, Poseidon
- *Ruppia maritima*, or Wideon Grass, is often mistaken for a solely freshwater plant but it is a seagrass closed related to *Posidonia*

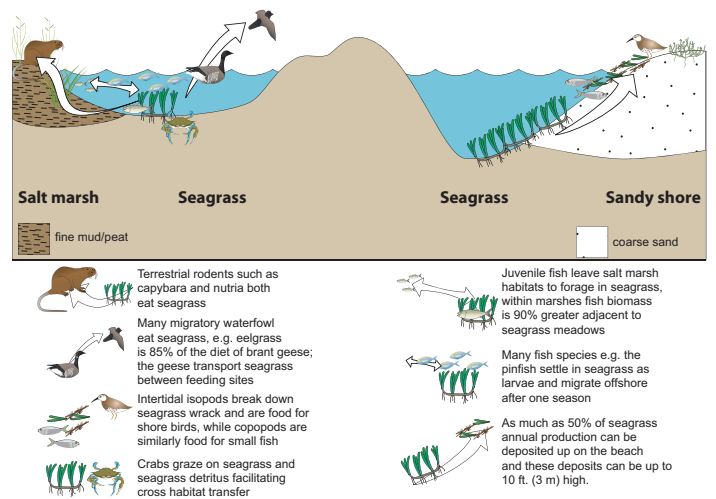
## SEAGRASS HABITATS ARE BOTH TEMPERATE AND TROPICAL



Map shows the global distribution of seagrass in relation to mean ocean temperature.

## TEMPERATE SEAGRASS ECOSYSTEMS

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



adapted from Heck et al. 2008. Ecosystems 11(7): 1198-1210

## FOR MORE INFORMATION:



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