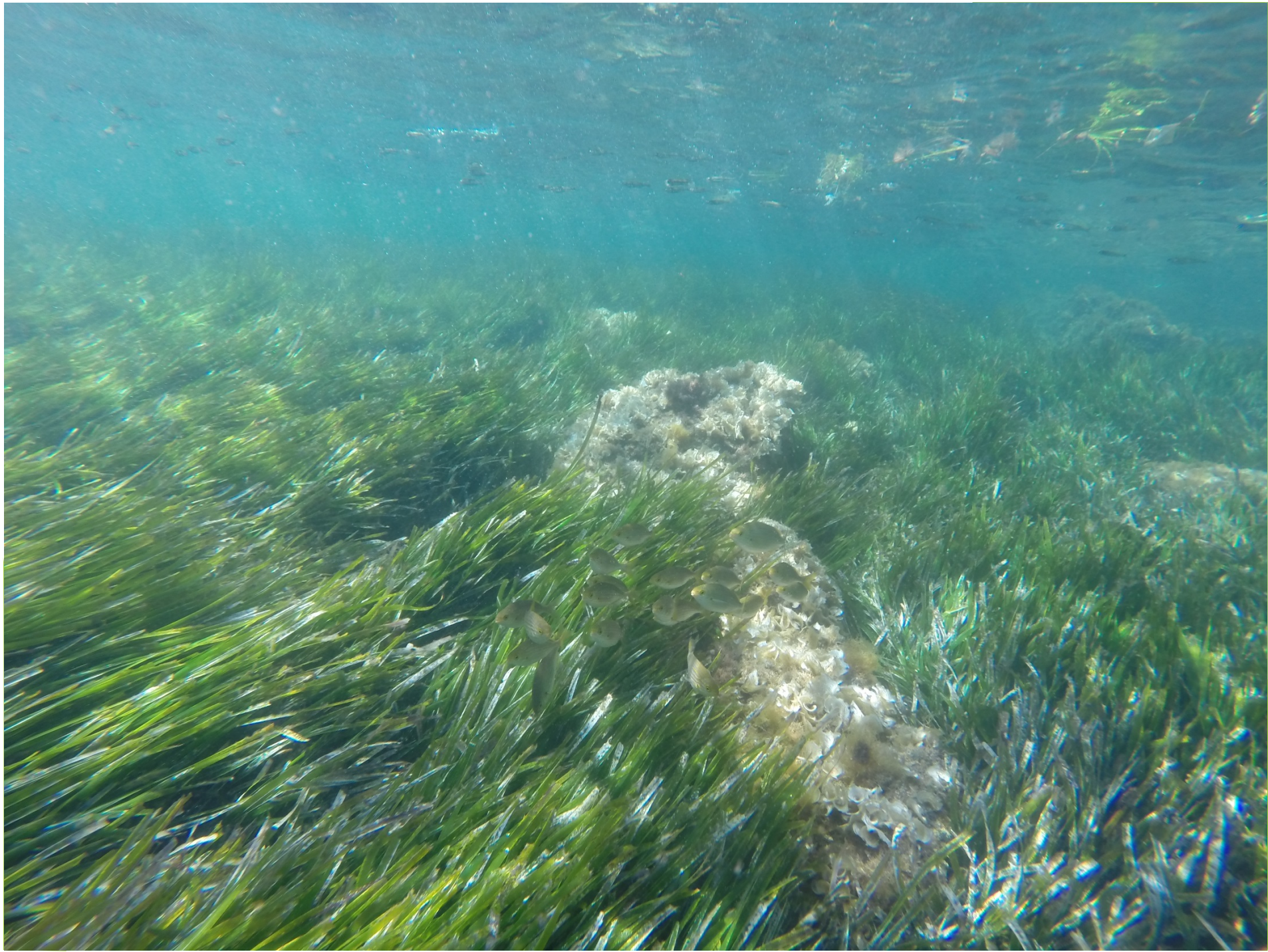




Eelgrass - It's not just for eels anymore

Dr. Phil Colarusso
US EPA

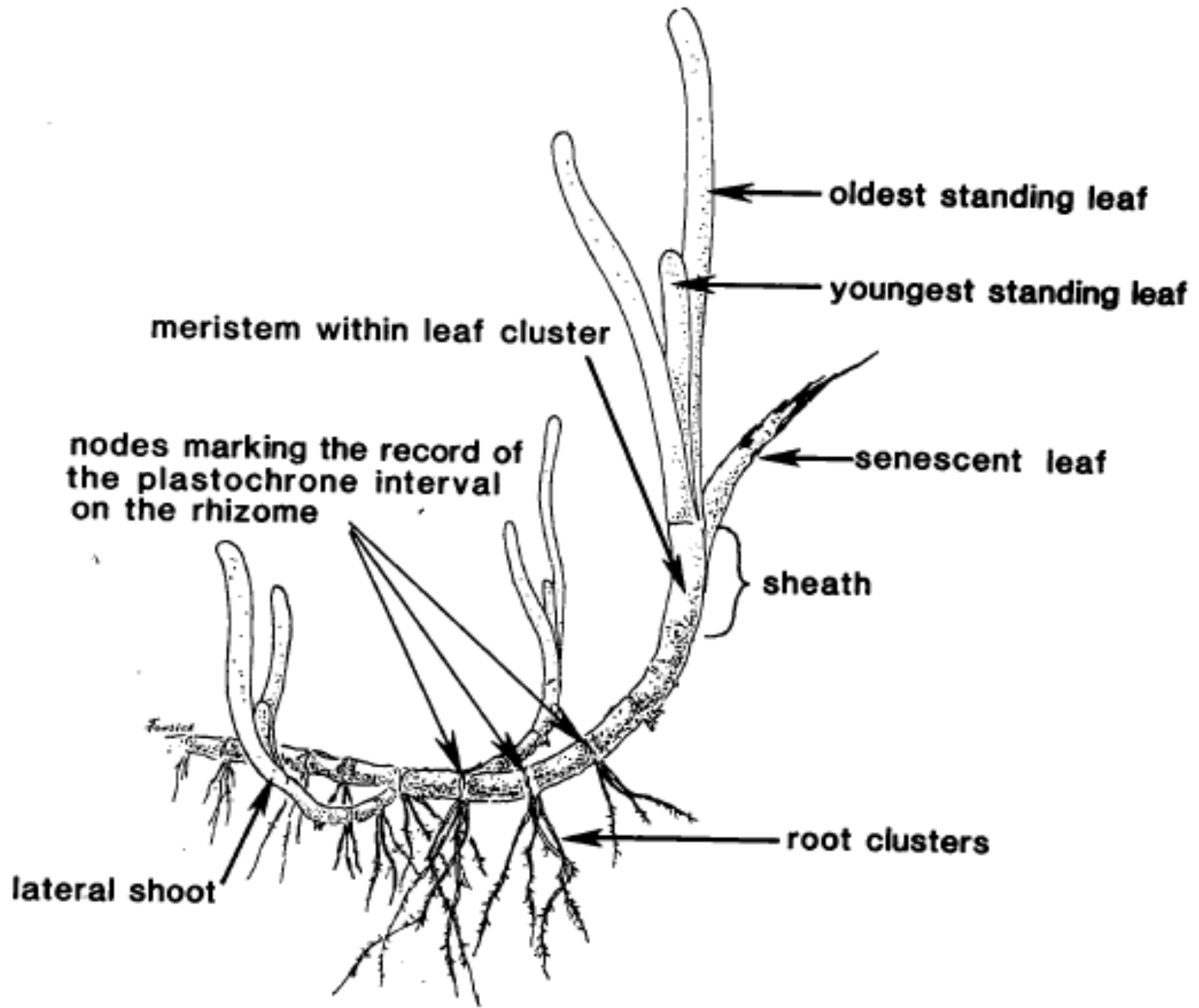




Eelgrass

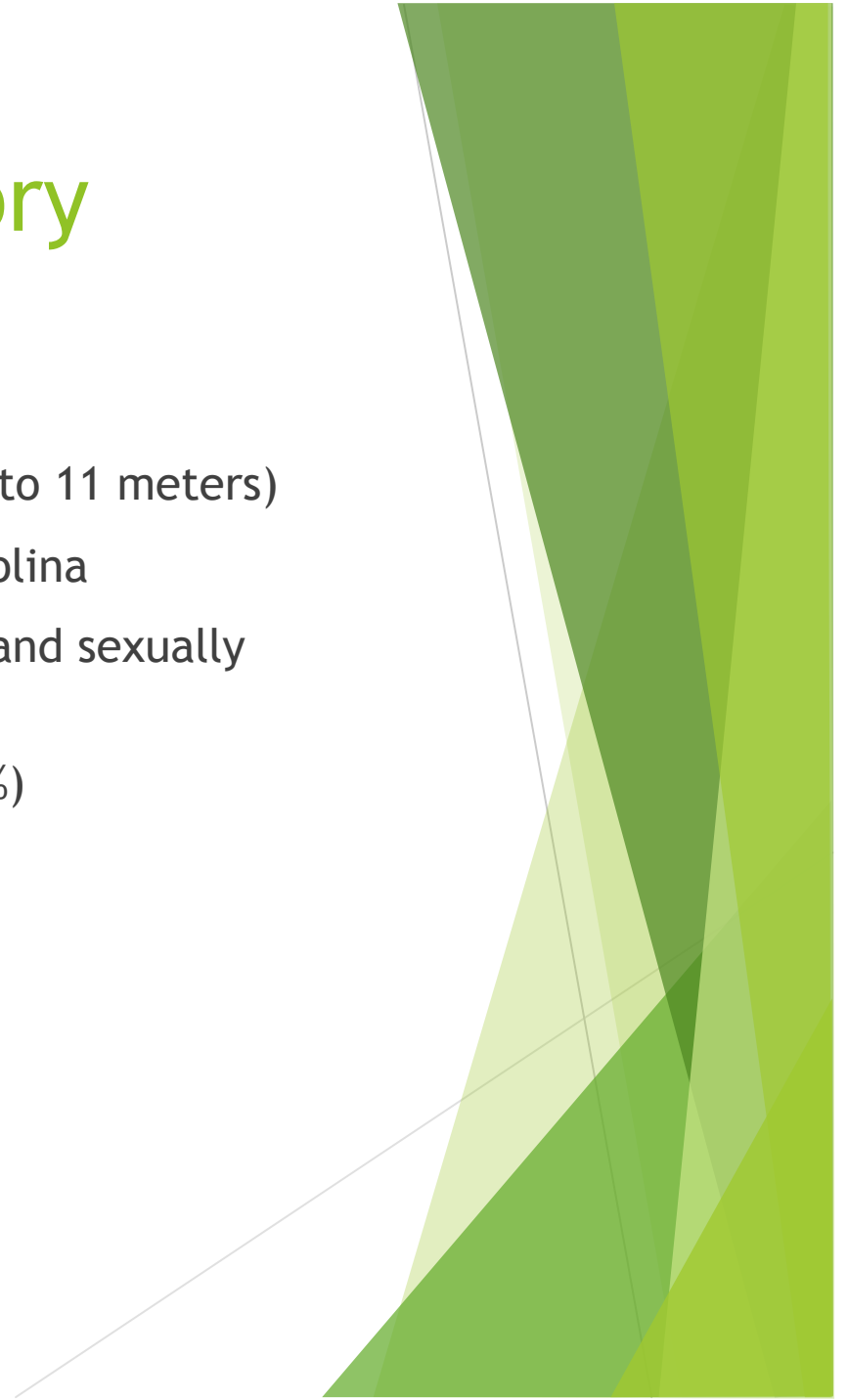
- ▶ Morphology/Natural history
- ▶ Ecology
- ▶ Threats to
- ▶ Population trends
- ▶ Restoration efforts
- ▶ What can you do





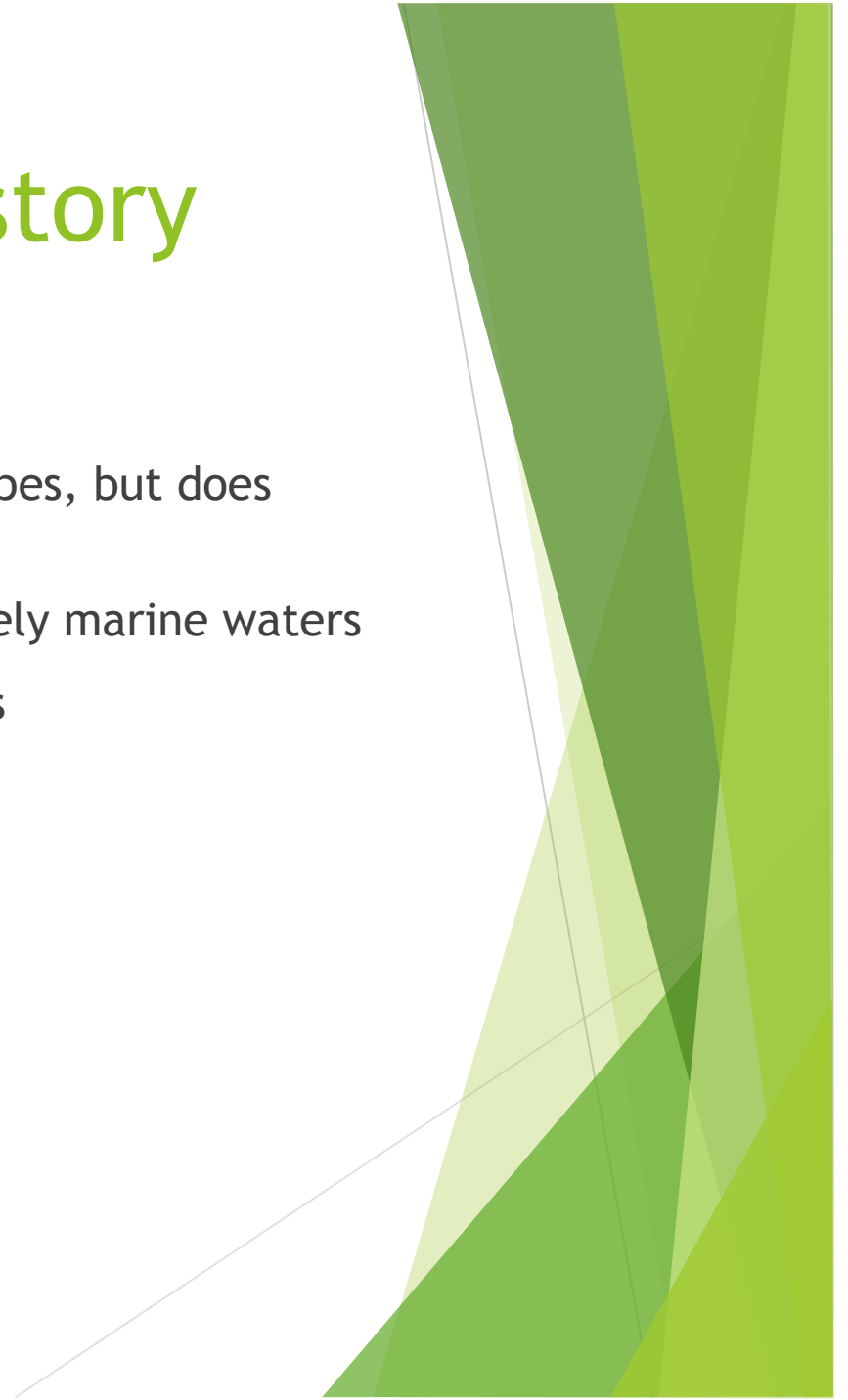
Eelgrass natural history

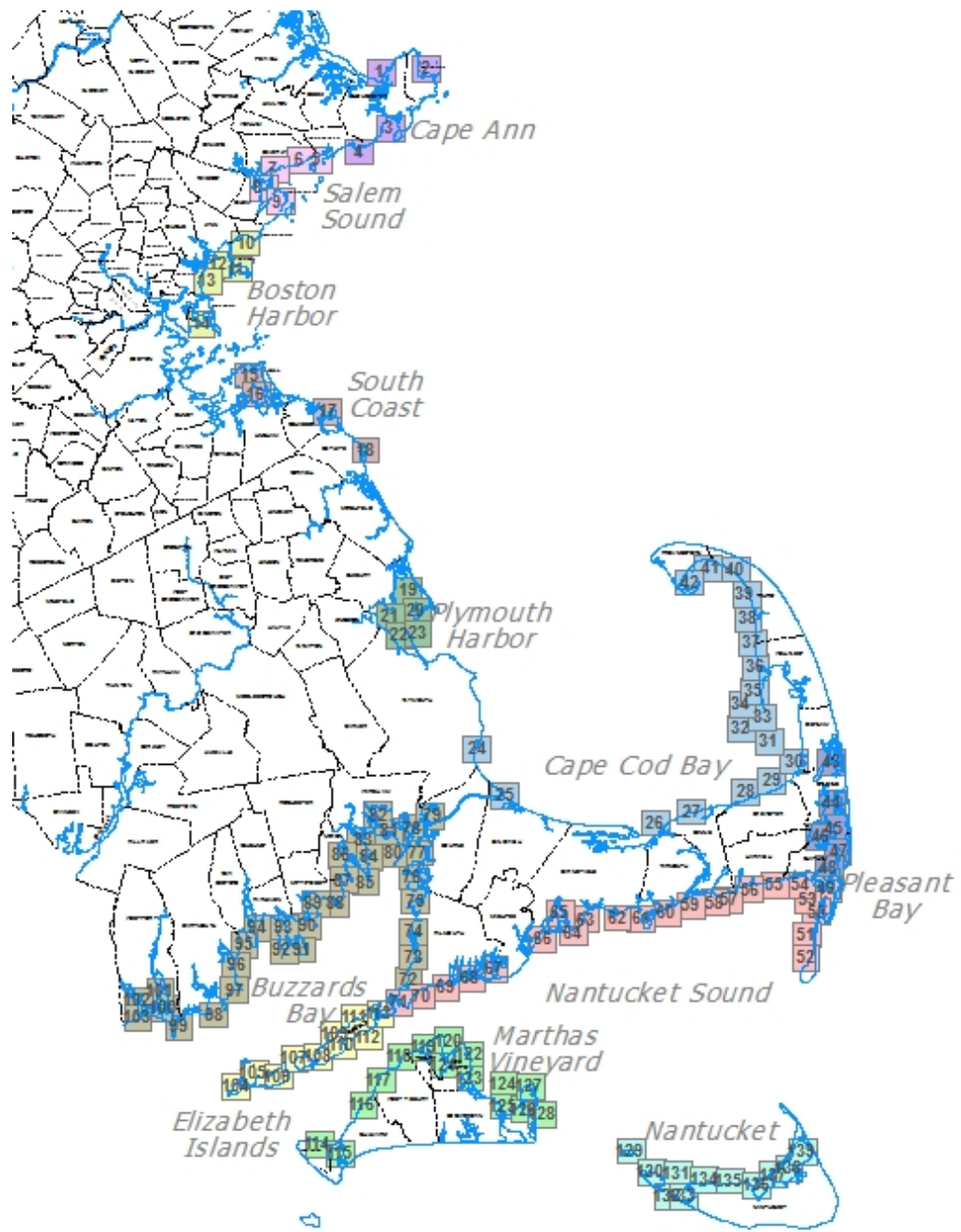
- ▶ Rooted shallow water plant (intertidal to 11 meters)
- ▶ Alaska to Mexico, Canada to North Carolina
- ▶ Reproduces asexually (lateral shoots) and sexually (seeds)
- ▶ High ambient light requirements (> 20%)

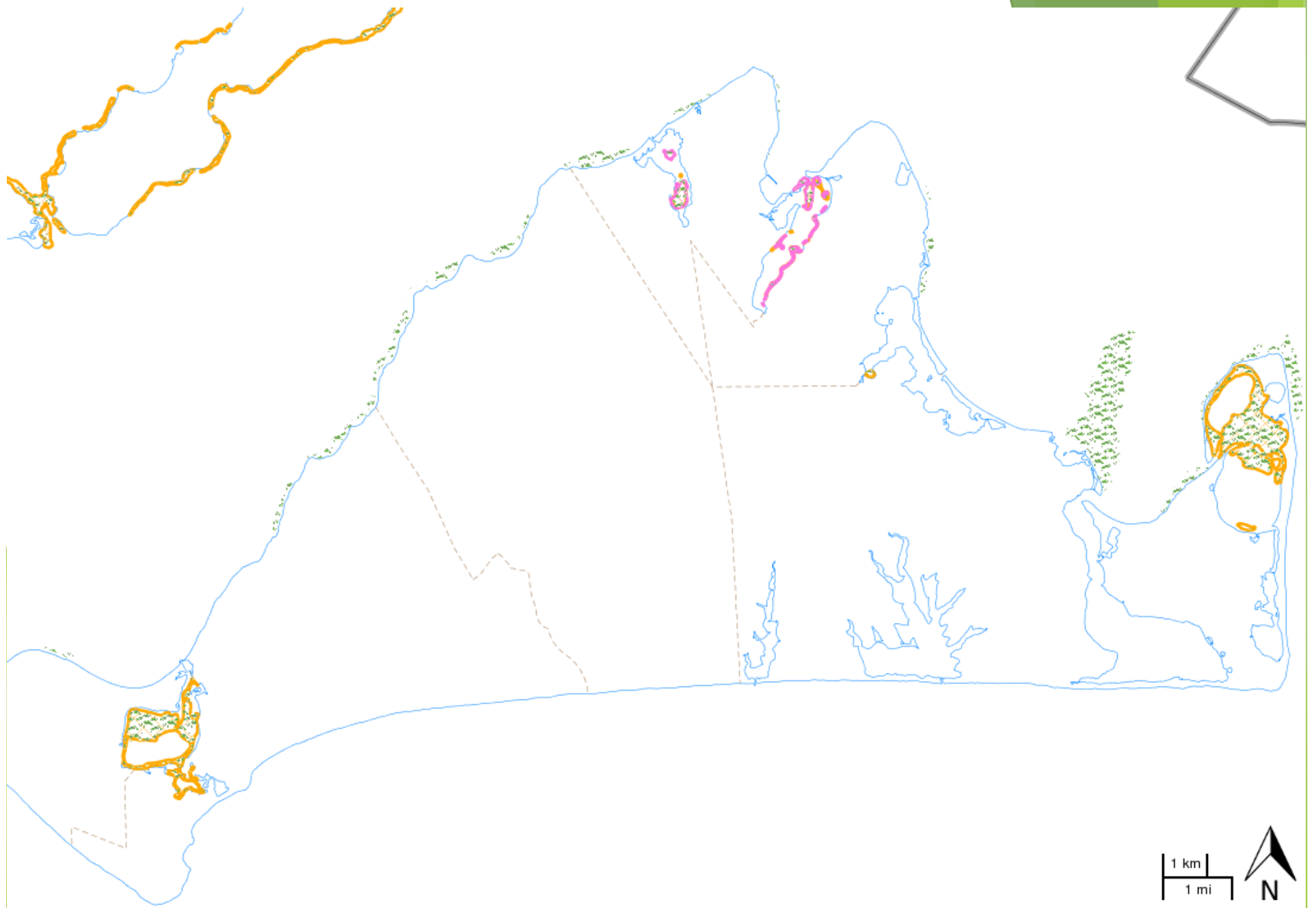


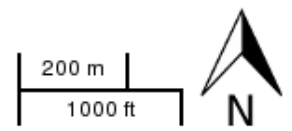
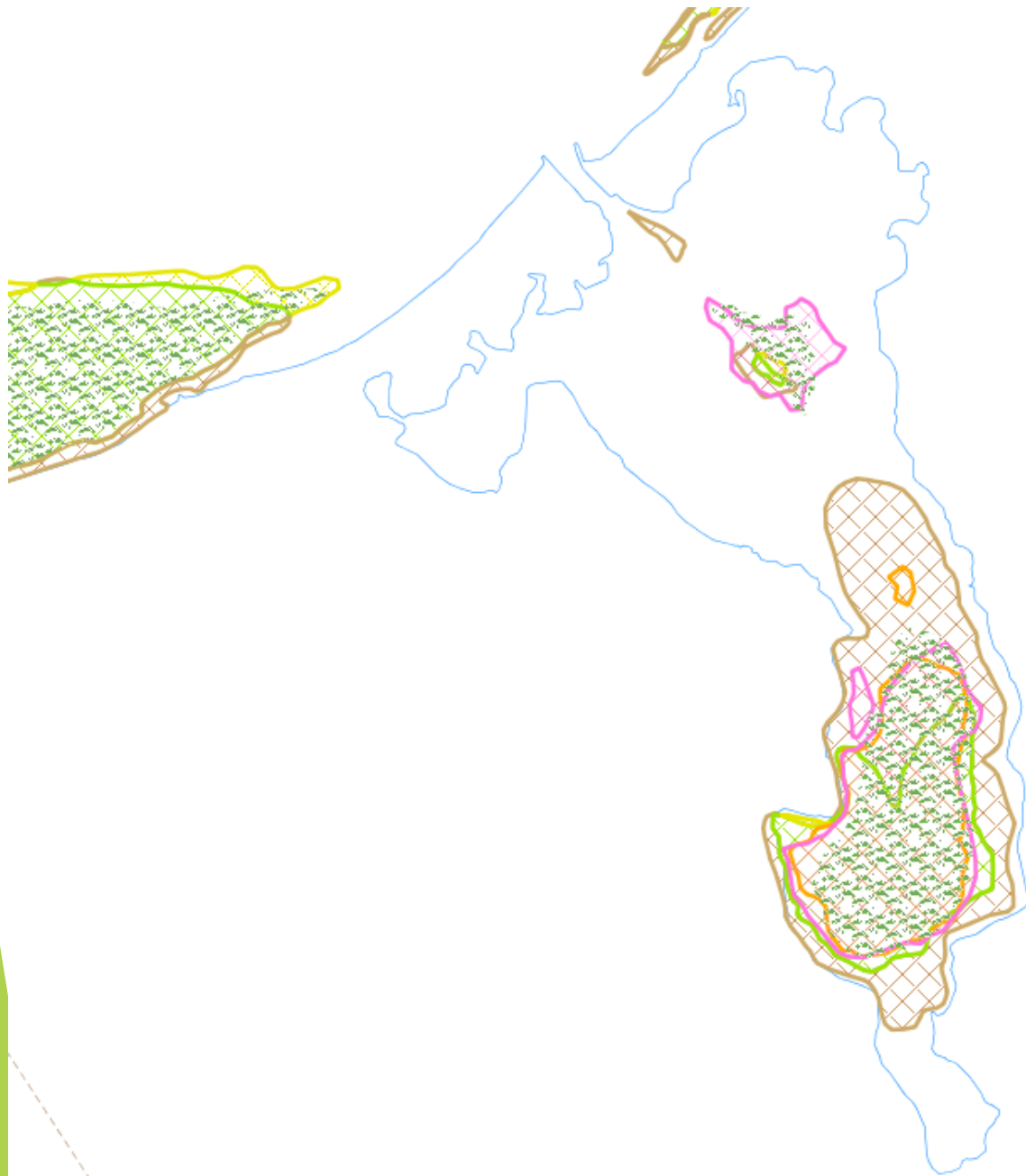
Eelgrass natural history cont.

- ▶ Grows in a wide variety of sediment types, but does best in soft sediments
- ▶ Grows from brackish water to completely marine waters
- ▶ Prefers quiescent, protected shorelines









Ecological Roles of Eelgrass

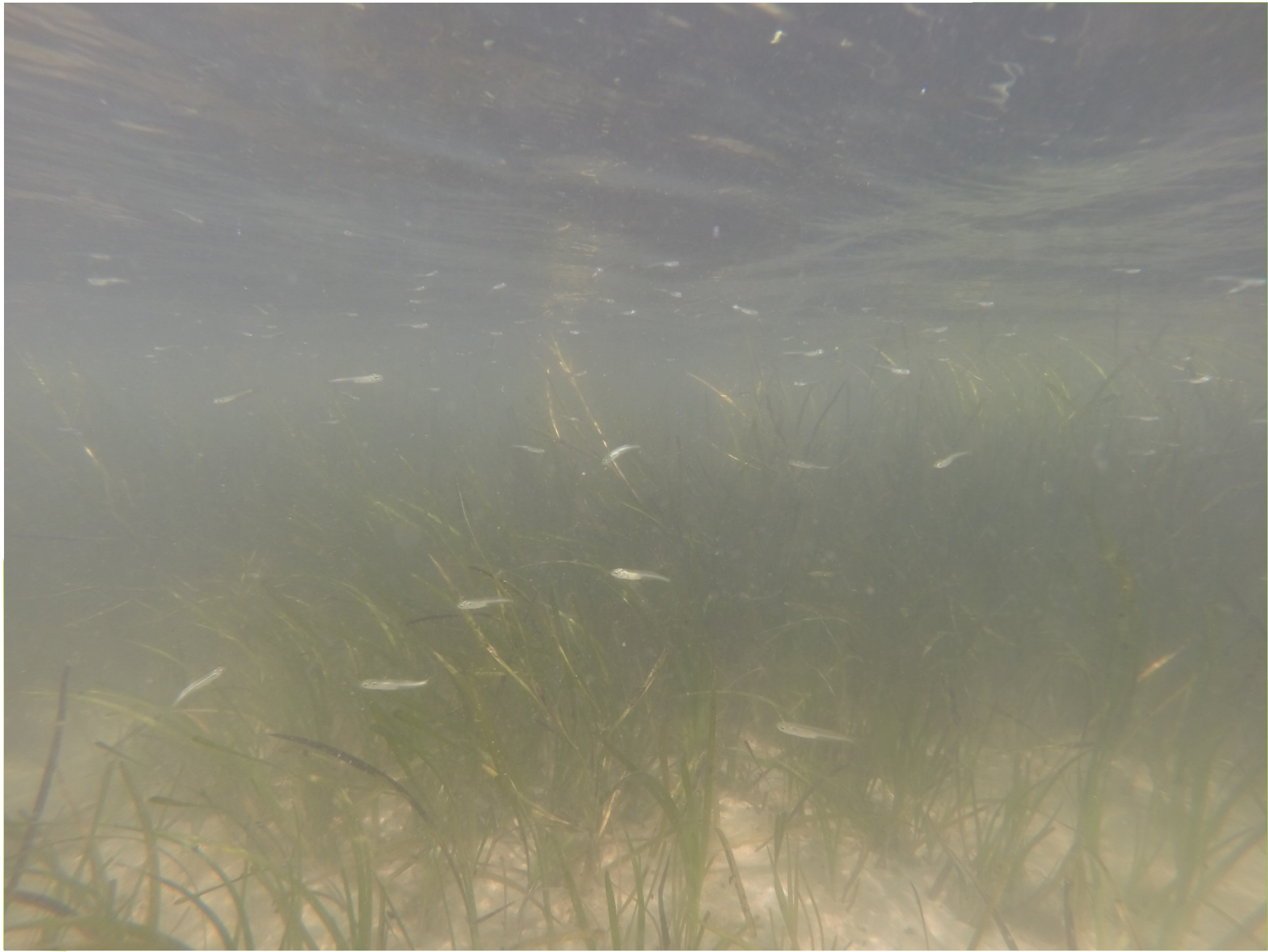
- ▶ Important complex habitat for many fish and shellfish (spawning and nursery site)
- ▶ Important primary producer
- ▶ Water filter
- ▶ Reduces erosion
- ▶ Sequesters carbon

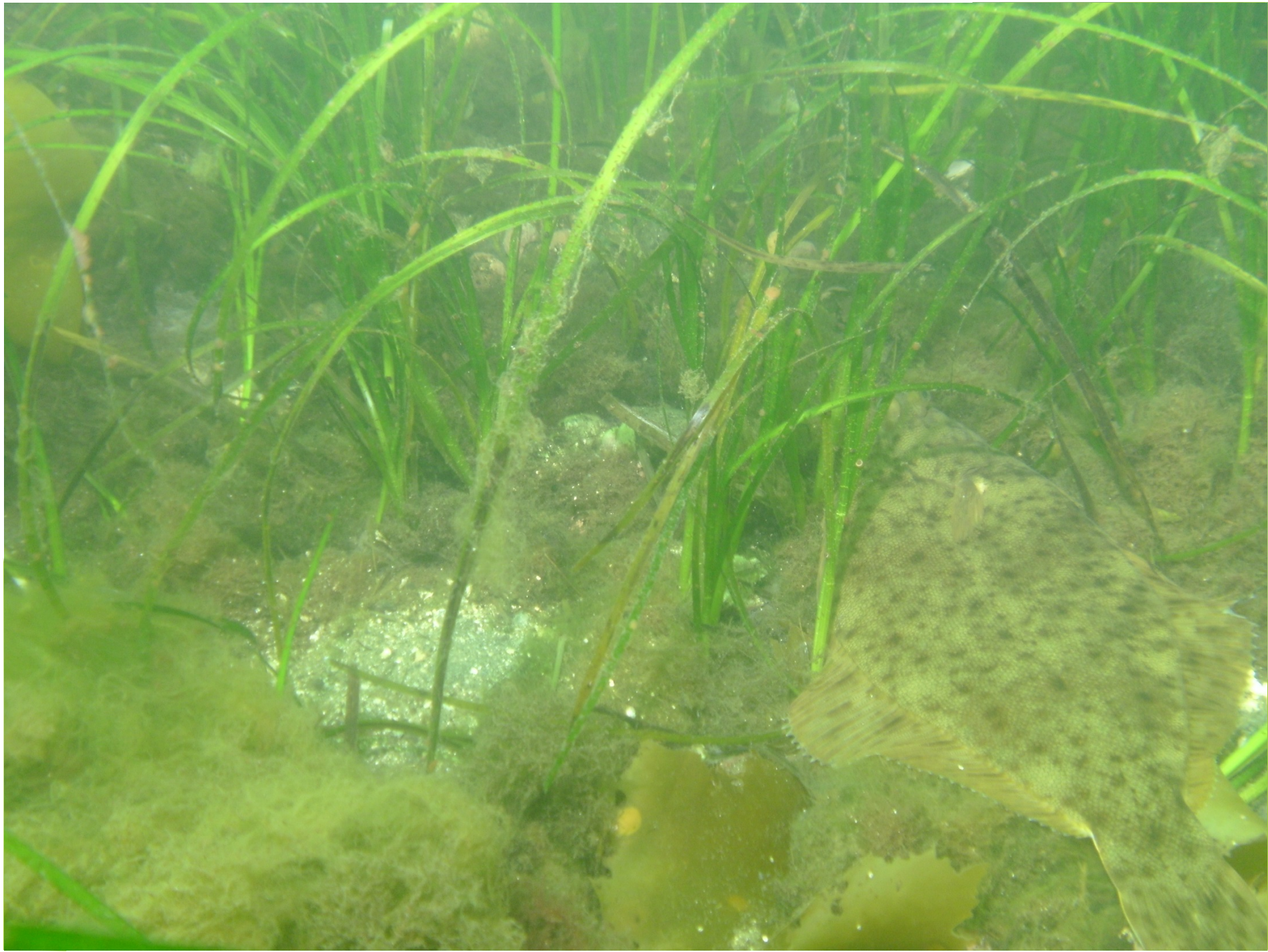


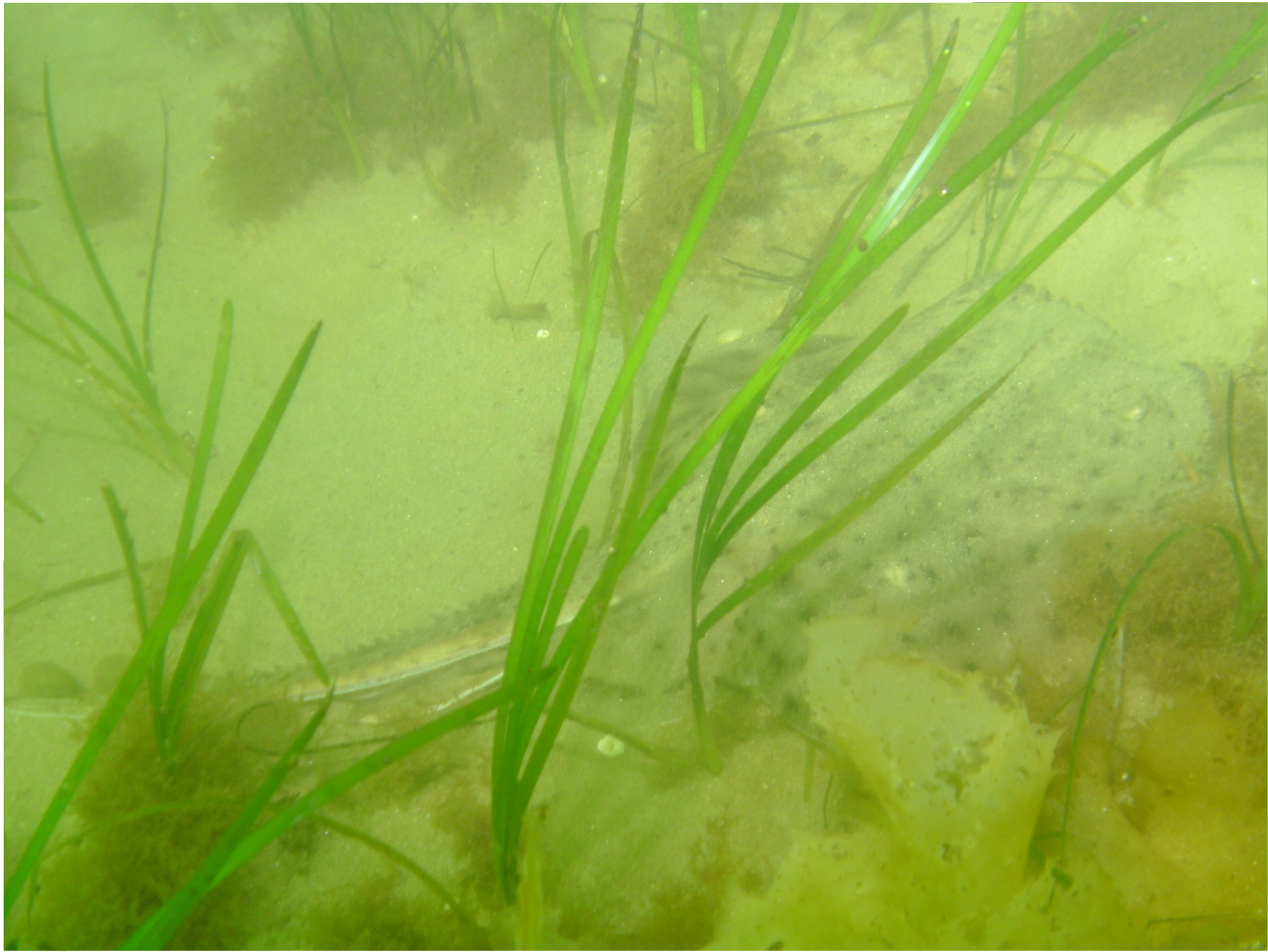
















Threats to Eelgrass

- ▶ Declining water quality (water clarity)
- ▶ Dredging, docks, moorings, boats
- ▶ Climate change
- ▶ Disease
- ▶ Invasive species









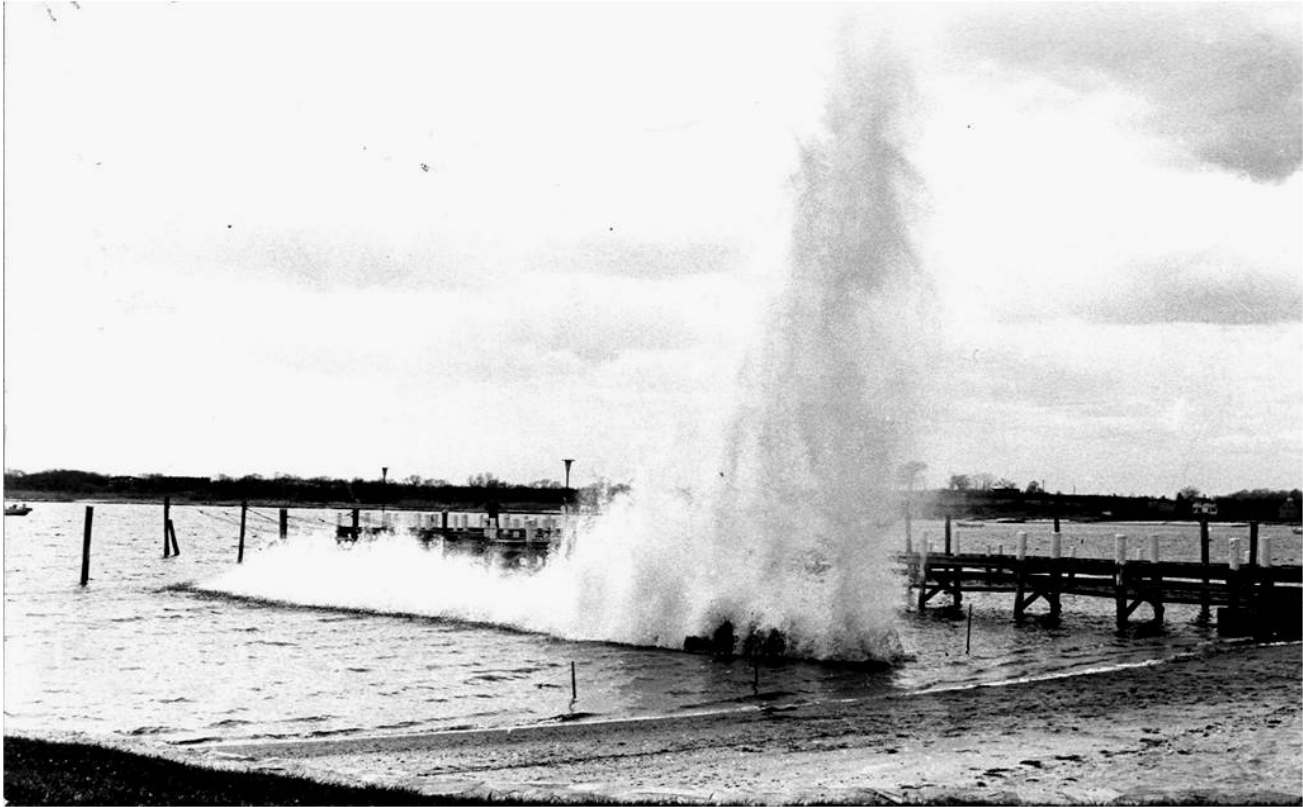








09/22/2008



k a lim-
 iters to
 in part
 owl pro-
 Aid to
 as avail-
 able and
 more ac-
 cidental to
 recovery
 from by
 prelimi-
 nary
 is work,
 of Ma-
 reports
 in their

r places
 and on
 is it as
 a sero-
 urtable
 orting a
 owl. In
 ance is
 but the
 actual
 several
 and the
 ndant"
 growth
 300000.
 y small
 ble dif-
 y beds.
 ys and
 d, even
 all sur-
 ul tur-
 with of
 : moder-
 ated in
 neyard.

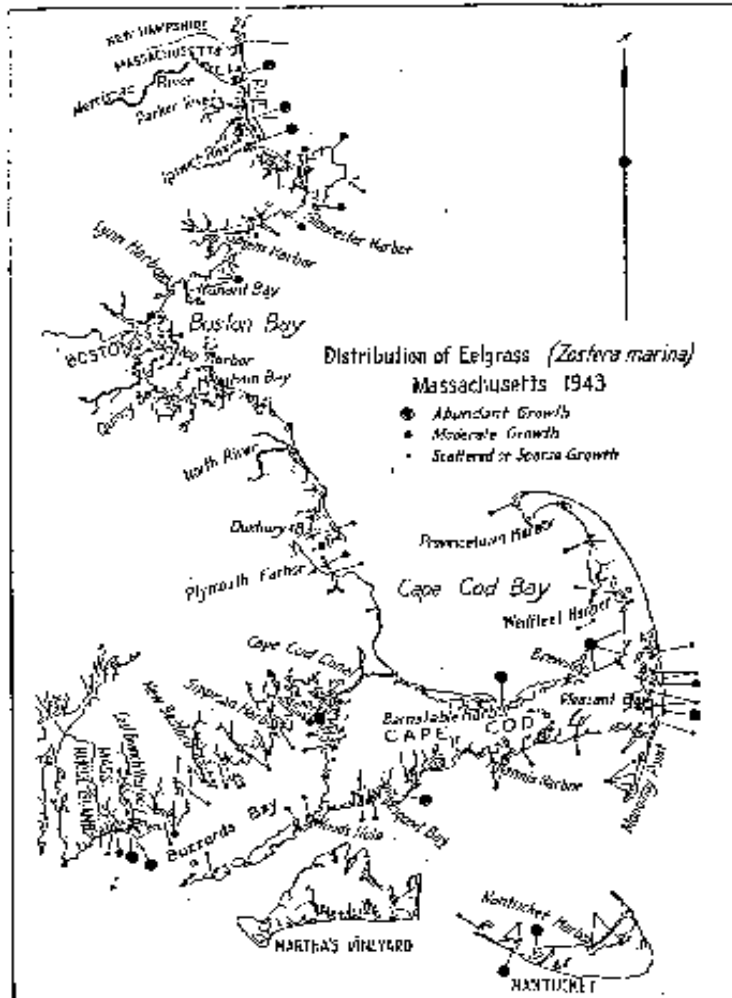
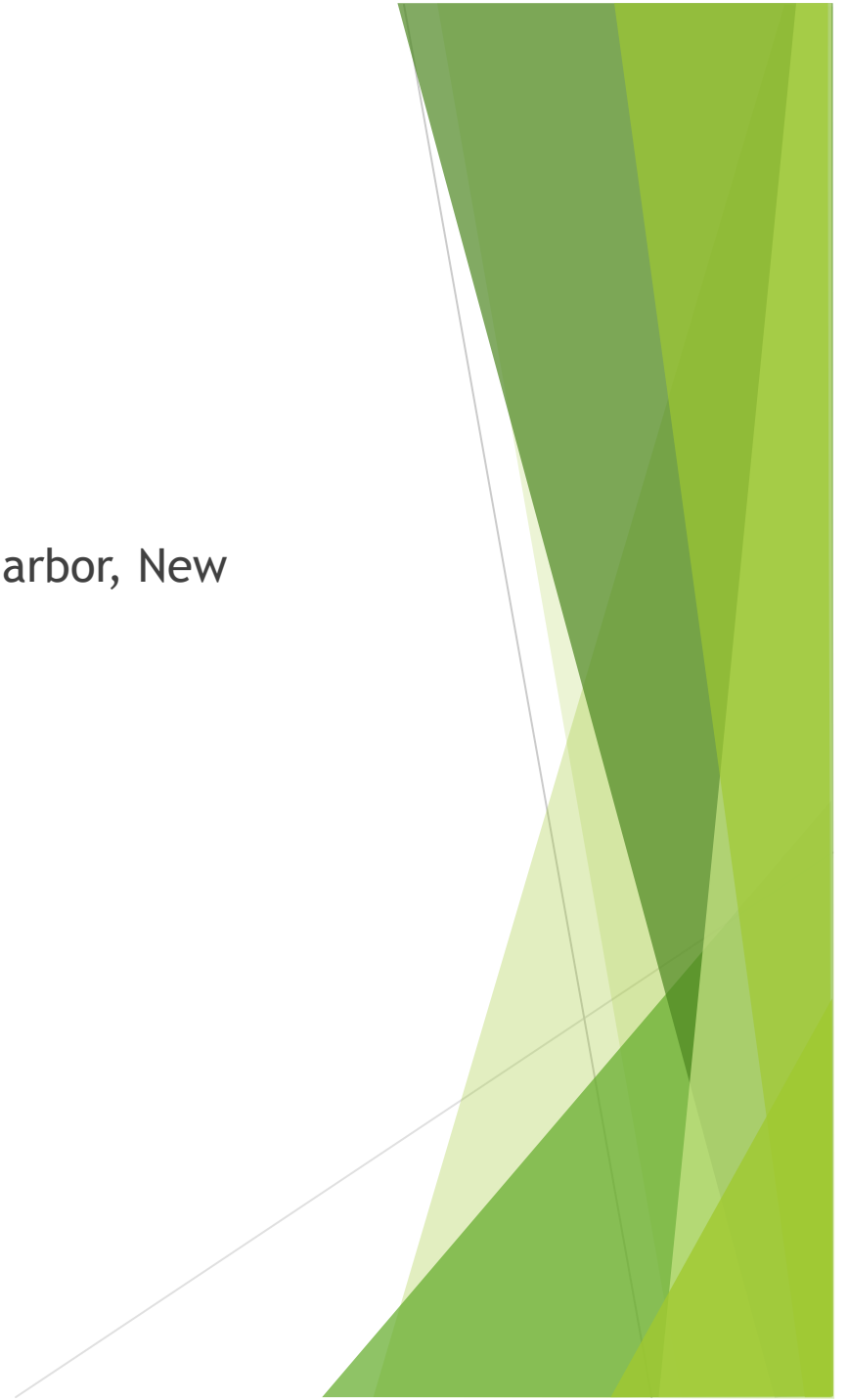


Fig. 1. Distribution of Eelgrass (*Zostera marina*) in Massachusetts, 1943.

Population Trends

- ▶ Generally declining
- ▶ 3 areas of positive expansion (Boston Harbor, New Bedford Harbor, Gloucester Harbor)



Seagrass Restoration/ Mitigation

- ▶ Seeding
- ▶ Transplanting of seedlings
- ▶ Transplanting of adult shoots









Challenges to Restoration

- ▶ Labor intensive, expensive
- ▶ Many attempts, few documented success stories
- ▶ Proper site selection
- ▶ Bioturbation
- ▶ Limited post-transplant monitoring



What can you do?

- ▶ Find and report seagrass
- ▶ Be a responsible boater
- ▶ Get involved with your local non-profit
- ▶ Take a walk or bike, less driving
- ▶ Study nature, not books
- ▶ Get wet



