

Species Profile: The Eastern Oyster, *Crassostrea virginica*

Range and Habitat

Range:	Eastern Canada to Florida and Gulf of Mexico
Salinity:	5 – 35 psu
Depth:	Intertidal to subtidal
Habitat:	Estuaries; firm or hard substrate
Size:	50 to 150 mm



Commercial Importance

Natural populations of oysters have been exploited for centuries. However, overfishing, mismanagement, and diseases have decimated most natural populations. Increasingly, oyster production is being met through aquaculture.

Ecological Importance

Oysters are filter feeders, being able to clear suspended particles (phytoplankton) out of the water at a high rate. Clearance (filtration) rate of oysters is highly variable, but can be as high as 4 l/hr/g. This filtering activity removes primary production from the water column and makes it available to the benthic community (benthic-pelagic coupling). It also increases water clarity, which in turn increases the depth to which light can penetrate, benefitting sea grasses.

Oysters are also ecological engineers. Oyster reefs providing a three-dimensional reef structure which in turn provides substrate and habitat for hundreds of other estuarine species.

Role in Environmental Restoration

Oysters are recognized as an effective means of improving water quality. However, to be successful, projects utilizing oysters must be sited properly with respect to bottom type, water currents, and intertidal position. In addition, they must be scaled properly to have a measurable impact.



The Gulf Shellfish Institute can offer the following capabilities to any group interested in oyster restoration projects:

- Production of juvenile (4 mm seed) clams in commercial hatcheries
- Seed grown on commercial leases (state-owned submerged land) until desired size (up to 60 mm) is attained
- Planting seed at desired density
- Follow-up monitoring of clam growth and survival, sea grass growth, and environmental parameters (sediment and water quality)