**Oyster Reefs are Important**

Oyster reefs are vital to our estuaries. They provide suitable habitat for small organisms and are feeding grounds for important species such as snapper and grouper. Their reefs also provide stabilization for our shorelines. Oysters remove nutrients from the water improving water quality, which is critical for seagrasses and fish.

**Habitat Requirements**

Oysters thrive in brackish waters where the salinity (salt) is lower than ocean water. They need a hard surface, preferably old oyster shells, on which to grow. They rely on currents (water movement) to deliver food to them and to prevent them from becoming buried.

**Adaptations**

Oysters are marine organisms that can live in both the intertidal (between high and low tides) and subtidal (always submerged) zones. The intertidal reefs are exposed to the air during low tide. Oysters are able to survive by tightly closing their shell until high tide returns. This adaptation allows them to avoid predation from organisms that must remain in the water (i.e. marine snails). Their hard shells also prevent many predators from reaching their soft bodies.

**Life Cycle**

1. **Fertilized egg**
2. **Egg**
3. **Sperm**
4. **Veliger larva (Swimming stage)**
5. **Pediveliger larva (Setting stage)**
6. **Oyster shell with spat attached**
7. **Adult oysters**

**Filter Feeding**

Oysters use their gills to absorb oxygen and strain food out of the water. One adult can strain plankton and organic matter out of the water at a rate of up to 50 gallons per day (or 1500 times its body volume). A healthy oyster reef contributes significantly to overall water clarity in the estuary.

**Oxygen and suspended particles**

**Clean water**

**Sedimentation**

**Preserving Nature by Design**

**Currents**

**Food**

**Oysters**

**Watershed**

**Gills**

**Mantle**

**Threats**

- **Physical removal.** Oyster reefs are vulnerable to over harvesting and disturbance by development.
- **Sedimentation.** Dredging and stormwater runoff can result in the burying of oyster reefs.
- **Boating impacts.** Boat wakes can erode the shoreline and disturb oyster reefs. Boat props can drag along the bottom and dislodge oyster clumps.

**Restoration**

Restoring oyster reefs is an effective way to improve water quality and provide new habitat for fish and invertebrates.

- **Empty oyster shells collected from local restaurants are placed in depleted oyster reef areas to provide hard substrate for spat settlement and calcium needed for shell growth.**
- **Limestone, oyster mats, and artificial reef materials such as concrete ReefBalls™ are other methods being used to provide new substrate for spat to settle.**

**The Nature Conservancy**

Loxahatchee River District

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