

# The Eastern Oyster

The eastern oyster, *Crassostrea virginica*, ranges naturally from the Gulf of Saint Lawrence in Canada to the Gulf of Mexico, the Caribbean, and the coasts of Brazil and Argentina. The eastern oyster is one of the few oyster species that can construct extensive reefs that, like corals, are primarily dead shell with a veneer of live animals. Oysters are also unique because they are a harvestable resource and provide critical habitat. Many commercially important oyster reefs are sustained through cultch plantings and stocking seed oysters onto reefs. Early efforts at cultivation involved little more than transplanting small oysters from one area to another where they could grow faster and survive better. During the 1950s, hatchery techniques were adequately refined for commercially aquacultured oysters.



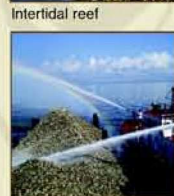
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# The Reef Builders of Estuaries

## ECOLOGY



Intertidal reef

Shell planting



The eastern oyster may be found on subtidal or intertidal reefs and provides important ecological functions in estuaries throughout its geographic range. These functions are related to both the reef structure formed by oysters and the filtering activity by individual oysters. Oyster reefs support over 300 species of marine organisms that are part of the food web leading to economically important species. Oysters are capable of filtering 2.5 gallons of water per hour and are effective in reducing phytoplankton densities and improving water quality. As a result, oyster reefs are critical to maintaining species diversity and the natural production of estuaries where oyster reefs have had a dominant historical presence.

## COMMERCIAL IMPORTANCE

With the decline of historically important areas such as Chesapeake Bay, the Gulf of Mexico supplies about 72% of the national production. The state of Louisiana is the biggest producer of oysters. Gulf oysters are harvested manually (by hand and with tongs, also known as rakes) and mechanically (with trawled scrape dredges) from public waters or private leases in areas that are approved for harvesting by state health authorities. Harvested oysters are quickly transported to processors where they are cleaned, sorted, chilled and processed. Shell recycling for cultch is an important by-product from the processing industry.

Oysters are delicious, as well as nutritious. About 20 million Americans annually enjoy eating raw oysters with few problems. However, some individuals are susceptible to bacteria which occur naturally in seawater and in raw oysters. These bacteria are harmless to healthy consumers but can prove deadly to those persons with certain medical conditions. These conditions include liver disease, hemochromatosis, diabetes, stomach problems, cancer, immune disorders, including reduced immune response from cancer treatments, and long-term steroid use. If you are, or think you may be, in any of these risk categories you should not eat raw oysters. However, fully cooked oysters can be safely consumed.



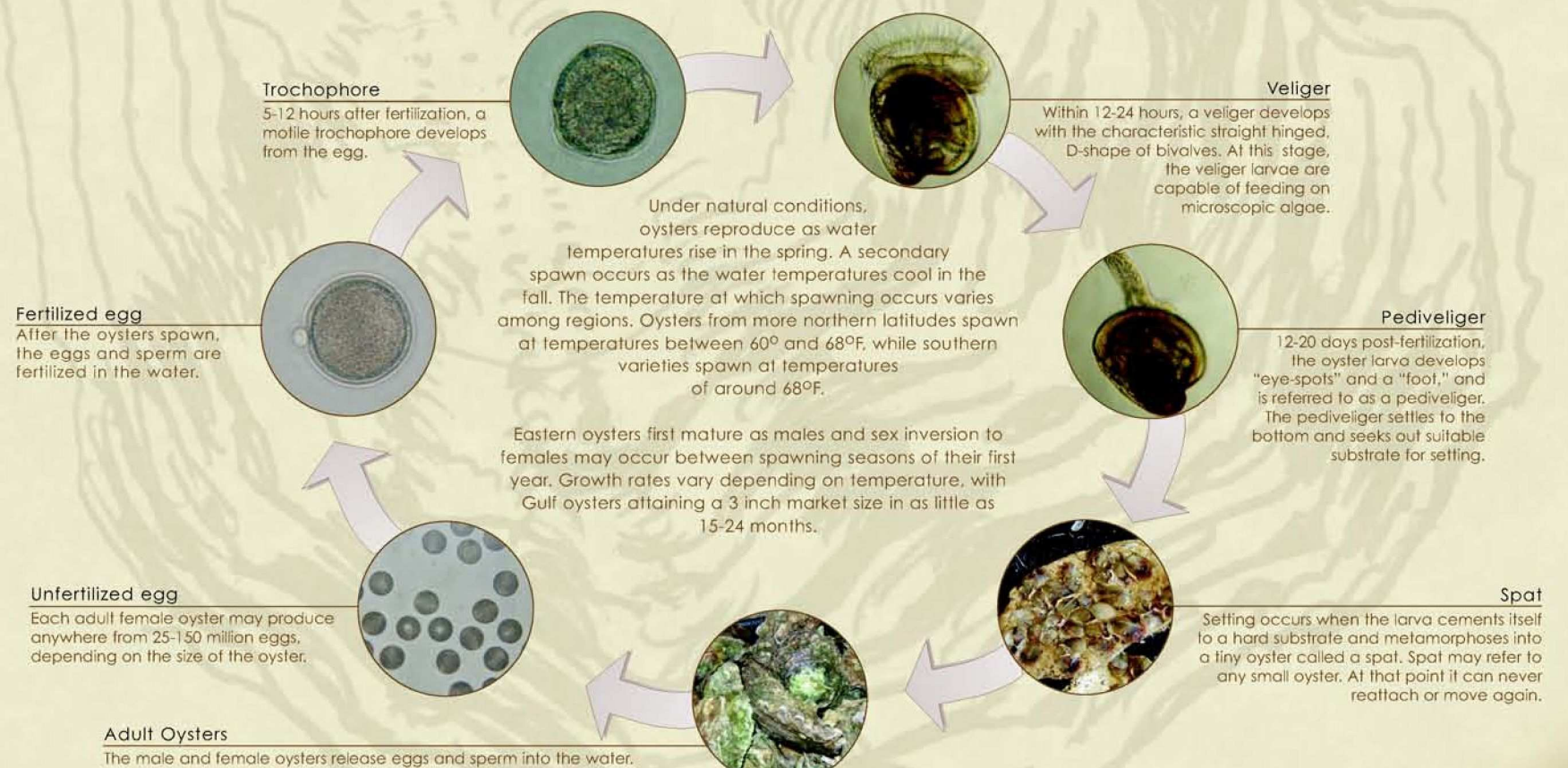
Tonger boat



Dredge boat



## LIFE CYCLE



Photos courtesy of Loren Coen, South Carolina Department of Marine Resources; Edward Herndon, DesignLab Marketing; Bradley Rammall and Scott Gordon, Mississippi Department of Marine Resources; Scott Rickard, Auburn University Shellfish Laboratory; LaDon Swann, Mississippi-Alabama Sea Grant Consortium; and Tom Ulrich.