Environmental Concern
P.O. Box P St. Michaels, MD 21663

OYSTER GROWERS GUIDE

Spring 2010

CATCHING UP WITH THE GROWERS

By now, what started off as tiny oyster "spat" the size of pin-heads, should have grown considerably into much larger and recognizable oysters. These year-old spat are growing rapidly and are well on their way to being vital additions to the Chesapeake Bay's oyster colonies.

Looking back over the past year, you should be able to see vast differences between what was initially delivered to your pier and what is now thriving in the cages.

1) Spring 2009: tiny spat cling to the shell

2) Fall 2009: Adolescent spat growing around the oyster shell

3) Spring 2010: Year-old spat taking shape as maturing oysters

Oysters will grow on average about an inch per year. They will grow slower in lower salinity (about 1/2 an inch per year), and faster in higher salinity. They are considered full grown "market size" when they reach 3 inches.

Inside this issue:

GOVERNOR O'MALLEY'S PLAN

On May 21, 2010, Governor Martin O'Malley held a press conference in which he revealed his plans to help restore and protect the oyster population in the Chesapeake Bay and surrounding waterways.

The Governor's plan focuses on creating more no-harvest sanctuaries, limiting areas for traditional harvesting, and encouraging oyster growing. This increase in the amount of oyster sanctuaries will take the percentage of protected oyster-growing Bottom areas from 9% of the total bottom area of the Chesapeake Bay to 25% of the total bottom area of the Bay.

These revisions could mean a great deal for the future of oysters in the Bay.

Oyster Facts

- Pearls are formed when a particle such as a piece of shell or sand gets lodged in the mantle tissue. As the oyster tries to dislodge the particle it secretes a substance that binds to the obstruction, eventually forming a pearl.
- The highest number of pearls in a single oyster has been recorded in Galveston Bay, TX which contained 365 pearls.
- Oysters have been exported from their natural environmental since the 1860s when shipments began to Europe from the Eastern Coast of America.
- Oysters grow about an inch per year and are considered full grown after three years.

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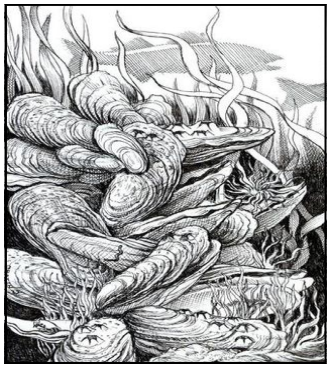
OYSTER SANCTUARY—THE NEXT STEP

In late June your oysters will be transported to an oyster sanctuary within San Domingo or La Trappe Creek.

The Marylanders Grow Oysters program transports oysters to a sanctuary within the waters that they were raised to ensure a natural transition from cage to reef.

DNR and EC looked at historical oyster bar maps to find the general location for potential sites. From there they went on boat, surveying the water bottom to determine its composition, noting areas with ideal habitat conditions.



Ideal habitat included areas with existing oysters and hard bottom. Areas with muddy substrate were avoided as much as possible.

EC will contact all of the growers within the next couple of weeks to let them know the dates that we will be picking up the cages and to also ask those that participated in the Fall monitoring to go ahead and monitor their cages before collection.

Reef Facts

- Oysters are a "keystone species" which means that their reefs provide a habitat for many other marine species.
- An oyster reef can increase the surface area of a flat bottom 50x its previous size.

REMINDER: OYSTER CAGE MAINTENANCE

As the temperatures warm up, some minimal work is required to keep your cages clean and healthy. Dunking your cages in and out of the water (like steeping a tea bag) once every two weeks will help keep fouling to a minimum. Jostling the cages will shake off excess silt and keep the oysters from growing into the mesh wire of the cages, which may easily break their delicate shells and kill them.

Make sure that the rope lengths have been adjusted from winter lengths. During warmer months the cages should rest about 1 foot below the surface of the water during high tide..

If you observe heavy fouling on the cages, spray the cages with a garden hose, or use a brush to scrub off buildup.

You can also help control fouling by leaving the cage of oysters out of the water for up to two hours once a week. The fouling organisms will dry out and die when exposed to air. This method is particularly helpful in controlling predatory creatures, like the flatworm which was featured in our previous edition.

Predatory creatures like the flatworm can pose a severe threat to spat. It is in order to protect the oysters from predators and fouling, that we ask you to take these quick and easy steps to help maintain healthy oyster growth.

Fouled cage (left) verses clean cage (right). Heavy fouling on cages may restrict water flow to your spat.

MAKE A HABIT OUT OF GROWING

Environmental stewardship is daunting, and the dismal state of the Bay's tributaries can often be more discouraging than mobilizing. But hope can be found through the implementation of programs such as Maryland Grow Oysters (MGO) and through the participation of people like you. Your work with the MGO Program makes a difference in more ways than you can imagine. Every cage tied to a pier; every oyster released onto a sanctuary; every new person who steps up to grow oysters makes a vital impact in the restoration of the oyster population as well as the health of the Chesapeake Bay itself.

If you feel the desire to continue helping Environmental Concern (EC) as well as the Chesapeake Bay, there will be ample opportunity to do so. New cages and spat will be distributed in the fall of 2010 and all able oyster growers are welcome to become involved. We encourage you to spread the word about MGO and get other individuals excited about helping to better their environment. On behalf of EC we would like to thank you for your involvement and invite you to participate again.

WHY ARE RESTORATION PROGRAMS NEEDED?

Over the centuries, oysters have gone from being one of the most predominant aquatic animals to having their populations severely diminished. A hundred years ago, over 10 million bushels of oysters were harvested from the Chesapeake Bay every year. In 2009, just over 10 thousand bushels were taken from the Bay, making the current yield less than 1% of historical populations. This decline is due to over-harvesting of oyster beds as well as to disease and water pollution. While in years past, the oysters had to contend with crabs, drill snails, and other predators, now they are fighting for survival against careless practices and parasitic diseases.

Projects like MGO help to recreate the previously abundant populations of oysters in order to rebuild their reefs as well as attempt to balance the eco-system.

THE OYSTER'S NATURAL PREDATORS

Natural predator: The Cownosed Ray

Natural predator: The Blue Crab

Natural predator: The Oystercatcher

FACT

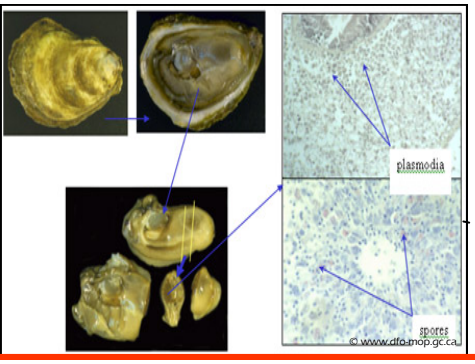
- The Chesapeake Bay is considered a "dead zone" meaning that the oxygen levels are so low that the water can't sustain life.

FACT

- Oystercatchers insert their blade-like beaks into oysters, clams, and mussels and use them as knives to slice the mollusks open.

Current Threat: Water pollution

Current Threat: Dredging



Current Threat: MSX and Dermo Diseases

THE OYSTER'S CURRENT THREATS

Environmental Concern

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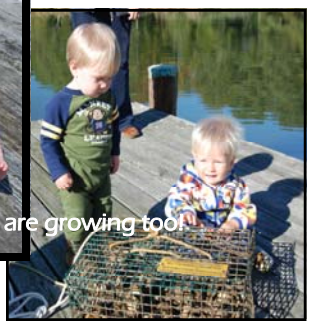
Visit the EC website at www.wetland.org

ABOUT EC AND THE MGO PROGRAM

Environmental Concern Inc. (EC) is a non-profit organization that promotes public understanding and stewardship of wetlands with the goal of improving water quality and enhancing nature's habitat. This is accomplished through wetland outreach and education, native species horticulture, and the restoration, construction and enhancement of wetlands.

The Marylanders Grow Oysters (MGO) program, instituted by Governor Martin O'Malley in 2008 and directed by the Maryland Department of Natural Resources reinforces EC's mission to improve water quality and enhance nature's habitat. EC is pleased to be a partner in the 2009 Marylanders Grow Oysters program, distributing spat and facilitating their growth with the property owners residing along San Domingo and La Trappe Creeks.



Our future growers are growing too!

A special thank you to our 2010 Restoration Intern Ivy Lister (University of Maryland) for helping us with the second issue of the "Oyster Growers Guide".

Questions, concerns, or comments? Please contact Jessica Lister at (410) 745-9620 or oysters@wetland.org .