Oyster Disease Update

Autumn 2000

Juvenile Oyster Disease Impacts Growers

Within the last several weeks, we have documented the mortality of seed oysters (*Crassostrea virginica*) in three locations in Maine. Examination of affected seed has revealed "signs" that are consistent with Juvenile Oyster Disease (JOD). In addition, these oysters were infected with a bacterium which we consistently find in JOD-affected seed. The affected areas include the Damariscotta River, Maquoit Bay, and the New Meadows River.

The purpose of this document is to increase awareness of JOD within the industry and to communicate what is known about the disease and what can be done to minimize its impact.

There will be a meeting to discuss this issue on October 4, at the Darling Marine Center (Kresge Classroom, beginning at 2 pm. For further information contact Dana Morse at 563-3146, ext. 205

Who to Contact for More Information

DR. BRUCE BARBER

Office: 581-2783

Email: bjbarber@maine.edu

DR. KATHERINE BOETTCHER

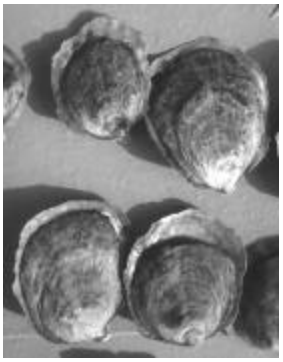
Office: 581-2822

Email: boettch@maine.edu

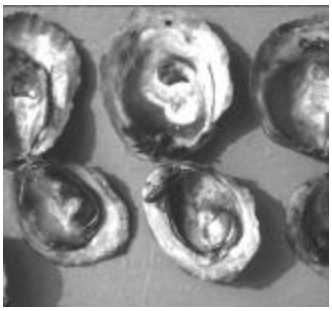
University of Maine

What Does JOD Look Like?

JOD affects seed oysters <25 mm in shell height during the nursery phase of production. Initial signs of the disease (usually seen within 4 weeks of deployment) are reduced growth accompanied by uneven shell margins, as illustrated below.



Mortality ensues and JOD is usually associated with conchiolin deposits ("brown rings") on the inner shell surfaces, as seen below.



JOD follows a seasonal pattern, with most mortality occurring in mid- to late summer. It does not affect other bivalve species, such as clams or mussels. The disease can be transmitted from oyster to oyster, but the causative agent has yet to be positively identified.

If you think you have oyster seed showing signs of JOD, please contact either Dr. Barber or Dr. Boettcher at the University of Maine. They would be happy to examine your oysters and answer any questions you may have.

How Can JOD-Mortality be minimized?

Most oyster hatcheries are using broodstock that have been selected for fast growth and resistance to JOD-mortality. However, even resistant stocks can be affected under certain conditions.

It has been shown that deploying seed early in the summer (late May-early June) results in growth such that JOD has minimal effect. Alternatively, deploying seed late in the summer (late August) avoids the JOD infective period.

Historically, JOD has only been encountered in the Damariscotta River. As a result, alternative locations have been utilized for nursery growth, followed by movement to the Damariscotta River for final growout, *after* oysters are large enough to resist JOD.

The appearance of JOD this year in locations with no previous history of the disease illustrates how important it is that oyster seed not be moved from areas known to harbor the JOD agent to other areas.

Once the causative agent of JOD is confirmed and a sensitive diagnostic tool is developed, we will be in a better position to screen seed for the presence of the agent and make sound management decisions.

School of Marine Sciences
University of Maine
Orono, ME 04469

ADDRESS CORRECTION REQUESTED