

## NATURAL DERMO RESISTANCE AND ITS ROLE IN THE DEVELOPMENT OF HATCHERIES FOR THE GULF OF MEXICO

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The value of developing selectively bred Dermo resistant oyster seed for aquaculture and perhaps stock enhancement is obvious. An important step in developing such a value-added product is identifying wild stocks that may have acquired resistance as a result of natural selection. Our goal was to provide clear evidence for the existence of "naturally resistant populations" of Eastern Oysters, *Crassostrea virginica* by using putatively Dermo-resistant brood stock from both the Gulf of Mexico and the Chesapeake Bay and determining the inherent resistance of their progeny to Dermo disease in a common garden experiment.

We identified and collected putative resistant and susceptible control stocks from both the Gulf (HAB, GTR, OYS) and Chesapeake Bay (RPP, TSO, COK, XXB) that were spawned at the ABC Gloucester Point hatchery in the summer of 1999. Seed were deployed that fall in Taylor floats at two Dermo-enzootic Gulf sites, Grand Isle and Grand Terre. Growth and mortality were recorded monthly, and samples were analyzed for Dermo prevalence and intensity using a modified body burden assay.

Fig. 2 - Monthly Stock Percent Mortality

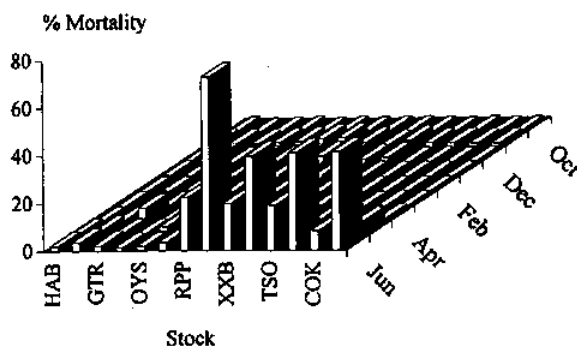
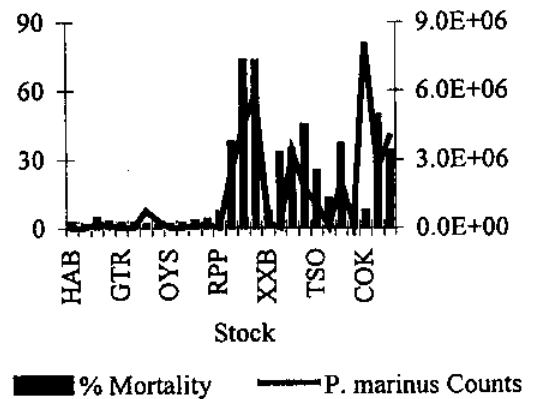


Fig. 1- P. marinus Levels v. June % Mortality



As of July 2000, Dermo prevalence was similar for all stocks, while intensity levels in non-Louisiana stocks were considerably higher than in Louisiana stocks (Fig. 1). Mortality levels correlated with disease prevalence. Louisiana stocks showed little mortality attributed to disease, while imported stocks experienced high mortality levels. Although there are differences between LA and CB stocks, there is little difference between the two putatively resistant populations from LA and their susceptible control HAB (Fig. 2).