

The Effects of Epizootic Shell Disease on Habitat Selection of the American Lobster (*Homarus americanus*)

Maine's American lobster (*Homarus americanus*) populations are being affected by many factors, one of which is epizootic shell disease (ESD), a complex disease associated with rising ocean temperatures in the Gulf of Maine (GOM). Studies have supported that other lobster species have experienced altered behaviors due to diseases. The lobsters in this study (nine healthy and nine diseased) were exposed to four different habitats in a lab setting to observe the behaviors associated with selecting a habitat. A small scale pilot study was previously conducted to build an ethogram of habitat-seeking behaviors. For all observed behaviors represented in the ethogram, there was no significant difference in any of them between the healthy and diseased lobsters. The results show that ESD may not have a significant effect on lobster's behaviors associated with finding a habitat. This warrants larger scale studies in both the laboratory and field settings with larger sample sizes to avoid any possible uncertainties related to lobster's behaviors.

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