

Rates of shell disease in subpopulations of lobster in Penobscot Bay, Maine

The American lobster (*Homarus americanus*) is the base for the most valuable fishery on the East coast of the United States, and since the 1990's there's been increasing rates of epizootic shell disease. Three areas of Penobscot Bay, Maine were sampled for nine weeks in June and July of 2013 using a mixture of commercial and ventless traps. The rates of shell disease were calculated over all and in different sub populations of the lobsters caught. There was also a correlation run on historical rates of shell disease in the area, and historical water temperatures of the year prior that yielded a significant relationship. The over all rate of shell disease was 2.78%, and of the sub populations examined effected females more than males, females of known reproductive status more than those of unknown reproductive status, and legal size lobsters more than sub legal size. Warming waters appear to have a significant effect on rates of shell disease, and there may need to be further studies done on the effects of shell disease on different sub populations of lobster, especially those of significance to the management of the fishery.