

Shellfish survey and
management in Hundred
Acre Cove, Barrington,
Rhode Island
(Independent Study)

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ABSTRACT

The soft-shell clam population of Hundred Acre Cove, in Barrington, Rhode Island, has been overfished in recent years. A survey was conducted in 1975 to establish the abundance of Mya arenaria, and the Cove was designated a Shellfish Management Area on the basis of this survey; catch limits for the Cove were also established. Four follow-up surveys have been completed since then to monitor the population. The 1977 survey represents a healthy, undisturbed population; it was conducted after the Cove had been closed to shellfishing for one and one half years. The 1981 population distribution, which is similar to those of 1975 and 1976, is depressed due to the effects of fishing.

The shellfish population is managed by the shape of the length-frequency curves, which indicate that the population is maintaining itself at a slightly depressed equilibrium. Other possible management tools¹ were investigated, including biomass distribution, quartiles, and increasing the minimum legal-size. While biomass calculations imply basically the same information as the length-frequency curves, the 25, 50, and 75 quartiles are more accurate distribution indicators. Changing the minimum size would have far-reaching consequences, because 38mm has been the minimum for many years. However, this would allow more of the population to grow and reproduce, therefore increasing the biomass.