



Ask the lobster doc

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This column provides lobster health and handling information.

If you have questions or concerns, contact Cowan at (207) 832-8224 or e-mail <dcowan@lobsters.org>.

Lobster landings conclusions

This is the last in a five-part series discussing potential explanations for changes in the magnitude of Maine lobster landings (see CFN, August-November 2004).

In summary, total landings for the state fluctuated at around 20 million pounds for decades before starting to climb in 1988, reaching 2-1/2 times that level and more in the past five years.

The number of lobsters landed is undoubtedly tied to lobster population size and fishing pressure. Various factors regulate both lobster population size and how many lobsters are harvested.

The relationship between number of lobsters harvested and number available for harvest is dependent on lobster behavior. Therein lies a level of complexity that inhibits our ability to tie landings directly to lobster abundance.

Even so, many observable changes occurred shortly preceding, or coincident with, the sharp increase in landings including apparent increases in lobster abundance, favorable environmental conditions, increases in fishing effort, and changes in regulations.

Although all of these factors likely have some impact on landings, their correlation with changes in the magnitude of landings does not establish a cause and effect relationship. We are left with a poor understanding of why the landings have risen so sharply and a lack of knowledge about when and whether they will drop precipitously — as they have in other states.

Our relative inability to demonstrate what drives lobster landings, or to predict and control the magnitude of landings,

necessitates that we proceed with caution when making decisions about how to sustain the lobster fishery. The complexity and multiplicity of factors affecting landings underlies the need for multiple indicators of how the lobster population is faring.

Several researchers and organizations are maintaining time series on environmental conditions, lobster abundance, and characteristics of the catch, including:

- Low Incze (University of Southern Maine) monitors fluctuations in larval and postlarval supply in the water column.
- Rick Wahle (Bigelow Laboratory for Ocean Sciences) measures annual abundance of young-of-the-year lobsters at the end of the settlement season.
- The Lobster Conservancy monitors monthly abundance of juvenile lobsters.
- Maine Department of Marine Resources (DMR) makes inshore trawl surveys to estimate sub-adult and adult lobster abundance.
- DMR and others collect sea sampling and port sampling data. And
- Environmental monitoring by the eMOLT project and GoMOOS provide information on conditions affecting lobsters.

Over time, these and other monitoring programs will help better understand the relationships between fluctuations in lobster abundance and landings.

In the meantime, these and other studies have provided sufficient information about lobster biology and lobster habitat to take precautionary action. The next series of articles will present ideas on how what we know can help us have a sustainable resource and a healthy fishery. ■