



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>.

Monitoring juvenile lobsters

The Lobster Conservancy (TLC) has been counting juvenile lobsters at a site in Harpswell, ME since 1993. This year, the abundance of juvenile lobsters at that site hit a record high – surpassing the last record count established in 2002. Juvenile lobster abundance at Friendship, ME — one of two additional sites sampled on a year-round basis – was also the highest on record.

At both sites, annual peak lobster densities (averaged for each month) have varied from a little less than 2 to greater than 5 lobsters per square meter (3.28'x3.28'). Actual numbers of lobsters per meter squared are as high as 11-13 during settlement.

Groups of juvenile lobsters are made up of subsets of age classes, e.g., newly settled lobsters, first-year lobsters, and older juveniles. In general, high density years for one age class have been high years for all age classes. Abundance of newly settled and first-year lobsters also hit record highs in 2002 and 2003.

Newly settled lobsters or “settlement” means that postlarval lobsters have made the journey from surface waters to “settle” on the bottom. Settlement typically occurs during late summer or early fall. This year, the period for settlement was prolonged from July through December. This extended settlement period may have



Peter K. Prybot photo

Photographer Peter K. Prybot caught this juvenile lobster in a trap on July 30, 2003 in Sandy Bay off Rockport, MA. After the picture-taking was over, the youngster was safely placed in a nearby lobster nursery ground.

contributed to the record high abundance.

Picking out general trends from discrete data samples can be tricky. Data from just one or two locations or times of year can be misleading. To prevent these potential pitfalls, samples should be taken over an extensive temporal and spatial scale.

Temporal and spatial just mean time and space. The point is that if you just take a “snapshot” approach — looking at brief time scale or just one time of year, you can miss a lot of what’s going on when you’re not looking; and the place you take your “picture” would only tell you what’s going on where you are

looking. If you don’t know the right place and time to look, you need to cover as much space and time as you can.

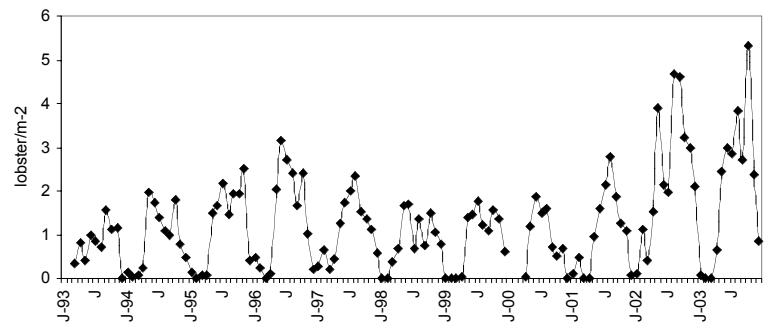
The Lobster Conservancy covers a broad geographical area by

training a team of 90 volunteers to census 25 additional lobster nurseries in Maine, New Hampshire, and Massachusetts. Volunteers in the Juvenile Lobster Monitoring Program (JLMP) measure lobster abundance from May through October. Sites in midcoast Maine, Casco Bay, and Massachusetts Bay have yielded consistently higher juvenile lobster densities than in other areas.

Keeping track of the same lobster nurseries month after month and year after year, leads to a better understanding of the relative importance of specific habitats. The JLMP identifies and quantifies the abundance of lobsters at specific nurseries. Such information can be useful for conservation of the lobster resource. Hopefully, habitats supporting lobster settlement and early growth will be deemed worthy of protection from environmental degradation.

Monitoring monthly and annual trends in juvenile lobster abundance may also serve as an indicator of future abundance of adult lobster abundance; those destined for the fishery. Further investigation into this relationship is merited. However, reliable measures of adult abundance — such as trawl surveys — are needed to temporally relate the abundance of juveniles to the future abundance of adults in a population. ■

Juvenile Lobster Density 1993-2003



Diane Cowan graphic

Monthly abundance of juvenile lobsters at TLC's near-shore long-term monitoring site in Harpswell, ME.