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## **Robbing the Lobster Cradle**

**By Diane F. Cowan**

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Friendship, Me.

THE suit over legal claims related to the catastrophic lobster die-off in the Long Island Sound in 1999 is on the docket in New York's federal court. The lobster fishermen allege that a pesticide manufacturer is responsible for destroying the fishery and their way of life. They certainly have a case, but more to the point, what happened more than six years ago could easily happen again, unless we make some changes now.

The lobster die-off in September 1999 abruptly ended a peak period of catches and essentially wiped out a \$100 million industry on Long Island. What happened? While the State of New York has pursued several theories and the lobstermen have consistently insisted that pesticides be a focus of the investigation, the die-off seems to have a number of contributing causes. The population was already weak because of intense harvesting and because the remnants of Hurricane Floyd had heated the water and removed life-sustaining oxygen from the seabed. The storm also dumped heavy rain on communities around the Sound where the authorities had applied mosquito pesticides to combat West Nile virus. It was these pesticides, carried by storm runoff into the Sound, that the lobstermen say pushed lobsters over the edge.

Whatever the cause, there's no question that lobsters need to live where waters are oxygen-rich, cool and relatively devoid of contamination. But the problem is that Long Island lobsters are already in a precarious situation.

The Sound is at just about the southern limit of the Maine lobster's inshore

East Coast range (south of Long Island, the water is simply too warm and the sandy habitat is not ideal for lobsters, which prefer rocky crevices) and as such the lobster population is already weak. As pipelines, sewage disposal systems and industries proliferate along the coast, more of the Eastern Seaboard may become uninhabitable: pipelines interfere with the movement of lobsters, which is essential to healthy repopulation; sewage systems contribute to toxic waste in the water; and many industrial activities raise water temperatures.

Years of intense harvesting have also hurt the lobster population in the Sound. You see, essentially too many very young lobsters were laying eggs in the Sound, resulting in what I call the "stay-at-home mom" phenomenon. Young, small egg-bearing lobsters tend to stay in the same area along the coast, while larger females travel greater distances and seed vast areas.

The problem is that intense harvesting prevents small lobsters from growing up. And because young females stay close to home, their eggs are fertilized by local male lobsters, and thus the gene pool deteriorates. Genetic diversity -- enhanced by large lobsters -- allows for a healthier lobster population and prevents it from being wiped out.

Sure, the plight of the lobstermen on Long Island is a concern, but of greater importance is stopping the die-off from repeating itself and hurting the ecosystem. Obviously, we need to halt the coastal creep of industries; protect lobster nursery, breeding and spawning areas; and create buffers for aerial spraying of pesticides so that runoff won't introduce poisons into coastal marine habitats.

But more important, while most states -- including New York -- have minimum size limits and prohibit the harvesting of brooding female lobsters, we need to make maximum size limit a federal law. Maine, New Hampshire and part of Massachusetts protect large breeding females and males, which are needed to fertilize larger females.

Maximum limits are important because a three-pound female lobster produces as many eggs as seven one-pound lobsters and a five-pound lobster produces as many eggs as 14 one-pound lobsters. And it's not just egg

quantity: larger females produce healthier offspring and mate more often. Without strong federal laws enforcing size limits, we can't replenish the lobster population.

Lobster catches were down last year -- even here in Maine. As the trial gets under way, we can learn from the experiences of Long Island Sound lobsters and lobstermen, and act to prevent this from happening again.

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