



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>.

Lobsters share insect vulnerability

The Ask the Lobster Doc column “Lobsters and insecticides” (see *Commercial Fisheries News* April 2002) described the concern over possible consequences to lobsters from the aerial spraying of the insecticide diflubenzuron to control browntail moths.

This article takes a more general approach to explaining the two primary reasons lobsters are vulnerable to agents that are engineered to kill other arthropods.

First, lobsters are arthropods, and, second, lobsters are likely to come into contact with killing agents.

Insects and lobsters belong to the phylum Arthropoda. Arthropods are the most biologically successful group of animals on the planet – they are numerous, abundant, varied in form, and occupy every conceivable living space.

Arthropods are classified together as those animals having jointed appendages and chitinous exoskeletons. All arthropods grow by molting. The hormones that regulate molting and growth are similar in all arthropods. Molting and growth involves building a new exoskeleton – the chemical make up of which is similar in all arthropods. Therefore, any chemical compound designed to kill other arthropods, degrade their exoskeleton, or interfere with

molting and growth is likely to harm lobsters in much the same way.

While most insects and many crustaceans have a “terminal” molt and stop growing when they reach adulthood, lobsters do not. This may make lobsters vulnerable in a more prolonged way such that detection of the harm to the lobster is related to the intermolt interval.

Life history stages with the shortest intermolt interval are lobster embryos within the egg. The next shortest time between molts is for larvae and postlarvae, then juveniles, then adults who can go for years without molting.

There seems to be a misconception that being underwater and not on shore keeps lobsters out of harm’s way. The problem with this thinking is that lobsters live right next to shore (as well as further from shore) and larvae live in surface waters, not on the bottom.

This means there is no buffer zone for the many juvenile lobsters living just below the low tide mark and larval lobsters living at the surface. Some adult lobsters live in surprisingly shallow water – less than 20’ deep – throughout the year.

Property owners can help take care of our nearshore lobsters by using safe products on lawns and gardens. Towns and states, too, can adopt rules that protect lobsters. ■