



Things to Do List

- Throw in the Trash**
 - Unneeded bait worms
 - Packaging materials
 - Bait containers (bags, boxes, etc.)
- Spread the Word**
 - Tell your friends
 - Display the sticker

For More Information

Visit the web page or contact an expert at Pennsylvania Sea Grant:

www.baitwormstudy.net



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Acknowledgments

The information in this publication is based on a research project, Preventing Aquatic Invasive Species through Vector Management: Live Bait Vector as a Model in the Mid-Atlantic Region. The project involved Maryland Sea Grant; the Smithsonian Environmental Research Center; and the University of Maryland, College Park, in partnership with the state Sea Grant Programs of Delaware, New Jersey, North Carolina, Pennsylvania, and Virginia. Funding was provided by the National Sea Grant Office of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce.

Maryland Sea Grant
 Publication Number
 UM-SG-PI-2014-05

This publication was produced by Maryland Sea Grant in cooperation with the University of Maryland, College Park, and the Smithsonian Environmental Research Center. Photograph credits: cover, Chelsea Carter, VIMS; inside brochure, left and right panels, Monaca Noble; and inside brochure, center panel, Wikimedia Commons.



Smithsonian
 Environmental
 Research Center



Protect Our Fisheries

Keep Out Invasive Species

Trash Unused Worms & Packaging

Are you an angler who buys and uses bait worms? You can make a difference in keeping Mid-Atlantic fisheries healthy and free of harmful, non-native animals and plants.

A key step you can take: Please throw away your unused, unneeded bait worms in the garbage, along with any seaweed or other types of packaging that your bait is packed in.

Bait worms imported from other states or countries can carry unwanted species in the packages, like small crabs and snails. Called “invasive” species, these can show up in places they don’t belong. They can cause serious harm to the economy and the environment and may damage your fishing spot.

To prevent this, please trash both the bait worms — bloodworms, sandworms, etc. — and the packaging material. Please use a trash container or take them home to your own trash can for disposal.

Why the Bait Creates a Problem

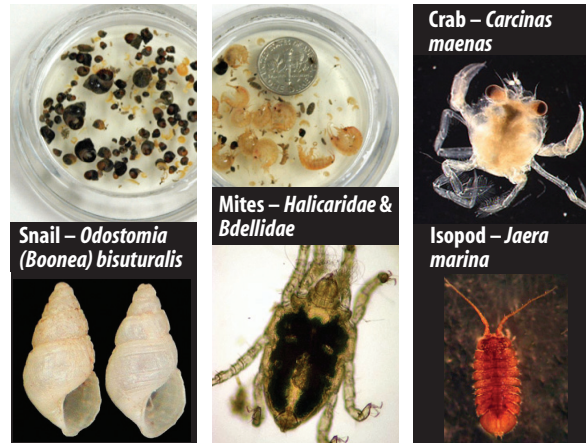
Bait worms and their packaging come from companies that are outside the Mid-Atlantic region. Bait worms are usually packaged



Bait worms come packaged in seaweed that can carry tiny invasive species such as crabs and snails, which can harm Mid-Atlantic fisheries.

in live seaweed that harbors many live animals and plants. Non-native crabs, snails, and a variety of other animals and plants can hitch a ride to wherever the bait is sold.

The little “hitchhiking” aquatic invaders are often too small to see with the naked eye.



Some of the invasive species that have been found in bait worm packaging materials: snails (above left); mites (above middle); crabs (above right, top); and isopods, which are a kind of crustacean (above right, bottom).

Why Trash Bait and Packaging?

Invasive animals and plants in bait worm packaging can damage the marine environment. That’s bad for anglers — because it can hurt the places where game fish live and breed.

For example, when bait worms and their seaweed packing materials were imported from Maine to California, they are believed to have introduced European green crabs to the Pacific coast. Green crabs have been found in bait boxes in the Mid-Atlantic, too. Green crabs are huge eaters of small crabs, young oysters and clams, and they destroy seagrass beds. This has caused big problems and economic losses to shellfisheries in New England.

What You Can Do to Help

Throwing out unneeded bait and its packaging in a regular garbage can goes a long way toward preventing invasive species from harming fisheries in the Mid-Atlantic region.

New kinds of packaging methods and materials, like newspaper and vermiculite, are being tried out as alternative packaging materials to reduce the number of hitchhiking species. For now, it’s safest to trash all of your unused packaging material, whatever the type.

It’s also good practice to trash all unused bait, regardless of type.

What Else Is Being Done?

Researchers from the University of Maryland at College Park, the Smithsonian Environmental Research Center, Maryland Sea Grant, and other partners are studying the potential threat from non-native species. They are working with anglers, bait stores, and bait distributors to reduce the risk.



Researchers from the Smithsonian Environmental Research Center collect invasive organisms from bait packaging material.