MAINE CENTER FOR COASTAL FISHERIES

Maine Center for Coastal Fisheries
PO Box 27 | 13 Atlantic Avenue
Stonington, ME 04681
Phone: 207.367.2708 | Fax: 207.367.2680
www.coastalfisheries.org

Island Ad-Vantages
THE WEEKLY PACKET

THE VIEW FROM ATLANTIC AVENUE

By: Tate Yoder

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The Bees of the Sea

In the last few days, I've thought a lot about the vital, tiny, and quiet creatures that we rely on for a large portion of our food: pollinators. Local blueberry growers bringing in honeybee hives, native bees buzzing around a group of daffodils, and hummingbird visits to my kitchen window have all reminded me of their existence and importance.

But until recently, I had never really thought about how pollination occurs in our oceans with marine plants. I assumed that marine plants like seaweed simply relied on ocean currents to spread their reproductive cells. But after doing a midday-curiosity-Google-search, I found a really fascinating study about a tiny marine crustacean that some are calling the "bee of the sea." No doubt the lobster will remain my favorite crustacean, but there are plenty of other crustaceans worth appreciating.

In a study published in *Science* in 2022, researchers found that a tiny marine crustacean, *Idotea balthica*, plays a key role in helping red seaweed (*Gracilaria gracilis)* reproduce (Valero et al., 2022, Pollinators of the sea). This kind of red seaweed grows in the Northeastern Atlantic and provides food and habitat for marine life, helps keep coastal waters clean, and acts as a carbon dioxide absorber.

These marine isopods pick up male reproductive cells, called spermatia, and transfer them to female seaweed as they move around—just like bees spreading pollen between flowers. This greatly increases fertilization success compared to when no animals are present. Experiments that observed this behavior were done in aquarium environments, and they found that the crustaceans unintentionally collect spermatia on their bodies while feeding on or exploring male algae. When they visit female algae, the cells are transferred.

I'm always a big fan of win-win situations, but it's even cooler to learn about these hidden behaviors and symbiotic relationships: the seaweed offers shelter and food, and the crustaceans assist in reproduction. This discovery challenges the idea that pollination only evolved on land and suggests that animal-assisted reproduction for plants may have started in the ocean long before plants made it to shore.

Do you have a question about fisheries? Send it to info@coastalfisheries.org or call 207.367.2708. Learn more about MCCF by visiting us at www.coastalfisheries.org.

FISHERIES LOG:

Prices to Harvesters in Stonington as of 5/19/2025

Lobster (hard): $5.00/lb.
Lobster (shedder) $5.00/lb.
Bait (pogies): $90/box
Fuel (diesel): $3.10/gal

Oceanographic Buoy I-01

44°6'10"N 68°6'44"W – Frenchboro
Top Temperature (1 meter): 43.77°F 6.54°C
Bottom Temperature (50 meters): 41.58°F 5.32°C
Source: www.neracoos.org