

Where are blue crabs in the Gulf of Maine?

Community partners team up in search of the elusive blue crab

What began as several local trapping surveys has grown into a network of organizations working together to monitor Atlantic blue crabs (*Callinectes sapidus*) across the coastal Gulf of Maine, from northern Massachusetts to mid-coast Maine. This Maine Sea Grant-funded project has greatly improved our ability as a community to detect and understand the distribution and annual fluctuations of this range expanding species.

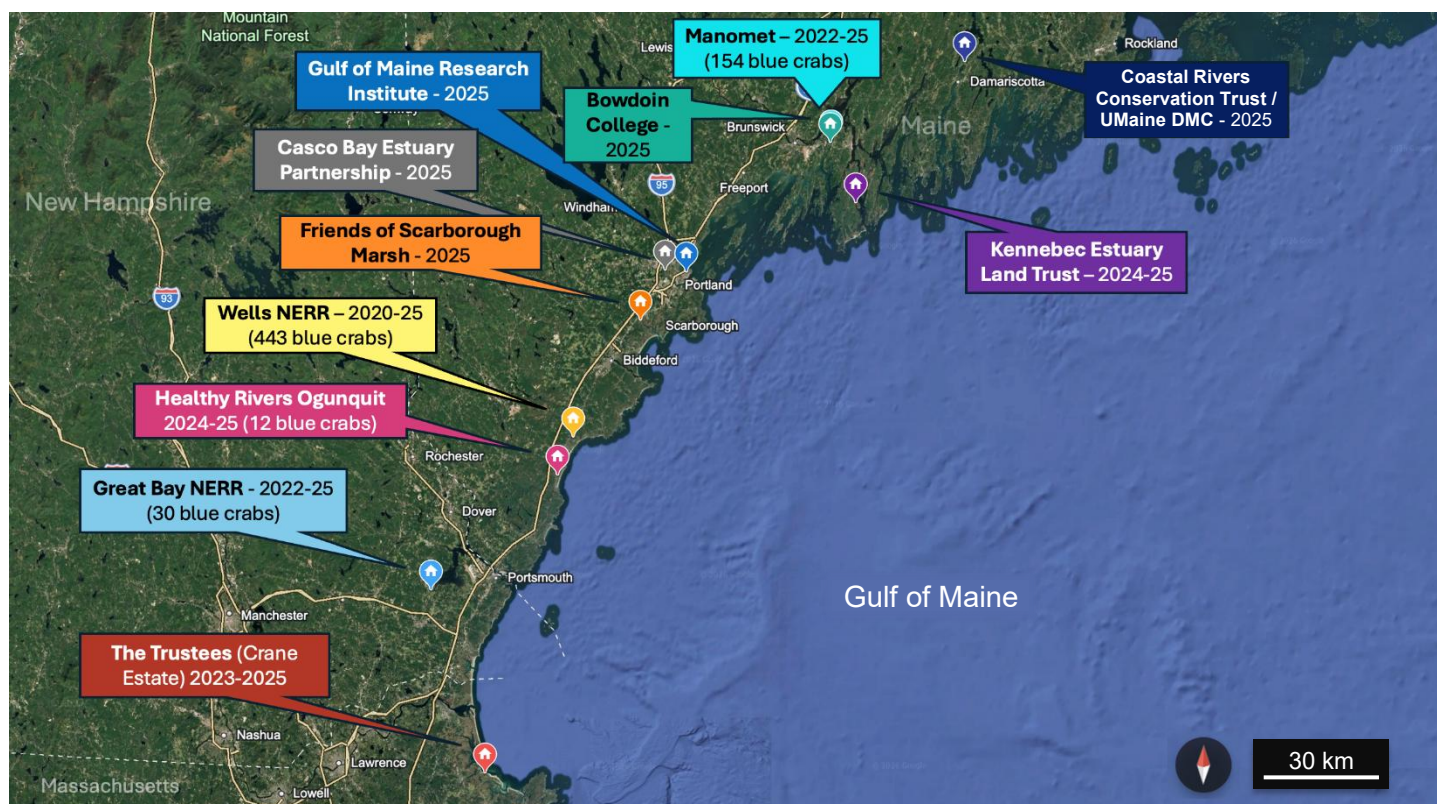


Figure 1. Map of survey locations including years trapped and total blue crabs caught during that time.

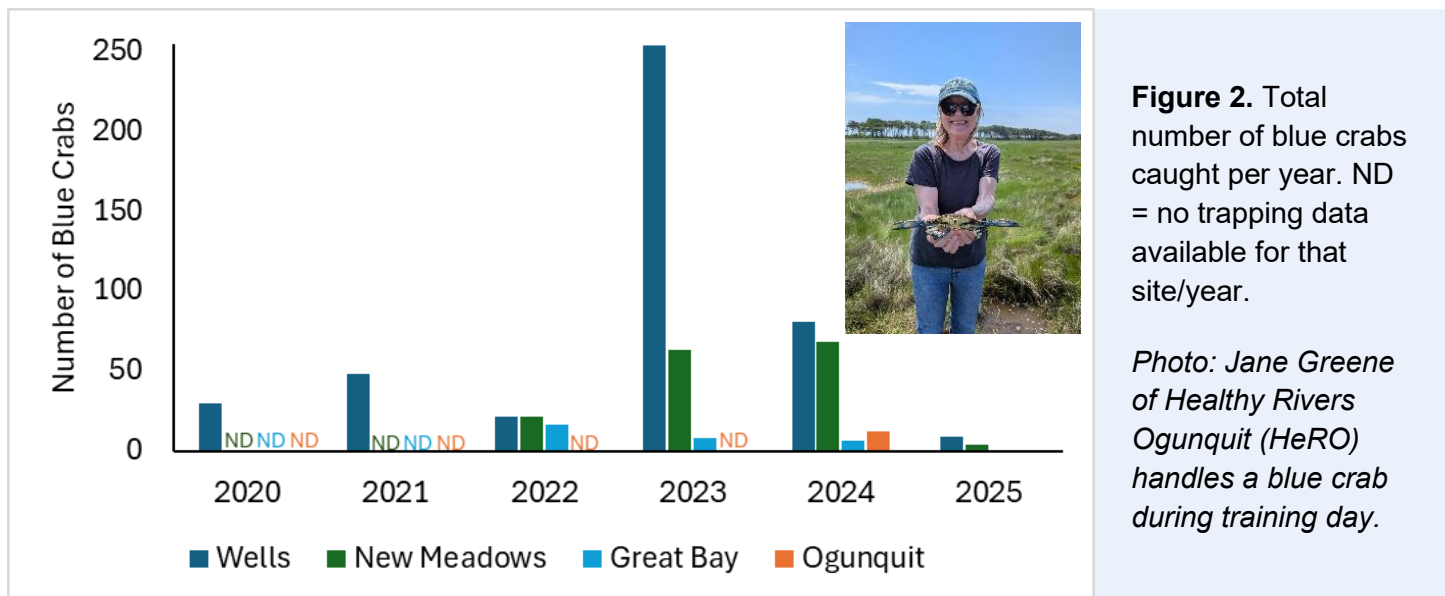
Researchers at the Wells National Estuarine Research Reserve (NERR) and Manomet Conservation Sciences have been conducting blue crab trapping surveys in their local estuaries for over 4 years and have consistently caught blue crabs every year. Wells NERR deploys ~12 traps per year in the Little River and Webhannet estuaries, primarily in salt marsh pools. Manomet deploys several traps each year in the main channel of the New Meadows River Estuary. Traps are checked weekly spring through fall.

Since 2023, an increasing number of community organizations from Massachusetts to Maine have joined this effort to search for the elusive range expanding blue crab. After receiving trapping kits and training, community partners deploy 1-4 traps in their respective systems, bait traps, and check them weekly for crabs. Across this network, 641 blue crabs have been trapped since 2020! By working together, we have expanded our reach further up the Maine coast, providing critical information about the spread of blue crabs.



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Blue crab catch has been highly variable from year to year, with more blue crabs being caught after milder winters. For example, the mild 2022-23 winter led to a boom in 2023 blue crab catch. After the particularly cold winter of 2024-25, very few blue crabs were caught at any of our sites throughout the Gulf of Maine. In 2025, only 14 blue crabs were caught, relegated to Wells and New Meadows. This steep drop in catch was reflected at every monitoring site. Healthy Rivers Ogunquit (HeRO), for example, caught 12 blue crabs in 2024 and 0 in 2025. Great Bay NERR consistently caught blue crabs between 2022-2024 but then caught none in 2025.

Water temperature data measured in Ogunquit, ME (HeRO) and Ipswich, MA (The Trustees) reveal some interesting trends in summer water temperature as well. Data from both sites show that 2025 experienced periods of cooler temperatures in late July and early August compared to 2024. After another cold winter, we predict that the 2026 trapping season will continue to have low blue crab catch. As exciting as it is to catch blue crabs, even “zeros” are important data, and we greatly appreciate the efforts of our partners to continue to monitor this range expanding species. Further trapping efforts will reveal the effects of annual water temperature on blue crab abundances and allow for early detection of their spread along the coast of the Gulf of Maine.

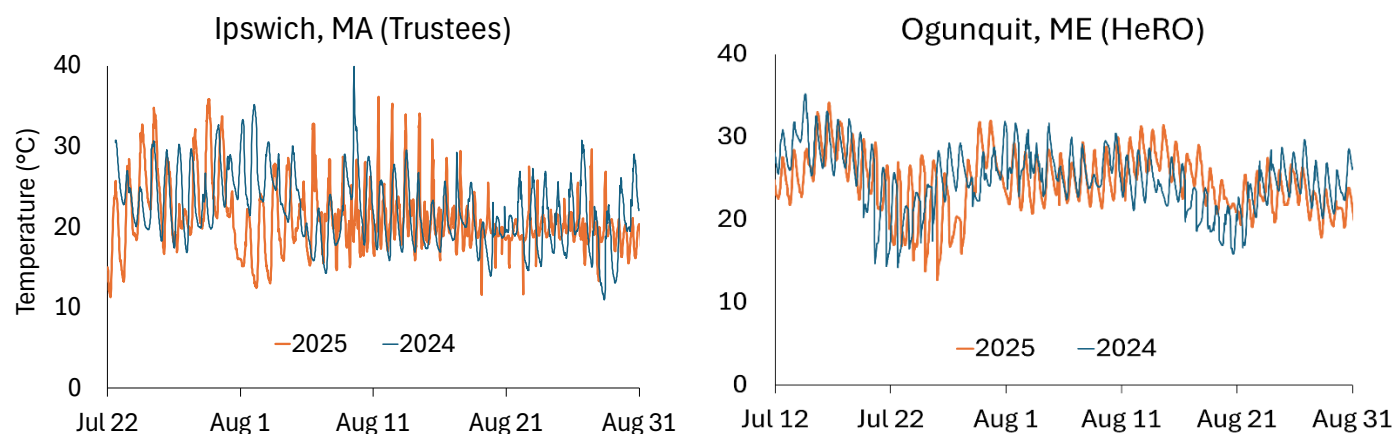


Figure 3. Water temperature data measured continuously Jul – Aug 2024 and 2025 at the trapping sites in Ipswich, MA (The Trustees) and Ogunquit, ME (HeRO). Data was collected using a HOBO temperature logger connected to one of the blue crab traps.

Where do blue crabs go?

Three blue crabs caught in the northern New Meadows River Estuary were tagged and released in Sep-Oct 2025. Using acoustic telemetry, Wells NERR and Manomet researchers tracked their movements through Nov 2025. Acoustic tags were strapped to the crabs' carapaces, and receivers were placed underwater across ~4.5 miles of estuary. The acoustic tags send off a "ping" at regular intervals which is detected by the receivers. These receivers act like EZ-Pass tolls, detecting any tagged blue crabs nearby. Two of the three tagged crabs hung out in the upper reaches of the estuary for the duration of the study and were still present when the acoustic receivers were removed in November in anticipation of winter. The third crab spent two weeks near where it was released, then quickly moved south, traveling over 4.5 miles and passing the southernmost receiver in only four days! While some blue crabs may hunker down wherever they are for the winter, others seem to leave the estuary in search of deeper water. We hope to tag and track more blue crabs in the future to improve our understanding of where blue crabs go in Gulf of Maine estuaries.

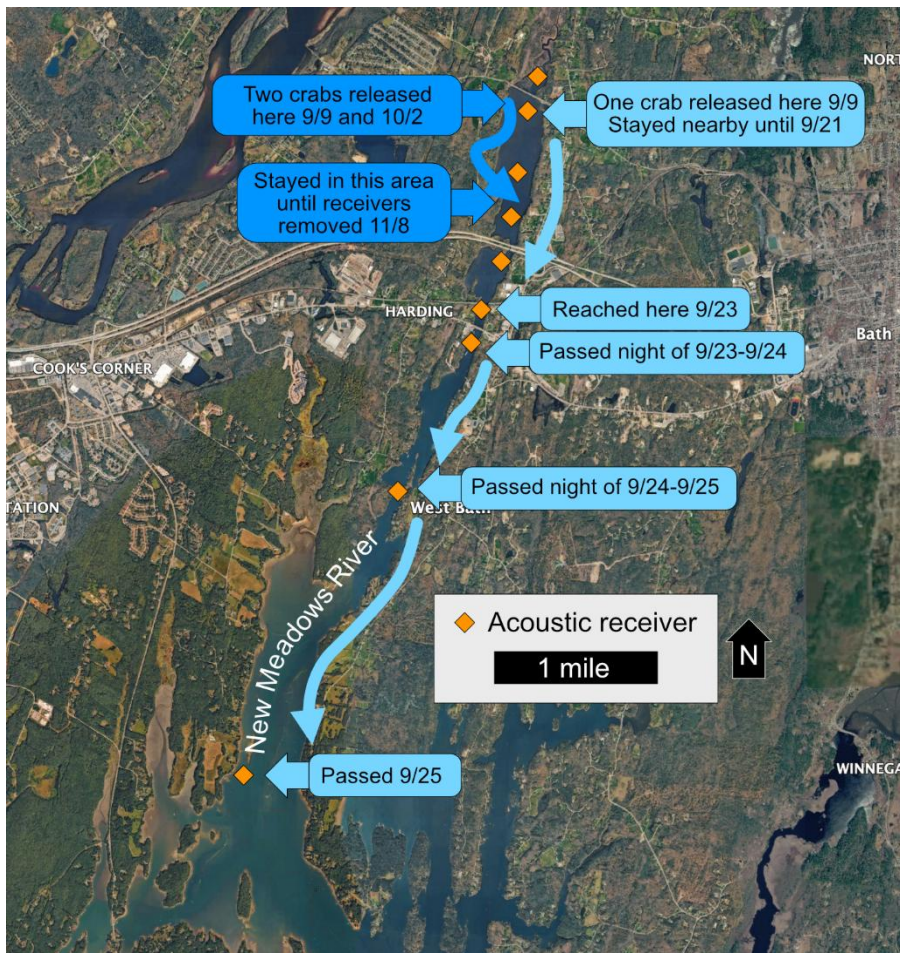


Figure 4. Map showing the movements of three blue crabs in New Meadows Estuary system as recorded with acoustic telemetry technology. Two blue crabs (dark blue) remained in the upper part of the estuary, while one crab (light blue) moved south past the southernmost receiver.



Photo: One of the blue crabs with an acoustic telemetry tag strapped to its carapace with wire.

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Report prepared May 2026 by:

Wells NERR: Laura Crane, Acadia Momm-White, Ben Gutzler, and Jason Goldstein

Manomet Conservation Sciences: Jessie Batchelder and Marissa McMahan

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