

GUIDE TO MARINE INVADERS IN THE GULF OF MAINE

Palaemon elegans

European rock shrimp



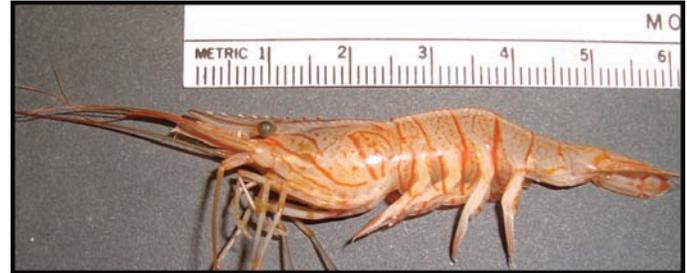
Adriaan Gittenberger

PHYSICAL DESCRIPTION

- Common shrimp body with long antennae and five pairs of legs, the first two pairs of legs having slender claws
- Orange or yellow spots on body, white leg joints, and neon blue claws
- Body mostly translucent, with dark reddish-brown bands along the margins of body plates
- Rostrum (beak) very wide and shovel-like in front of the eye socket, with seven to nine small serrated teeth along the top edge, three of them behind the eye socket, and typically three teeth on the underside of the rostrum
- Can reach over 2.5 inches (~6 centimeters) when fully grown

HABITAT PREFERENCE

- Generally associated with docks and inshore along rocky coasts and tidepools
- Often found in dense algal growths and in protected, shaded spots
- Tolerant of salinities from nearly freshwater to hyper-saline (~1- 40 ppt)
- Large temperature ranges from nearly 32° to upwards of 85°F (1°- 30°C)



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INVASION STATUS & ECOLOGICAL CONCERNS

A recent arrival to North America from Europe and the Mediterranean, *Palaemon elegans* was first found in Salem Sound in 2010. Due to its size, environmental tolerances, and distribution outside of its native range in Europe, *P. elegans* is likely to spread along the Atlantic coast.

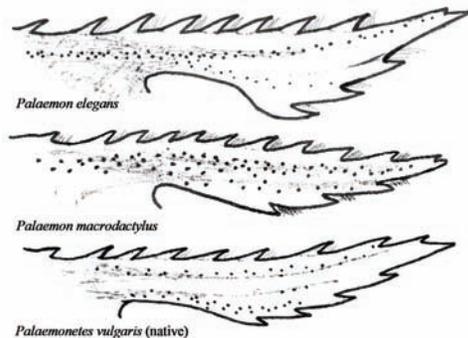
Another recently introduced shrimp, *Palaemon macrodactylus*, from the western Pacific, was reported in 2010 in Long Island Sound and Narragansett Bay. It prefers more estuarine waters, where it is also likely to exclude native shrimp. Both species are likely to become well-established in New England waters.

SIMILAR SPECIES

The non-native invader, *Palaemon macrodactylus*, is similar in form to *P. elegans*, but smaller and not as conspicuously marked. *P. elegans*'s rostrum is unusually wide and shovel-shaped, unlike any other shrimp species. *P. macrodactylus* has nine to fifteen teeth along the top of the rostrum, three of them behind the eye socket, and three to five teeth along the bottom along the bottom of the rostrum. Both non-native species have 3 teeth along the top of the rostrum behind the eye socket, which is a key that sets them both apart from the native Palaemonid shrimp in the region.

Other closely-related native Palaemonid shrimp are common to the region, particularly *Palaemonetes pugio* and *P. vulgaris*. They have muted coloration and have different configurations of teeth on the rostrum.

This identification card is one of a series produced by Salem Sound Coastwatch (www.salemsound.org) highlighting introduced species that pose a threat to the marine environments of Massachusetts and the Gulf of Maine. These cards were funded by the MA Executive Office of Energy and Environmental Affairs, Office of Coastal Zone Management. For additional information on these species, or to report sightings, please visit www.mass.gov/czm/invasives/monitor/reporting.htm.



P. elegans's rostrum shape and teeth distinguish it from all other shrimp.