

December 2019

Volume 237 • Number 3

# THE BIOLOGICAL BULLETIN



Marine  
Biological  
Laboratory

Published by the University of Chicago Press

## Cover

---

The cover features the introduced anemone *Sagartia elegans* on fouling panels in Salem Harbor, Massachusetts. One of the two adults has visibly ripe female reproductive tissue (salmon colored) that can be seen through the translucent oral disk. Alongside these adults are many asexually produced pedal lacerates, which are produced by contraction and tearing of the pedal disk. Through this method of asexual reproduction, anemone populations exponentially increase and take over hard-bottom substrata. *Sagartia elegans* is native to western Europe and was introduced to Salem Harbor before the year 2000. The population was restricted to Salem Harbor in the western Atlantic and would increase in summer and fall but disappear every winter. In the winter of 2010, the population in Salem Harbor disappeared and has since never been seen again, despite intensive efforts to locate this species.

On pages 283–291, Wells and Harris test hypotheses for the local extinction of this species and bring context to this failed invasion, a highly understudied topic despite the prevalence of introduced species in marine habitats. They report that the mechanism for its failed invasion is likely a mismatch between the thermal tolerance of this population and the winter temperatures. In both laboratory and field experiments, anemones died well above temperatures experienced in Salem Harbor, suggesting a warm-water refuge. Another contributor to the fate of this population was the apparent lack of genetic diversity; they observed only females, and all individuals within the population were the same color, which is uncharacteristic of this species in its native range.

*Credits:* Photo, Christopher D. Wells, University at Buffalo. Cover design, Jeannie Harrell, University of Chicago Press.