

Scary Stuff: Invasive Species

Invasive species can be found in freshwater, estuaries like the Narragansett Bay, and marine environments as well as on land from landlocked forests to our coasts.

An invasive species is a non-native species that survives



An Asian longhorn beetle

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when introduced to a new ecosystem, reproduces and spreads in the new area, and does, or is likely to, cause harm to the ecosystem. Scientists believe that invasive species are one of the main human-caused and abetted threats to biological systems.

As local and regional waters warm, additional warm-water species that once found the colder temperature inhospitable will be able to move into the area, live, and reproduce. The vast majority of range shifts—up to 75 percent—are in the northward direction. This is towards “us” if you are a Rhode Islander.

The shift north of warm-water species may introduce new species into Rhode Island waters, and warmer temperature could prolong the stay of current seasonal migrants. As ocean temperatures rise, invasive species that can breed in warmer winter waters may have an advantage over native Rhode Island species that breed in colder water. (And let us not forget how insects such as mosquitoes and ticks that thrive in warm humid weather can carry diseases such as Lyme, and the West Nile and Eastern equine encephalitis, or EEE, viruses. These effects are equivalent to invasive species.)

As environmental changes affect what native species live here and how many there are of each species (known in the scientific world as species diversity), resistance to the establishment and spread of invasive species could decline.

Resistance to invasive species may also be impeded by compound stressors, such as man-made disturbances, the spread of new diseases among naturally occurring animals and plants, and the stress of temperature increases.

While the Northeast may currently be relatively free of media darlings such as the voracious, land-journeying snakehead fish, and the zebra mussels that muscle out other species, don't think that means we don't have other intruders.

Once you've stepped on a water chestnut's spikes or watched Asian longhorn beetles devour



The dangerous and unseen barb of a water chestnut.

a forest, you won't need the national press to tell you there is a serious problem at hand. Those of you old enough to remember a summer when gypsy moth caterpillars flourished can recall the sci-fi effect of denuded forests in July or the pitter-pat of caterpillar scat “raining down” in the trees. How many seasons of this can a tree withstand? And how many can our psyches adapt to?



Blackstone River Watershed Association volunteers pulling up water chestnuts on Rice City Pond, on the Blackstone River.

Photo Credit: [Blackstone River Watershed Association](#).