

# Prevention key to combating invasive species

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A huge problem in trying to conserve and preserve our natural landscapes is the introduction of invasive species. Invasive species are non-native species that thrive in their new environment.

Invasive species pose such a large threat because they have no local natural predators and are able to outcompete native species for food and shelter, allowing their population to grow rapidly. Invasive species can be both plants and animals and once they establish themselves in the local ecosystem, they can be a problem to get rid of.

A native species is a species that historically lives in a particular region, contributing to maintain the local food chain. While some native populations are still flourishing, most native species have to put up with competition from invasive species, which strain and reduce their historic populations.

Often people confuse invasive species with non-native species. Invasive species are non-native species that wreak havoc on an ecosystem while non-native species were introduced to a but do not always pose a threat. All invasive species are non-native but all

non-natives are not invasive.

One such invasive species that has quickly spread across Maryland's coastal bays is *Phragmites australis*, otherwise known as "Phragmites" or "Phrag." *Phragmites* is a coarse marsh grass that can expand rapidly. *Phragmites* can reach heights of anywhere between 15 to 20 feet and create dense stands throughout fresh and saltwater marshes. Due to its size and propensity to create thick stands, *Phragmites* tends to outcompete native species of marsh grass such as *Spartina*. When this occurs it results in a vegetative monoculture and this can lower the animal biodiversity as well.

*Phragmites* are particularly suited to spread quickly throughout a marsh, even if there are other well-established native plants. *Phragmites* have a strong and thick root system and often reproduces using creeping rhizomes off its roots. Stands of *Phragmites* have vertical and horizontal rhizomes, allowing quick and easy distribution of nutrients for maximum reproduction.

Our bays are very susceptible to invasive species because of its easy access and wide range of salinity, allowing a large variety of organisms to inhabit it. An invasive species that is a threat to the aquatic ecosystems here

on the Eastern shore is *Nutria*. *Nutria* are a large brown rodent that can be distinguished by its big bright orange teeth. They originate from the marshes of South America and were brought up to Louisiana in the 1930s for fur and have since spread out to other regions.

*Nutria* are a threat to our marshes because they feed on the roots of our native grasses. The grasses are important because they are used as habitat, nursery, and a food source for a lot of our native organisms, both terrestrial and aquatic. Because the *Nutria* have no natural predators in Maryland, they are able to reproduce rapidly and eat our marsh roots. Efforts for the eradication of *Nutria* are strong, and we have seen a reduction in a few places here in Maryland. In 1999 President Clinton signed an executive order to control invasive species, which was followed up with President Bush signing the more specific *Nutria* Eradication and Control Act of 2003. Since then we have progressed greatly in the eradication of *Nutria* but they are still a population we must keep an eye on.

Invasive species take a great toll on our economy. We rely heavily on our natural resources like wetlands so when an invasive such as *Nutria* and *Phragmites* come and degrade it to

such an extent, we lose a lot of money. Businesses that rely on our wetlands lose the most, such as those in agriculture, ecotourism, commercial fisheries, the seafood industry, recreational fishing, hunting, and trapping. Millions of dollars have been spent on the eradication of *Nutria* and *Phragmites* and the restoration of marshes targeted by these and other invasive species.

If we focus on maintaining native species and continuing invasive removal, our local ecosystems should start to restore themselves.

Preventing the introduction of invasive species is the best form of fighting them, and the cheapest. There are many simple things you can do to prevent invasive species from being introduced such as doing your research on whether the plants you put in your garden are native. Another method is to make sure all of your belongings are clean when traveling and to leave foreign plants and animals behind. This means that you need to clean your shoes, bags, and mode of transportation. Another way to prevent invasive species introduction into our ecosystems is to not release pets into the wild.

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