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Keystone Species

By Jane Morton Galetto

A keystone species like the name suggests is a species on which an ecosystem is dependent and if it is destroyed the wall of species dependent on it can come tumbling down.

One such keystone species in the Maurice River watershed is wild rice *Zizania aquatica*. Many migrating species forage upon wild rice's kernels like rail birds and red wing black birds. In the winter the rice decays and provides migrating fish detritus, the proper microorganism soup of life for their young. Many fish must come into fresher waters to lay their eggs. A number of species young can't tolerate the saltier waters. So the Maurice River estuary is a nursery for many anadromous fish species including striped bass, herring, sturgeon, American shad and eel.

The roots of the rice also hold the base muds of the tidal marsh that protects uplands from floods and erosion. And the plants of the marsh clean our waters and ultimately the aquifer that we rely on for our drinking water. So we are really talking about the life as we know it.

Add to the mix an invasion non-migratory Canada geese and their need for a high caloric intake and you have the recipe for disaster. Up until the late 80s the Maurice didn't have many year round Canada geese then their numbers seemed to sky rocket. The hundreds of acres of wild rice were decimated. In fact the only places that wild rice grew to its full height was around osprey platforms. Osprey simply don't tolerate geese getting too close to their nests. Plants that weren't on the geese's menu became more plentiful. But for the most part the marshes were bare. Fish and Wildlife biologists put up some small enclosures and proved that it was the geese that were grazing on the vegetation and because of the soft substrate pulling it out entirely. Where blades of wild rice remained instead of having a pointy natural tip it was snapped squarely off. The herbivores were decimating the marsh plain.

Ultimately, the numbers of geese needed to be thinned or the ecosystem would collapse. The rice has not returned to its former glory but it is rather lush. There was the risk of losing many species dependent on the wild rice and possibly most importantly

the species hardly anyone ever sees the smallest of critters the small invertebrates that are at the base of the food pyramid that if destroyed cause the demise of all things. Time will tell if the public has the fortitude to protect the marshes from the highly invasive resident geese.