

2023 KNOCKOUT KNOTWEED RECAP

Since 2020, the MRBA has been tracking the spread of Japanese knotweed and experimenting with mechanical control methods of this incredibly pervasive invasive plant. During the last three summers, the MRBA has been monitoring the success of several mechanical removal methods across two infested sites; we have now narrowed these down to three mechanical control

treatments including: smothering with thick pond liner plastic, monthly cutting and removal of knotweed, and covering with metal mesh to impact the knotweed's growth. MRBA staff was planning to reintroduce native vegetation at the end of this year's treatment period. However, due to this summer's extreme rainfall, and especially the impact of the July 2023

flooding, our treatment plots experienced upheaval and disturbance that has set us back. Although we have had to delay some of the treatment plans, such as planting natives on our treated plots, the MRBA has still expanded our knowledge of knotweed this year including which fragments of the plant grow most readily and a successful method for drying mass cuttings, and have reinforced how essential protecting river banks is to reduce destruction during the more frequent high water events that Vermont will continue to see.

2023 Flood Impacts

Although our Missisquoi region fared well in comparison to other sections of our green mountain state, the destruction of natural communities and spread of invasives is still apparent from the July flooding. It will truly take years to understand the total impact that the torrential downpour had on the local ecosystems. The extreme weather events that our Vermont community experienced this summer is a warning of what is in store for us in years to come. It has once again* highlighted the importance of storm water management and how fast our riverbanks can be washed away during one massive event.

Our most effective knotweed treatment method, the pond liner, was washed away in Montgomery, and uprooted at our North Troy site. Plots that were ready for trial native plantings this summer experienced renewed knotweed growth in previously treated patches. Year-old native plantings accomplished at other knotweed sites had become inundated with floodwaters and the native established vegetation was mostly destroyed.

*In 2011, flooding from Tropical Storm Irene heavily affected parts of Vermont and resulted in a massive spread of invasives, especially of Japanese knotweed in the southern sections of the state. We are continuing to monitor the impact of the flooding in our region, and anticipate an increased establishment of knotweed on our riverbanks. Although this isn't the most uplifting news, we take solace that we are not beginning at step 1, but instead are strides ahead with the knowledge we have gained since the beginnings of this project.





Our Collection Box - Nov 2023

New Methods

Over the past three years of knotweed collecting, the MRBA has gone through several variations of methods of drying and have found a successful method for mass drying. Due to the large-scale cuttings that we do, especially in the early and late season of knotweed growth, the MRBA tends to have massive piles of knotweed to dry. In years past, staff has finagled 10 foot long stalks of knotweed into grocery onion bags to dry - a dreadfully cumbersome task! This method also required the bags to be hung to dry and not left on the

ground, where they would mold easily. For this season, MRBA staff tried a new method: building a breathable box out of six old donated pallets. A tarp under this box separates knotweed from soil, and landscape fabric was stapled along the bottom third of the box to reduce risk of spread as it dries. We have been able to fit all of our 2023 clippings - approximately 125 lbs of fresh weight - and it has dried wonderfully. We intend to continue this method for next year's drying as well! If you would like assistance in creating your own knotweed drying box, reach out to our Field Coordinator, Sarah Lunn, at sarah@mrbavt.com for more in depth details about how we constructed it!



Week 3 Growth - July 2023

Still Learning

Each growing season, we try to learn as much as we can about knotweed. This summer, with the help of our high-school interns, we conducted experiments with different fragments of the knotweed plant. Our interns selected leaves, new shoots, and stems of different diameters to test which fragments of the plant are likely to

grow most easily. Not shockingly, we found that all plant fragments except leaves resulted in some new knotweed growth. This experiment cemented our knowledge that fragments of the plant do have a huge risk of spread if not properly disposed of. We also started new treatment ideas, inspired by the late frost in May 2023 that damaged knotweed around the state. The MRBA plans to expand our understanding next year and focus on how intense cold could impact the plant. Stay tuned for next year's experiments!



2023 Frost Damage

Expanding Connections

As Japanese knotweed has been spreading through Vermont, so has the mission to stop it. We have had great conversations with communities throughout the state and even beyond: the MRBA has connected with other local efforts - the Montgomery Conservation Commission and their project to reclaim town-owned property, AmeriCorps members reaching out for technical assistance in Montpelier; we've even received inquiries from people battling knotweed in the United Kingdom. Although at times this battle seems daunting, we feel optimistic with the efforts being put forth to continue battling it by our Vermont community and beyond.



Learn more by visiting our website at mrbavt.com/knockout-knotweed

Keep following us and stay connected with our journey to Knockout Knotweed!