Welcome!

Once again the growing season comes to an end on PEI. Animals have filled their stores, and plants have entered dormancy to prepare for the deep freeze. Our time in the field is becoming more and more scarce. Even though invasive species activity has begun to slow, work for the PEIISC staff never stops! Let's take a step back and reflect on a year of hard work and progress.

Thank you to Laura for a fantastic season! Our summer student technician Laura Mohan has returned to her studies in the UPEI Faculty of Engineering for the winter semester. Laura provided the PEIISC with a positive, hardworking attitude throughout the summer season, and we wish her all the best in her academic endeavors. Laura, the PEIISC appreciates your dedication to invasive species management on PEI!

This winter's funding has allowed the council to keep our coordinator and two active full-time technicians at work. This will allow us to take on additional projects and opportunities during the winter months. Erica, Kassidy and Clay will continue to work on important projects that benefit PEI's natural areas, forests and the people that use them.

Since our last newsletter...

Recently, the PEIISC has been occupied with a number of projects to protect our island ecosystems.

Management activities since our last update have included three sites with garlic mustard infestations, several Japanese knotweed infestations, Himalayan balsam at Beach Grove, wild cucumber with the Trout River Environmental Committee, giant hogweed, Georgetown's scotch broom, and multiflora rose & glossy buckthorn with the Upton Farm Land Trust. We have also spent some time fixing up our tarped sites that were managed earlier in the season in the aftermath of hurricane Fiona.

Survey and monitoring work was undertaken in several provincial parks, at giant hogweed sites, and in partnership with Ducks Unlimited at some of their properties. Interesting observations include bank swallow nesting sites and many newly found patches of black knapweed.

On the entomological front, we have worked with several partners including MacPhail Woods, the City of Charlottetown, the Canadian Food Inspection Agency, and the Abegweit Conservation Society to monitor selected ash trees for emerald ash borer presence. Thankfully, nothing significant was found this year.

A report of Japanese beetle (JB) grubs came from a member of the public in Montague. This was our furthest JB report from the Charlottetown area. A visit to the property revealed that they were June Bug grubs, not the Japanese beetle. Staff used size and hairs on the grubs' lower abdomen for ID.

The PEIISC had our first in-person meeting since before the COVID-19 global pandemic on September 15th at the PEI Farm Centre in Charlottetown. Thank you to all in attendance for a productive and lighthearted session! PEIISC staff also attended the Forested Landscape Priority Places tour where we showcased our Japanese knotweed management site in Clearsprings/St. Margaret's.

In the office, the team has been keeping busy finishing off year end reports, preparing for next year, and a host of other tasks. Kassidy has been hard at work on an invasive plant species guide for PEI, discussed later. Clay has led the recent endeavour to survey PEI provincial parks for invasive species presence and make recommendations for future management there. Work has been ongoing on the creation of a priority list for insects & diseases on PEI, and on improvements to website content.

Black knapweed infests a ditch near Belle River.

Provincial Park Monitoring:

Thanks to financial support from the Climate Challenge Fund, the PEIISC has worked with the province over the past few months to conduct surveys of some of PEI's provincial parks. The main goals for this project were the creation of a survey and monitoring protocol for invasive species on PEI, discovering new populations of invasive species, tracking how these populations spread, and pushing for the management of identified high-risk populations. Technicians selected parks for survey based on their ecological value, location, and visitation rate.

Each park has its own unique set of invasive species issues. Some of the most prominent invasive species found in multiple parks include bittersweet nightshade, black knapweed, Japanese knotweed, and woodland angelica. Black knapweed detection was surprisingly frequent, indicating that this plant may be much more widespread on PEI than reports previously suggested.

The team created survey datasheets for the project. Recorded data is currently being compiled into reports with specific management recommendations for each park, so that staff can effectively manage these populations of invasive species in the absence of PEIISC technicians. In the following growing season, we intend to meet with provincial park staff to familiarize them with the invasive plant species present in their parks, help them identify problem species, and educate on how to control these species.

Thank you to the provincial park staff for welcoming us into your beautiful places of work!

Invasive Plant Species Guide:

Identifying invasive species early in their establishment is imperative to effectively manage resources and achieve success. To help Islanders understand how to identify and manage invasive species we have been working on an information guide.

This guide is funded by the PEI Forested Landscape Priority Place for Species at Risk, an initiative focused on protecting PEI's forested landscape. We look forward to releasing it soon.

The planning section covers types of monitoring, stages of management, provincial permit requirements, reporting sightings, disposal, biosecurity, site replanting, tools and how to account for species at risk.

The identification section covers when a plant is most observable, where they can be found, what they look like as mature vs immature plants and how to differentiate between lookalike species, a description of the inflorescence, fruit, leaves, stem, root and photos of key features.

The management section covers methods of reproduction, seed bank viability, pathways of introduction, natural dispersal methods, best time to conduct management, techniques based on population size, recommended protective gear, and grow me instead options.

This project was undertaken with the financial support of:
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Environment and Climate Change Canada
Environnement et Changement climatique Canada

About the PEI Invasive Species Council:

The PEI Invasive Species Council has been actively engaged in the creation of a framework for the management of invasive species on Prince Edward Island for over a decade. The council is composed of core staff, including technicians and a coordinator, supported by a larger council of stakeholders in the fight against invasive species. We support the management of invasive species on PEI by networking with and educating both professional land managers and the public on invasive species issues. We also work with these groups to actively manage invasive species on PEI, including physical management activities, surveying, and monitoring.

Invasive Species Have a Role to Play in Urban Forest Planning

The City of Charlottetown continues its tree maintenance efforts in the aftermath of Hurricane Fiona. Along with the rest of PEI, the City experienced significant tree loss along its streets, parks, and natural areas. Trees that have been damaged by the hurricane continue to be identified and designated for removal to eliminate public risk and hazards.

City staff use a tree inventory software that aids in planning tree maintenance, as well as monitors the health and loss of trees throughout Charlottetown. Trees that are removed are updated in the inventory, and over time, a search can be done to identify locations of tree loss and aids in the planning of future tree planting. The inventory is also used to note trees that require maintenance such as pruning.

A wide range of tree species are planted every year in our city, and extensive planning goes into the process, as planting in urban environments pose several challenges. These challenges include limited soil volume, above and below ground utilities, soil compaction, sunlight exposure, road salt exposure and maintaining sight lines. Selecting the appropriate species depends on these listed conditions.

Due to invasive insect pests and the urban forest impacts they have shown in other Canadian provinces, the City has stopped planting ash trees along our streets. This is due to the emerald ash borer (EAB), which when present will kill most true ash trees in its path. Based on province-wide monitoring efforts, EAB is not yet present in PEI.

The Norway maple is an example of an invasive species that is widely planted across the Island due to its tolerance to urban conditions, showy cultivars, and rapid growth. These trees, when mature, exhibit poor branching structure with weak branch unions and have low strength during wind events, creating hazards and damaging infrastructure. Sadly, some of Charlottetown's streets are lined with this species, and experience loss after a storm. Areas such as this are heavily monitored for tree risk and are prime candidates for replanting with native species.

Planting native species is always encouraged, and species that tolerate urban conditions include red maple, red oak, American elm (Dutch elm disease resistant cultivars), and serviceberry, to name a few. However, species that aren't native are also planted on city streets to increase biodiversity and withstand harsh growing conditions. Research should be done before planting to ensure the selected species to be planted are not invasive.

Morgan Laverty

Acting Forest and Environment Officer

City of Charlottetown

Red maple, *Acer rubrum*

Red oak, *Quercus rubra*

American elm, *Ulmus americana*

EDDMapS is a web-based mapping system used to document invasive species distribution across PEI. Use either the website or smartphone app to make reports of invasive species sightings. Check out both methods! All reports that are mapped are verified by our team. Visit *EDDMapS.org*!

Spotted Lanternfly — On the Horizon

The spotted lanternfly is a highly destructive insect invader from Asia. The insect is a member of the order of true bugs, and has a very distinctive appearance when mature. Egg masses are highly inconspicuous, and can look very similar to lichen. A single egg mass has the potential to initiate an entire new population. The main risk of spread is via human activity. This species will feed on a large variety of plants, and can almost always find a host. This pest is found just south of the Canada-U.S.A. border, and will likely find its way into Canada some time within the next few years.

Species at Risk Spotlight: Black Ash and the Emerald Ash Borer

The PEIISC's efforts to monitor high value ash trees in the province for the invasive emerald ash borer in 2022 was a success. No EAB was found on PEI this year, which is great news for our Island's ash populations. The emerald ash borer, as you have likely heard, is a highly destructive insect introduced from East Asia. Since its initial discovery and introduction in 2022, the insect has spread throughout Eastern Canada and the Northeastern United States, killing 99% of the trees it infests.

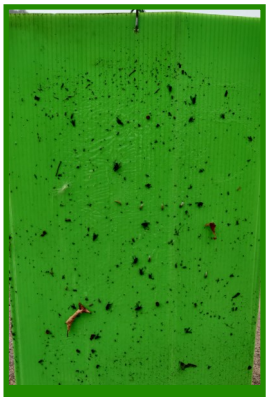
Black ash, one of the emerald ash borer's preferred hosts, is registered as threatened by the Committee on the Status of Endangered Wildlife in Canada. As PEI is one of the few areas within black ash's native range free from the emerald ash borer, it is critical these trees be protected from the influence of this destructive invasive insect. Not only is the tree of great ecological significance as a rare component of the Wabanaki/Acadian forest, black ash also has great cultural significance to the Mi'kmaq people. The PEIISC is happy to do its part to protect this threatened species.

Monitoring is done by placing a bright green, tree-sided sticky trap (PRISM trap) high up in a selected ash tree. A long reach pole with a hanger attached is used to mount the readied trap, armed with a combination of emerald ash borer pheromones and volatile compounds released by stressed ash trees. The traps are checked at the end of the flying season for adult emerald ash borer. This past season, emerald ash borer remains undetected on PEI. We are thankful to our numerous partners in this endeavour for making this possible! For our readers, we are always searching for ideal locations to place these traps. If you know of any white or black ash trees in high-value or high-traffic areas, please reach out to us to share the location at peiinvasives@gmail.com.


Chemical attractants set.


Trap set in East Royalty.


A suspicious lookalike.


The results.

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