

Abegweit First Nation Stewardship of Black Ash: Ecological Reporting 2025

A PEI Forested Landscape Priority Place Project

March, 2025

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Busy Beavers Flooding Forest, Vernon River, PE

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Sunny Black Ash Leaves

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Acknowledgements



The fieldwork, restoration and public outreach activities of the **Black Ash Project** have been a joint effort between the **Abegweit Conservation Society** and the **Macphail Woods Ecological Forestry Project** through support from the **PEI Forested Landscape Priority Place for Species at Risk** Funding.

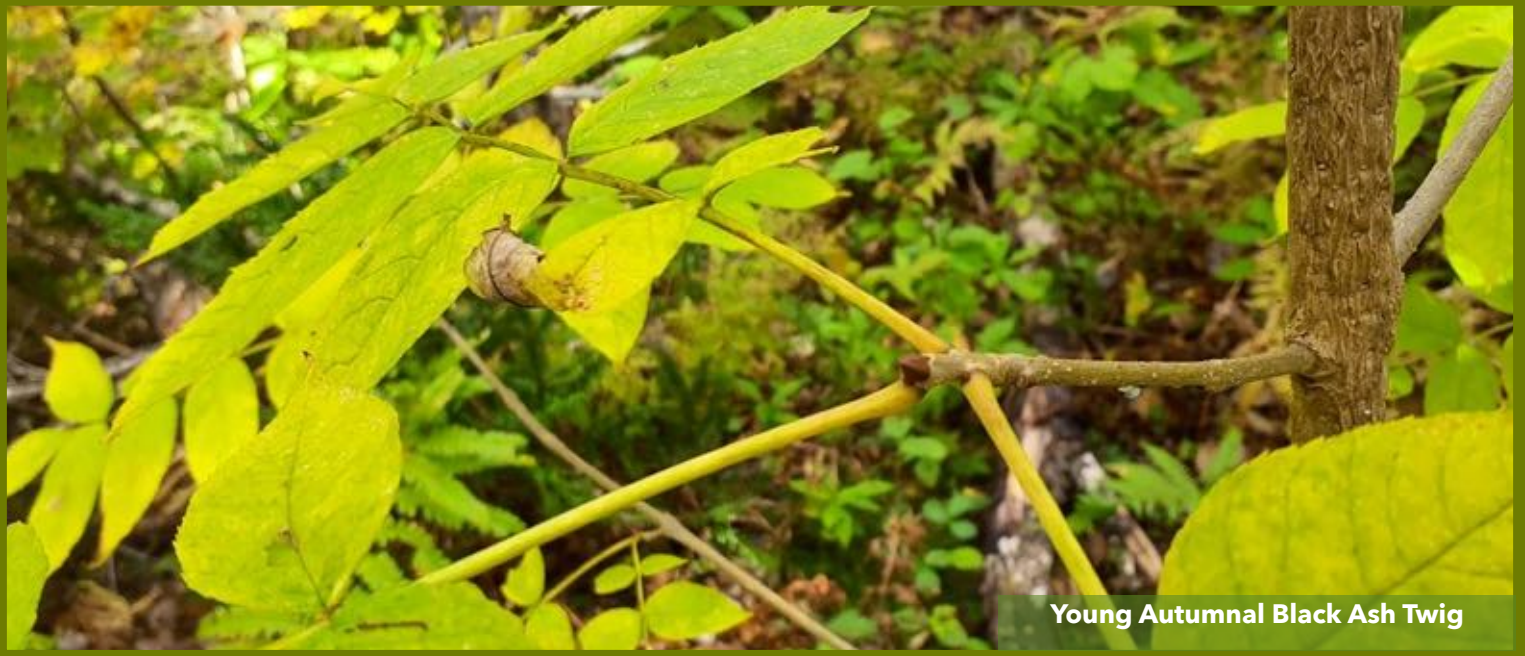
There are also a number of other organizations that have been integral to the project. These include local land stewards such as the **Island Nature Trust**, **The Nature Conservancy of Canada**, the **Provincial Government**, **Lennox Island First Nation** and various private land owners.

Thanks is also due to the **Atlantic Canadian Conservation Data Centre (ACCDC)** and their staff. They provided many of the historic locations that helped to start the fieldwork. Several members of their staff participated in field visits to help improve biodiversity data. They have also been a resource to confirm obscure or unknown species. Their staff was integral for the creation of a Provincial black ash habitability model.

Thank you to the long history of data collectors & GIS analysts from the Federal and Provincial Government. Their data informed the fieldwork as well as assisted in finding new sites across the Island. Thank you as well to PEI Provincial Nursery staff for growing such wonderful Black ash seedlings.



Black Ash Project History



Young Autumnal Black Ash Twig

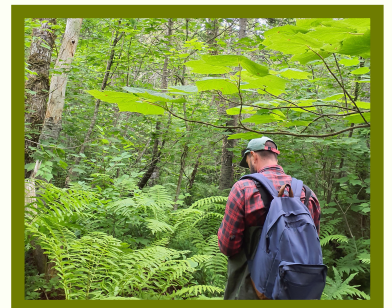
The **Black Ash Project** field survey data was collected between December of 2020 and March 2025 by a team composed of staff from the Abegweit Conservation Society and the Macphail Woods Ecological Forestry Project.

Black ash plantings were led by staff from the Macphail Woods Ecological Forestry Project. Other relevant conservation organizations, as well as Abegweit Conservation Society staff participated in many of the plantings. These specimens have been geo-referenced and monitoring is planned as part of the next steps of the project.

Outreach and consultation about black ash and their swampy habitats have become an increasingly important component due to public and national interest in this species. A number of strong partnerships have emerged from this project. Whether helping the PEI invasive species council monitor for Emerald Ash boring beetles, participating in local wetland and river conferences or assisting regional experts to develop better predictive modelling, the cumulative expertise gathered over the course of this project has mutually benefitted a large number of local and regional partners.

2021 SEASON

The first year of the project focused on gathering the historical database of black ash locations across the province, as well as creating an assessment rubric and a data collection system. Sites surveyed were used to test the accuracy of the historical records and fine-tune the ecological assessment for the project. Fieldwork was also an opportunity to provide training for staff from the Abegweit Conservation Society in data collection and plant identification. Over 1000 black ash saplings were delivered to the Macphail Woods Nursery for care and maintenance.



2022 SEASON

The 2022 season was focused on field surveys & finding unrecorded sites. Fieldwork was primarily focused in Queens and Kings counties, although select sites in Prince county were visited. A number of new sites were found through manual GIS analysis. This season also included public outreach and education, including walks, talks, press coverage and even participation in a podcast. Black ash saplings continued to be nurtured at the Macphail Woods Nursery.



Black Ash Project History

2023 SEASON

The 2023 season continued the previous aspects of the project, such as outreach, training and field surveys. Additionally, restoration plantings of the young black ash saplings began this season. 450 black ash were planted across all three counties, as well as 119 native companion species specimens. The restoration work included other conservation organizations and volunteers as often as possible, using these plantings as educational, experiential and community-building events.

2024 SEASON

The fourth year of the project continued fieldwork, restoration plantings, outreach, and training. In addition to these ongoing activities, the project team also consulted on the development of ACCDC's Black Ash Habitability Model, installed monitoring devices across 3 black ash sites focused on collecting running data about local humidity and temperature. Fieldwork continued across the Province, although this time with the additional goal of ground truthing the new habitability model.



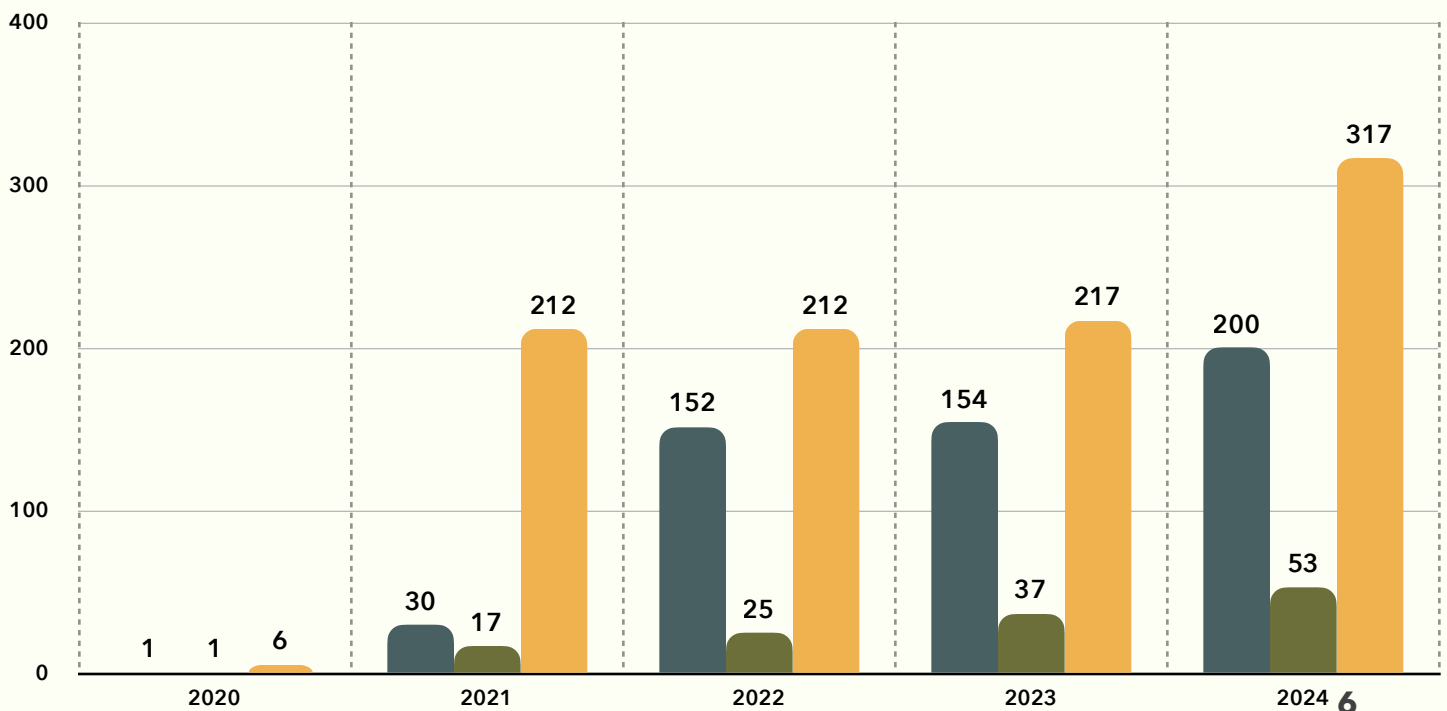
Towering Black Ash on INT Land, Clarkin, PE

■ Properties Visited

■ Properties with BA

■ # of BA Confirmed

PROJECT HISTORY



Historically Hidden



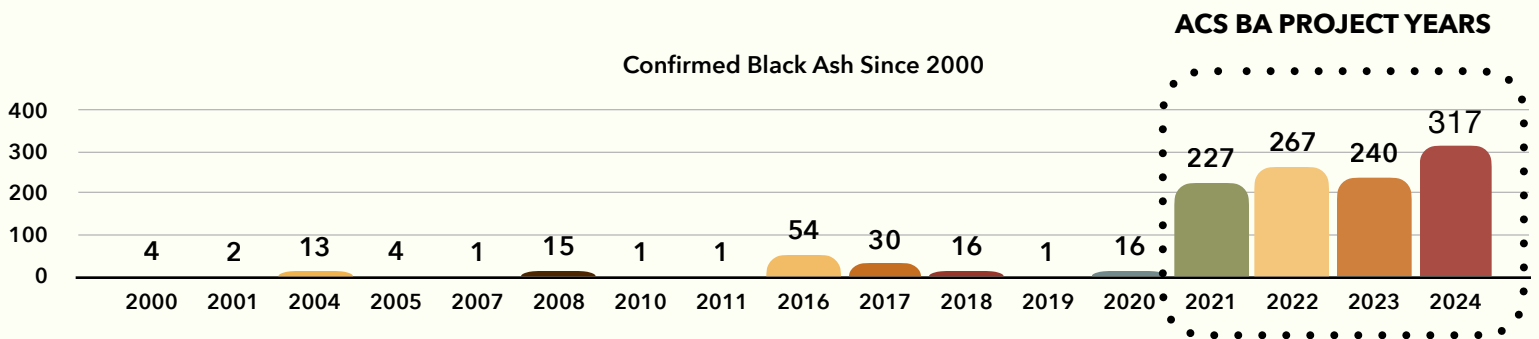
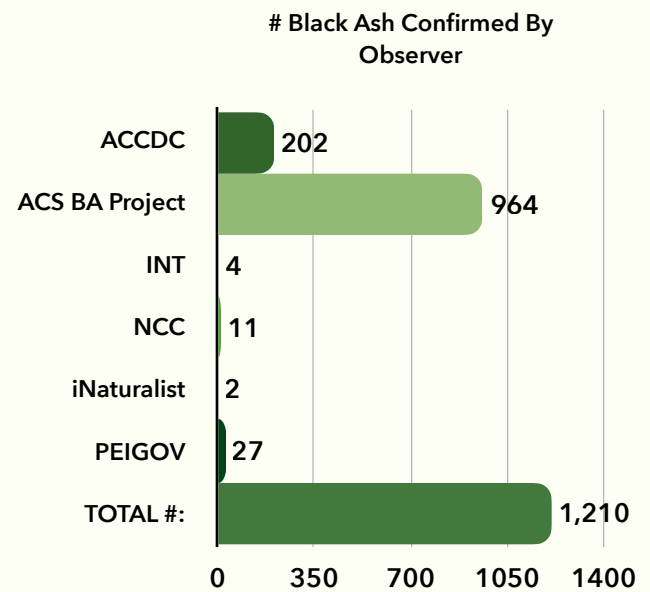
As mentioned in previous reports, black ash trees grow across Prince Edward Island, although primarily in Prince and Kings Counties. Wild trees have been found in eastern Queens County, however only a few planted specimens have been found west of Tracadie Bay.

Although the project began with a large number of historic potential sites, thanks to the ACCDC, many of these had poor locational accuracy or were gathered from very old records.

In addition, black ash trees also primarily grow in wet habitats, often hard to access and rarely surveyed. Coupled with being a subtle tree to both notice and identify, as well as their generally low cohort populations, this has led to this species being under-reported across the province.

There have been a number of sites visited, such as the popular Dromore trails, Morrell fishing spots, and even areas along the confederation trail with black ash present but never recorded. Despite this positive discovery of more black ash than previously thought, this species is still very rare, often growing in low-number cohorts, with many recuperating from past land-use practices.

As the graphs on this page show, the Abegweit Conservation Society's Black Ash Project has resulted in a dramatic increase in the number of confirmed black ash trees and growing sites over the last four years.





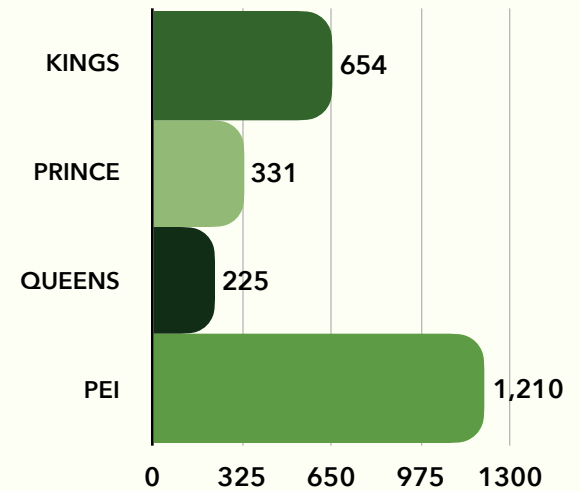
Setting up Emerald Ash Borer Traps with the PEI Invasive Species Council

Black ash grow across the province, although they are generally found concentrated in wet habitats, primarily in wet woodlands and along forested rivers. Historic land-clearing and other ecological disturbances still greatly influence where black ash can be found. For instance, despite the healthy population in Queens County, these are predominantly all located east of the Hillsborough River. This area of Queens has seen less farming/clearing and has higher concentrations of poor-drainage soils.

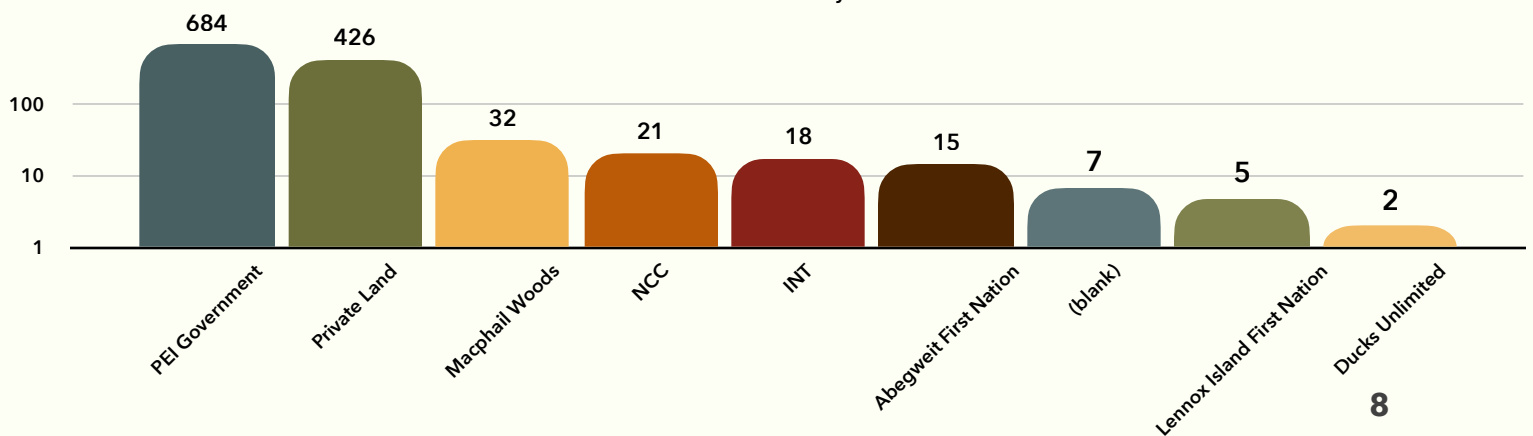
The graph to the right shows the number of confirmed black ash by county. It should be noted that more sites have been surveyed in both Queens and Kings compared to Prince County. Despite this, a higher number of trees were found in Prince over Queens County, with many more excellent sites to be surveyed in 2025.

Although over 60% of PEI's confirmed black ash are growing on properties protected or stewarded by local conservation organizations, there are a substantial number growing on private land.

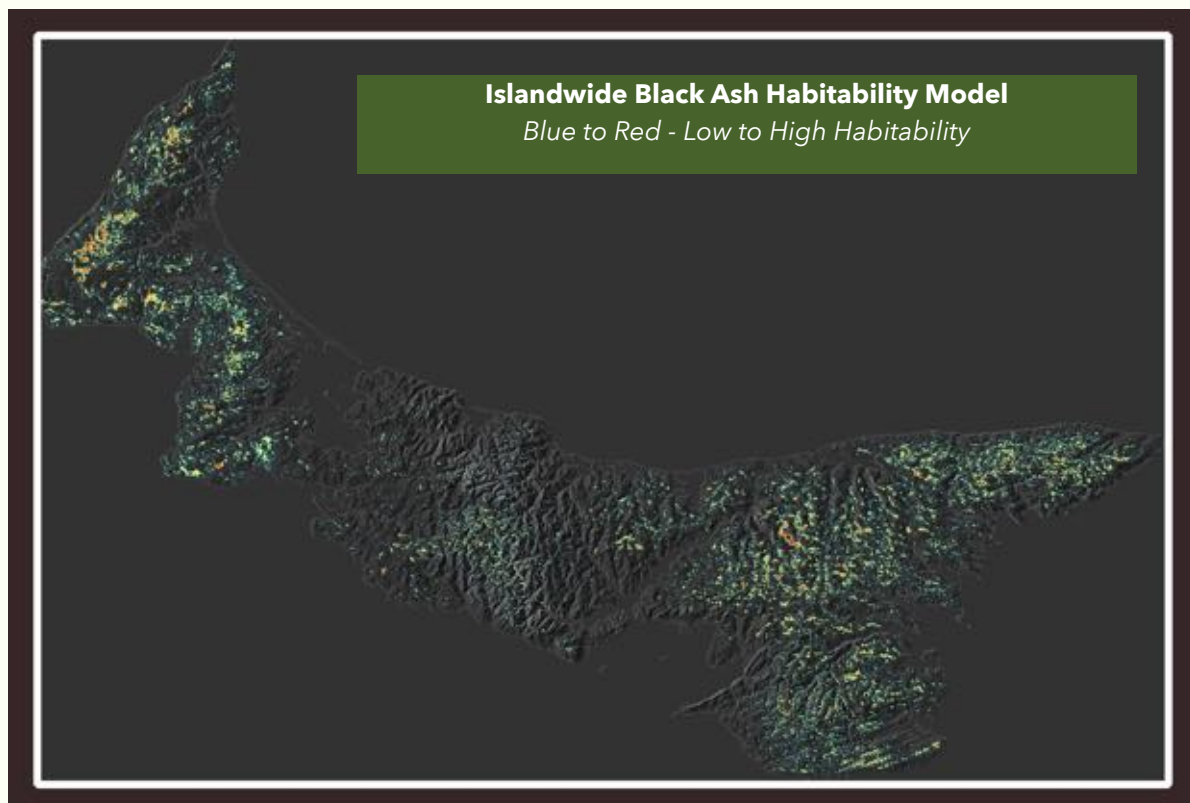
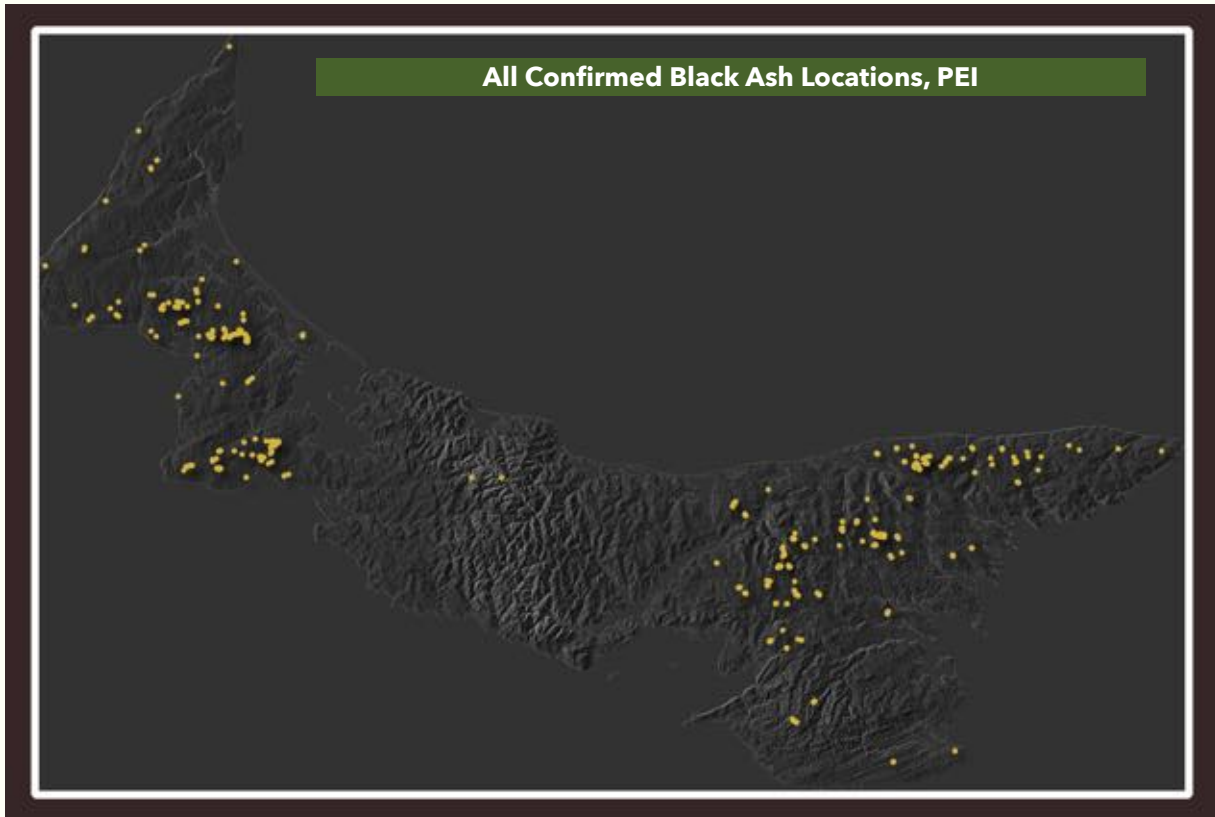
Confirmed Black Ash
By County



Confirmed Black Ash by Land Steward



Black Ash Maps: Locations & Habitability Model



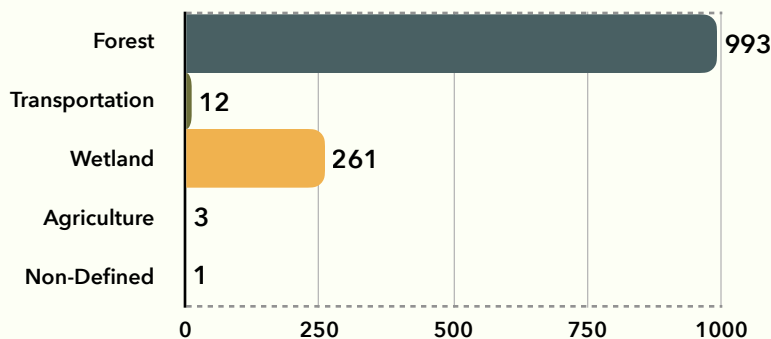
Hospitable Habitats



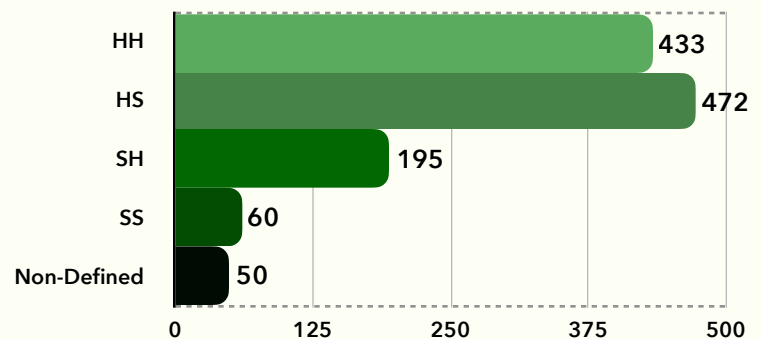
Although black ash grow in wet habitats across their global range, there is always local variability in their preferences based on differing soils, ecological communities, climates, and land-use histories. Prince Edward Island is almost completely composed of sandstone bedrock as well as their associated sandy soils, often higher in drainage and acidity than other Maritime soils. As more and more black ash are confirmed across the Province, our knowledge about their preferred habitats, growing conditions and ability to withstand specific ecological disturbances becomes more nuanced.

The graphs below showcase black ash's preference for PEI's wet forested habitats, ideally with little historic ecological disturbances as well as a predominantly deciduous canopy. Coniferous swamps, bogs and other higher-acidity wetlands tended to have less healthy trees with lower populations.

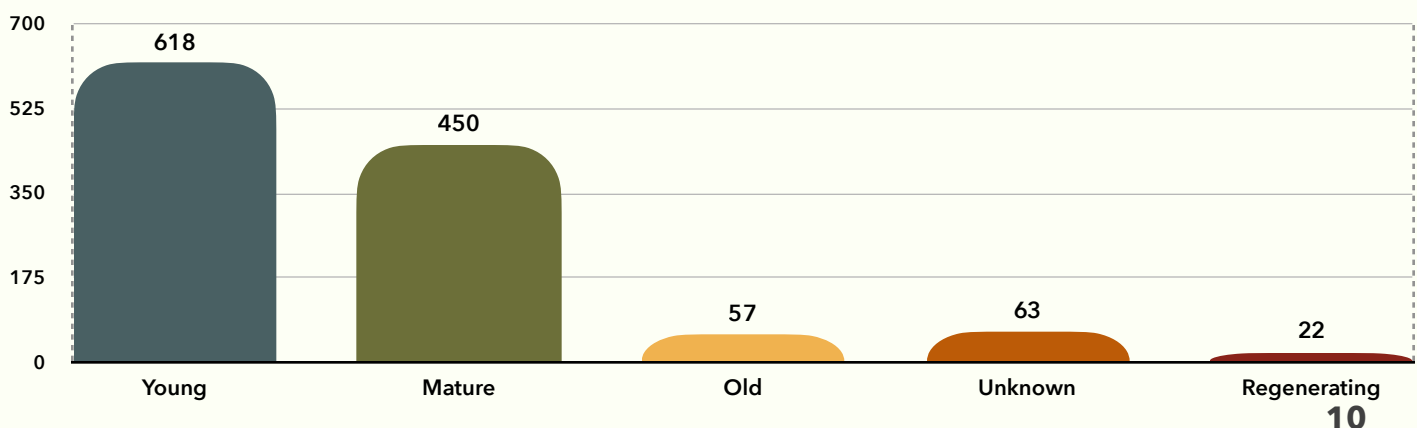
Confirmed BA by Land-use



Confirmed BA by Canopy Cover



of Confirmed Black Ash by Development Stage



Disturbances & Durability

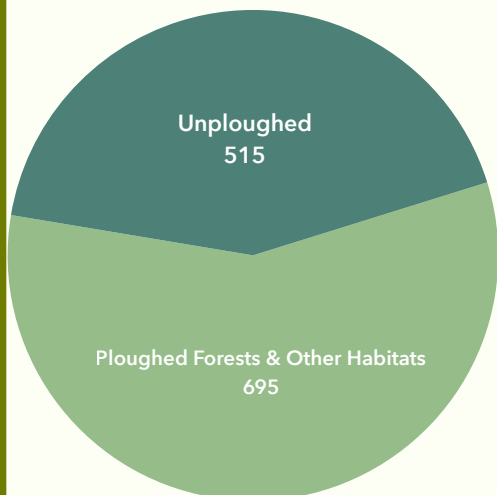


Historically, the small province of PEI has seen substantial ecological disturbance, first through land clearing, burning, and ship-building, then from vast agricultural production and intensive forestry practices. This has resulted in highly ecologically disturbed habitats across the province, even many of our wetlands were clear-cut and farmed, where possible.

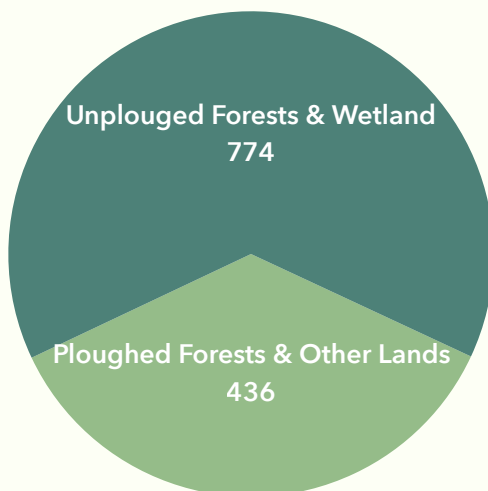
Despite this, black ash have been found growing across the province; even in some areas of poor ecological health. These areas often had specimens that were in poorer health, struggling to recover from past land-use practices. Not only that, but sites with intensive histories had the lowest black ash populations as well.

The charts below showcase black ash's sensitivity to ecological disturbances using the province's *Corporate Land-Use Inventory* (2020), as well as the historically *unploughed forests* dataset to showcase black ash's preference for less-disturbed sites on PEI. While over half of confirmed black ash are growing in previously ploughed forests, over 60% are found growing in unploughed forests and/or wetlands. Parsing out those unploughed forests and wetlands with an officially recorded history of ecological disturbance, whether burning, clearcutting or more, the resulting numbers clearly show the predominance of our Island's black ash growing in the least disturbed habitats.

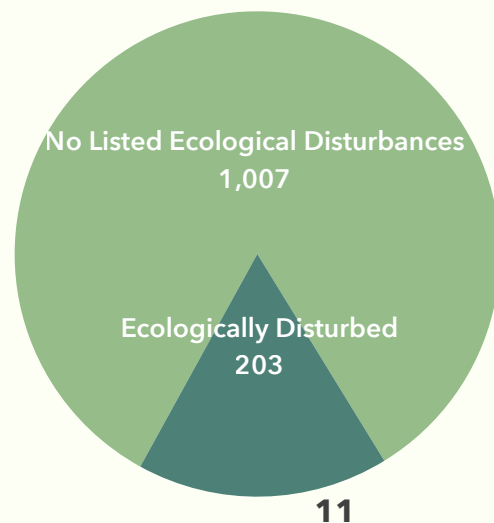
Confirmed BA by Unploughed Forests



of Confirmed Black Ash by Provincial Unploughed Layer with Wetlands



of Confirmed Black Ash by Ecological Disturbance



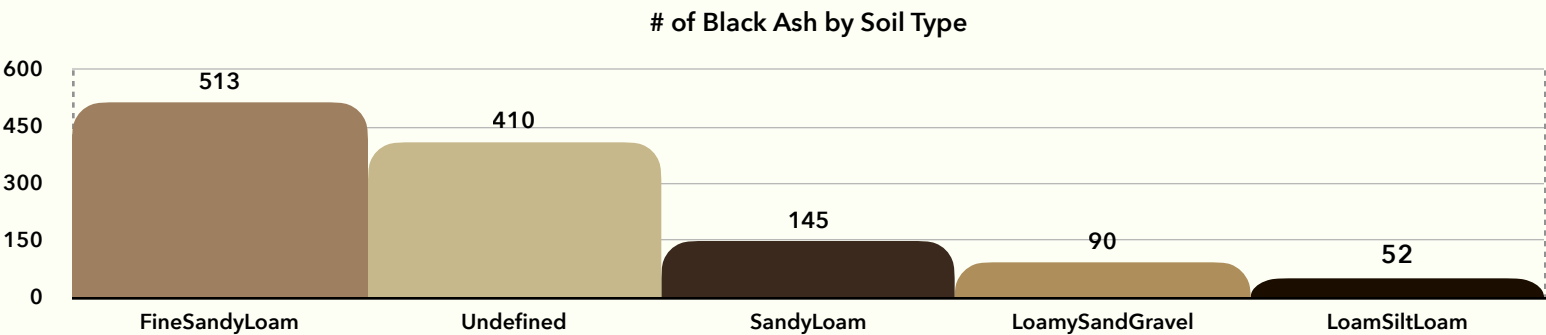
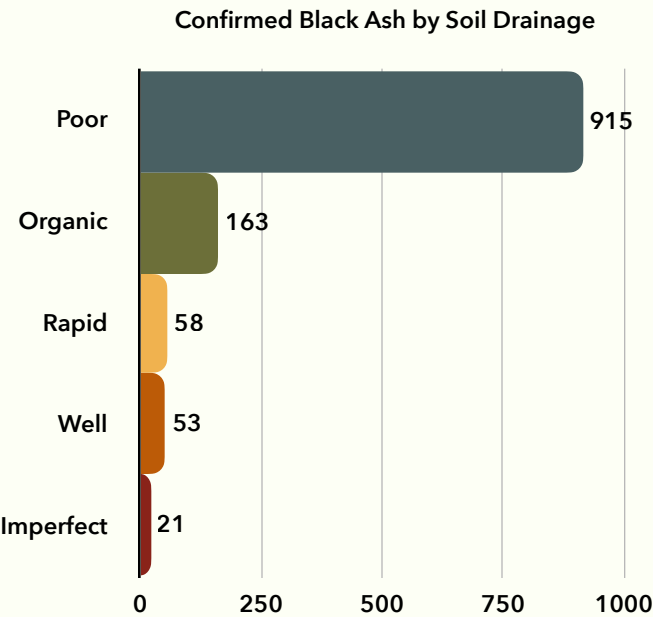
Suitable Soils



Sphagnum girgeneshonii - A common shade-tolerant wet woodland ground cover

Black ash’s preference for wetter soils and habitats is a well-known fact across its range. Data collected on PEI supports this locally, with just over 75% of all confirmed black ash growing in soils of poor drainage. When combined with trees located on organic soils, which also boast lower drainage, then approximately 90% of our population are found growing in these soggy places.

Black ash’s preference for local soil types is less clear, although just over 40% can be found growing in Fine Sandy Loams. This type of soil is also the most geographically prolific across the province, likely skewing these results. Further studies would benefit from soil sampling across a wide variety of sites. This data would be beneficial for restoration work as well as informing better germinating practices.



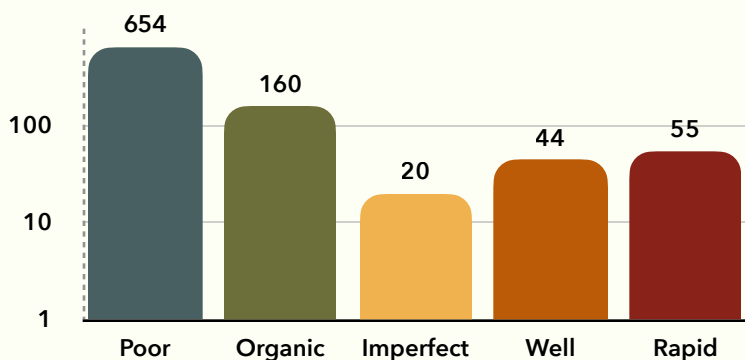


Shrub Swamp with Marsh Marigolds, Vallyfield Demonstration Woodlot

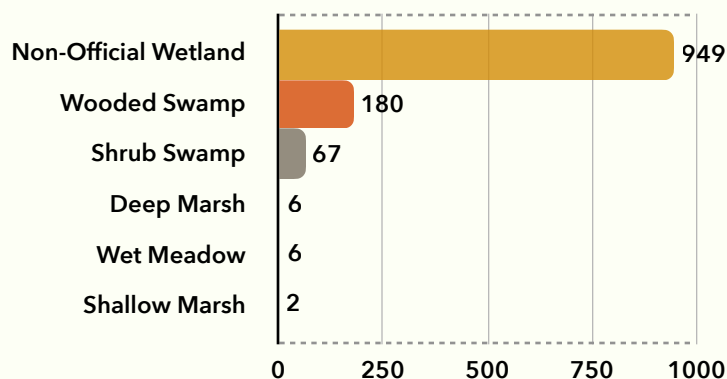
Based on its preference for poorer drainage soils, it is no surprise that just over 20% of confirmed black ash trees have been found growing in official PEI wetlands. As the chart to the right shows, the greatest number of these are found growing in swamps, with scarce populations found in sunnier or boggier wetlands.

Although most of PEI's black ash trees are growing across forested sites, the chart below shows that these are found predominantly in forests with poorer drainage, many of these might be unclassified wetlands. The chart to the bottom right shows the number of species across black ash sites and their corresponding wetland rating categories based on the Nova Scotian wetland plant indicator list.

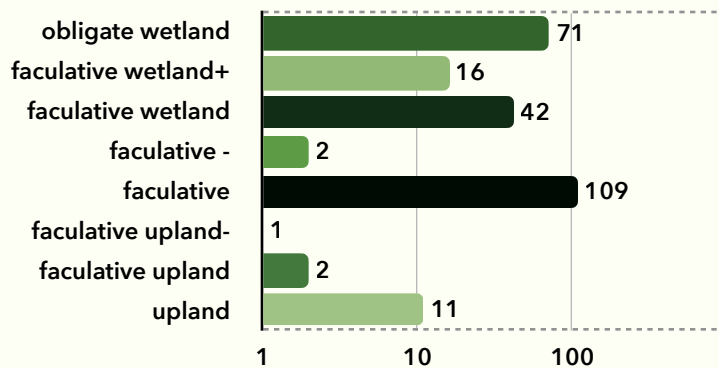
Confirmed Black Ash in Forests by Soil Drainage



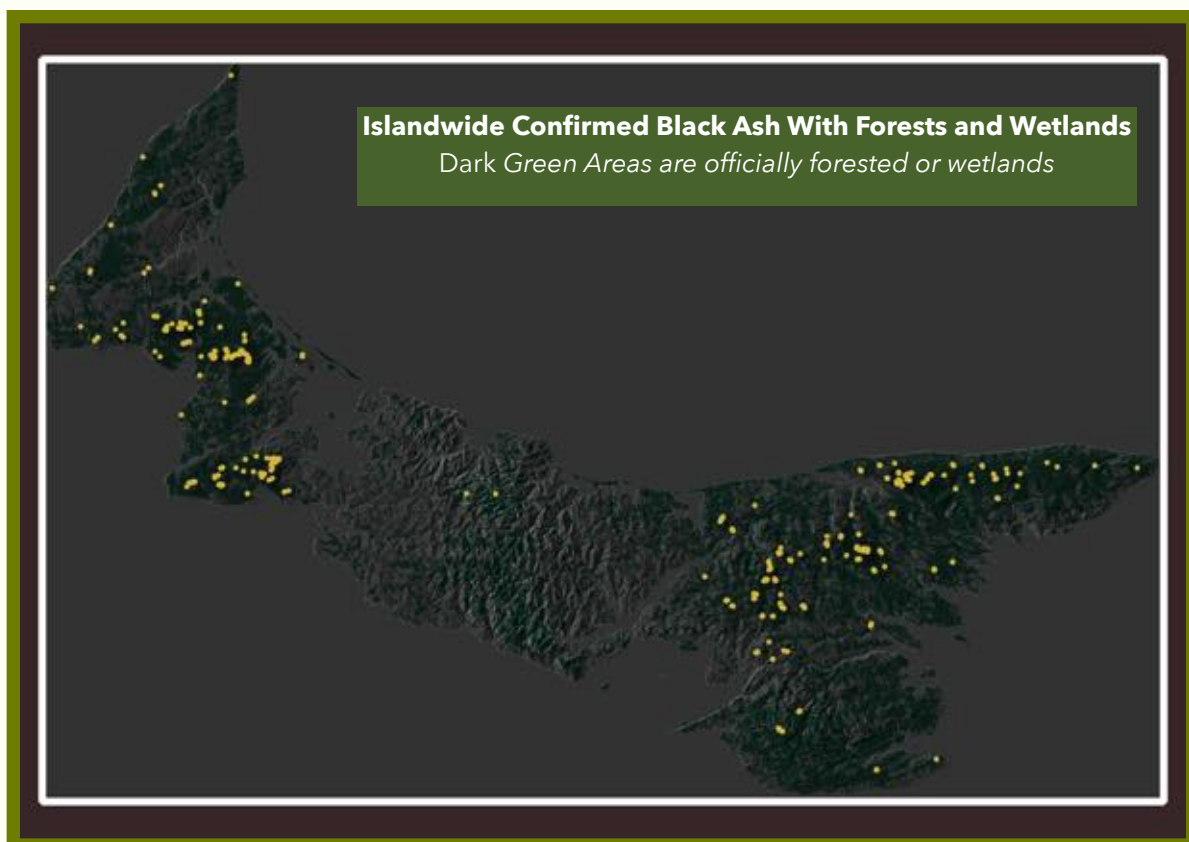
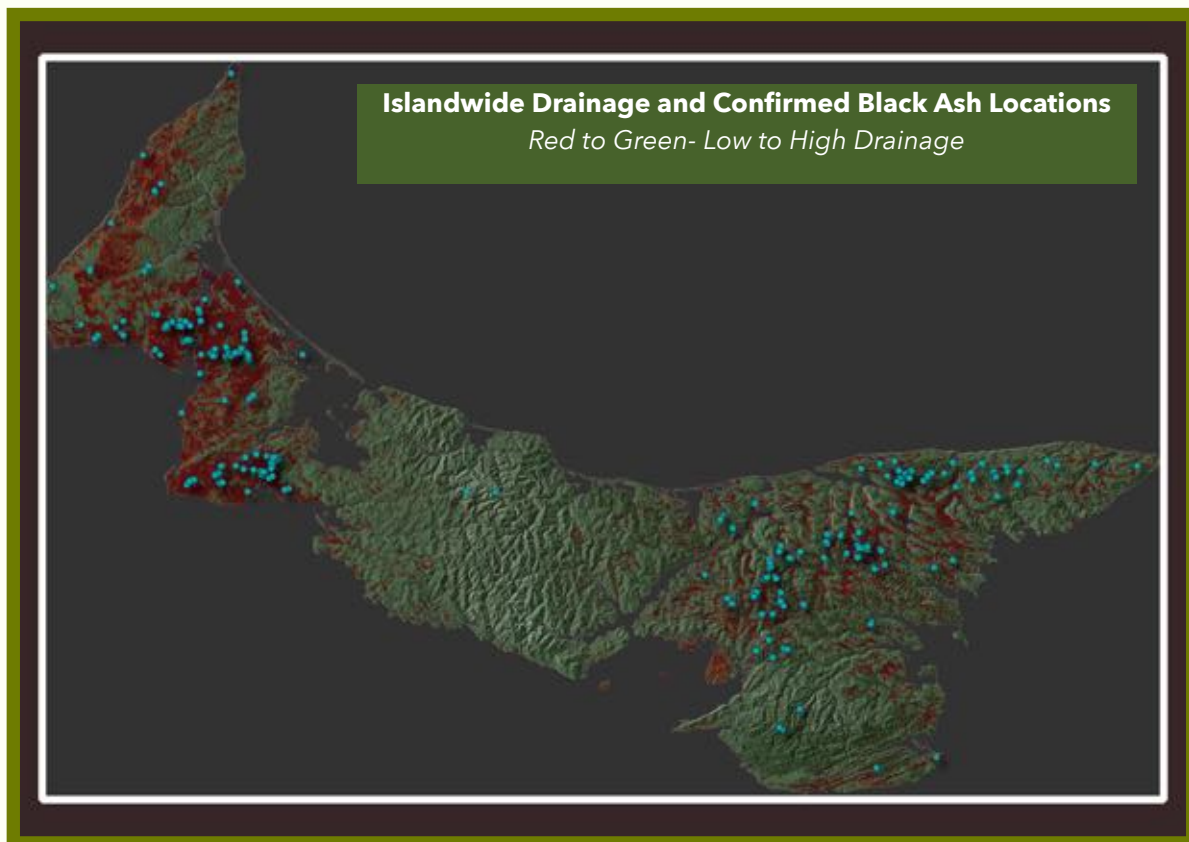
Confirmed BA by Wetland Type

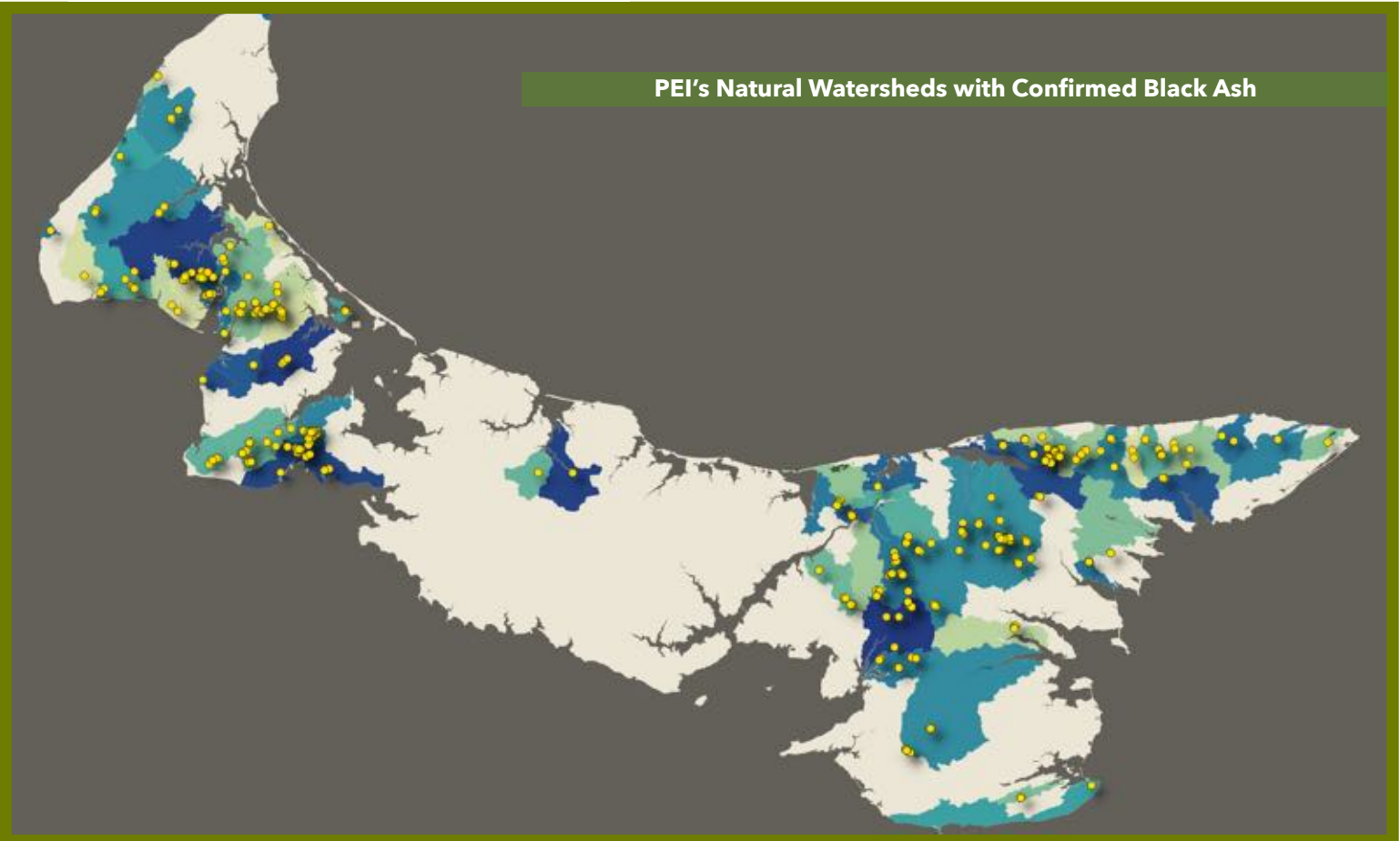


Confirmed Species by NS Wetland Flora Rankings



Black Ash Maps: Drainage & Habitats



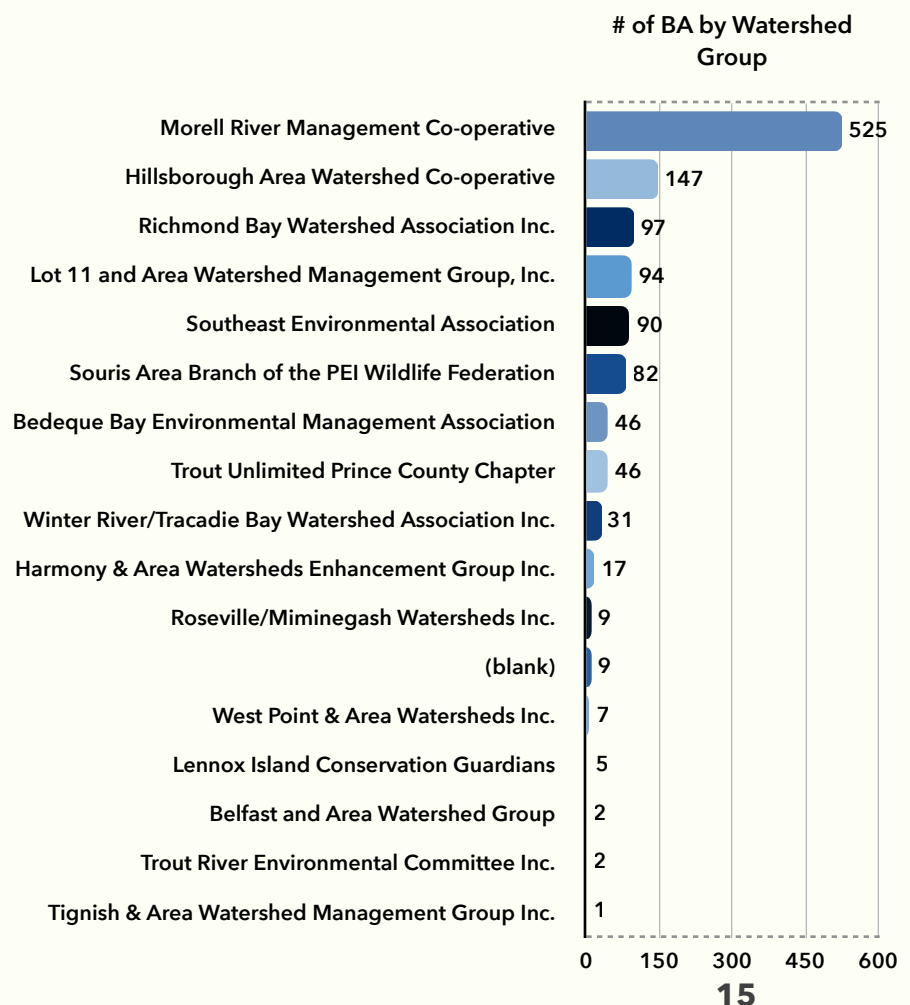


The maps and charts on this page and the next showcase confirmed across our Island's watersheds. The graph to the right displays the number of black ash confirmed growing in each watershed's groups territory.

The chart on the following page presents confirmed black ash across our natural watersheds, omitting those areas which have under 3 trees found. This metric is contrasted with the number of rare species found.

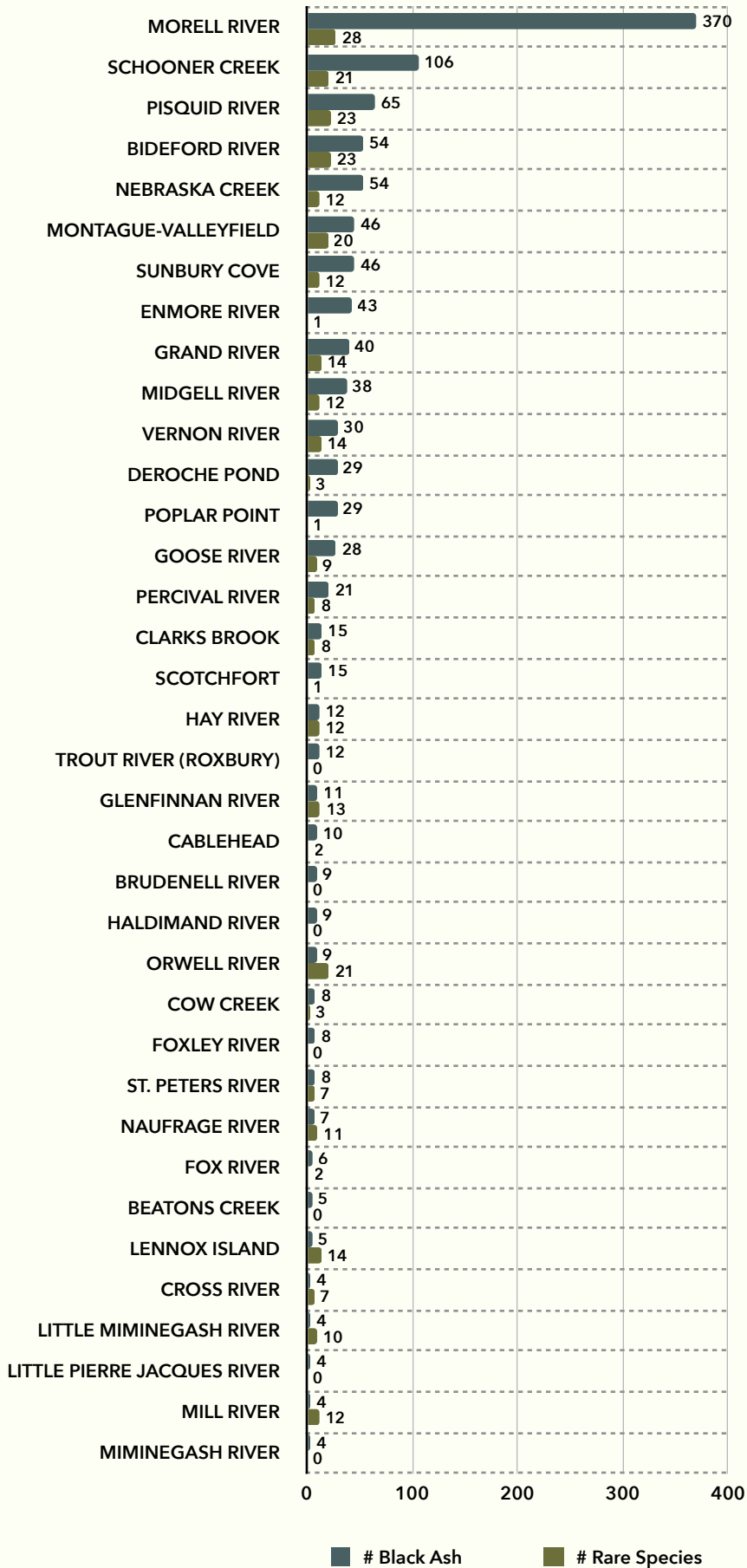


**Julie-Lynn Zahavich, PEI Government,
Searching for Black Ash**



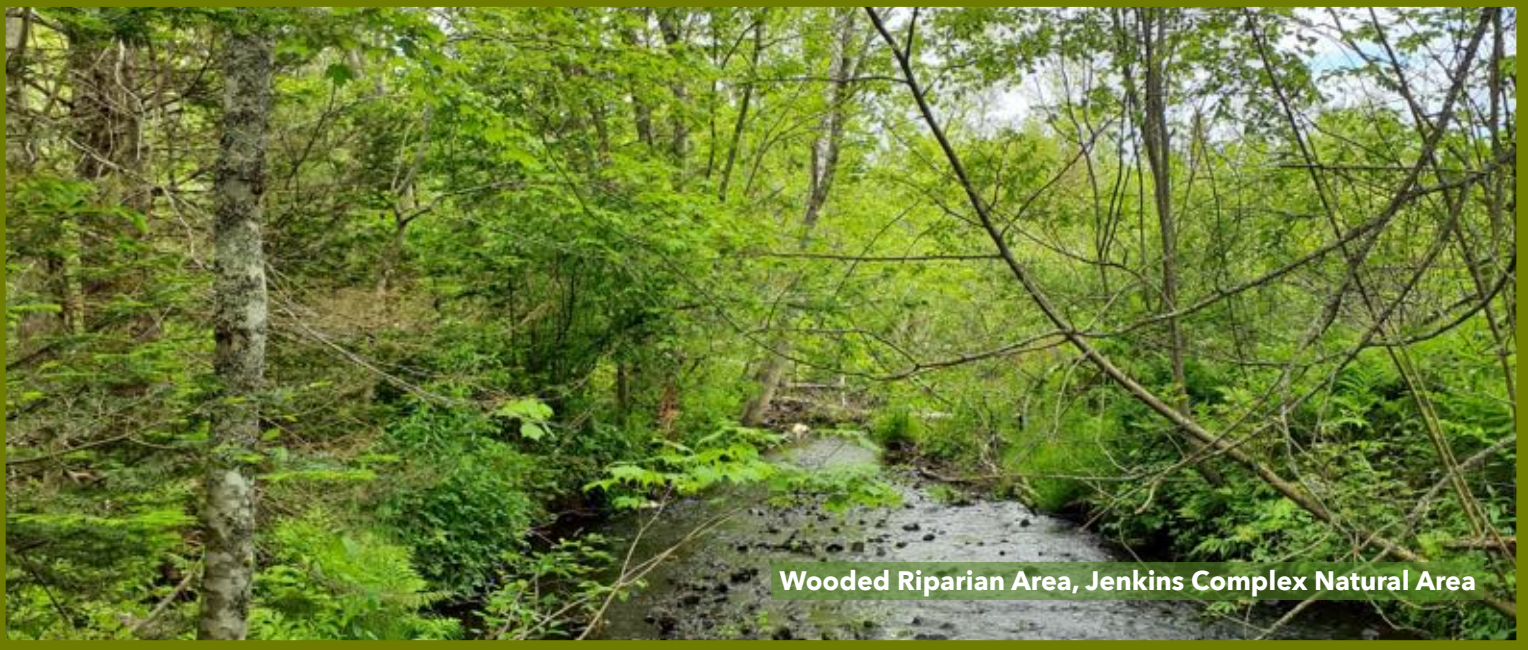
Wisnoq Watersheds

Black Ash & Rare Species by Watershed



Tall Black Ash, Glennfinnan Watershed

Riparian Regulars

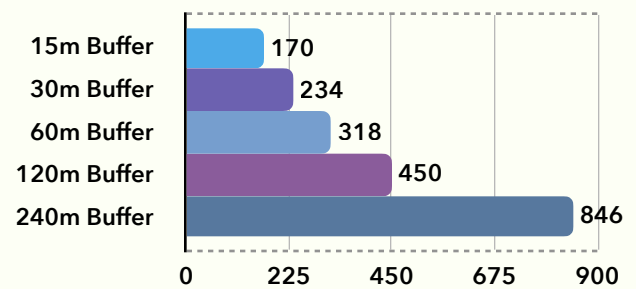


Wooded Riparian Area, Jenkins Complex Natural Area

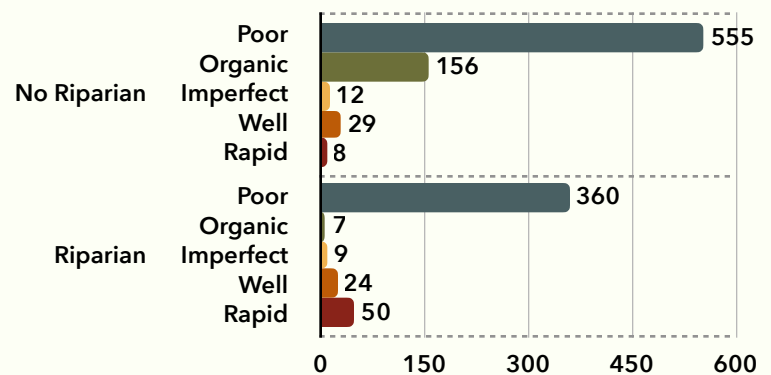
Although most confirmed black ash were found growing outside of 60m riparian areas, the great bulk of these were found growing in soils of poorer drainage. The chart to the right showcases the number of black ash trees across official provincial forestland compared to their soil-drainage category and whether they were found in the 120m riparian buffer. Although far fewer black ash have been found in locales with higher soil drainage, these tended to be located more often along rivers. These were often found in more upland areas such as the Selkirk Hills, Dromore, and Townsend Woodlot.

Again, requiring more data, the chart below showcases the total number of black ash across riparian and non-riparian sites as well as their average elevation. While far from concrete, this analysis suggests that forested rivers are important habitats for black ash when growing at higher elevations.

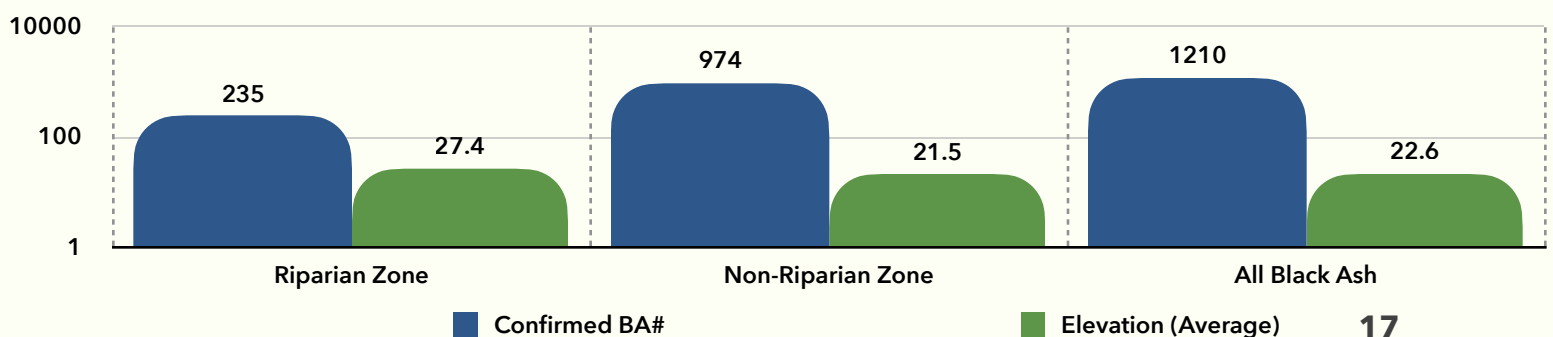
of BA by Riparian Buffer Sizing



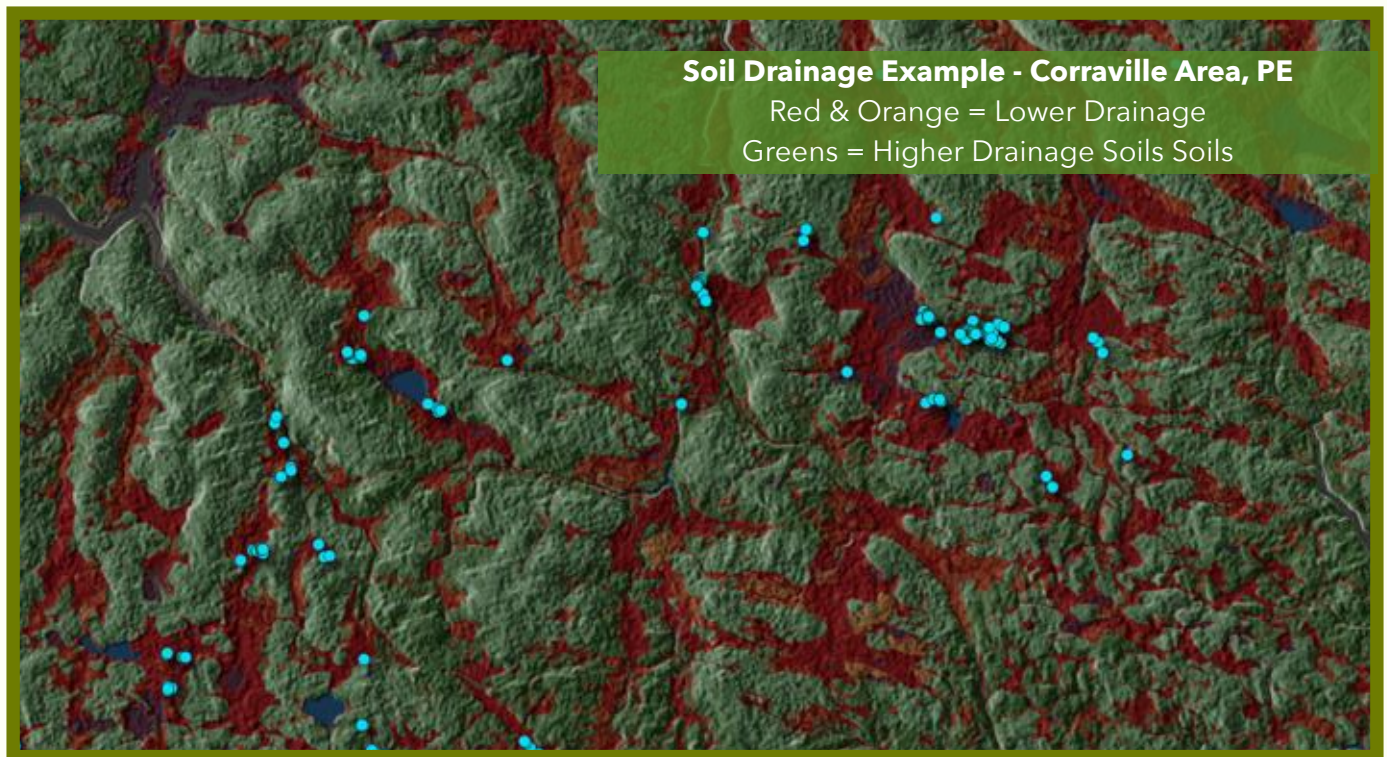
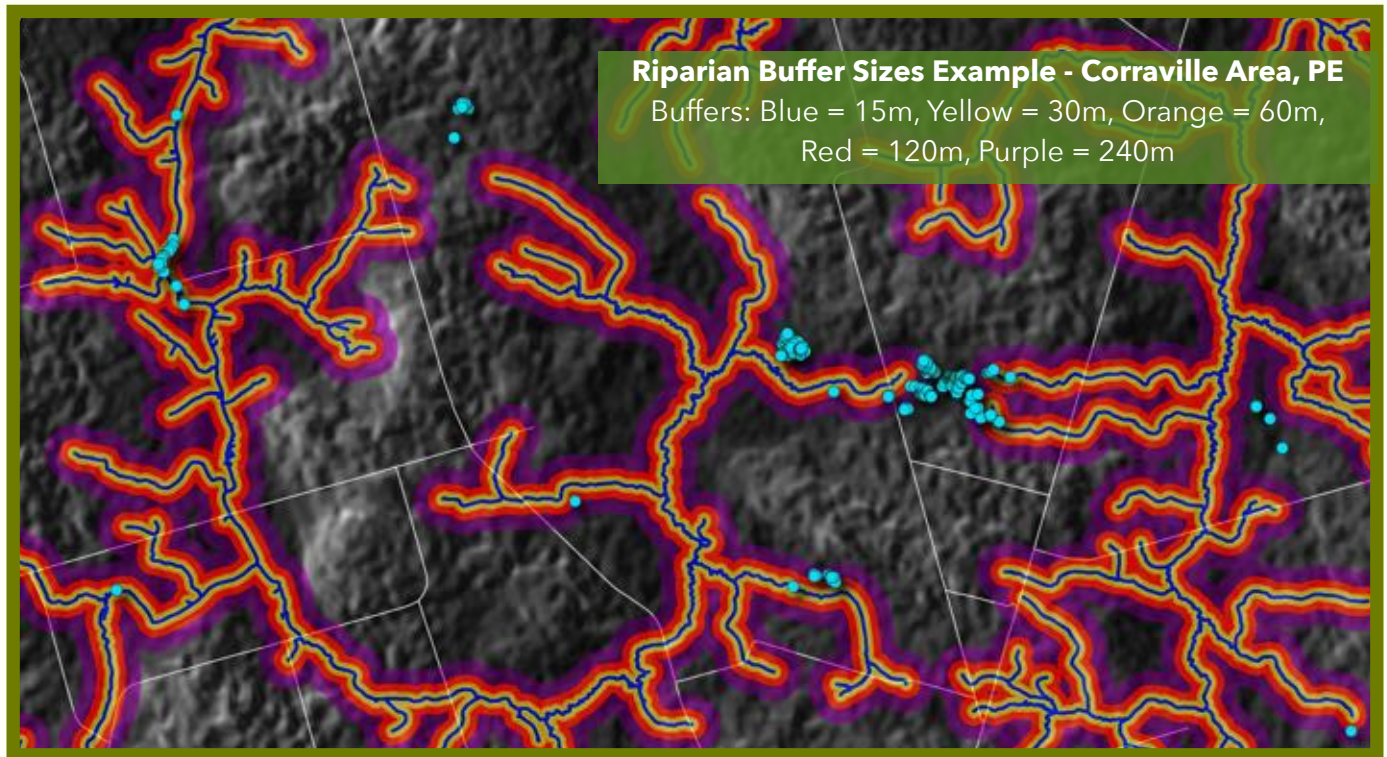
of BA in Forests by Riparian Status (120m) & Soil Drainage



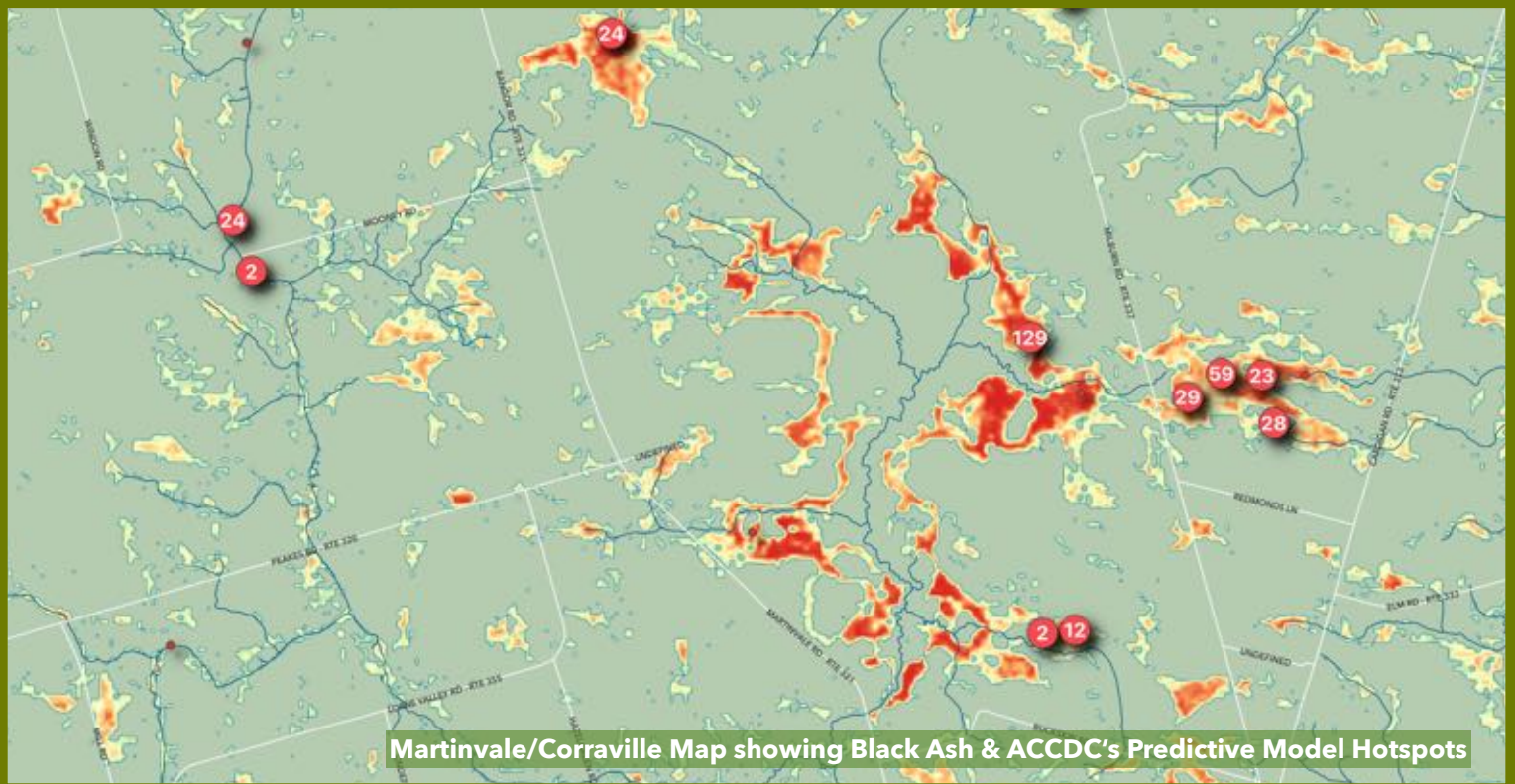
Confirmed BA by Riparian Buffer Zone (30m) With Average Elevation (m)



Black Ash Maps: Riparian & Drainage Examples



Predictive Modelling

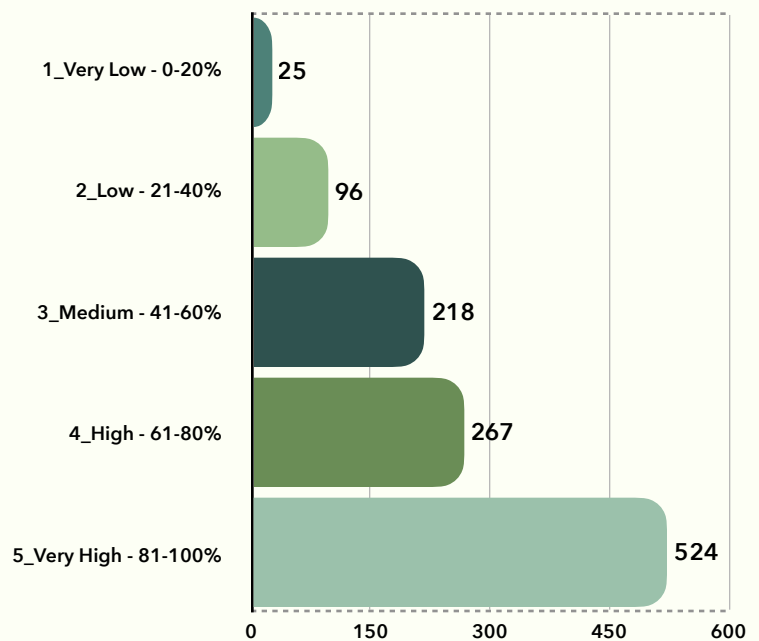


As part of the regional efforts to catalogue this threatened species, the Atlantic Canada Conservation Data Centre (ACCDC), developed a predictive model to estimate suitable habitat for black ash across the Island. Both a non-climate model and a climate-based model were produced in early July 2024.

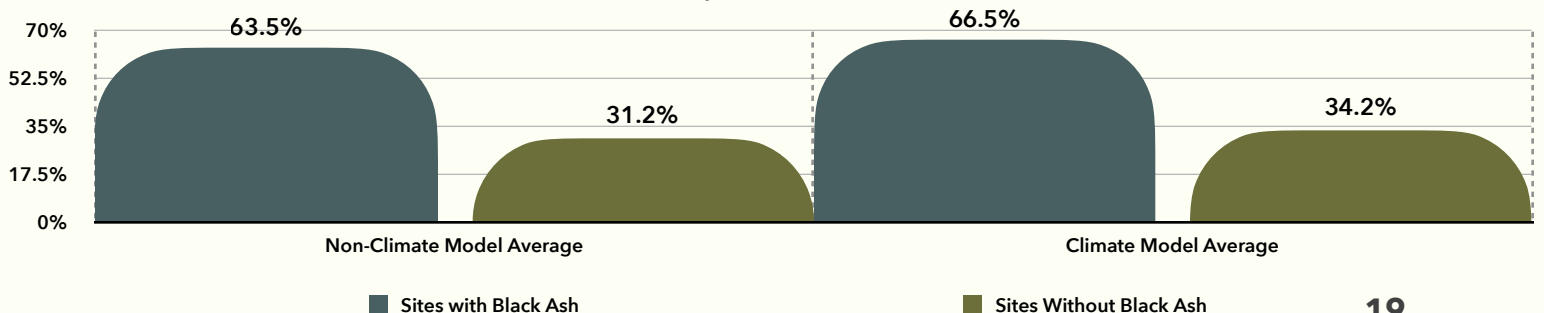
Data from this project, as well as online consultation was crucial for the success of the model, contributing over 900 black ash locations out of the 1140 total. The model assigned a percentage likelihood of black ash suitability across the Province. The 2024 field work included ground-truth sites suggested by the model.

Although black ash were found in low likelihood areas, the greatest numbers were found across sites with ratings over 60%. The model has proven incredibly useful and has made new site selection a much more efficient process.

Black Ash by Non-Climatic Predictive Model



Black Ash by Non-Climatic Predictive Model





Small Burreed, *Sparganium natans* - S3

As already demonstrated, Island black ash are found growing in a variety of wet habitats, many of which show less evidence of historic ecological disturbances than dryer locales. This diverse distribution across less-disturbed habitats has resulted in black ash growing in places with many other unique, interesting and rare native species.

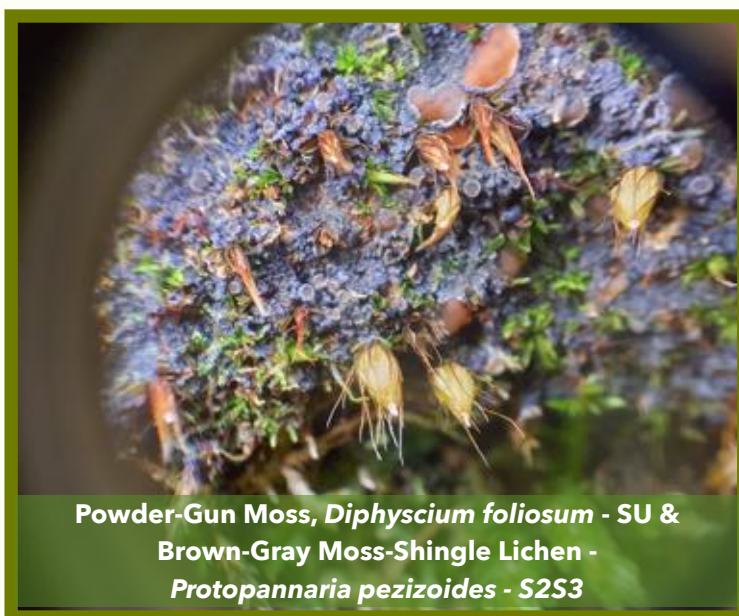
Many of the sites visited were wet woodlands populated by typical water-tolerant native trees such as American mountain ash, black spruce and red maple. Other wooded sites have a much less common array of tree species such as American elm, white ash, eastern white cedar, and even ironwood.

The understory of these sites are often densely vegetated with ferns, wetland wildflowers, shrubs and an incredible diversity of non-vascular species. Some of the shrubs found include alder-leaved buckthorn, mountain fly honeysuckle, poison ivy, red-osier dogwood, *Rosa nitida*, alders, witch-hazel, hobblebush and both native hollies.

The ferns & non-vascular community are of particular interest across these sites. Ferns such as royal fern, Christmas fern and many others have been located during fieldwork. There has also been a large number of lichens, mosses and liverworts found, including many rare and unconfirmed species. One particularly rare lichen found during the 2024 season was blue felt lichen, *Pectenium plumbea*, a SAR species of special concern. This was a joint find between staff from the ACCDC and Black Ash Project members.



Yellow-Seeded False Pimpernel - *Lindernia dubia* - S1



**Powder-Gun Moss, *Diphyscium foliosum* - SU &
Brown-Gray Moss-Shingle Lichen -
Protopannaria pezizoides - S2S3**



Biodiversity data for each site was collected during fieldwork between December 2022 and March 2025.

A number of field tools were used to aid in species identification.

- 1) Fieldguides
- 2) 2 botanical loupes (10x & 20x magnification)
- 3) A portable digital microscope
- 4) A field tablet for photography
- 5) GPS for recording species location

Species identification was confirmed in one of three ways:

- 1) Identification by survey team in the field.
- 2) Identification through consultation with staff of the ACCDC.
- 3) Identification through crowd-sourcing help on the website/app, INaturalist.

OBSERVER BIAS

The field team acknowledges a number of biases in the collected data. The lead botanist's background is predominantly in dryer habitats, leading to an improving learning curve throughout of the project. Sites visited at later dates generally have larger more comprehensive species lists. Seasonal surveying also led to numerous missed species with some sites surveyed outside the growing season. Difficult terrain and windfall also led to limitations in species surveying. At some sites, black ash were found late in the day, leaving little time for data collection.



Species Conservation Rankings



Horned Bladderwort - *Utricularia cornuta* - S2S3, growing with Pitcher Plants, Saint Peters Bog

The **Atlantic Canada Conservation Data Centre (AC CDC)** in Sackville, N.B. continues to be a great asset throughout the region for determining whether or not a plant is native and its rarity. They have a ranking system on their excellent website for plants found in each individual province (S1 to S5).

The **AC CDC** rankings for our Provincial plants are:

S1 - Critically Imperiled:

Critically imperiled in the province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the province.

S2 - Imperiled:

Imperiled in the province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the province.

S3 - Vulnerable:

Vulnerable in the province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 - Apparently Secure:

Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 - Secure:

Common, widespread, and abundant in the province.

SU/Unknown - Unrankable -

Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.

Website: <http://www.accdc.com/index.html>

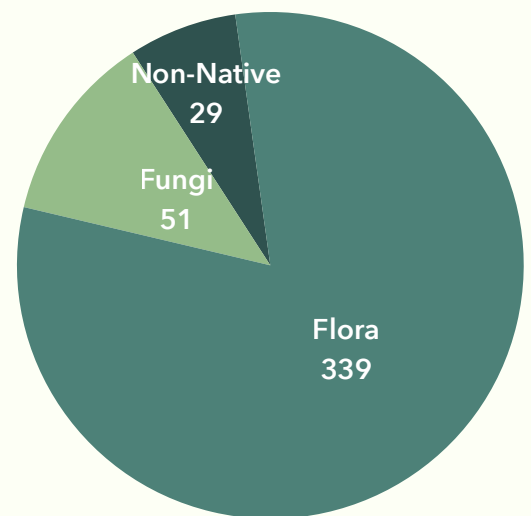


Wrinkled Shingle Lichen - *Pannaria lurida* - S1 - COSEWIC Status: Threatened, Ellerslie Cedar Swamps

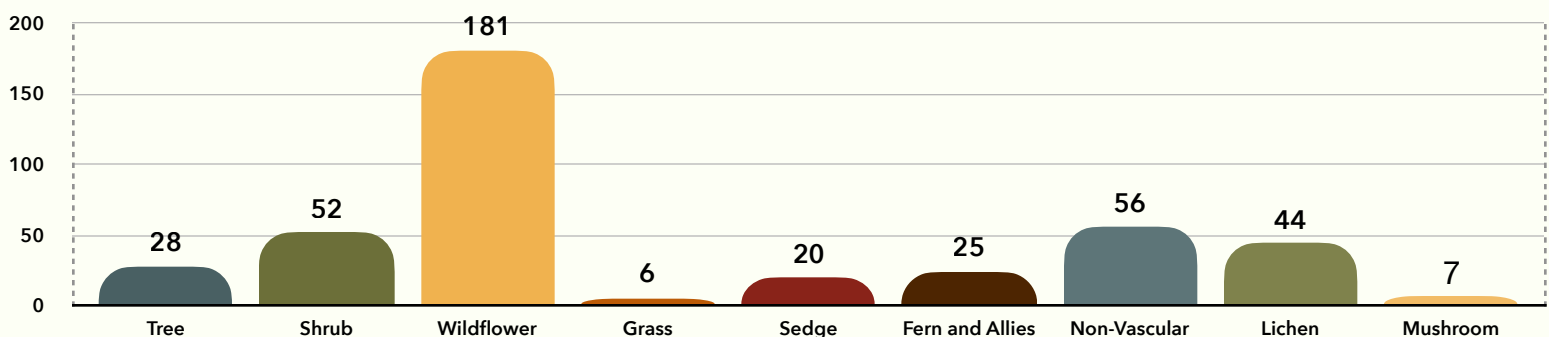
As mentioned in this and previous reports, Island black ash grow across a number of different habitats, generally of poorer-drainage. This diversity of habitats, topography, and conditions, not to mention ample soil-water, has resulted in a large diversity of native flora and fungi found during fieldwork. While great efforts have been made to collect species data across all sites, there are still a number of species groups in which the survey team is still developing proficient identification skills to accurately confirm, much help with this aspect of the project has been provided by the ACCDC.

The charts on this page showcase the wide variety of species found across various categories. Species lists and analysis on the pages below only begin to showcase the variety of common and rare native species which grow with black ash. That being said, a number of reliable companion species have been identified across many of these habitats which contribute greatly to finding new black ash on PEI.

Species by Type



Species By Group



Rare Refuges

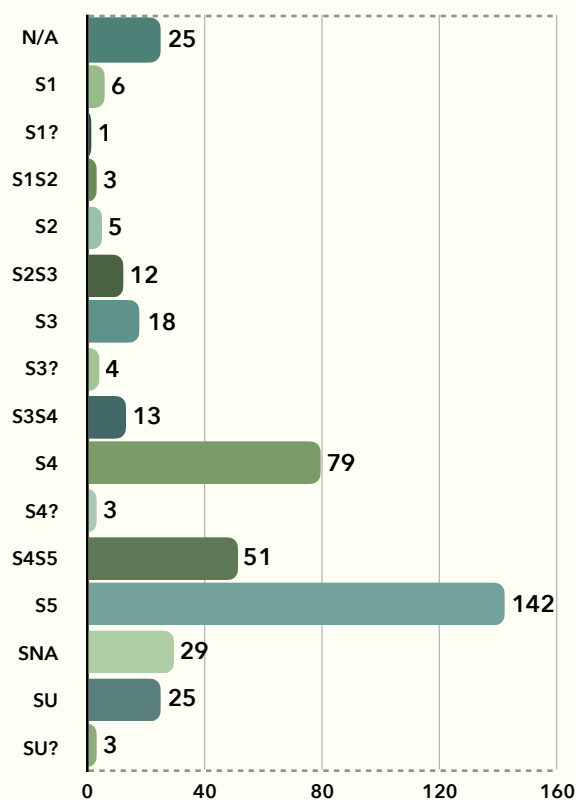


Ironwood, *Ostrya virginiana* - S2, growing with Black Ash in Western PEI

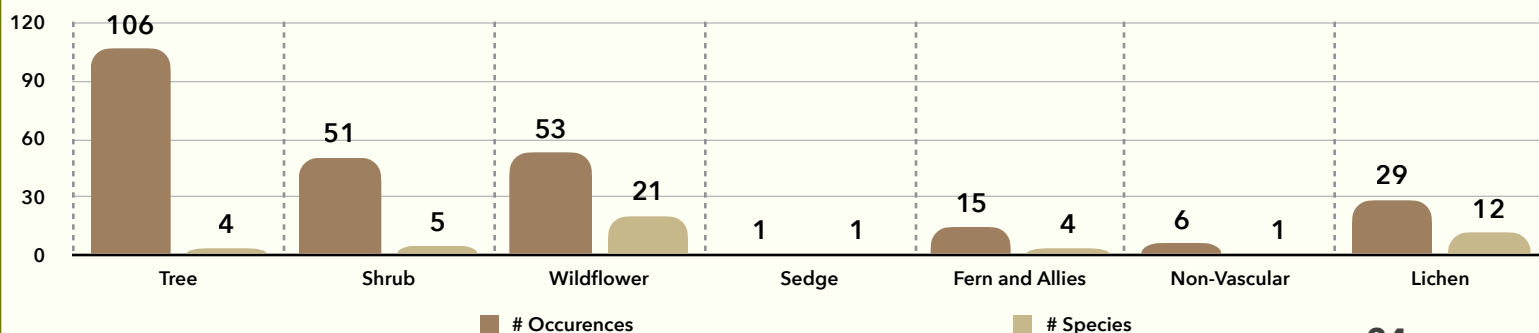
Black ash habitats across PEI are often rare species refuges, home to a wide variety as well as healthy populations of some of our rarer native flora and fungi. As the teams' proficiency in finding and identifying these species improves, these rare findings grow each season. The 2024 field season was a bumper year for locating rare and unclassified species. Over the last year a number of new rare species were found, including swamp thistle, blue felt lichen, yellow-seeded false pimperel, port-hole lichen, powder-gun moss, and many others.

Although not a primary goal of the project, this secondary data has proven incredibly useful for a number of local and regional organizations including the ACCDC, PEI Invasive species council, as well as local conservation and watershed groups. Whenever adequate supply was found, seeds were gathered to be propagated at the Macphail Woods Native Plant Nursery for future ecological restoration efforts.

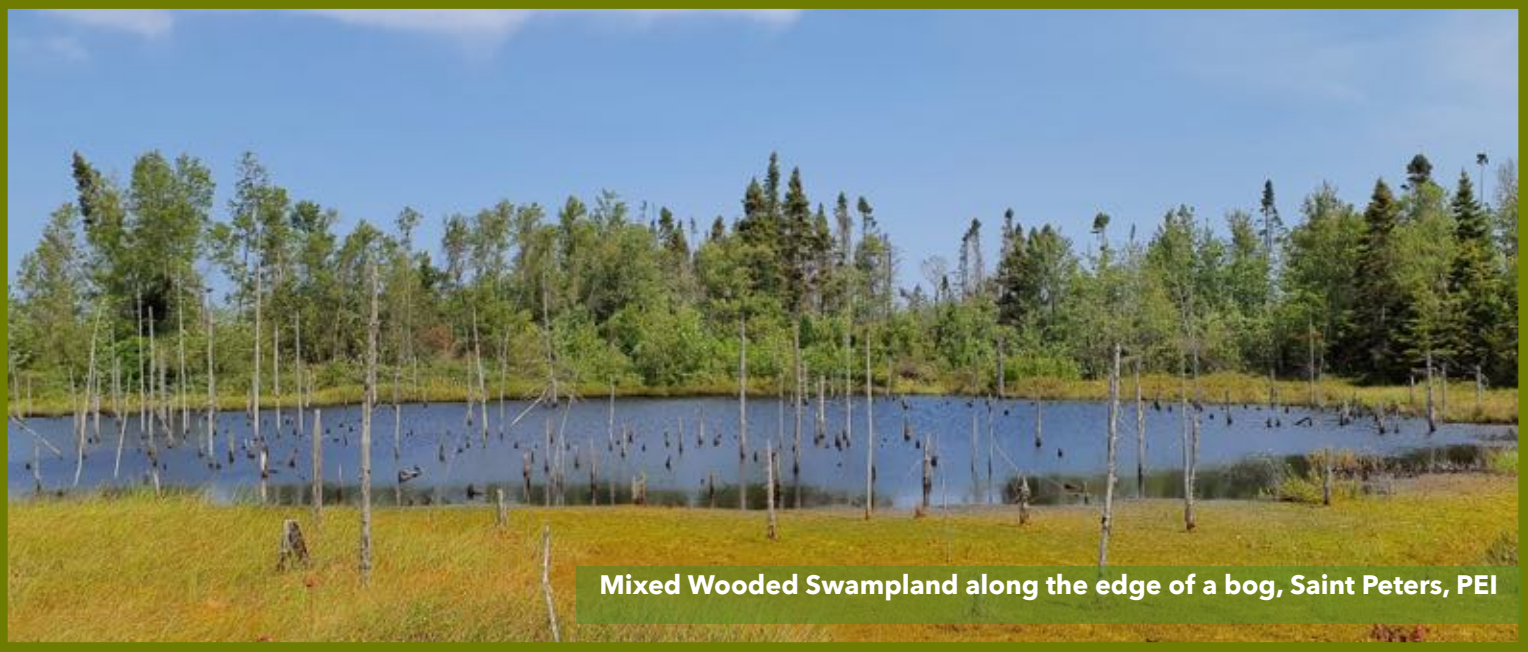
Flora & Fungi Species by SRANK



Rare Species Specimens & Species



Companion Species: Wooded Swamps

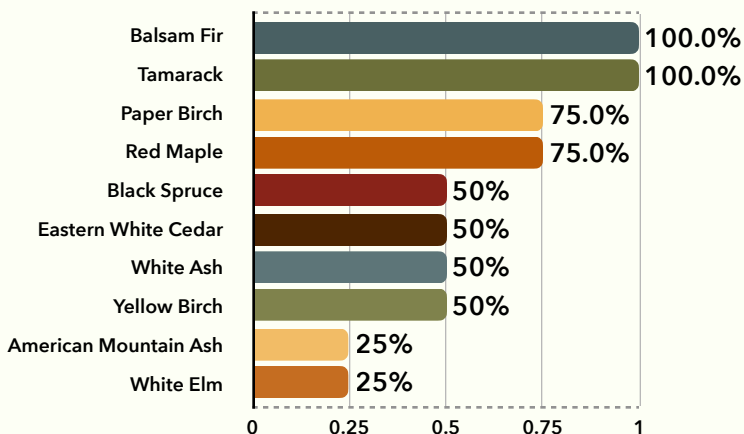


Mixed Wooded Swampland along the edge of a bog, Saint Peters, PEI

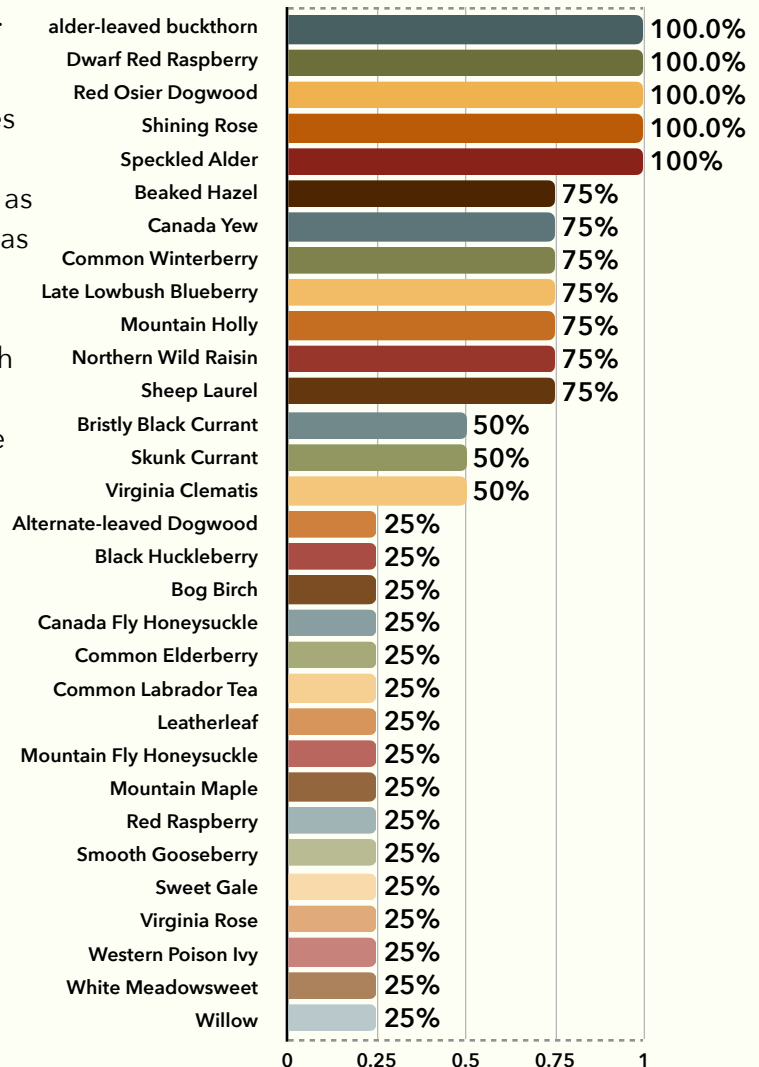
Approximately 210 Black ash have been located growing in official wetlands with wooded swamps as their primary or secondary wetland classification. This represents approximately 17% of the confirmed Provincial population.

By our provincial classification methodology, wooded swamps are defined as official wetlands dominated by trees and tall shrubs. This encompasses a variety of wetland habitats, from our black spruce/larch boggy forests as well as our more deciduous red maple/white ash swamps, as well as our distinct western cedar swamps. Although all of these habitats can be home to black ash, this lack of conditional nuance fails to highlight exactly which community black ash prefer to grow in. Each of these swamp types have very different growing conditions, as seen by the diversity in the tree and shrub lists on this page.

Tree Species By % Occurrence
across sample
Wooded Swamp Sites



Shrub Species By % Occurrence
across sample
Wooded Swamp Sites



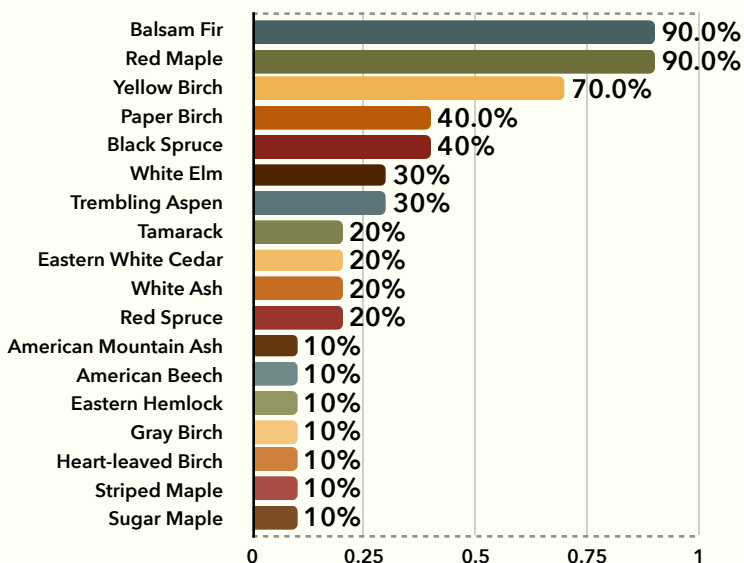
Companion Species: Deciduous Wet Forests



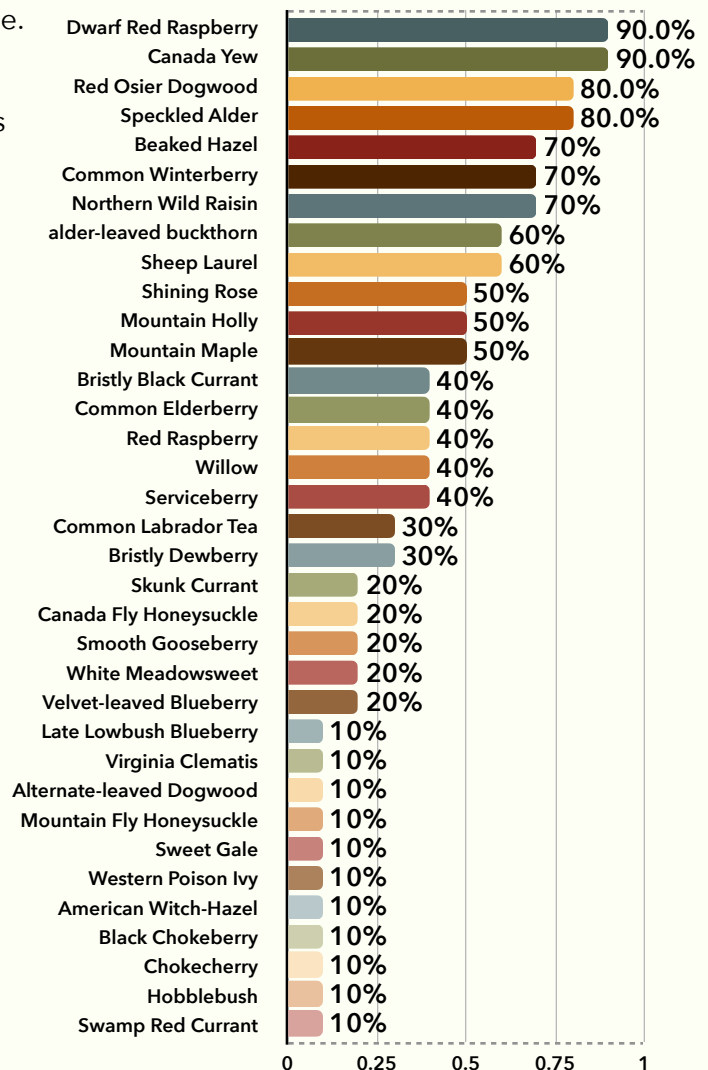
As previously shown, PEI's black ash tend to prefer wet forests with predominantly deciduous canopies. Approximately 810, or 67%, of located black ash were found growing in forests showcasing *poor* or *organic* soil drainage.

Many of these sites were not officially listed as wetlands, although most were located within close proximity to rivers and/or official wetlands. The species lists on this page showcase a much more unified ecological community, resulting in a more functional companion species lists for these distinct Island habitats. Certain notably uncommon/rare species occur much more frequently in these habitats, greatly assisting in locating black ash cohorts.

**Tree Species By % Occurrence
across sample
Deciduous Wet Forests Sites**



**Shrub Species By % Occurrence
across sample
Deciduous Wet Forests Sites**



Companion Species: Coniferous Wet Forests



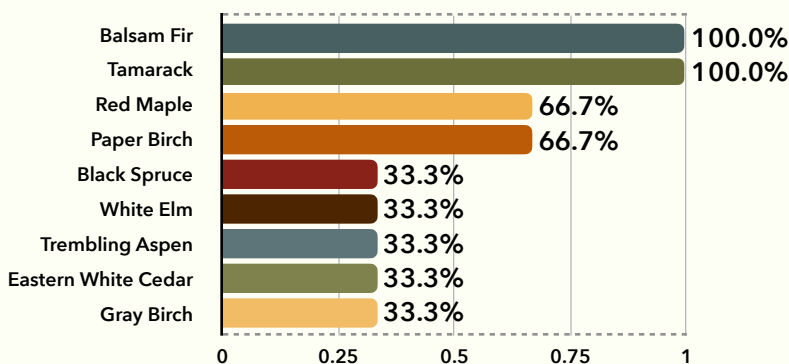
Wet Forest with a Predominantly Coniferous Canopy, Near Murray River

Many other low-drainage forests in PEI have more coniferous canopies, often with higher soil acidity and deeper shade than their deciduous counterparts. Often abutting open areas of peat-moss, these communities share many species with our *bog* wetlands, from pitcher plants to our native rhodora, not to mention black spruce and larch.

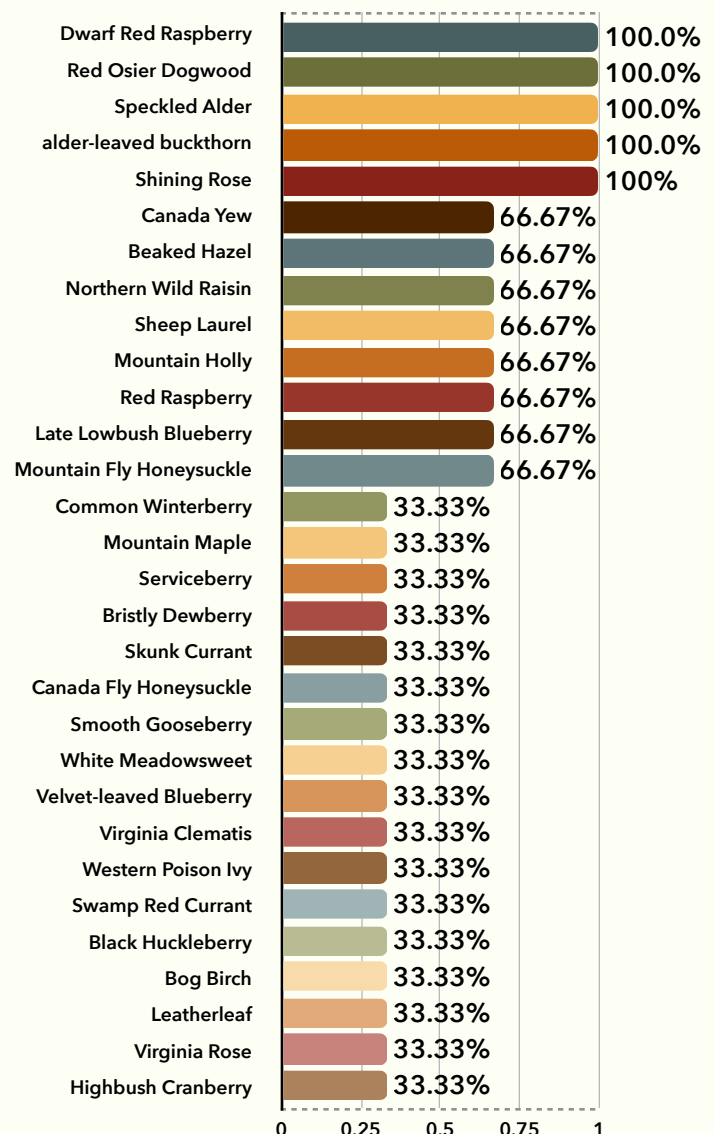
Across the Island, only 229 black ash, approximately 19% of our confirmed population, can be found growing in these habitats. These populations are often in poorer health, sometimes stunted and generally much less populous.

While definitely a natural Island habitat type, these boggy woods often show signs of recent and/or ample historical ecological disturbances, suggesting that some of these habitats are the result of past landuse. In fact, many of the sites visited showcased more deciduous red maple regeneration than coniferous on the forest floor. Given enough time to heal, many of these locales might progress into a more deciduously dominated habitat.

Tree Species By % Occurrence
across sample
Coniferous Wet Forests Sites



Shrub Species By %
Occurrence across sample
Coniferous Wet Forests Sites



Companion Species: Riparian Forests

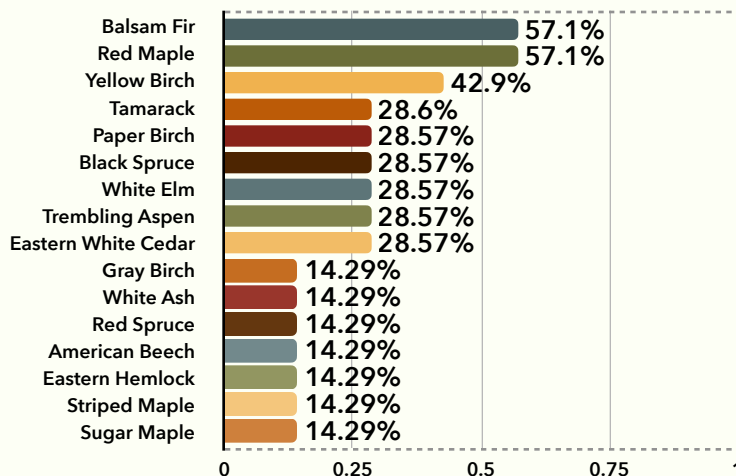


Riparian Forest, Bonshaw, PE

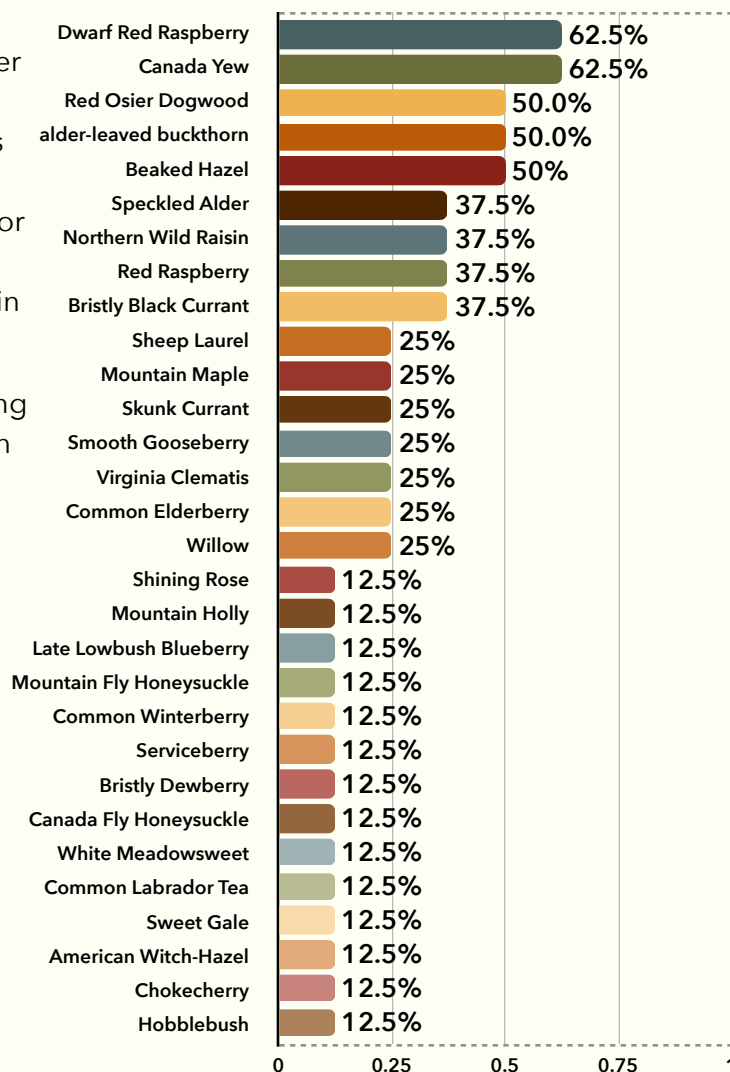
Our forested riparian zones are a trickier habitat to categorize. PEI has many rivers, with many greatly reduced by most metrics due to an intensive history of clearing and agriculture. This has resulted in a variety of forest riparian areas differing in species composition, canopy closure, water levels, river flow, sedimentation and much more. Despite these circumstances, these sensitive and degraded habitats are still home to a number of healthy black ash cohorts, particularly in less-disturbed areas, such as the Selkirk Hills or the northeast forests such as Townsend's woodlot. Approximately 179 black ash, 15%, are found growing within 30 meters of a forested river.

In these areas, there are a number of unique species growing with the black ash such as hemlock, red spruce, hobblebush and witch hazel.

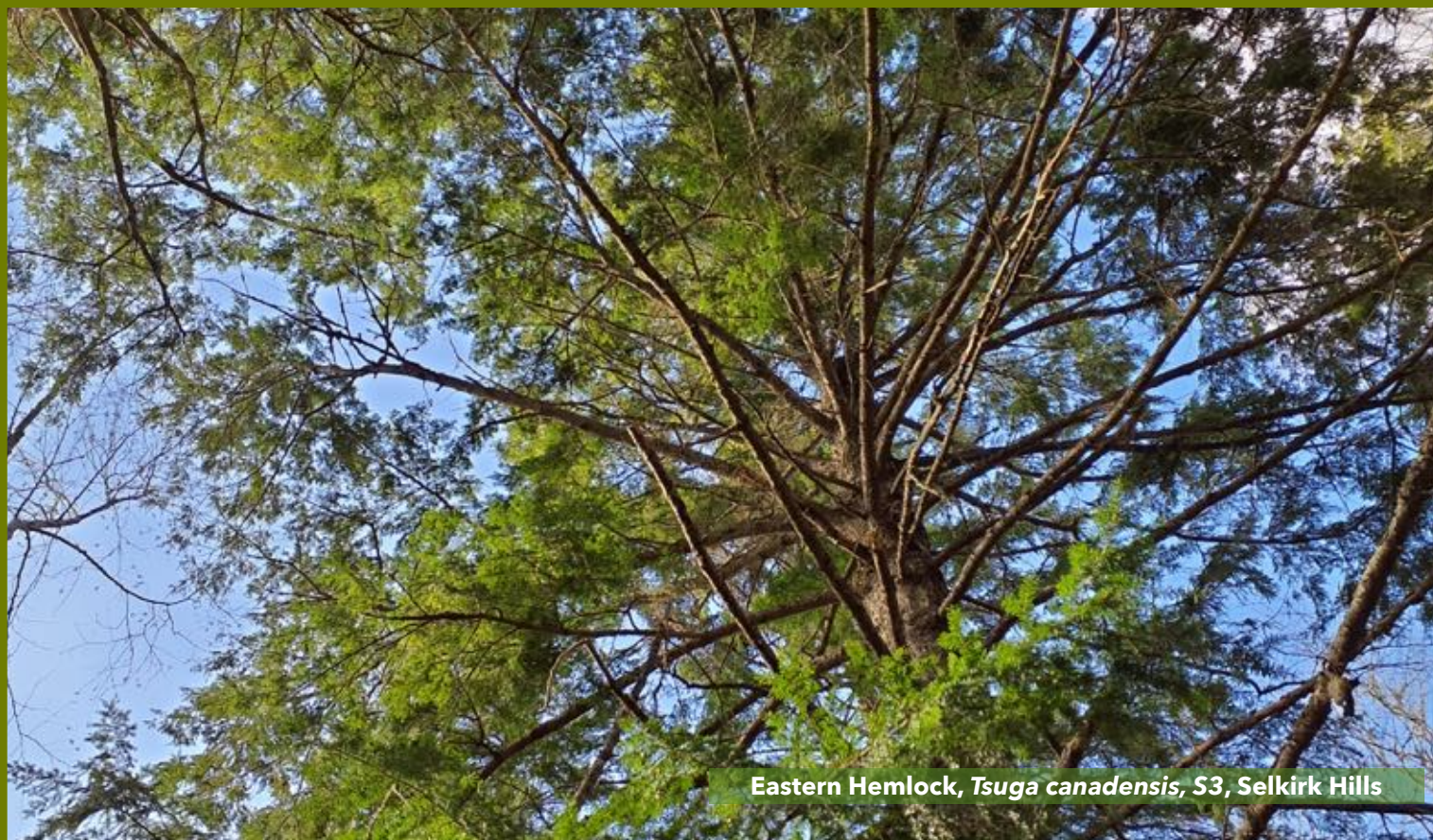
Tree Species By % Occurrence
across sample
Riparian Forests (30m Buffer) Sites



Shrub Species By % Occurrence
across sample
Riparian Forests (30m Buffer) Sites



Native Conifers



Eastern Hemlock, *Tsuga canadensis*, S3, Selkirk Hills

As previously mentioned, PEI's black ash appear to prefer a predominantly deciduous canopy. Despite this, coniferous species are present across all black ash sites.

The chart to the left showcases the native conifer species which can be found growing across the 14 sample black ash sites.

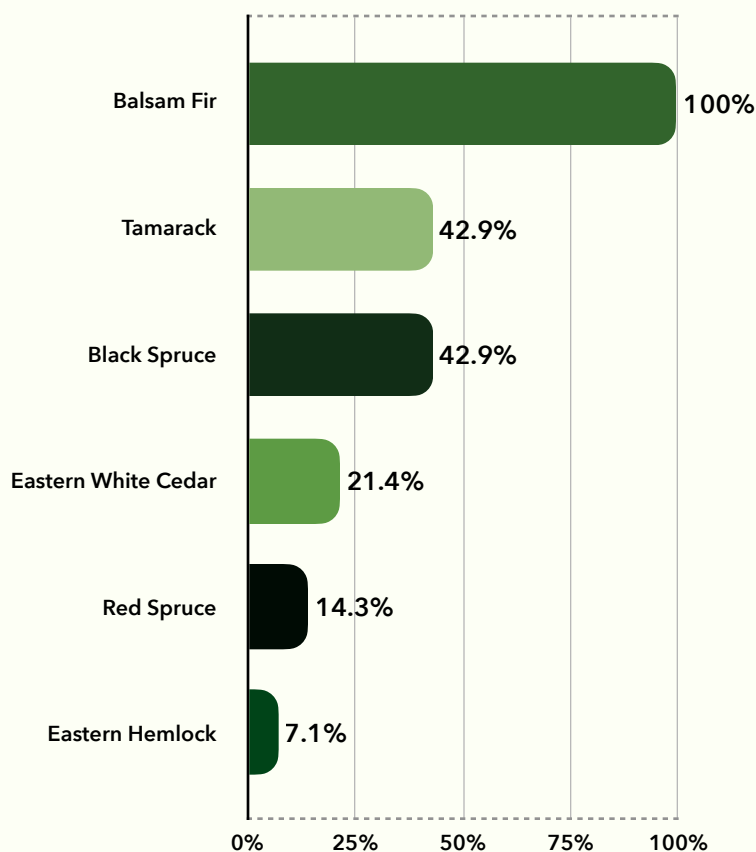
Balsam fir can be found growing across most black ash sites, often a lesser component of the canopy, although sometimes prevalent in the understory. Sites with prolific balsam fir tend to show evidence of heavy and/or recent ecological disturbances.

Tamarack and black spruce, although often present, only dominate the canopy across more acidic and bog-like black ash sites.

Eastern white cedar are generally confined to Prince County sites, although often a dominant canopy species in this region.

Red spruce and eastern hemlock tend to be found most often along forested riparian areas, although these can be present at other black ash sites, usually with smaller and younger populations.

Coniferous Tree Species By
Percentage Occurrence across
14 Black Ash Sites



Native Deciduous Trees



Towering White Ash, *Fraxinus americana* - S2S3, Brockton, PE

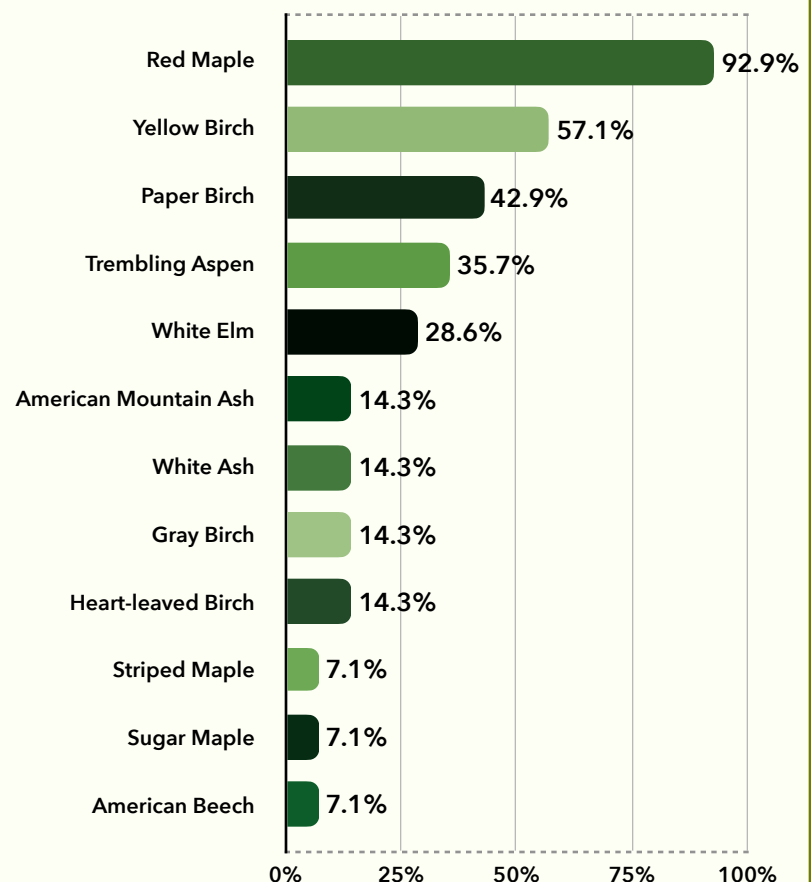
Itself a deciduous species, PEI's black ash seem to thrive in deciduously dominated wet woodlands. Over 900 black ash, almost 75% of our confirmed black ash can be found growing under these leafy canopies.

Although many of these sites showcase a wide-variety of species, they tend to be heavily dominated by red maple, less often with healthy populations of yellow birch as well. While white birch is listed as a more common species, these can be easily confused with heart-leaved birch. Literature suggests that the latter prefers wetter-soils, suggesting that this species might be more common with improved field identification efforts.

Most of the other deciduous species on the chart to the right occur sporadically in black ash habitats, often along the edges or on dryer hummocks. One exception is American mountain ash, which is often present as an understory species across many sites, despite its low presence among sample sites.

A few uncommon Island species can be quite populous in black ash habitats. American elm and white ash, when found, are often a substantial presence, both in the canopy and understory, amongst the black ash.

Deciduous Tree Species By Percentage Occurrence across 14 Black Ash Sites



Native Shrubs

Native shrubs play an incredibly important role in all black ash habitats. Whether in along a river, in a swamp, or throughout a bog, these species provide critical food and shelter for local wildlife and pollinators.

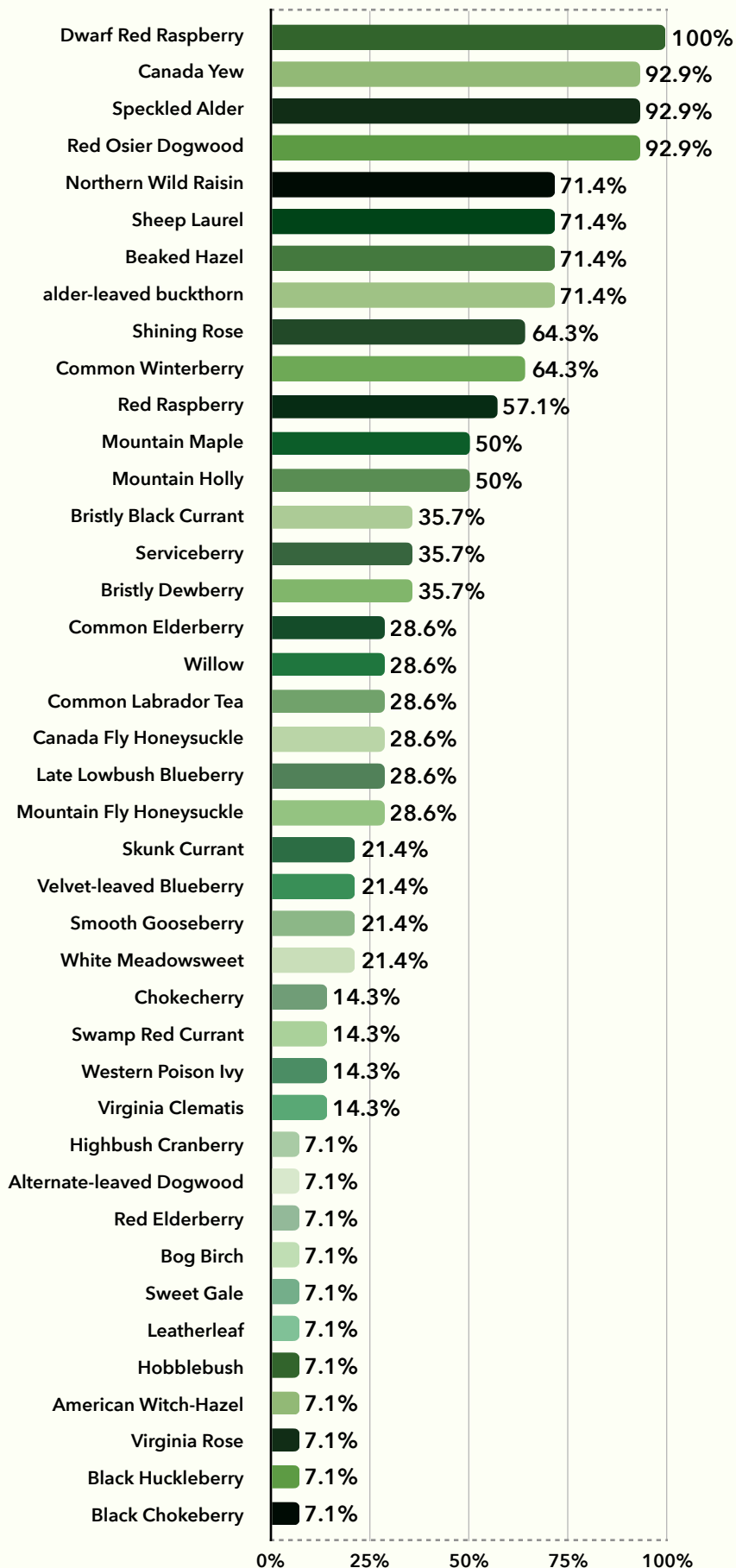
Some particularly flexible species can be found across most black ash sites, for example alders, dogwoods, dwarf raspberry, wild raisin, sheep laurel, and mountain holly. Others are found primarily in particular habitats, such as huckleberries and leatherleaf prefer boggier places, while mountain maple, hobblebush and witch hazel prefer riparian sites.

Many of these native shrub species are incredibly helpful in located black ash habitat, particularly alder-leaved buckthorn, shining rose, bristly black currant, and swamp red currant.



Alder-leaved Buckthorn - Endotrop
A typical Swamp Shrub

Shrub Species By Percentage Occurrence across 14 Black Ash Sites



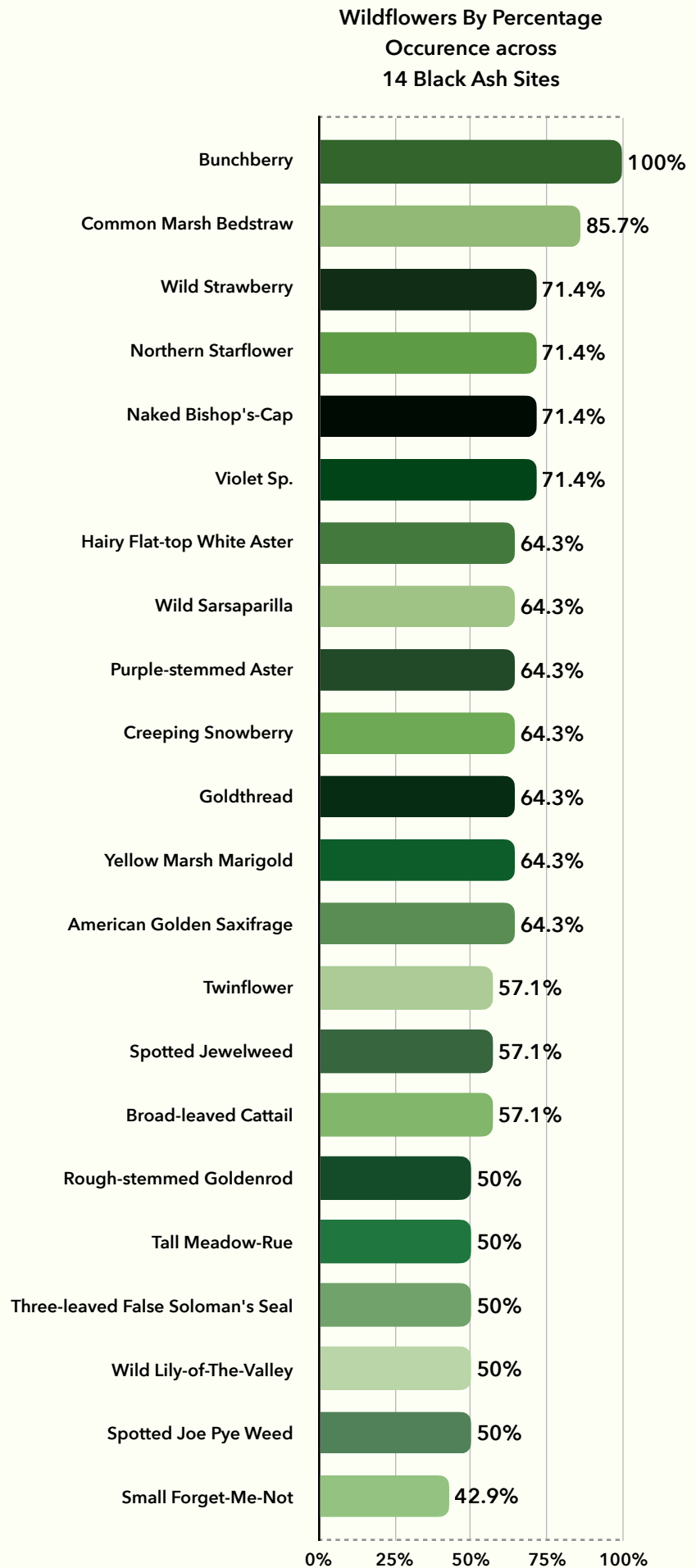
Native Wildflowers

Wet and diverse, black ash habitats are home to an incredible array of native wildflowers. The sheer number of species makes field identification much more difficult and nuanced, with a steep learning curve over the course of the project. This has resulted in better floral surveys in the project's more recent years. More in-depth botanical surveys are needed to fill out gaps in this data-set.

Despite these challenges, a host of rare and common native flowers were found across black ash sites, with many more species found in deciduous wet woodlands than other habitat types. These places are often home to incredibly rare species as well as poor-drainage specialists.



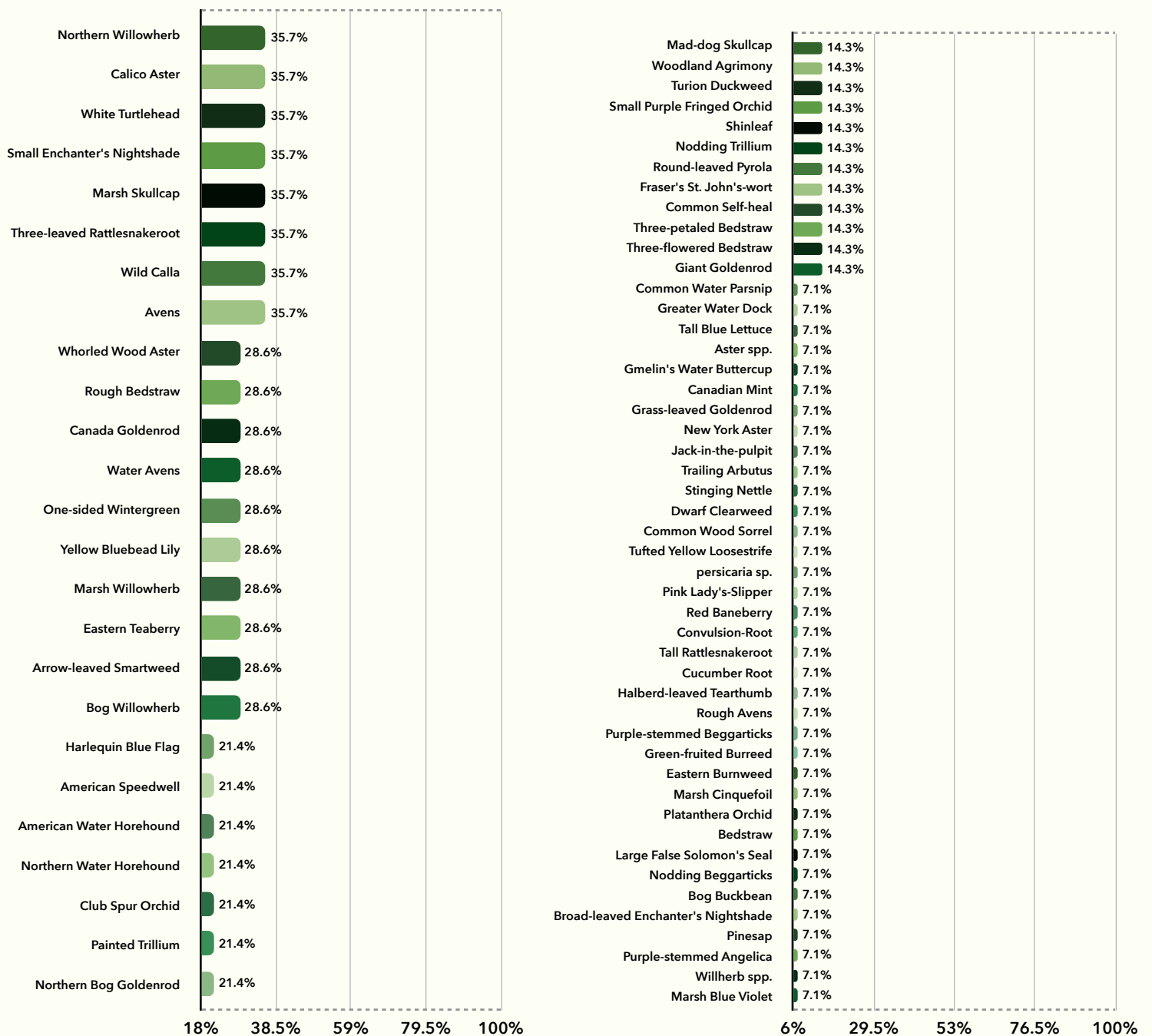
Three-Leaf False Solomon's Seal, Bunchberry, and Sphagnum Mosses



Other Native Wildflowers



Other Wildflowers By Percentage Occurrence Across 14 Black Ash Sites



Native Sedges, Grasses & Rushes



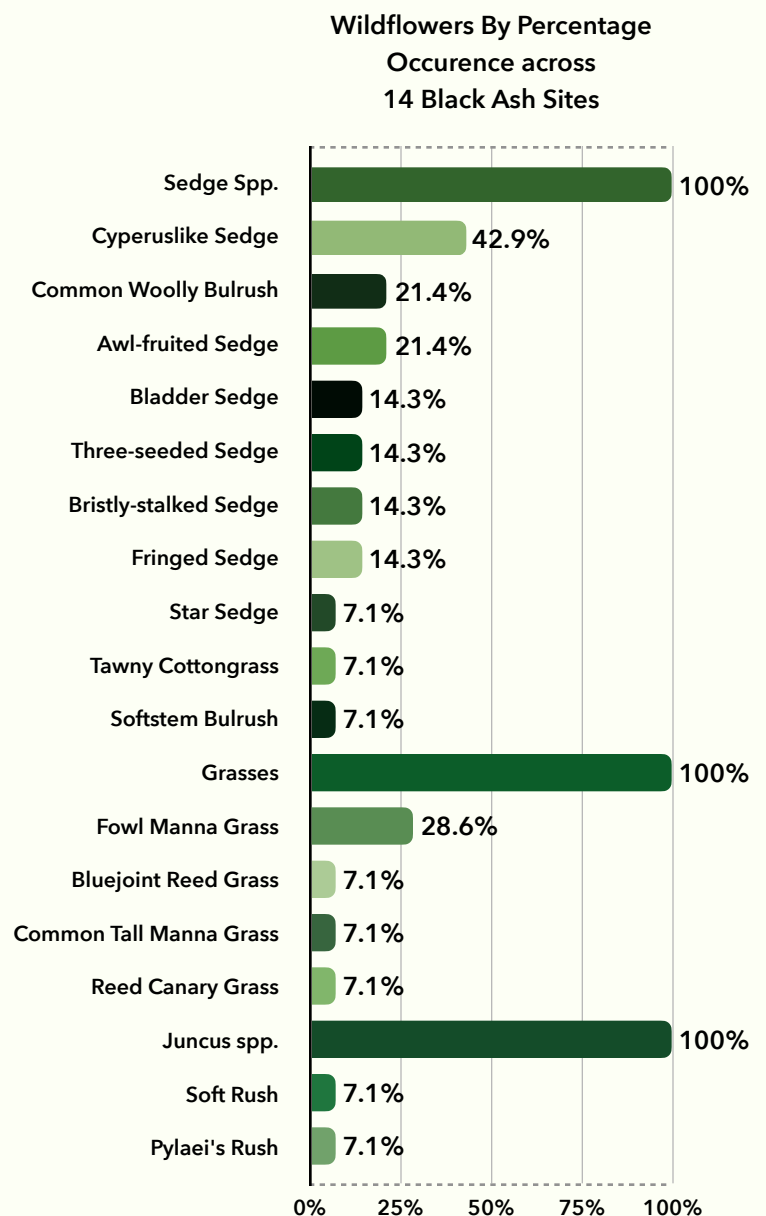
Cottongrasses, Three-Seeded Sedge, and many more bog-growing species, Saint Peters Bog, PE

With over 340 species in the sedge, grass & rush families, these floral groups are some of the most difficult to accurately identify. The small list of confirmed species to the right showcases this challenge. Despite this difficulty, much effort by the black ash team has been made in improving our knowledge of these species, resulting in more and more specific identifications each year of the project. This progress would not be possible without the help of regional partners such as staff from the ACCDC.

Although hard to find and identify, this large group of forbs are incredibly important across all types of black ash habitats. They are often a significant ground cover, mixed with ferns, other wildflowers and mosses.

While not yet particularly used in finding black ash, many of our forb species are specialists, preferring to grow in areas with distinct conditions, whether acidic and boggy, shaded and wet or even in our open, marshy flood plains. With more surveying and better species identification, targeted species may be very useful in locating new black ash sites.

Although not as heavily used for survey work, seeds from several of our native forbs have been gathered once identification is confirmed. These are being propagated at the Macphail Woods Native Plant Nursery for future restoration work across these wet habitats.



Native Ferns

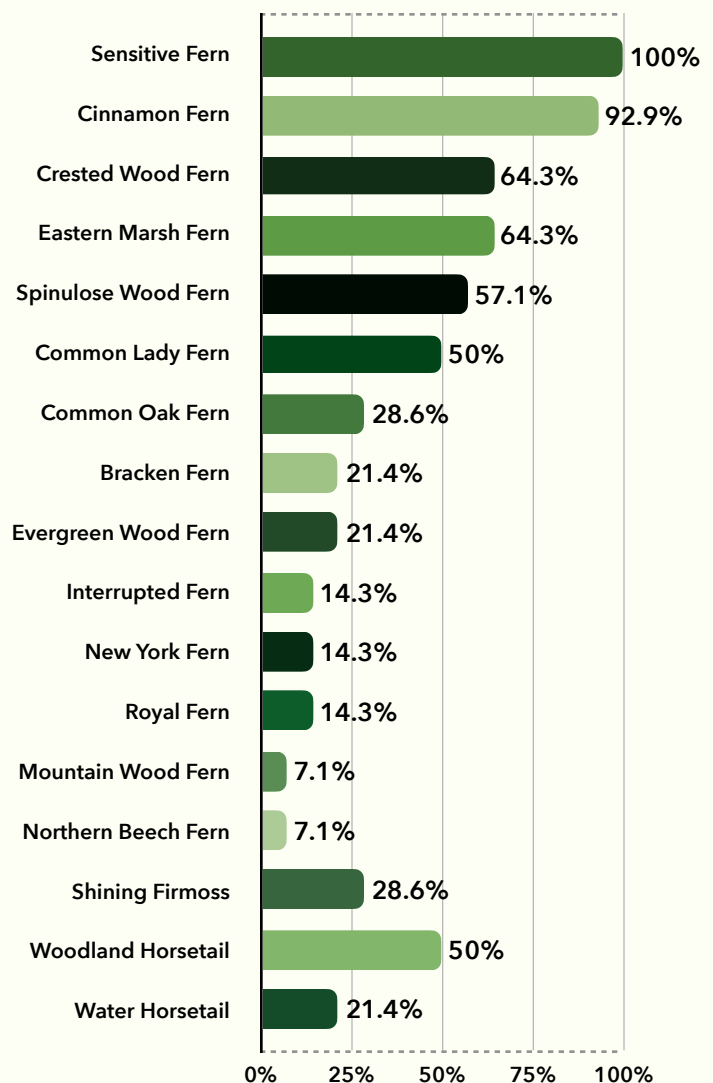


Although a relatively small group when considering the number of species, our native ferns and fern allies are prolifically found across many black ash sites, often acting as a dominant ground cover in our deciduous wet woodlands. The proportions and types of fern species found growing across black ash sites are highly indicative of local drainage patterns, often integral in finding new populations of black ash.

A number of species are found across most black ash sites, including sensitive fern, cinnamon fern, crested wood fern and eastern marsh fern. While none of these species are particularly rare, all are ferns which are generally found growing in the wettest soils. Even the occurrence of our three wood ferns follows this pattern. Spinulose, which tolerates wetter soils, is the most common, while mountain wood fern, with slightly dryer preferences, occurs the least.

While not all represented on the chart to the right, a number of rarer fern species were found at other black ash sites, including Christmas fern, silvery glade fern, royal fern, braun's holly fern and Virginia chain fern.

Ferns By Percentage Occurrence across 14 Black Ash Sites





Rare Fissidens or Pocket Moss, Ellerslie Cedar Swamps, PE

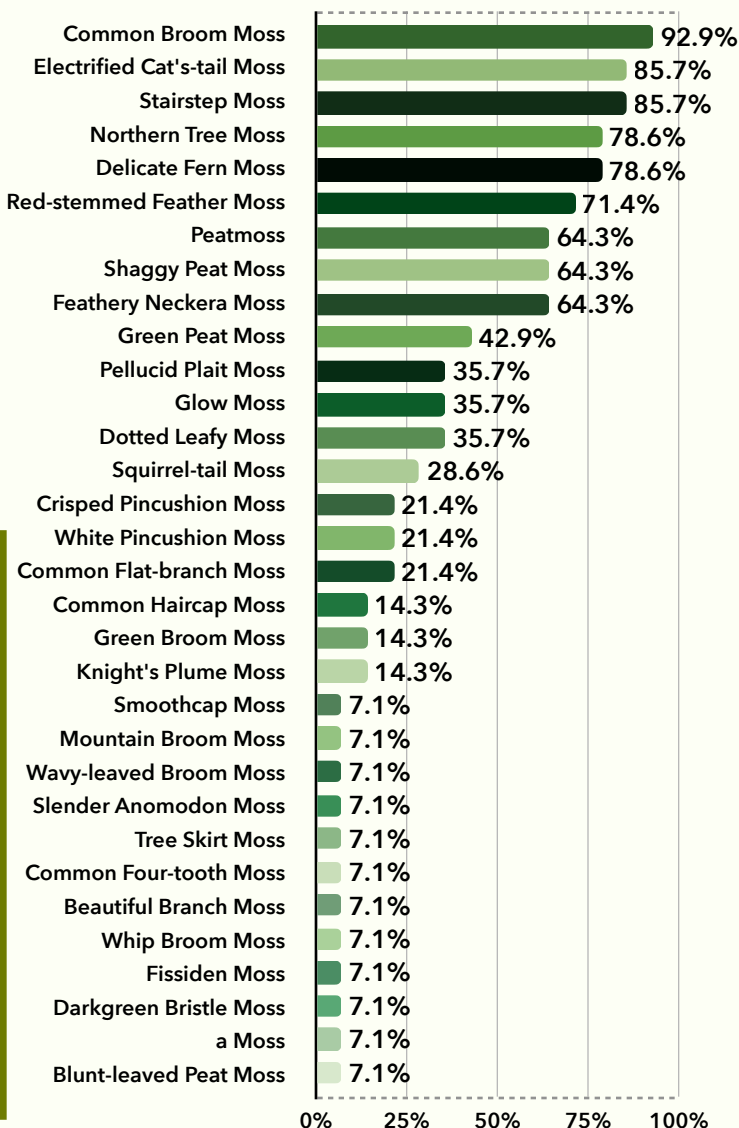
Mosses are found in great diversity and coverage across black ash habitats. Acidic swamps and bogs are often dominated by sphagnum mosses, as well as glow moss. While shady deciduous wet forests and cedar swamps are home to an incredible array of species. These bryophyte species are often sensitive specialists, only growing when a variety of growing conditions have been consistent. The moss species found help to indicate local conditions, even when surveying during dry times.

The geographical range and rarity is poorly understood with many of our moss species. Although not a primary project goal, a number of rare and/or uncommon species were located and confirmed across the province.



Tree Skirt Moss,
Anomodon attenuatus S3

Mosses By Percentage
Occurrence across
36 Black Ash Sites



Liverworts



Creeping Fingerwort, *Lepidozia reptans*, S5, Selkirk Hills, PE

Another poorly studied group of flora, our native liverworts favour growing in many of our wetter habitats. Small and often overlooked, little is known about their individual Provincial status rankings, as the majority are listed as *status unknown*. While liverwort families are difficult to identify down to the species, many are unique and easy to find in the field.

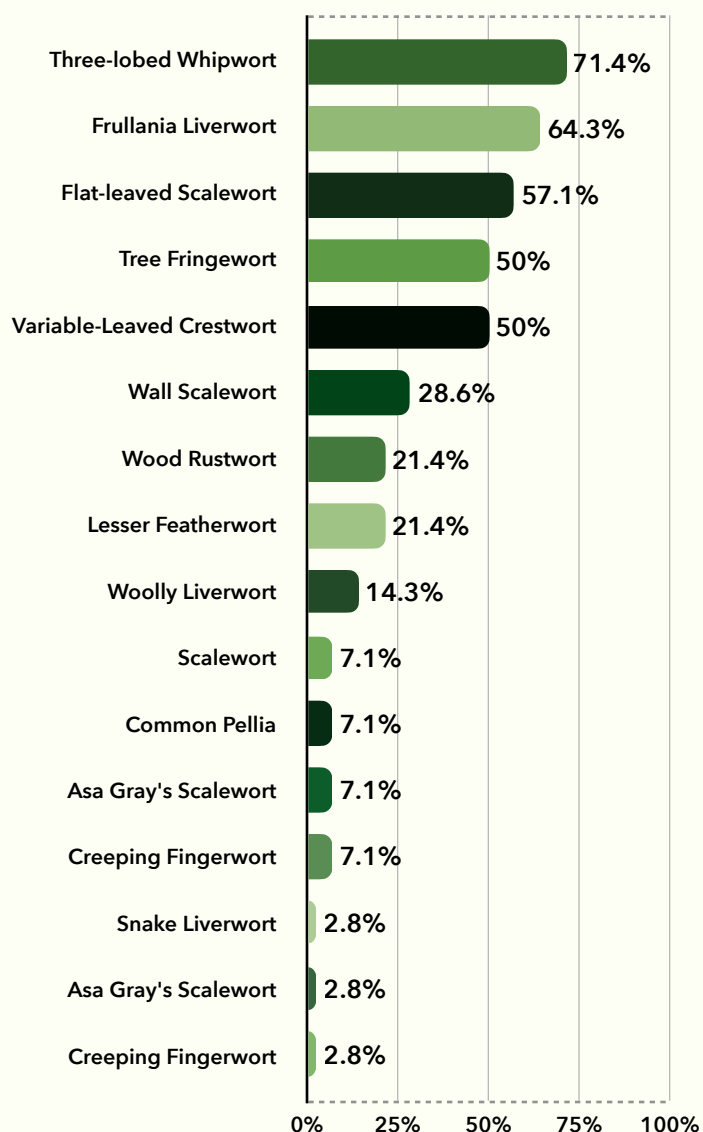
Similarly to mosses, these small plants are sensitive and rely on both specific and consistent growing conditions, often in shaded, wet places with ample humidity. Species such as woolly liverwort, lesser featherwort, wall scalewort, and snake liverwort are found growing with at populous black ash sites.

Again, although an important group of plants, more work is needed to better use these species as habitat indicators for black ash and other species. Despite the lack of information, as well as challenge in finding and identifying these species, many specimens and varieties have been found over the course of this project.



Wall Scalewort, *Porella platyphylla* SU

Liverwort By Percentage Occurrence across 36 Black Ash Sites



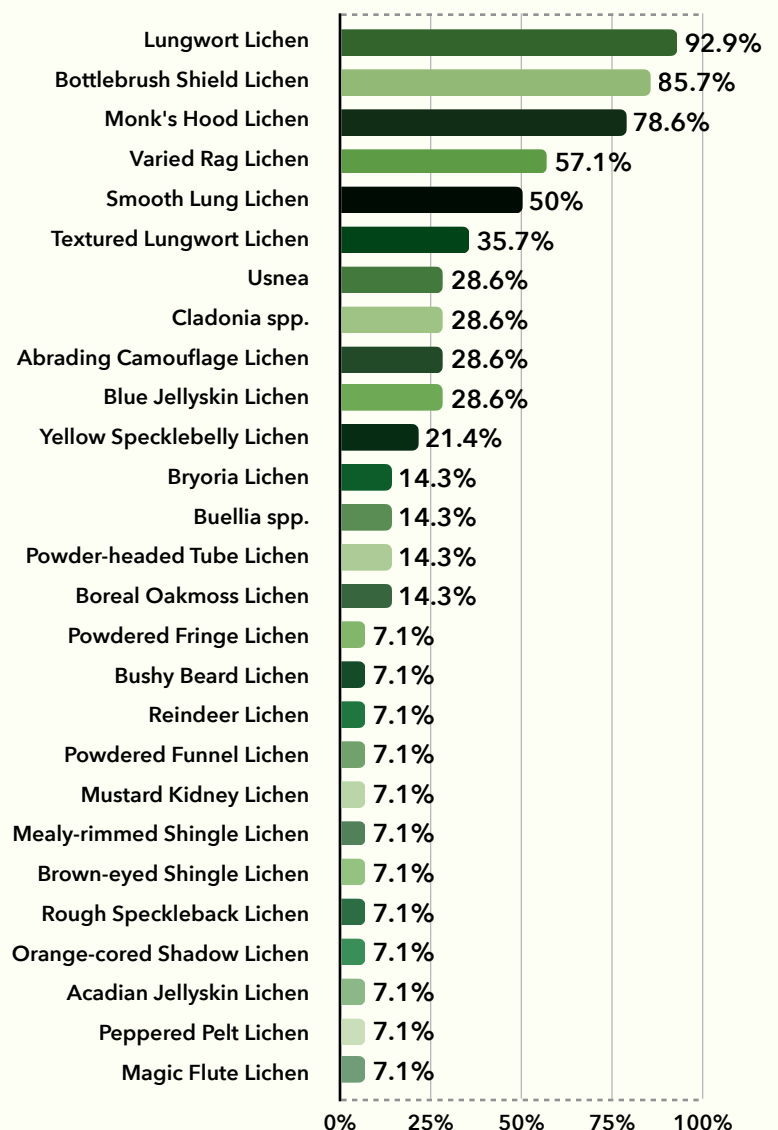


PEI's lichens are a better-researched and surveyed group than our non-vascular plant species, thanks in no small part to the great work of staff from the ACCDC. Not only have they been incredibly helpful in providing data on all Island species, including black ash, but they've also lent their training both in-person and virtually to help in finding rare and important lichens for this project.

Similarly to other difficult-to-identify groups, black ash project members' knowledge of these species has grown with each year of the project. The 2024 field season saw the most lichen species and specimens documented, including a variety of very rare species. Of note, team members from the black ash project assisted in finding the second known location of blue-felt lichen, as well as other rare species: yellow specklebelly lichen, magic flute lichen, peppered pelt lichen, Acadian jellyskin lichen, powdered fringe lichen, and several of the rare kidney and shingle lichens.

Lichens are excellent habitat indicators, often preferring specific and stable conditions, much like other small native species. While no one lichen species has been identified as a consistent black ash companion species, local lichens still play a role in finding suitable habitats. Many of these species prefer more mature forested habitats; shaded, sheltered, and with high levels of humidity.

Lichens By Percentage Occurrence across 36 Black Ash Sites



Rare Species



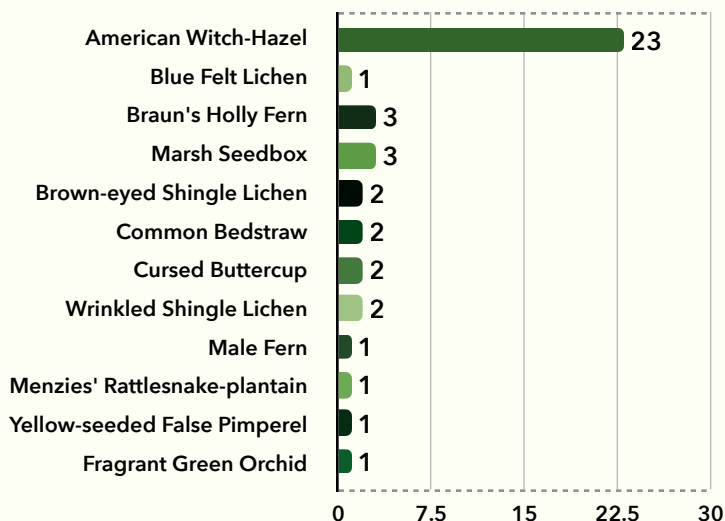
American Witch-hazel - *Hama virginia* - S1, Selkirk Hills

As documented, black ash habitats are often rare species refuges, whether along wooded rivers or in swamps and wet woodlands. These locations are often challenging to harvest and/or farm, saving these areas from the historic disturbances common across the Island..

While not all black ash sites are undisturbed, those with the largest cohorts tend to boast large varieties and populations of uncommon and rare species.

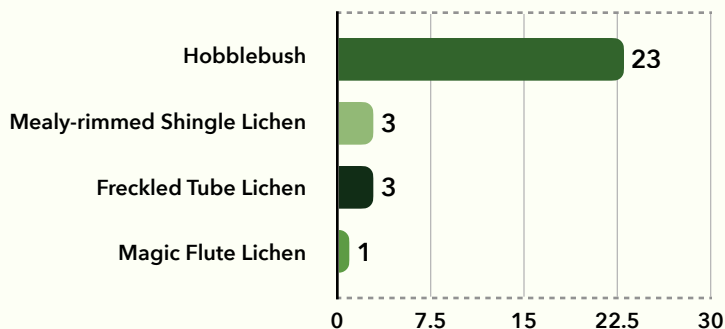
The charts on the following pages showcase the number of specimens of each rare species of flora and fungi that were documented during fieldwork.

SRANK: S1 Species Confirmed by # of Specimens



Mealy-rimmed Shingle Lichen - *Pannaria conoplea* - S1S2

SRANK: S1S2 Species Confirmed by # of Specimens

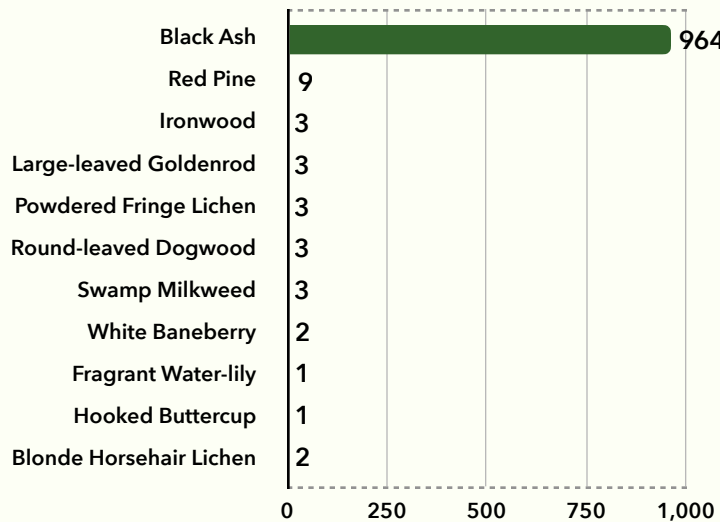


Rare Species

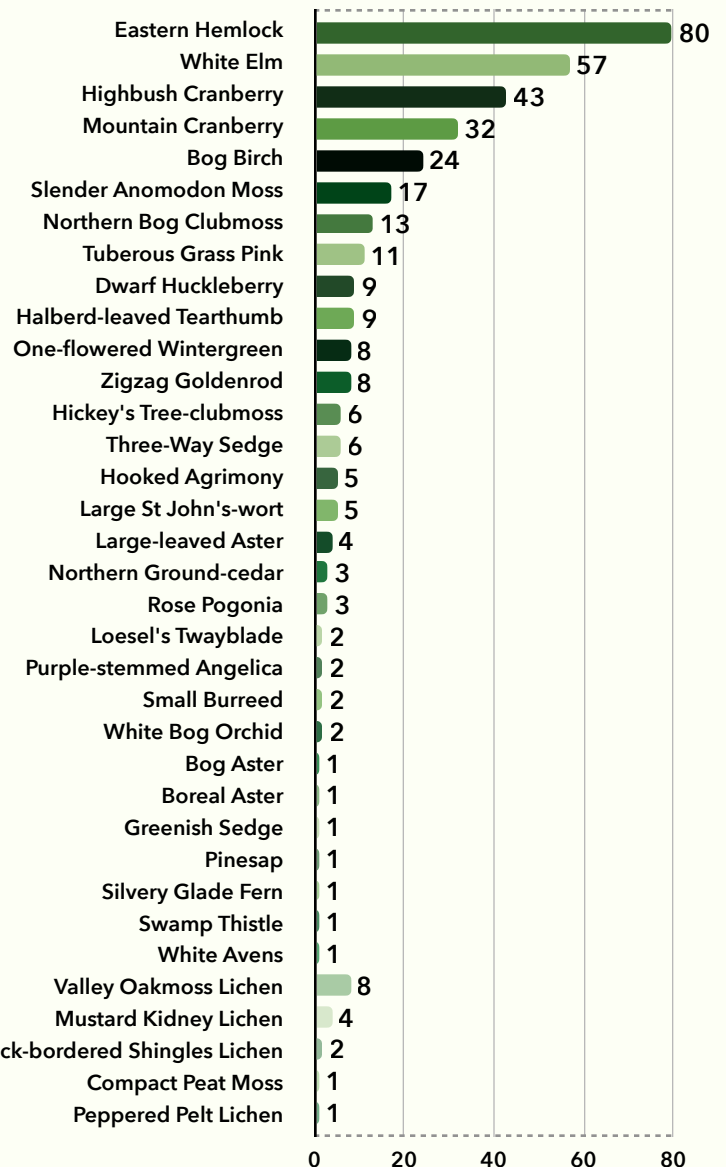


Acadian Jellyskin Lichen - *Leptogium acadiense* - S2S3, St. Raphael, PE

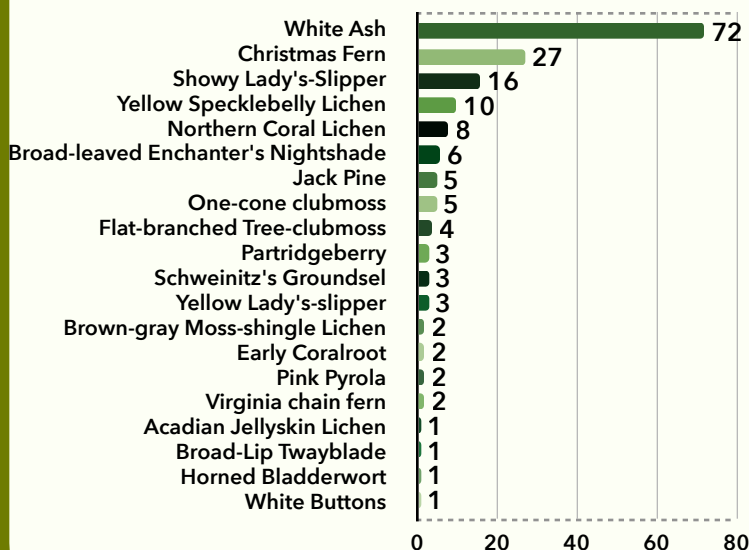
SRANK: S2 Species Confirmed
by # of Specimens



SRANK: S3 Species
Confirmed by # of Specimens



SRANK: S2S3 Species
Confirmed by # of Specimens



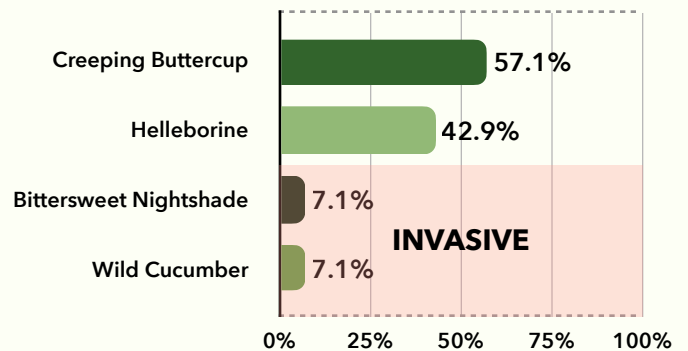
Non-Native & Invasive Species



Non-native and invasive species are an issue across the Province. Whether radiating out from old farming properties, planted in our urban communities, or added to roadside gardens. A number of these species grow aggressively when let loose, often disrupting other ecosystem processes. While most Island habitats have a common or strong presence of non-native and invasive species, black ash habitats tend to be less ecologically disturbed on average. This has resulted in generally lower levels of non-native species found during fieldwork. While there are some common species found, such as creeping buttercup and helleborine, these species are sometimes considered semi-naturalized, disrupting little in the habitat.

Nearby farmland and river systems often seem to disperse these species more readily, particularly bittersweet nightshade and wild cucumber, but also reed canary grass, woodland angelica, and Virginia creeper.

Non-Native & Invasive Species
By Percentage Occurrence
across
14 Black Ash Sites



Non-Native Tree Species

European Mountain Ash
English Oak
Red Ash

Non-Native Shrub Species

Glossy Buckthorn

Non-Native Wildflower Species

Creeping Buttercup
Helleborine
Bittersweet Nightshade
Common Hemp-nettle
Common Speedwell
Coltsfoot
Common Buttercup
Woodland Angelica
Queen Anne's Lace
Common Burdock
Tansy Ragwort
Reed Canary Grass

Brown-eyed Susan
Common Dandelion
Worm-seeded Wallflower
Watercress
Orpine
Wild Cucumber
Tufted Vetch
Purple Loosestrife
Common Eyebright
False Waterpepper
Japanese Knotweed
Curled Dock
Virginia Creeper

Restoration & Education



Black ash restoration plantings, from stock grown at PEI's Provincial Tree Nursery, were a major component of the 2023-24 seasons. Over the previous field seasons, suitable sites and habitats were recorded, creating a list of potential restoration locations. These sites were chosen based on a number of considerations:

- Island-Wide Distribution across counties, watersheds, habitats and land stewards
- Both establishing new populations as well as enhancing existing populations
- Areas with public access for future educational opportunities and easier monitoring
- Areas far from foot traffic and under some kind of protection to prevent future ecological disturbances
- Opportunities for community involvement of local volunteers, schools, municipalities and conservation groups.
- Planting a large enough number of black ash specimens to improve the probabilities of cohort diversity of gender, flowering and seeding.
- Testing micro-site conditions during plantings to attempt to learn more about specimen placement and specific botanical tolerances.

These plantings have also generated substantial public interest and press coverage, as shown by the photos to the right. The first planting of the 2023 season was a partnership between classes from Charlottetown Rural High School, Ellen's Creek Watershed, INT, City of Charlottetown and other FLPP Members.

Why planting black ash trees is so important for P.E.I. and the Mi'kmaq

'It gives me hope that there's a future for our black ash here in the Atlantic region'

 Nicola MacLeod · CBC News · Posted: Jun 08, 2023 6:00 AM ADT | Last Updated: June 8, 2023



CBC Coverage of Hermitage Creek Planting

The trees planted in the Hermitage Creek by Charlottetown Rural students were raised in a partnership

Islanders planting Black ash

Akwé:shon First Nation, a Mi'kmaq band on Prince Edward Island (PEI), is working to re-establish Black ash across the province, for the sake of this species' ecological value and its cultural importance as a material for traditional basketry. *Fraxinus nigra* (Wigwag in Mi'kmaq) is the only tree species in P.E.I. registered as "threatened" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

One of the partners in this effort is the Macphail Woods Ecological Forestry Project, a charitable organization devoted to protecting and restoring natural spaces, based in Orwell, P.E.I. Daniel McRae, a researcher and environmental educator with the group, has played a key role in identifying suitable sites.

"The project has been running for 2 1/2 years, and basically we started with doing surveying to figure out where there are black ash trees growing," says McRae. "Then we

got hemlock and Sugar maple and beech and Red oak – kind of dry upland areas. As long as you've got water, it'll find a way. We found some in really interesting spots that really push where it can grow more than we thought."

The strategy is to boost Black ash numbers at verted sites, and also establish new populations in locations that seem to hold promise. "It's an island-wide approach. We've got about 1,400 trees to plant, give or take, so we're trying to do groups of 40 to 60," says McBae, noting that the Macphail Woods nursery obtained seedlings and grew them out a bit. "We don't like planting plans; we find their success rate is so low."

We like to do larger specimens that are a bit more robust and will settle in a little faster – so for us it's pretty normal to be planting this one-to-three-foot size."

It is hoped that at some sites the trees will not just take root, but thrive and reproduce. "The ones I find growing in those open marshes, they seem like holdovers. They'll survive, but they never look good and



Atlantic Forestry Magazine Coverage of Restoration Work

Black Ash: Companion Species Propagation



Young Cotyledons from a freshly propagated greenhouse bed

While not one of the original primary goals of the Black Ash Project, native seed collection and species propagation has become an increasingly successful component. Over the course of the project, through fieldwork, consultation and public outreach, it was noted that many of the water-tolerant native species which are required for successful wet woodland and wetland restoration were lacking. Most of these species were not being propagated locally or regionally, and the ones that are being grown were not available in an adequate supply. Whether from local watershed groups, municipalities, or other nature conservancy groups, the project team saw the need for these incredible species, whether rare or common.

Seed collection took place during fieldwork, when and where time and supply allowed. Seeds to be collected were prioritized based on their status as black ash companion species, their rarity, as well as looking at specific wetland habitats, such as bogs, swamps and fens. It was also important to collect a variety of flora across the habitat strata, from woody canopy and understory species, to fern and wildflower ground cover.

Seeds were cleaned, catalogued, and processed at the Macphail Woods Native Plant Nursery. Propagation was generally started inside the greenhouse, particularly for new species, often lacking clear propagative methodologies. Once successfully propagated, most of these species were moved outdoors to acclimatize for future restoration plantings. These specimens and species were used during black ash plantings to further restore and enhance these habitats.

SPECIES LIST

PROJECT: ABEGWEIT FIRST NATION STEWARDSHIP OF BLACK ASH
MWOODS SEED COLLECTION/PROPAGATION LIST

CONIFEROUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
TAMARACK	Pinaceae	Larix laricina	S5
RED SPRUCE	Pinaceae	Picea rubens	S5
EASTERN WHITE CEDAR	Cupressaceae	Thuja occidentalis	S3S4
DECIDUOUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
BLACK ASH	Oleaceae	Fraxinus nigra	S2
RED MAPLE	Sapindaceae	Acer rubrum	S5
WHITE ELM	Ulmaceae	Ulmus americana	S3
WHITE ASH	Oleaceae	Fraxinus americana	S2S3
AMERICAN MOUNTAIN ASH	Rosaceae	Sorbus americana	S5
IRONWOOD	Betulaceae	Ostrya virginiana	S2
SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
SPECKLED ALDER	Betulaceae	Alnus incana	S5
ALDER-LEAVED BUCKTHORN	Rhamnaceae	Endotropis alnifolia	S3S4
RED OSIER DOGWOOD	Cornaceae	Cornus sericea	S5
NORTHERN WILD RAISIN	Viburnaceae	Viburnum cassinoides	S5
MOUNTAIN MAPLE	Sapindaceae	Acer spicatum	S5
MOUNTAIN HOLLY	Aquifoliaceae	Ilex mucronata	S5
COMMON WINTERBERRY	Aquifoliaceae	Ilex verticillata	S5
COMMON ELDERBERRY	Viburnaceae	Sambucus canadensis	S4S5
MOUNTAIN FLY HONEYSUCKLE	Caprifoliaceae	Lonicera villosa	S4
BRISTLY DEWBERRY	Rosaceae	Rubus hispidus	S4
HIGHBUSH CRANBERRY	Viburnaceae	Viburnum opulus	S3
VELVET-LEAVED BLUEBERRY	Ericaceae	Vaccinium myrtilloides	S4S5
VIRGINIA CLEMATIS	Ranunculaceae	Clematis virginiana	S4
HOBBLEBUSH	Viburnaceae	Viburnum lantanoides	S1S2
AMERICAN WITCH-HAZEL	Hamamelidaceae	Hamamelis virginiana	S1
STEEPLEBUSH	Rosaceae	Spiraea tomentosa	S4
ROUND-LEAVED DOGWOOD	Cornaceae	Cornus rugosa	S2
BLACK CHOKEBERRY	Rosaceae	Aronia melanocarpa	S4S5
PALE BOG LAUREL	Ericaceae	Kalmia polifolia	S4
WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK
YELLOW MARSH MARIGOLD	Ranunculaceae	Caltha palustris	S4S5
THREE-LEAVED FALSE SOLOMAN'S SEAL	Asparagaceae	Maianthemum trifolium	S4
SMALL FORGET-ME-NOT	Boraginaceae	Myosotis laxa	S4
WHITE TURTLEHEAD	Plantaginaceae	Chelone glabra	S5
WATER AVENS	Rosaceae	Geum rivale	S4
HARLEQUIN BLUE FLAG	Iridaceae	Iris versicolor	S5
EASTERN TEABERRY	Ericaceae	Gaultheria procumbens	S4S5
NODDING TRILLIUM	Melanthiaceae	Trillium cernuum	S4
RED BANEERRY	Ranunculaceae	Actaea rubra	S4
MARSH BLUE VIOLET	Violaceae	Viola cucullata	S5
CLUB SPUR ORCHID	Orchidaceae	Platanthera clavellata	S3S4
CUCUMBER ROOT	Liliaceae	Medeola virginiana	S3S4
ZIGZAG GOLDENROD	Asteraceae	Solidago flexicaulis	S3
ROUND-LEAVED SUNDEW	Droseraceae	Drosera rotundifolia	S4
HERB ROBERT	Geraniaceae	Geranium robertianum	S4
MARSH CINQUEFOIL	Rosaceae	Comarum palustre	S4
SWAMP MILKWEED	Apocynaceae	Asclepias incarnata	S2
ROSE POGONIA	Orchidaceae	Pogonia ophioglossoides	S3
AMERICAN SWEETFLAG	Acoraceae	Acorus americanus	S4
COMMON BONESET	Asteraceae	Eupatorium perfoliatum	S3S4
BOG ASTER	Asteraceae	Oclemena nemoralis	S3
CUT-LEAVED CONEFLOWER	Asteraceae	Rudbeckia laciniata	S2
WHITE BANEERRY	Ranunculaceae	Actaea pachypoda	S2
CANADA ANEMONE	Ranunculaceae	Anemonastrum canadense	S1
NORTHERN PITCHER PLANT	Sarracenaceae	Sarracenia purpurea	S4
BLUE VERVAIN	Verbenaceae	Verbena hastata	S1
LANCE-LEAVED VIOLET	Violaceae	Viola lanceolata	S1
SEDGES	FAMILY	SCIENTIFIC NAME	SRANK
FRINGED SEDGE	Cyperaceae	Carex crinita	S4S7
TAWNY COTTONGRASS	Cyperaceae	Eriophorum virginicum	S4
TUSsock COTTONGRASS	Cyperaceae	Eriophorum vaginatum	S4
FERNS	FAMILY	SCIENTIFIC NAME	SRANK
CINNAMON FERN	Osmundaceae	Osmundastrum cinnamomeum	S5
CHRISTMAS FERN	Dryopteridaceae	Polystichum acrostichoides	S2S3
ROYAL FERN	Osmundaceae	Osmunda regalis var. spectabilis	S4
MALE FERN	Dryopteridaceae	Dryopteris filix-mas	S1

Black Ash Plantings



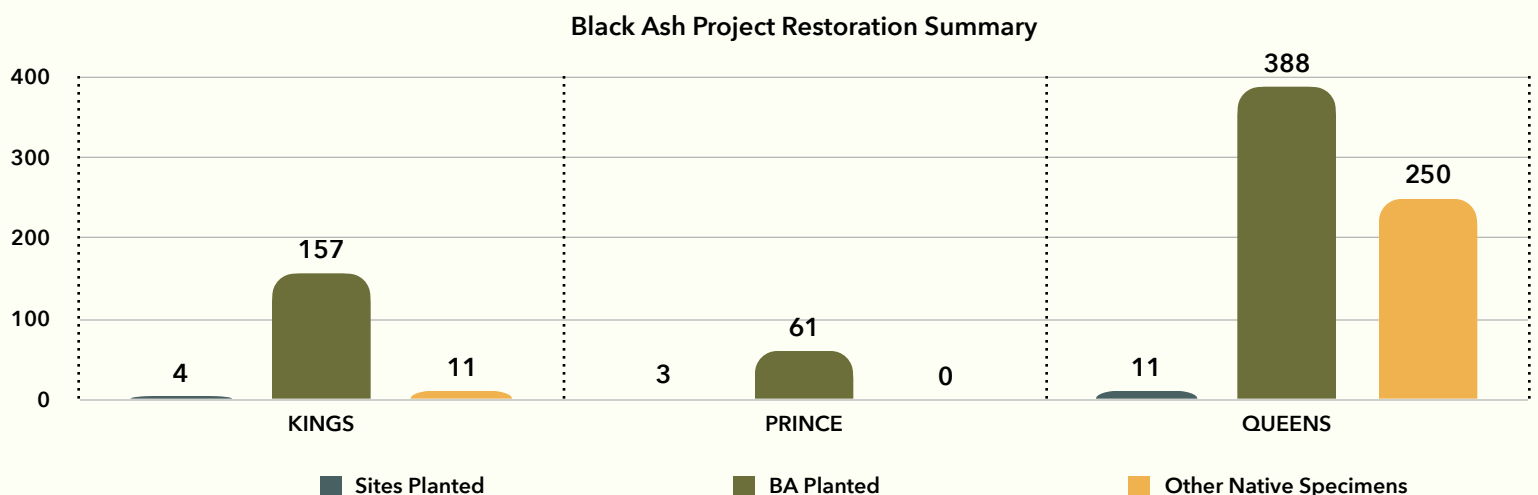
All black ash restoration plantings were led by staff from the Macphail Woods Ecological Forestry Project and the Abegweit Conservation Society, although they often included staff and volunteers from other FLPP member groups and other organizations.

Over the course of the 2022-4 seasons, 18 sites were planted with 606 black ash specimens, mostly ranging from 1 to 2 feet. Whenever feasible, other native companion species were added.

All specimens were geo-referenced with high accuracy and will be monitored as part of the ongoing project. Monitoring in 2024 saw high survival rates at most sites, with minor chewing damage in tall-grass areas being the most observed damage, only seen at 2 sites to date.

The following page displays two other charts, showcasing the diversity of land steward where black ash were planted as well as a yearly timeline of restoration activities over the course of the project.

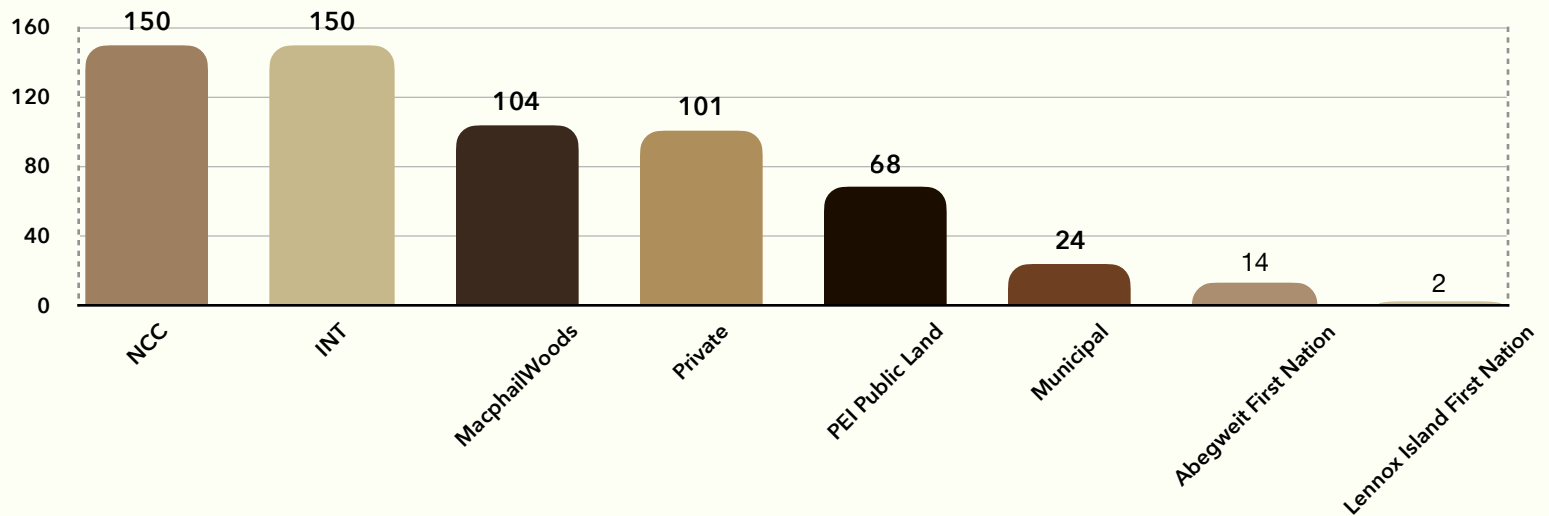
The 2025 season plans to get the last of the black ash in the ground, with plantings planned at Lennox Island, among other sites.



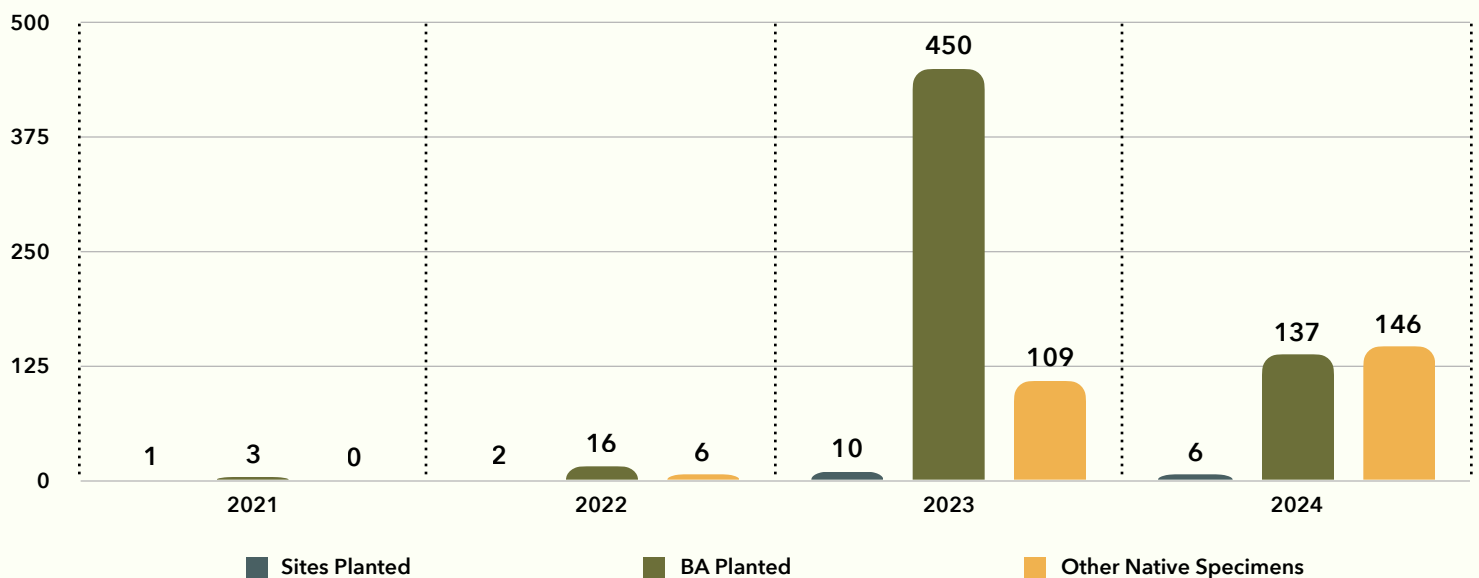
Black Ash Plantings

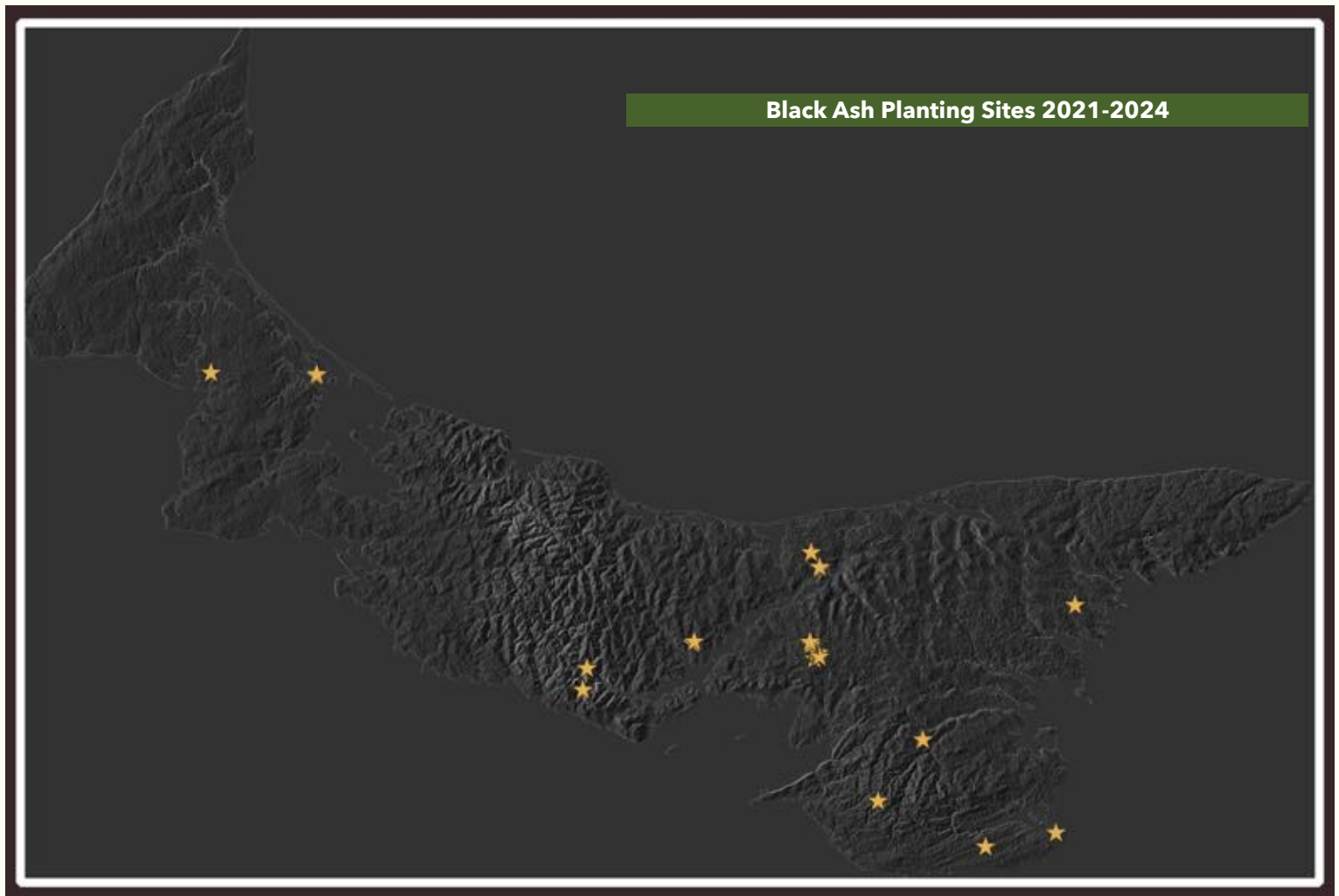


of Black Ash Planted by Land Steward



Black Ash Project Restoration Summary





Conclusion: Swampin' On



Young Black Ash, Corraville, PE

As detailed in this report, the ongoing **Abegweit First Nation Stewardship of Black Ash Project** has been an incredible effort and cooperation between many groups, both local and regional. Not only has the team found more black ash during the course of the project than ever found before on PEI, but it has also forged strong partnerships, benefitting all involved. From training sessions and excursions with watersheds and conservation groups to public walks & talks to capacity building amongst the primary organizations, and not to forget restoration plantings and black ash cataloguing, this project has contributed greatly to PEI's conservation landscape.

The 2025 season will move these efforts forward with many plans and partnerships already underway. A greater priority will be to focus on Prince County habitats, both for restoration plantings and surveying. Atmospheric data monitoring began during the 2024 season with more to learn and analyze in 2025. With approximately 400 black ash still to plant, as well as many other companion species, strategizing is already underway to create new partnerships and find new suitable areas for plantings. The black ash habitability model has proven incredibly useful in finding new black ash locations, not to mention improving both field and GIS efficiency.



Black Ash Bark



Black Ash Canopy



Black Ash Leaflets

SPECIES LIST

PROJECT:	ABEGWEIT FIRST NATION STEWARDSHIP OF BLACK ASH
HABITAT	OFFICIAL WOODED SWAMPS
TOTAL # BA:	210

CONIFEROUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
EASTERN WHITE CEDAR	Cupressaceae	Thuja occidentalis	S3S4
BALSAM FIR	Pinaceae	Abies balsamea	S5
TAMARACK	Pinaceae	Larix laricina	S5
WHITE SPRUCE	Pinaceae	Picea glauca	S5
BLACK SPRUCE	Pinaceae	Picea mariana	S5
EASTERN WHITE PINE	Pinaceae	Pinus strobus	S3S4
EASTERN HEMLOCK	Pinaceae	Tsuga canadensis	S3
DECIDUOUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
YELLOW BIRCH	Betulaceae	Betula alleghaniensis	S5
PAPER BIRCH	Betulaceae	Betula papyrifera	S5
GRAY BIRCH	Betulaceae	Betula populifolia	S5
NORTHERN RED OAK	Fagaceae	Quercus rubra	S3S4
WHITE ASH	Oleaceae	Fraxinus americana	S2S3
BLACK ASH	Oleaceae	Fraxinus nigra	S2
PIN CHERRY	Rosaceae	Prunus pensylvanica	S5
AMERICAN MOUNTAIN ASH	Rosaceae	Sorbus americana	S5
BALSAM POPLAR	Salicaceae	Populus balsamifera	S3
TREMBLING ASPEN	Salicaceae	Populus tremuloides	S5
RED MAPLE	Sapindaceae	Acer rubrum	S5
SUGAR MAPLE	Sapindaceae	Acer saccharum	S4
WHITE ELM	Ulmaceae	Ulmus americana	S3
SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
WESTERN POISON IVY	Anacardiaceae	Toxicodendron radicans var. rydbergii	S4
MOUNTAIN HOLLY	Aquifoliaceae	Ilex mucronata	S5
COMMON WINTERBERRY	Aquifoliaceae	Ilex verticillata	S5
SPECKLED ALDER	Betulaceae	Alnus incana	S5
BOG BIRCH	Betulaceae	Betula pumila	S3
BEAKED HAZEL	Betulaceae	Corylus cornuta	S5
CANADA FLY HONEYSUCKLE	Caprifoliaceae	Lonicera canadensis	S5
MOUNTAIN FLY HONEYSUCKLE	Caprifoliaceae	Lonicera villosa	S4
WOOLLY BEACH-HEATH	Cistaceae	Hudsonia tomentosa	S3
ALTERNATE-LEAVED DOGWOOD	Cornaceae	Cornus alternifolia	S4
RED OSIER DOGWOOD	Cornaceae	Cornus sericea	S5
COMMON JUNIPER	Cupressaceae	Juniperus communis	S3
COMMON BEARBERRY	Ericaceae	Arctostaphylos uva-ursi	S3
LEATHERLEAF	Ericaceae	Chamaedaphne calyculata	S4
BLACK CROWBERRY	Ericaceae	Empetrum nigrum	S3
BLACK HUCKLEBERRY	Ericaceae	Gaylussacia baccata	S4S5
SHEEP LAUREL	Ericaceae	Kalmia angustifolia	S5
PALE BOG LAUREL	Ericaceae	Kalmia polifolia	S4
RHODORA	Ericaceae	Rhododendron canadense	S5
COMMON LABRADOR TEA	Ericaceae	Rhododendron groenlandicum	S5
LATE LOWBUSH BLUEBERRY	Ericaceae	Vaccinium angustifolium	S5

Associated Species: Wooded Swamps

VELVET-LEAVED BLUEBERRY	Ericaceae	Vaccinium myrtilloides	S4S5
SKUNK CURRANT	Grossulariaceae	Ribes glandulosum	S5
SMOOTH GOOSEBERRY	Grossulariaceae	Ribes hirtellum	S5
BRISTLY BLACK CURRANT	Grossulariaceae	Ribes lacustre	S5
SWAMP RED CURRANT	Grossulariaceae	Ribes triste	S3S4
NORTHERN BAYBERRY	Myricaceae	Morella pensylvanica	S5
SWEET GALE	Myricaceae	Myrica gale	S5
VIRGINIA CLEMATIS	Ranunculaceae	Clematis virginiana	S4
ALDER-LEAVED BUCKTHORN	Rhamnaceae	Endotropis alnifolia	S3S4
SERVICEBERRY	Rosaceae	Amelanchier sp	N/A
BLACK CHOKEBERRY	Rosaceae	Aronia melanocarpa	S4S5
CHOKECHERRY	Rosaceae	Prunus virginiana	S5
SHINING ROSE	Rosaceae	Rosa nitida	S4
VIRGINIA ROSE	Rosaceae	Rosa virginiana	S5
SMOOTH BLACKBERRY	Rosaceae	Rubus canadensis	S5
BRISTLY DEWBERRY	Rosaceae	Rubus hispidus	S4
RED RASPBERRY	Rosaceae	Rubus idaeus	S5
DWARF RED RASPBERRY	Rosaceae	Rubus pubescens	S5
WHITE MEADOWSWEET	Rosaceae	Spiraea alba	S5
STEEPLEBUSH	Rosaceae	Spiraea tomentosa	S4
WILLOW	Salicaceae	Salix spp.	N/A
MOUNTAIN MAPLE	Sapindaceae	Acer spicatum	S5
CANADA YEW	Taxaceae	Taxus canadensis	S4
COMMON ELDERBERRY	Viburnaceae	Sambucus canadensis	S4S5
RED ELDERBERRY	Viburnaceae	Sambucus racemosa	S5
NORTHERN WILD RAISIN	Viburnaceae	Viburnum cassinoides	S5
HIGHBUSH CRANBERRY	Viburnaceae	Viburnum opulus	S3
ALLEGHANEY BLACKBERRY	Rosaceae	Rubus allegheniensis	S4S5
NON-NATIVE TREES	FAMILY	SCIENTIFIC NAME	SRANK
RED ASH	Oleaceae	Fraxinus pennsylvanica	SNA
EUROPEAN MOUNTAIN ASH	Rosaceae	Sorbus aucuparia	SNA
COMMON APPLE	Rosaceae	Malus pumila	SNA
NON-NATIVE SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
GLOSSY BUCKTHORN	Rhamnaceae	Frangula alnus	SNA
WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK
THIN-LEAVED ORACHE	Amaranthaceae	Atriplex prostrata	S4
PURPLE-STEMMED ANGELICA	Apiaceae	Angelica atropurpurea	S3
BULBOUS WATER-HEMLOCK	Apiaceae	Cicuta bulbifera	S4S5
COMMON WATER PARSNIP	Apiaceae	Sium suave	S5
WILD CALLA	Araceae	Calla palustris	S4
TURION DUCKWEED	Araceae	Lemna turionifera	S4S5
BRISTLY SARSAPARILLA	Araliaceae	Aralia hispida	S4
WILD SARSAPARILLA	Araliaceae	Aralia nudicaulis	S5
WILD LILY-OF-THE-VALLEY	Asparagaceae	Maianthemum canadense	S5
LARGE FALSE SOLOMON'S SEAL	Asparagaceae	Maianthemum racemosum	S4
STARRY FALSE SOLOMON'S SEAL	Asparagaceae	Maianthemum stellatum	S3
THREE-LEAVED FALSE SOLOMAN'S SEAL	Asparagaceae	Maianthemum trifolium	S4
BEGGARTICK	Asteraceae	Biden sp.	SU
NODDING BEGGARTICKS	Asteraceae	Bidens cernua	S4

Associated Species: Wooded Swamps

PURPLE-STEMMED BEGGARTICKS	Asteraceae	Bidens connata	S4
DEVIL'S BEGGARTICKS	Asteraceae	Bidens frondosa	S5
SWAMP THISTLE	Asteraceae	Cirsium muticum	S3
HAIRY FLAT-TOP WHITE ASTER	Asteraceae	Doellingeria umbellata	S5
EASTERN BURNWEED	Asteraceae	Erechtites hieraciifolius	S4
LOW ROUGH ASTER	Asteraceae	Eurybia radula	S4
GRASS-LEAVED GOLDENROD	Asteraceae	Euthamia graminifolia	S5
SPOTTED JOE PYE WEED	Asteraceae	Eutrochium maculatum	S5
HAWKWEED SPP.	Asteraceae	Hieracium sp	N/A
TALL BLUE LETTUCE	Asteraceae	Lactuca biennis	S5
TALL RATTLESNAKEROOT	Asteraceae	Nabalus altissimus	S4
THREE-LEAVED RATTLESNAKEROOT	Asteraceae	Nabalus trifoliolatus	S5
WHORLED WOOD ASTER	Asteraceae	Oclemena acuminata	S5
BOG ASTER	Asteraceae	Oclemena nemoralis	S3
WHITE GOLDENROD	Asteraceae	Solidago bicolor	S4
CANADA GOLDENROD	Asteraceae	Solidago canadensis	S5
GIANT GOLDENROD	Asteraceae	Solidago gigantea	S4
LARGE-LEAVED GOLDENROD	Asteraceae	Solidago macrophylla	S2
DOWNY GOLDENROD	Asteraceae	Solidago puberula	S4S5
ROUGH-STEMMED GOLDENROD	Asteraceae	Solidago rugosa	S5
SEASIDE GOLDENROD	Asteraceae	Solidago sempervirens	S4S5
NORTHERN BOG GOLDENROD	Asteraceae	Solidago uliginosa	S4
CALICO ASTER	Asteraceae	Symphyotrichum lateriflorum	S5
NEW YORK ASTER	Asteraceae	Symphyotrichum novi-belgii	S5
PURPLE-STEMMED ASTER	Asteraceae	Symphyotrichum puniceum	S5
ASTER SPP.	Asteraceae	Symphyotrichum sp	N/A
ROUGH COCKLEBUR	Asteraceae	Xanthium strumarium	S4
SPOTTED JEWELWEED	Balsaminaceae	Impatiens capensis	S5
SMALL FORGET-ME-NOT	Boraginaceae	Myosotis laxa	S4
PENNSYLVANIA BITTERCRESS	Brassicaceae	Cardamine pensylvanica	S4S5
TWINFLOWER	Caprifoliaceae	Linnaea borealis	S5
SEABEACH SANDWORT	Caryophyllaceae	Honckenya peploides	S3S4
BLUNT-LEAVED SANDWORT	Caryophyllaceae	Moehringia lateriflora	S5
BUNCHBERRY	Cornaceae	Cornus canadensis	S5
ROUND-LEAVED SUNDEW	Droseraceae	Drosera rotundifolia	S4
CREeping SNOWBERRY	Ericaceae	Gaultheria hispidula	S5
EASTERN TEABERRY	Ericaceae	Gaultheria procumbens	S4S5
ONE-FLOWERED WINTERGREEN	Ericaceae	Moneses uniflora	S3
ONE-SIDED WINTERGREEN	Ericaceae	Orthilia secunda	S4S5
SHINLEAF	Ericaceae	Pyrola elliptica	S5
LARGE CRANBERRY	Ericaceae	Vaccinium macrocarpon	S4S5
MOUNTAIN CRANBERRY	Ericaceae	Vaccinium vitis-idaea	S3
HERB ROBERT	Geraniaceae	Geranium robertianum	S4
FRASER'S ST. JOHN'S-WORT	Hypericaceae	Hypericum fraseri	S5
HARLEQUIN BLUE FLAG	Iridaceae	Iris versicolor	S5
AMERICAN WATER HOREHOUND	Lamiaceae	Lycopus americanus	S4S5
NORTHERN WATER HOREHOUND	Lamiaceae	Lycopus uniflorus	S5
CANADIAN MINT	Lamiaceae	Mentha canadensis	S4S5

Associated Species: Wooded Swamps

MARSH SKULLCAP	Lamiaceae	Scutellaria galericulata	S4S5
MAD-DOG SKULLCAP	Lamiaceae	Scutellaria lateriflora	S5
YELLOW BLUEBEAD LILY	Liliaceae	Clintonia borealis	S5
CLASPING-LEAVED TWISTED-STALK	Liliaceae	Streptopus amplexifolius	S4
ROSE TWISTED-STALK	Liliaceae	Streptopus lanceolatus	S4
NODDING TRILLIUM	Melanthiaceae	Trillium cernuum	S4
BOG BUCKBEAN	Menyanthaceae	Menyanthes trifoliata	S4
FIREWEED	Onagraceae	Chamaenerion angustifolium	S5
SMALL ENCHANTER'S NIGHTSHADE	Onagraceae	Circaea alpina	S5
NORTHERN WILLOWHERB	Onagraceae	Epilobium ciliatum	S5
BOG WILLOWHERB	Onagraceae	Epilobium leptophyllum	S4S5
MARSH WILLOWHERB	Onagraceae	Epilobium palustre	S4
WILLHERB SPP.	Onagraceae	Epilobium sp	N/A
EARLY CORALROOT	Orchidaceae	Corallorhiza trifida	S2S3
PINK LADY'S-SLIPPER	Orchidaceae	Cypripedium acaule	S5
YELLOW LADY'S-SLIPPER	Orchidaceae	Cypripedium parviflorum	S2S3
SHOWY LADY'S-SLIPPER	Orchidaceae	Cypripedium reginae	S2S3
WHITE FRINGED ORCHID	Orchidaceae	Platanthera blephariglottis	S3S4
CLUB SPUR ORCHID	Orchidaceae	Platanthera clavellata	S3S4
WHITE BOG ORCHID	Orchidaceae	Platanthera dilatata	S3
SMALL PURPLE FRINGED ORCHID	Orchidaceae	Platanthera psycodes	S4
PLATANThERA ORCHID	Orchidaceae	Platanthera sp.	N/A
ROSE POGONIA	Orchidaceae	Pogonia ophioglossoides	S3
WHITE TURTLEHEAD	Plantaginaceae	Chelone glabra	S5
AMERICAN SPEEDWELL	Plantaginaceae	Veronica americana	S4
HALBERD-LEAVED TEARTHUMB	Polygonaceae	Persicaria arifolia	S3
DOTTED SMARTWEED	Polygonaceae	Persicaria punctata	S4
ARROW-LEAVED SMARTWEED	Polygonaceae	Persicaria sagittata	S5
PERSICARIA SP.	Polygonaceae	Persicaria sp.	N/A
GREATER WATER DOCK	Polygonaceae	Rumex britannica	S5
NORTHERN STARFLOWER	Primulaceae	Lysimachia borealis	S5
TUFTED YELLOW LOOSESTRIPE	Primulaceae	Lysimachia thyrsiflora	S4S5
RED BANEERRY	Ranunculaceae	Actaea rubra	S4
YELLOW MARSH MARIGOLD	Ranunculaceae	Caltha palustris	S4S5
GOLDTHREAD	Ranunculaceae	Coptis trifolia	S5
GMELIN'S WATER BUTTERCUP	Ranunculaceae	Ranunculus gmelinii	S4
WHITE WATER BUTTERCUP	Ranunculaceae	Ranunculus trichophyllus	S4
TALL MEADOW-RUE	Ranunculaceae	Thalictrum pubescens	S5
WOODLAND AGRIMONY	Rosaceae	Agrimonia striata	S4
MARSH CINQUEFOIL	Rosaceae	Comarum palustre	S4
WILD STRAWBERRY	Rosaceae	Fragaria virginiana	S5
WATER AVENS	Rosaceae	Geum rivale	S4
AVENS	Rosaceae	Geum sp	N/A
ROUGH BEDSTRAW	Rubiaceae	Galium asprellum	S4S5
COMMON MARSH BEDSTRAW	Rubiaceae	Galium palustre	S5
BEDSTRAW	Rubiaceae	Galium sp	N/A
THREE-PETALED BEDSTRAW	Rubiaceae	Galium trifidum	S4S5
THREE-FLOWERED BEDSTRAW	Rubiaceae	Galium triflorum	S5

Associated Species: Wooded Swamps

AMERICAN GOLDEN SAXIFRAGE	Saxifragaceae	Chrysosplenium americanum	S4
NAKED BISHOP'S-CAP	Saxifragaceae	Mitella nuda	S4
AMERICAN BURREED	Typhaceae	Sparganium americanum	S4
BROAD-LEAVED CATTAIL	Typhaceae	Typha latifolia	S5
DWARF CLEARWEED	Urticaceae	Pilea pumila	S4
STINGING NETTLE	Urticaceae	Urtica dioica ssp. gracilis	S4
MARSH BLUE VIOLET	Violaceae	Viola cucullata	S5
SMALL WHITE VIOLET	Violaceae	Viola macloskeyi	S5
VIOLET SP.	Violaceae	Viola sp.	N/A
BEACH PEA	Fabaceae	Lathyrus japonicus	S4S5
CLIMBING FALSE BUCKWHEAT	Polygonaceae	Fallopia scandens	S3
SEDGES	FAMILY	SCIENTIFIC NAME	SRANK
SILVERY SEDGE	Cyperaceae	Carex canescens	S4S5
FRINGED SEDGE	Cyperaceae	Carex crinita	S4?
NODDING SEDGE	Cyperaceae	Carex gynandra	S5
BLADDER SEDGE	Cyperaceae	Carex intumescens	S4S5
BRISTLY-STALKED SEDGE	Cyperaceae	Carex leptalea	S5
CYPERUSLIKE SEDGE	Cyperaceae	Carex pseudocyperus	S5
SEABEACH SEDGE	Cyperaceae	Carex silicea	S4
SEDGE SP.	Cyperaceae	Carex sp.	N/A
AWL-FRUITED SEDGE	Cyperaceae	Carex stipata	S5
THREE-SEEDED SEDGE	Cyperaceae	Carex trisperma	S5
GREENISH SEDGE	Cyperaceae	Carex viridula	S3
NARROW-LEAVED COTTONGRASS	Cyperaceae	Eriophorum angustifolium	S4
ROUGH COTTONGRASS	Cyperaceae	Eriophorum tenellum	S4
TAWNY COTTONGRASS	Cyperaceae	Eriophorum virginicum	S4
SOFTSTEM BULRUSH	Cyperaceae	Schoenoplectus tabernaemontani	S4
BLACK-GIRDLED BULRUSH	Cyperaceae	Scirpus atrocinctus	S4S5
DARK-GREEN BULRUSH	Cyperaceae	Scirpus atrovirens	S1
COMMON WOOLLY BULRUSH	Cyperaceae	Scirpus cyperinus	S5
GRASSES	FAMILY	SCIENTIFIC NAME	SRANK
GRASS SPP.	Poaceae	Grass Spp.	N/A
WAVY HAIRGRASS	Poaceae	Avenella flexuosa	S4
WAVY HAIRGRASS	Poaceae	Avenella flexuosa	S4
BLUEJOINT REED GRASS	Poaceae	Calamagrostis canadensis	S5
DROOPING WOOD REED GRASS	Poaceae	Cinna latifolia	S4S5
NORTHERN MANNA GRASS	Poaceae	Glyceria borealis	S4
COMMON TALL MANNA GRASS	Poaceae	Glyceria grandis	S4S5
FOWL MANNA GRASS	Poaceae	Glyceria striata	S5
CANADA BLUE GRASS	Poaceae	Poa compressa	N/A
RUSHES	FAMILY	SCIENTIFIC NAME	SRANK
CANADA RUSH	Juncaceae	Juncus canadensis	S4
SOFT RUSH	Juncaceae	Juncus effusus	S5
RUSH	Juncaceae	Juncus sp	N/A
NON-NATIVE WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK
WOODLAND ANGELICA	Apiaceae	Angelica sylvestris	SNA
COMMON BURDOCK	Asteraceae	Arctium minus	SNA
BEACH WORMWOOD	Asteraceae	Artemisia stelleriana	SNA
MOUSE-EAR HAWKWEED	Asteraceae	Pilosella officinarum	SNA

Associated Species: Wooded Swamps

COMMON DANDELION	Asteraceae	Taraxacum officinale	SNA
COLTSFOOT	Asteraceae	Tussilago farfara	SNA
WATERCRESS	Brassicaceae	Nasturtium officinale	SNA
BOUNCING-BET	Caryophyllaceae	Saponaria officinalis	SNA
ORPINE	Crassulaceae	Hylotelephium telephium	SNA
WILD CUCUMBER	Cucurbitaceae	Echinocystis lobata	SNA
HELLEBORINE	Orchidaceae	Epipactis helleborine	SNA
COMMON SPEEDWELL	Plantaginaceae	Veronica officinalis	SNA
FALSE WATERPEPPER	Polygonaceae	Persicaria hydropiperoides	SNA
CREEPING BUTTERCUP	Ranunculaceae	Ranunculus repens	SNA
BITTERSWEET NIGHTSHADE	Solanaceae	Solanum dulcamara	SNA
TUFTED VETCH	Fabaceae	Vicia cracca	SNA
MUSK MONKEYFLOWER	Phrymaceae	Erythranthe moschata	N/A
FERNS	FAMILY	SCIENTIFIC NAME	SRANK
COMMON LADY FERN	Athyriaceae	Athyrium filix-femina	S5
COMMON OAK FERN	Cystopteridaceae	Gymnocarpium dryopteris	S5
BRACKEN FERN	Dennstaedtiaceae	Pteridium aquilinum	S5
MOUNTAIN WOOD FERN	Dryopteridaceae	Dryopteris campyloptera	S4
SPINULOSE WOOD FERN	Dryopteridaceae	Dryopteris carthusiana	S4S5
CRESTED WOOD FERN	Dryopteridaceae	Dryopteris cristata	S5
EVERGREEN WOOD FERN	Dryopteridaceae	Dryopteris intermedia	S5
OSTRICH FERN	Onocleaceae	Matteuccia struthiopteris	S4
SENSITIVE FERN	Onocleaceae	Onoclea sensibilis	S5
INTERRUPTED FERN	Osmundaceae	Claytosmunda claytoniana	S5
ROYAL FERN	Osmundaceae	Osmunda regalis	S4
ROYAL FERN	Osmundaceae	Osmunda regalis var. spectabilis	S4
CINNAMON FERN	Osmundaceae	Osmundastrum cinnamomeum	S5
NEW YORK FERN	Thelypteridaceae	Parathelypteris noveboracensis	S5
NORTHERN BEECH FERN	Thelypteridaceae	Phegopteris connectilis	S5
EASTERN MARSH FERN	Thelypteridaceae	Thelypteris palustris	S4S5
CLUBMOSES	FAMILY	SCIENTIFIC NAME	SRANK
SHINING FIRMOSS	Lycopodiaceae	Huperzia lucidula	S4
NORTHERN BOG CLUBMOSS	Lycopodiaceae	Lycopodiella inundata	S3
HORSETAILS	FAMILY	SCIENTIFIC NAME	SRANK
WATER HORSETAIL	Equisetaceae	Equisetum fluviatile	S4
WOODLAND HORSETAIL	Equisetaceae	Equisetum sylvaticum	S5
MOSES	FAMILY	SCIENTIFIC NAME	SRANK
GLOW MOSS	AULACOMNIACEAE	Aulacomnium palustre	S5
NORTHERN TREE MOSS	CLIMACIACEAE	Climacium dendroides	S5
WHIP BROOM MOSS	DICRANACEAE	Dicranum flagellare	S5
WAVY-LEAVED BROOM MOSS	DICRANACEAE	Dicranum polysetum	S5
COMMON BROOM MOSS	DICRANACEAE	Dicranum scoparium	S5
GREEN BROOM MOSS	DICRANACEAE	Dicranum viride	S4?
FISSIDEN MOSS	FISSIDENTACEAE	Fissidens sp.	SU
STAIRSTEP MOSS	HYLOCOMIACEAE	Hylocomium splendens	S5
ELECTRIFIED CAT'S-TAIL MOSS	HYLOCOMIACEAE	Rhytidiadelphus triquetrus	S5
RED-STEMMED FEATHER MOSS	HYLOCOMIACEAE	Pleurozium schreberi	S5
BEAUTIFUL BRANCH MOSS	HYPNACEAE	Callicladium haldanianum	S5
PELLUCID PLAIT MOSS	Hypnaceae	Hypnum imponens	S5

Associated Species: Wooded Swamps

KNIGHT'S PLUME MOSS	Hypnaceae	Ptilium crista-castrensis	S5
WHITE PINCUSHION MOSS	LEUCOBRYACEAE	Leucobryum glaucum	SU
SQUIRREL-TAIL MOSS	LEUCODONTACEAE	Leucodon sciuroides	SU?
SWAN'S-NECK LEAFY MOSS	Mniaceae	Mnium hornum	S5
DOTTED LEAFY MOSS	MNIACEAE	Rhizomnium punctatum	S4?
COMMON FLAT-BRANCH MOSS	NECKERACEAE	Homalia trichomanoides	SU
FEATHERY NECKERA MOSS	NECKERACEAE	Neckera pennata	S5
CRISPED PINCUSHION MOSS	ORTHOTRICHACEAE	Ulotia crispa	S5
A MOSS	ORTHOTRICHACEAE	Ulotia sp.	SU
COMMON SMOOTHCAP MOSS	POLYTRICHACEAE	Atrichum undulatum	S4S5
COMMON HAIRCAP MOSS	Polytrichaceae	Polytrichum commune	S5
GREEN PEAT MOSS	SPHAGNACEAE	Sphagnum girgensohnii	S5
PEATMOSS	SPHAGNACEAE	Sphagnum sp	N/A
SHAGGY PEAT MOSS	SPHAGNACEAE	Sphagnum squarrosum	S5
COMMON FOUR-TOOTH MOSS	TETRAPHIDACEAE	Tetraphis pellucida	S5
DELICATE FERN MOSS	Thuidiaceae	Thuidium delicatulum	S4S5
LIVERWORTS	FAMILY	SCIENTIFIC NAME	SRANK
WOOD RUSTWORT	CEPHALOZIACEAE	Nowellia curvifolia	SU
ASA GRAY'S SCALEWORT	JUBULACEAE	Frullania asagrayana	SU
FRULLANIA LIVERWORT	JUBULACEAE	Frullania sp.	SU
THREE-LOBED WHIPWORT	LEPIDOZIACEAE	Bazzania trilobata	S5
CREEPING FINGERWORT	LEPIDOZIACEAE	Lepidozia reptans	S5
VARIABLE-LEAVED CRESTWORT	LOPHOCOLEACEAE	Lophocolea heterophylla	SU
GREEN-TONGUE LIVERWORT	MARCHANTACEAE	Marchantia polymorpha	SU
COMMON PELLIA	PELLIACEAE	Pellia epiphylla	SU
LESSER FEATHERWORT	PLAGIOCHILACEAE	Plagiochila porelloides	SU
WALL SCALEWORT	PORELLACEAE	Porella platyphylla	SU
TREE FRINGEWORT	PTILIDIACEAE	Ptilidium pulcherrimum	SU
FLAT-LEAVED SCALEWORT	RADULACEAE	Radula complanata	SU
WOOLLY LIVERWORT	TRICHOCOLEACEAE	Trichocolea tomentella	SU
CILIATE FRINGEWORT	PTILIDIACEAE	Ptilidium ciliare	SU
LICHENS	FAMILY	SCIENTIFIC NAME	SRANK
SMOOTH-FOOTED POWDERHORN LICHEN	CLADONACEAE	CLADONIA OCHROCHLORA	S4S5
GRAY REINDEER LICHEN	CLADONACEAE	Cladonia rangiferina	S5
CLADONIA SPP.	CLADONACEAE	Cladonia sp	N/A
DRAGON LICHEN	CLADONACEAE	Cladonia squamosa	S4S5
STAR-TIPPED REINDEER LICHEN	CLADONACEAE	Cladonia stellaris	S4S5
ACADIAN JELLYSKIN LICHEN	COLLEMATACEAE	Leptogium acadiense	S2S3
BLUE JELLYSKIN LICHEN	COLLEMATACEAE	Leptogium cyanescens	S5
LUNGWORT LICHEN	LOBARIACEAE	Lobaria pulmonaria	S4S5
TEXTURED LUNGWORT LICHEN	LOBARIACEAE	Lobaria scrobiculata	S4
YELLOW SPECKLEBELLY LICHEN	LOBARIACEAE	Pseudocyphellaria holarctica	S2S3
SMOOTH LUNG LICHEN	LOBARIACEAE	Ricasolia quercizans	S4S5
MUSTARD KIDNEY LICHEN	NEPHROMATACEAE	Nephroma laevigatum	S3?
MEALY-RIMMED SHINGLE LICHEN	PANNARIACEAE	Pannaria conoplea	S1S2
BROWN-EYED SHINGLE LICHEN	PANNARIACEAE	Pannaria rubiginosa	S1
BLUE FELT LICHEN	PANNARIACEAE	Pectenium plumbea	S1
BRYORIA LICHEN	PARMELIACEAE	Bryoria sp	N/A
BOREAL OAKMOSS LICHEN	PARMELIACEAE	Evernia mesomorpha	S5

Associated Species: Wooded Swamps

MONK'S HOOD LICHEN	PARMELIACEAE	Hypogymnia physodes	S5
POWDER-HEADED TUBE LICHEN	PARMELIACEAE	Hypogymnia tubulosa	S4S5
ABRADING CAMOUFLAGE LICHEN	PARMELIACEAE	Melanelixia subaurifera	S4S5
MAGIC FLUTE LICHEN	PARMELIACEAE	Menegazzia terebrata	S1S2
BOTTLEBRUSH SHIELD LICHEN	PARMELIACEAE	Parmelia squarrosa	S5
HAMMERED SHIELD LICHEN	PARMELIACEAE	Parmelia sulcata	S5
VARIED RAG LICHEN	PARMELIACEAE	Platismatia glauca	S5
ROUGH SPECKLEBACK LICHEN	PARMELIACEAE	Punctelia rudecta	S4S5
VARIABLE WRINKLE LICHEN	PARMELIACEAE	Tuckermannopsis orbata	S4S5
USNEA	PARMELIACEAE	Usnea sp	N/A
BUSHY BEARD LICHEN	PARMELIACEAE	Usnea strigosa	S4S5
POWDERED SUNSHINE LICHEN	PARMELIACEAE	Vulpicida pinastri	S4S5
PEPPERED PELT LICHEN	PELTIGERACEAE	Peltigera evansiana	S3?
BUELLIA SPP.	PHYSICIACEAE	Buellia sp	N/A
POWDERED FRINGE LICHEN	PHYSICIACEAE	Heterodermia speciosa	S2
ORANGE-CORED SHADOW LICHEN	PHYSICIACEAE	Phaeophyscia rubropulchra	S4S5
HOODED ROSETTE LICHEN	PHYSICIACEAE	Physcia adscendens	S4S5
MARITIME SUNBURST LICHEN		Xanthoria parietina	S4S5
FUNGI	FAMILY	SCIENTIFIC NAME	SRANK
BOLETE MUSHROOM	N/A	N/A	N/A

SPECIES LIST

PROJECT:	ABEGWEIT FIRST NATION STEWARDSHIP OF BLACK ASH
HABITAT	DECIDUOUS FORESTS WITH POOR DRAINAGE
TOTAL # BA:	810

CONIFEROUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
EASTERN WHITE CEDAR	Cupressaceae	Thuja occidentalis	S3S4
BALSAM FIR	Pinaceae	Abies balsamea	S5
TAMARACK	Pinaceae	Larix laricina	S5
WHITE SPRUCE	Pinaceae	Picea glauca	S5
BLACK SPRUCE	Pinaceae	Picea mariana	S5
RED SPRUCE	Pinaceae	Picea rubens	S5
EASTERN WHITE PINE	Pinaceae	Pinus strobus	S3S4
EASTERN HEMLOCK	Pinaceae	Tsuga canadensis	S3
DECIDUOUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
YELLOW BIRCH	Betulaceae	Betula alleghaniensis	S5
HEART-LEAVED BIRCH	Betulaceae	Betula cordifolia	S3S4
PAPER BIRCH	Betulaceae	Betula papyrifera	S5
GRAY BIRCH	Betulaceae	Betula populifolia	S5
AMERICAN BEECH	Fagaceae	Fagus grandifolia	S3S4
NORTHERN RED OAK	Fagaceae	Quercus rubra	S3S4
WHITE ASH	Oleaceae	Fraxinus americana	S2S3
BLACK ASH	Oleaceae	Fraxinus nigra	S2
PIN CHERRY	Rosaceae	Prunus pensylvanica	S5
AMERICAN MOUNTAIN ASH	Rosaceae	Sorbus americana	S5
LARGE-TOOTHED ASPEN	Salicaceae	Populus grandidentata	S4S5
TREMBLING ASPEN	Salicaceae	Populus tremuloides	S5
STRIPED MAPLE	Sapindaceae	Acer pensylvanicum	S5
RED MAPLE	Sapindaceae	Acer rubrum	S5
SUGAR MAPLE	Sapindaceae	Acer saccharum	S4
WHITE ELM	Ulmaceae	Ulmus americana	S3
SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
WESTERN POISON IVY	Anacardiaceae	Toxicodendron radicans var. rydbergii	S4
SPREADING DOGBANE	Apocynaceae	Apocynum androsaemifolium	S4
MOUNTAIN HOLLY	Aquifoliaceae	Ilex mucronata	S5
COMMON WINTERBERRY	Aquifoliaceae	Ilex verticillata	S5
GREEN ALDER	Betulaceae	Alnus alnobetula	S4S5
SPECKLED ALDER	Betulaceae	Alnus incana	S5
BOG BIRCH	Betulaceae	Betula pumila	S3
BEAKED HAZEL	Betulaceae	Corylus cornuta	S5
NORTHERN BUSH HONEYSUCKLE	Caprifoliaceae	Diervilla lonicera	S4
CANADA FLY HONEYSUCKLE	Caprifoliaceae	Lonicera canadensis	S5
MOUNTAIN FLY HONEYSUCKLE	Caprifoliaceae	Lonicera villosa	S4
ALTERNATE-LEAVED DOGWOOD	Cornaceae	Cornus alternifolia	S4
ROUND-LEAVED DOGWOOD	Cornaceae	Cornus rugosa	S2
RED OSIER DOGWOOD	Cornaceae	Cornus sericea	S5
LEATHERLEAF	Ericaceae	Chamaedaphne calyculata	S4
BLACK HUCKLEBERRY	Ericaceae	Gaylussacia baccata	S4S5
SHEEP LAUREL	Ericaceae	Kalmia angustifolia	S5

Associated Species: Poor-Drainage Deciduous Forests

PALE BOG LAUREL	Ericaceae	Kalmia polifolia	S4
RHODORA	Ericaceae	Rhododendron canadense	S5
COMMON LABRADOR TEA	Ericaceae	Rhododendron groenlandicum	S5
LATE LOWBUSH BLUEBERRY	Ericaceae	Vaccinium angustifolium	S5
VELVET-LEAVED BLUEBERRY	Ericaceae	Vaccinium myrtilloides	S4S5
SKUNK CURRANT	Grossulariaceae	Ribes glandulosum	S5
SMOOTH GOOSEBERRY	Grossulariaceae	Ribes hirtellum	S5
BRISTLY BLACK CURRANT	Grossulariaceae	Ribes lacustre	S5
SWAMP RED CURRANT	Grossulariaceae	Ribes triste	S3S4
AMERICAN WITCH-HAZEL	Hamamelidaceae	Hamamelis virginiana	S1
SWEET-FERN	Myricaceae	Comptonia peregrina	S4
NORTHERN BAYBERRY	Myricaceae	Morella pensylvanica	S5
SWEET GALE	Myricaceae	Myrica gale	S5
VIRGINIA CLEMATIS	Ranunculaceae	Clematis virginiana	S4
ALDER-LEAVED BUCKTHORN	Rhamnaceae	Endotropis alnifolia	S3S4
SERVICEBERRY	Rosaceae	Amelanchier sp	N/A
BLACK CHOKEBERRY	Rosaceae	Aronia melanocarpa	S4S5
ARONIA SP	Rosaceae	Aronia sp	N/A
CHOKECHERRY	Rosaceae	Prunus virginiana	S5
SHINING ROSE	Rosaceae	Rosa nitida	S4
VIRGINIA ROSE	Rosaceae	Rosa virginiana	S5
ALLEGHANEY BLACKBERRY	Rosaceae	Rubus allegheniensis	S4S5
SMOOTH BLACKBERRY	Rosaceae	Rubus canadensis	S5
BRISTLY DEWBERRY	Rosaceae	Rubus hispidus	S4
RED RASPBERRY	Rosaceae	Rubus idaeus	S5
DWARF RED RASPBERRY	Rosaceae	Rubus pubescens	S5
WHITE MEADOWSWEET	Rosaceae	Spiraea alba	S5
STEEPLEBUSH	Rosaceae	Spiraea tomentosa	S4
PUSSY WILLOW	Salicaceae	Salix discolor	S5
WILLOW	Salicaceae	Salix spp.	N/A
MOUNTAIN MAPLE	Sapindaceae	Acer spicatum	S5
CANADA YEW	Taxaceae	Taxus canadensis	S4
COMMON ELDERBERRY	Viburnaceae	Sambucus canadensis	S4S5
RED ELDERBERRY	Viburnaceae	Sambucus racemosa	S5
NORTHERN WILD RAISIN	Viburnaceae	Viburnum cassinoides	S5
HOBBLEBUSH	Viburnaceae	Viburnum lantanoides	S1S2
HIGHBUSH CRANBERRY	Viburnaceae	Viburnum opulus	S3
NON-NATIVE TREES	FAMILY	SCIENTIFIC NAME	SRANK
ENGLISH OAK	Fagaceae	Quercus robur	SNA
BUTTERNUT	Juglandaceae	Juglans cinerea	SNA
LINDEN TREE	Malvaceae	Tilia sp.	SNA
EUROPEAN ASH	Oleaceae	Fraxinus excelsior	SNA
RED ASH	Oleaceae	Fraxinus pennsylvanica	SNA
COMMON APPLE	Rosaceae	Malus pumila	SNA
EUROPEAN MOUNTAIN ASH	Rosaceae	Sorbus aucuparia	SNA
WYCH ELM	Ulmaceae	Ulmus glabra	SNA
NON-NATIVE SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
GLOSSY BUCKTHORN	Rhamnaceae	Frangula alnus	SNA
WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK

Associated Species: Poor-Drainage Deciduous Forests

THIN-LEAVED ORACHE	Amaranthaceae	Atriplex prostrata	S4
SEASIDE ANGELICA	Apiaceae	Angelica lucida	S2S3
BULBOUS WATER-HEMLOCK	Apiaceae	Cicuta bulbifera	S4S5
COMMON COW PARSNIP	Apiaceae	Heracleum maximum	S4
MARYLAND SANICLE	Apiaceae	Sanicula marilandica	S3S4
COMMON WATER PARSNIP	Apiaceae	Sium suave	S5
JACK-IN-THE-PULPIT	Araceae	Arisaema triphyllum	S4
SWAMP JACK-IN-THE-PULPIT	Araceae	Arisaema triphyllum ssp. stewardsoni	S4
WILD CALLA	Araceae	Calla palustris	S4
TURION DUCKWEED	Araceae	Lemna turionifera	S4S5
WILD SARSAPARILLA	Araliaceae	Aralia nudicaulis	S5
WILD LILY-OF-THE-VALLEY	Asparagaceae	Maianthemum canadense	S5
LARGE FALSE SOLOMON'S SEAL	Asparagaceae	Maianthemum racemosum	S4
THREE-LEAVED FALSE SOLOMAN'S SEAL	Asparagaceae	Maianthemum trifolium	S4
BEGGARTICK	Asteraceae	Biden sp.	SU
NODDING BEGGARTICKS	Asteraceae	Bidens cernua	S4
PURPLE-STEMMED BEGGARTICKS	Asteraceae	Bidens connata	S4
DEVIL'S BEGGARTICKS	Asteraceae	Bidens frondosa	S5
HAIRY FLAT-TOP WHITE ASTER	Asteraceae	Doellingeria umbellata	S5
EASTERN BURNWEED	Asteraceae	Erechtites hieraciifolius	S4
CANADA HORSEWEED	Asteraceae	Erigeron canadensis	S5
LOW ROUGH ASTER	Asteraceae	Eurybia radula	S4
GRASS-LEAVED GOLDENROD	Asteraceae	Euthamia graminifolia	S5
SPOTTED JOE PYE WEED	Asteraceae	Eutrochium maculatum	S5
ROUGH HAWKWEED	Asteraceae	Hieracium scabrum	S4
TALL BLUE LETTUCE	Asteraceae	Lactuca biennis	S5
TALL RATTLESNAKEROOT	Asteraceae	Nabalus altissimus	S4
THREE-LEAVED RATTLESNAKEROOT	Asteraceae	Nabalus trifoliolatus	S5
WHORLED WOOD ASTER	Asteraceae	Oclemena acuminata	S5
SCHWEINITZ'S GROUNDSEL	Asteraceae	Packera schweinitziana	S2S3
CANADA GOLDENROD	Asteraceae	Solidago canadensis	S5
ZIGZAG GOLDENROD	Asteraceae	Solidago flexicaulis	S3
GIANT GOLDENROD	Asteraceae	Solidago gigantea	S4
DOWNY GOLDENROD	Asteraceae	Solidago puberula	S4S5
ROUGH-STEMMED GOLDENROD	Asteraceae	Solidago rugosa	S5
NORTHERN BOG GOLDENROD	Asteraceae	Solidago uliginosa	S4
BOREAL ASTER	Asteraceae	Symphyotrichum boreale	S3
HEART-LEAVED ASTER	Asteraceae	Symphyotrichum cordifolium	S4
LANCE-LEAVED ASTER	Asteraceae	Symphyotrichum lanceolatum	S4
CALICO ASTER	Asteraceae	Symphyotrichum lateriflorum	S5
NEW YORK ASTER	Asteraceae	Symphyotrichum novi-belgii	S5
PURPLE-STEMMED ASTER	Asteraceae	Symphyotrichum puniceum	S5
ASTER SPP.	Asteraceae	Symphyotrichum sp	N/A
ROUGH COCKLEBUR	Asteraceae	Xanthium strumarium	S4
SPOTTED JEWELWEED	Balsaminaceae	Impatiens capensis	S5
SMALL FORGET-ME-NOT	Boraginaceae	Myosotis laxa	S4
PENNSYLVANIA BITTERCRESS	Brassicaceae	Cardamine pensylvanica	S4S5
TWINFLOWER	Caprifoliaceae	Linnaea borealis	S5

Associated Species: Poor-Drainage Deciduous Forests

SEABEACH SANDWORT	Caryophyllaceae	Honckenya peploides	S3S4
BLUNT-LEAVED SANDWORT	Caryophyllaceae	Moehringia lateriflora	S5
BUNCHBERRY	Cornaceae	Cornus canadensis	S5
ROUND-LEAVED SUNDEW	Droseraceae	Drosera rotundifolia	S4
TRAILING ARBUTUS	Ericaceae	Epigaea repens	S4
CREeping SNOWBERRY	Ericaceae	Gaultheria hispidula	S5
EASTERN TEABERRY	Ericaceae	Gaultheria procumbens	S4S5
PINESAP	Ericaceae	Hypopitys monotropa	S3
ONE-FLOWERED WINTERGREEN	Ericaceae	Moneses uniflora	S3
CONVULSION-ROOT	ERICACEAE	Monotropa uniflora	S5
ONE-SIDED WINTERGREEN	Ericaceae	Orthilia secunda	S4S5
ROUND-LEAVED PYROLA	Ericaceae	Pyrola americana	S4
SHINLEAF	Ericaceae	Pyrola elliptica	S5
SMALL CRANBERRY	Ericaceae	Vaccinium oxycoccos	S4
MOUNTAIN CRANBERRY	Ericaceae	Vaccinium vitis-idaea	S3
HERB ROBERT	Geraniaceae	Geranium robertianum	S4
SIBERIAN WATER MILFOIL	Haloragaceae	Myriophyllum sibiricum	S4
FRASER'S ST. JOHN'S-WORT	Hypericaceae	Hypericum fraseri	S5
HARLEQUIN BLUE FLAG	Iridaceae	Iris versicolor	S5
AMERICAN WATER HOREHOUND	Lamiaceae	Lycopus americanus	S4S5
NORTHERN WATER HOREHOUND	Lamiaceae	Lycopus uniflorus	S5
CANADIAN MINT	Lamiaceae	Mentha canadensis	S4S5
COMMON SELF-HEAL	Lamiaceae	Prunella vulgaris	S5
MARSH SKULLCAP	Lamiaceae	Scutellaria galericulata	S4S5
MAD-DOG SKULLCAP	Lamiaceae	Scutellaria lateriflora	S5
YELLOW BLUEBEAD LILY	Liliaceae	Clintonia borealis	S5
CUCUMBER ROOT	Liliaceae	Medeola virginiana	S3S4
CLASPING-LEAVED TWISTED-STALK	Liliaceae	Streptopus amplexifolius	S4
ROSE TWISTED-STALK	Liliaceae	Streptopus lanceolatus	S4
PAINTED TRILLIUM	Melanthiaceae	Trillidium undulatum	S5
NODDING TRILLIUM	Melanthiaceae	Trillium cernuum	S4
FIREWEED	Onagraceae	Chamaenerion angustifolium	S5
SMALL ENCHANTER'S NIGHTSHADE	Onagraceae	Circaea alpina	S5
BROAD-LEAVED ENCHANTER'S NIGHTSHADE	Onagraceae	Circaea canadensis	S2S3
NORTHERN WILLOWHERB	Onagraceae	Epilobium ciliatum	S5
BOG WILLOWHERB	Onagraceae	Epilobium leptophyllum	S4S5
MARSH WILLOWHERB	Onagraceae	Epilobium palustre	S4
MARSH SEEDBOX	Onagraceae	Ludwigia palustris	S1
EARLY CORALROOT	Orchidaceae	Corallorhiza trifida	S2S3
PINK LADY'S-SLIPPER	Orchidaceae	Cypripedium acaule	S5
YELLOW LADY'S-SLIPPER	Orchidaceae	Cypripedium parviflorum	S2S3
SHOWY LADY'S-SLIPPER	Orchidaceae	Cypripedium reginae	S2S3
MENZIES' RATTLESNAKE-PLANTAIN	Orchidaceae	Goodyera oblongifolia	S1
BROAD-LIP TWAYBLADE	Orchidaceae	Neottia convallarioides	S2S3
WHITE FRINGED ORCHID	Orchidaceae	Platanthera blephariglottis	S3S4
CLUB SPUR ORCHID	Orchidaceae	Platanthera clavellata	S3S4
WHITE BOG ORCHID	Orchidaceae	Platanthera dilatata	S3
SMALL PURPLE FRINGED ORCHID	Orchidaceae	Platanthera psycodes	S4

Associated Species: Poor-Drainage Deciduous Forests

PLATANThERA ORCHID	Orchidaceae	Platanthera sp.	N/A
COMMON WOOD SORREL	Oxalidaceae	Oxalis montana	S4
EUROPEAN WOOD SORREL	Oxalidaceae	Oxalis stricta	S5
SQUARE-STEMMED MONKEYFLOWER	Phrymaceae	Mimulus ringens	S3S4
MARSH WATER-STARWORT	Plantaginaceae	Callitriche palustris	S4
WHITE TURTLEHEAD	Plantaginaceae	Chelone glabra	S5
AMERICAN SPEEDWELL	Plantaginaceae	Veronica americana	S4
MARSH SPEEDWELL	Plantaginaceae	Veronica scutellata	S4
FRINGED BLACK BINDWEED	Polygonaceae	Fallopia cilinodis	S4
HALBERD-LEAVED TEARTHUMB	Polygonaceae	Persicaria arifolia	S3
DOTTED SMARTWEED	Polygonaceae	Persicaria punctata	S4
ARROW-LEAVED SMARTWEED	Polygonaceae	Persicaria sagittata	S5
PERSICARIA SP.	Polygonaceae	Persicaria sp.	N/A
GREATER WATER DOCK	Polygonaceae	Rumex britannica	S5
NORTHERN STARFLOWER	Primulaceae	Lysimachia borealis	S5
SWAMP YELLOW LOOSESTRIFE	Primulaceae	Lysimachia terrestris	S4S5
TUFTED YELLOW LOOSESTRIFE	Primulaceae	Lysimachia thyrsoflora	S4S5
RED BANEERRY	Ranunculaceae	Actaea rubra	S4
YELLOW MARSH MARIGOLD	Ranunculaceae	Caltha palustris	S4S5
GOLDTHREAD	Ranunculaceae	Coptis trifolia	S5
KIDNEY-LEAVED BUTTERCUP	Ranunculaceae	Ranunculus abortivus	S4
GMELIN'S WATER BUTTERCUP	Ranunculaceae	Ranunculus gmelinii	S4
CURSED BUTTERCUP	Ranunculaceae	Ranunculus sceleratus	S1
TALL MEADOW-RUE	Ranunculaceae	Thalictrum pubescens	S5
HOOKEED AGRIMONY	Rosaceae	Agrimonia gryposepala	S3
WOODLAND AGRIMONY	Rosaceae	Agrimonia striata	S4
MARSH CINQUEFOIL	Rosaceae	Comarum palustre	S4
WILD STRAWBERRY	Rosaceae	Fragaria virginiana	S5
YELLOW AVENS	Rosaceae	Geum aleppicum	S4
ROUGH AVENS	Rosaceae	Geum laciniatum	S4
LARGE-LEAVED AVENS	Rosaceae	Geum macrophyllum	S3S4
WATER AVENS	Rosaceae	Geum rivale	S4
AVENS	Rosaceae	Geum sp	N/A
ROUGH CINQUEFOIL	Rosaceae	Potentilla norvegica	S4S5
ROUGH BEDSTRAW	Rubiaceae	Galium asprellum	S4S5
COMMON MARSH BEDSTRAW	Rubiaceae	Galium palustre	S5
BEDSTRAW	Rubiaceae	Galium sp	N/A
DYER'S BEDSTRAW	Rubiaceae	Galium tinctorium	S4
THREE-PETALED BEDSTRAW	Rubiaceae	Galium trifidum	S4S5
THREE-FLOWERED BEDSTRAW	Rubiaceae	Galium triflorum	S5
PARTRIDGEBERRY	Rubiaceae	Mitchella repens	S2S3
AMERICAN GOLDEN SAXIFRAGE	Saxifragaceae	Chrysosplenium americanum	S4
NAKED BISHOP'S-CAP	Saxifragaceae	Mitella nuda	S4
NARROW-LEAVED BURREED	Typhaceae	Sparganium angustifolium	S4
GREEN-FRUITED BURREED	Typhaceae	Sparganium emersum	S4S5
SMALL BURREED	Typhaceae	Sparganium natans	S3
BROAD-LEAVED CATTAIL	Typhaceae	Typha latifolia	S5
DWARF CLEARWEED	Urticaceae	Pilea pumila	S4

Associated Species: Poor-Drainage Deciduous Forests

STINGING NETTLE	Urticaceae	Urtica dioica ssp. gracilis	S4
SWEET WHITE VIOLET	Violaceae	Viola blanda	S4S5
MARSH BLUE VIOLET	Violaceae	Viola cucullata	S5
SMALL WHITE VIOLET	Violaceae	Viola macloskeyi	S5
VIOLET SP.	Violaceae	Viola sp.	N/A
SEDGES	FAMILY	SCIENTIFIC NAME	SRANK
BROWNISH SEDGE	Cyperaceae	Carex brunnescens	S5
SILVERY SEDGE	Cyperaceae	Carex canescens	S4S5
FRINGED SEDGE	Cyperaceae	Carex crinita	S4?
DEWEY'S SEDGE	Cyperaceae	Carex deweyana	S4
STAR SEDGE	Cyperaceae	Carex echinata	S4S5
NODDING SEDGE	Cyperaceae	Carex gynandra	S5
BLADDER SEDGE	Cyperaceae	Carex intumescens	S4S5
BRISTLY-STALKED SEDGE	Cyperaceae	Carex leptalea	S5
BOREAL BOG SEDGE	Cyperaceae	Carex magellanica	S4
NEW ENGLAND SEDGE	Cyperaceae	Carex novae-angliae	S4S5
CYPERUSLIKE SEDGE	Cyperaceae	Carex pseudocyperus	S5
ROUGH SEDGE	Cyperaceae	Carex scabrata	S4
SEDGE SP.	Cyperaceae	Carex sp.	N/A
AWL-FRUITED SEDGE	Cyperaceae	Carex stipata	S5
THREE-SEEDED SEDGE	Cyperaceae	Carex trisperma	S5
GREENISH SEDGE	Cyperaceae	Carex viridula	S3
FOX SEDGE	Cyperaceae	Carex vulpinoidea	S3S4
NARROW-LEAVED COTTONGRASS	Cyperaceae	Eriophorum angustifolium	S4
TUSsock COTTONGRASS	Cyperaceae	Eriophorum vaginatum	S4
TAWNY COTTONGRASS	Cyperaceae	Eriophorum virginicum	S4
BLACK-GIRDLED BULRUSH	Cyperaceae	Scirpus atrocinctus	S4S5
DARK-GREEN BULRUSH	Cyperaceae	Scirpus atrovirens	S1
COMMON WOOLLY BULRUSH	Cyperaceae	Scirpus cyperinus	S5
GRASSES	FAMILY	SCIENTIFIC NAME	SRANK
BLUEJOINT REED GRASS	Poaceae	Calamagrostis canadensis	S5
DROOPING WOOD REED GRASS	Poaceae	Cinna latifolia	S4S5
NORTHERN MANNA GRASS	Poaceae	Glyceria borealis	S4
COMMON TALL MANNA GRASS	Poaceae	Glyceria grandis	S4S5
FOWL MANNA GRASS	Poaceae	Glyceria striata	S5
GRASS SPP.	Poaceae	Grass Spp.	N/A
REED CANARY GRASS	Poaceae	Phalaris arundinacea	SNA
RUSHES	FAMILY	SCIENTIFIC NAME	SRANK
SOFT RUSH	Juncaceae	Juncus effusus	S5
PYLAIE'S RUSH	Juncaceae	Juncus pylaei	S4S5
RUSH	Juncaceae	Juncus sp	N/A
SLENDER RUSH	Juncaceae	Juncus tenuis	S5
COMMON WOODRUSH	Juncaceae	Luzula multiflora	S5
NON-NATIVE WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK
WOODLAND ANGELICA	Apiaceae	Angelica sylvestris	SNA
QUEEN ANNE'S LACE	Apiaceae	Daucus carota	SNA
TANSY RAGWORT	Asteraceae	Jacobaea vulgaris	SNA
MEADOW HAWKWEED	Asteraceae	Pilosella caespitosa	SNA
BROWN-EYED SUSAN	Asteraceae	Rudbeckia triloba	SNA

Associated Species: Poor-Drainage Deciduous Forests

FIELD SOW THISTLE	Asteraceae	Sonchus arvensis	SNA
COMMON DANDELION	Asteraceae	Taraxacum officinale	SNA
COLTSFOOT	Asteraceae	Tussilago farfara	SNA
PALE JEWELWEED	Balsaminaceae	Impatiens pallida	SNA
DAME'S ROCKET	Brassicaceae	Hesperis matronalis	N/A
WATERCRESS	Brassicaceae	Nasturtium officinale	SNA
COMMON STARWORT	Caryophyllaceae	Stellaria media	SNA
ORPINE	Crassulaceae	Hylotelephium telephium	SNA
MOSSY STONECROP	Crassulaceae	Sedum acre	SNA
WILD CUCUMBER	Cucurbitaceae	Echinocystis lobata	SNA
TUFTED VETCH	Fabaceae	Vicia cracca	SNA
COMMON HEMP-NETTLE	Lamiaceae	Galeopsis tetrahit	SNA
PURPLE LOOSESTRIFE	Lythraceae	Lythrum salicaria	SNA
HELLEBORINE	Orchidaceae	Epipactis helleborine	SNA
COMMON EYEBRIGHT	Orobanchaceae	Euphrasia nemorosa	SNA
COMMON SPEEDWELL	Plantaginaceae	Veronica officinalis	SNA
FALSE WATERPEPPER	Polygonaceae	Persicaria hydropiperoides	SNA
CURLED DOCK	Polygonaceae	Rumex crispus	SNA
COMMON BUTTERCUP	Ranunculaceae	Ranunculus acris	SNA
CREeping BUTTERCUP	Ranunculaceae	Ranunculus repens	SNA
KNOTTY FIGWORT	Scrophulariaceae	Scrophularia nodosa	SNA
BITTERSWEET NIGHTSHADE	Solanaceae	Solanum dulcamara	SNA
VIRGINIA CREEPER	Vitaceae	Parthenocissus quinquefolia	SNA
FERNS	FAMILY	SCIENTIFIC NAME	SRANK
COMMON LADY FERN	Athyriaceae	Athyrium filix-femina	S5
NORTHEASTERN LADY FERN	Athyriaceae	Athyrium filix-femina var. angustum	S5
COMMON OAK FERN	Cystopteridaceae	Gymnocarpium dryopteris	S5
EASTERN HAY-SCENTED FERN	Dennstaedtiaceae	Dennstaedtia punctilobula	S5
BRACKEN FERN	Dennstaedtiaceae	Pteridium aquilinum	S5
MOUNTAIN WOOD FERN	Dryopteridaceae	Dryopteris campyloptera	S4
SPINULOSE WOOD FERN	Dryopteridaceae	Dryopteris carthusiana	S4S5
CRESTED WOOD FERN	Dryopteridaceae	Dryopteris cristata	S5
EVERGREEN WOOD FERN	Dryopteridaceae	Dryopteris intermedia	S5
CHRISTMAS FERN	Dryopteridaceae	Polystichum acrostichoides	S2S3
OSTRICH FERN	Onocleaceae	Matteuccia struthiopteris	S4
SENSITIVE FERN	Onocleaceae	Onoclea sensibilis	S5
INTERRUPTED FERN	Osmundaceae	Claytonomunda claytoniana	S5
ROYAL FERN	Osmundaceae	Osmunda regalis	S4
ROYAL FERN	Osmundaceae	Osmunda regalis var. spectabilis	S4
CINNAMON FERN	Osmundaceae	Osmundastrum cinnamomeum	S5
NEW YORK FERN	Thelypteridaceae	Parathelypteris noveboracensis	S5
NORTHERN BEECH FERN	Thelypteridaceae	Phegopteris connectilis	S5
EASTERN MARSH FERN	Thelypteridaceae	Thelypteris palustris	S4S5
CLUBMOSES	FAMILY	SCIENTIFIC NAME	SRANK
ROUND-BRANCHED TREE-CLUBMOSS	Lycopodiaceae	Dendrolycopodium dendroideum	S5
FLAT-BRANCHED TREE-CLUBMOSS	Lycopodiaceae	Dendrolycopodium obscurum	S2S3
SHINING FIRMOSS	Lycopodiaceae	Huperzia lucidula	S4
NORTHERN BOG CLUBMOSS	Lycopodiaceae	Lycopodiella inundata	S3

Associated Species: Poor-Drainage Deciduous Forests

HORSETAILS	FAMILY	SCIENTIFIC NAME	SRANK
WOODLAND HORSETAIL	Equisetaceae	Equisetum sylvaticum	S5
WATER HORSETAIL	Equisetaceae	Equisetum fluviatile	S4
FIELD HORSETAIL	Equisetaceae	Equisetum arvense	S5
MOSESSES	FAMILY	SCIENTIFIC NAME	SRANK
HEART-LEAVED SPEAR MOSS	AMBLYSTEGIACEAE	Calliergon cordifolium	S4S5
SLENDER ANOMODON MOSS	ANOMODONTACEAE	Anomodon attenuatus	S3
TREE SKIRT MOSS	ANOMODONTACEAE	Anomodon attenuatus	S3
GLOW MOSS	AULACOMNIACEAE	Aulacomnium palustre	S5
NORTHERN TREE MOSS	CLIMACIACEAE	Climacium dendroides	S5
WHIP BROOM MOSS	DICRANACEAE	Dicranum flagellare	S5
MOUNTAIN BROOM MOSS	DICRANACEAE	Dicranum montanum	S5
WAVY-LEAVED BROOM MOSS	DICRANACEAE	Dicranum polysetum	S5
COMMON BROOM MOSS	DICRANACEAE	Dicranum scoparium	S5
GREEN BROOM MOSS	DICRANACEAE	Dicranum viride	S4?
STAIRSTEP MOSS	HYLOCOMIACEAE	Hylocomium splendens	S5
ELECTRIFIED CAT'S-TAIL MOSS	HYLOCOMIACEAE	Rhytidiadelphus triquetrus	S5
RED-STEMMED FEATHER MOSS	HYLOCOMIACEAE	Pleurozium schreberi	S5
BEAUTIFUL BRANCH MOSS	HYPNACEAE	Callicladium haldanianum	S5
PELLUCID PLAIT MOSS	Hypnaceae	Hypnum imponens	S5
KNIGHT'S PLUME MOSS	Hypnaceae	Ptilium crista-castrensis	S5
WHITE PINCUSHION MOSS	LEUCOBRYACEAE	Leucobryum glaucum	SU
SQUIRREL-TAIL MOSS	LEUCODONTACEAE	Leucodon sciuroides	SU?
SWAN'S-NECK LEAFY MOSS	Mniaceae	Mnium hornum	S5
WOODSY LEAFY MOSS	Mniaceae	Plagiomnium cuspidatum	S4S5
APPALACHIAN LEAFY MOSS	MNIACEAE	Rhizomnium appalachianum	S4S5
DOTTED LEAFY MOSS	MNIACEAE	Rhizomnium punctatum	S4?
COMMON FLAT-BRANCH MOSS	NECKERACEAE	Homalia trichomanoides	SU
FEATHERY NECKERA MOSS	NECKERACEAE	Neckera pennata	S5
CRISPED PINCUSHION MOSS	ORTHOTRICHACEAE	Ulota crispa	S5
A MOSS	ORTHOTRICHACEAE	Ulota sp.	SU
FOUNTAIN SMOOTH CAP	POLYTRICHACEAE	Atrichum crispulum	S5
SMOOTHCAP MOSS	POLYTRICHACEAE	Atrichum sp	N/A
COMMON SMOOTHCAP MOSS	POLYTRICHACEAE	Atrichum undulatum	S4S5
COMMON HAIRCAP MOSS	Polytrichaceae	Polytrichum commune	S5
JUNIPER HAIRCAP MOSS	Polytrichaceae	Polytrichum juniperinum	S4S5
BOG HAIRCAP MOSS	Polytrichaceae	Polytrichum strictum	S4S5
GREEN PEAT MOSS	SPHAGNACEAE	Sphagnum girgensohnii	S5
BLUNT-LEAVED PEAT MOSS	SPHAGNACEAE	Sphagnum palustre	S5
RED PEAT MOSS	SPHAGNACEAE	Sphagnum rubellum	S4S5
PEATMOSS	SPHAGNACEAE	Sphagnum sp	N/A
SHAGGY PEAT MOSS	SPHAGNACEAE	Sphagnum squarrosum	S5
COMMON FOUR-TOOTH MOSS	TETRAPHIDACEAE	Tetraphis pellucida	S5
DELICATE FERN MOSS	Thuidiaceae	Thuidium delicatulum	S4S5
LIVERWORTS	FAMILY	SCIENTIFIC NAME	SRANK
WOOD RUSTWORT	CEPHALOZIACEAE	Nowellia curvifolia	SU
SNAKE LIVERWORT	CONOCEPHALACEAE	Conocephalum salebrosum	SU
ASA GRAY'S SCALEWORT	JUBULACEAE	Frullania asagrayana	SU
SCALEWORT	JUBULACEAE	Frullania sp	N/A

Associated Species: Poor-Drainage Deciduous Forests

FRULLANIA LIVERWORT	JUBULACEAE	Frullania sp.	SU
THREE-LOBED WHIPWORT	LEPIDOZIACEAE	Bazzania trilobata	S5
CREEPING FINGERWORT	LEPIDOZIACEAE	Lepidozia reptans	S5
VARIABLE-LEAVED CRESTWORT	LOPHOCOLEACEAE	Lophocolea heterophylla	SU
GREEN-TONGUE LIVERWORT	MARCHANTACEAE	Marchantia polymorpha	SU
COMMON PELLIA	PELLIACEAE	Pellia epiphylla	SU
COMMON PELLIA	PELLIACEAE	Pellia epiphylla	SU
LESSER FEATHERWORT	PLAGIOCHILACEAE	Plagiochila porelloides	SU
WALL SCALEWORT	PORELLACEAE	Porella platyphylla	SU
CILIATE FRINGEWORT	PTILIDIACEAE	Ptilidium ciliare	SU
TREE FRINGEWORT	PTILIDIACEAE	Ptilidium pulcherrimum	SU
FLAT-LEAVED SCALEWORT	RADULACEAE	Radula complanata	SU
EARWORT	SCAPANACEAE	Scapania sp.	SU
WOOLLY LIVERWORT	TRICHOCOLEACEAE	Trichocolea tomentella	SU
LICHENS	FAMILY	SCIENTIFIC NAME	SRANK
REINDEER LICHEN	CLADONACEAE	Cladonia arbuscula	S5
BRITISH SOLDIERS LICHEN	CLADONACEAE	Cladonia cristatella	S5
GRAY REINDEER LICHEN	CLADONACEAE	Cladonia rangiferina	S5
CLADONIA SPP.	CLADONACEAE	Cladonia sp	N/A
DRAGON LICHEN	CLADONACEAE	Cladonia squamosa	S4S5
TREE TARPAPER LICHEN	COLLEMACEAE	Collema subflaccidum	S4S5
ACADIAN JELLYSKIN LICHEN	COLLEMACEAE	Leptogium acadiense	S2S3
BLUE JELLYSKIN LICHEN	COLLEMACEAE	Leptogium cyanescens	S5
A LICHEN	GRAPHIDACEAE	Graphis scripta	S5
WHITE GREEN-ALGAE CORAL	HYDNACEAE	Multiclavula mucida	SU
LUNGWORT LICHEN	LOBARIACEAE	Lobaria pulmonaria	S4S5
TEXTURED LUNGWORT LICHEN	LOBARIACEAE	Lobaria scrobiculata	S4
YELLOW SPECKLEBELLY LICHEN	LOBARIACEAE	Pseudocyphellaria holarctica	S2S3
SMOOTH LUNG LICHEN	LOBARIACEAE	Ricasolia quercizans	S4S5
MUSTARD KIDNEY LICHEN	NEPHROMACEAE	Nephroma laevigatum	S3?
MEALY-RIMMED SHINGLE LICHEN	PANNARIACEAE	Pannaria conoplea	S1S2
WRINKLED SHINGLE LICHEN	PANNARIACEAE	Pannaria lurida	S1
BROWN-EYED SHINGLE LICHEN	PANNARIACEAE	Pannaria rubiginosa	S1
BLACK-BORDERED SHINGLES LICHEN	PANNARIACEAE	Parmeliella triptophylla	S3?
BLACK-BORDERED SHINGLES LICHEN	PANNARIACEAE	Parmeliella triptophylla	S3?
BLUE FELT LICHEN	PANNARIACEAE	Pectenia plumbea	S1
BRYORIA LICHEN	PARMELIACEAE	Bryoria sp	N/A
BOREAL OAKMOSS LICHEN	PARMELIACEAE	Evernia mesomorpha	S5
VALLEY OAKMOSS LICHEN	PARMELIACEAE	Evernia prunastri	S3?
MONK'S HOOD LICHEN	PARMELIACEAE	Hypogymnia physodes	S5
POWDER-HEADED TUBE LICHEN	PARMELIACEAE	Hypogymnia tubulosa	S4S5
ABRADING CAMOUFLAGE LICHEN	PARMELIACEAE	Melanelixia subaurifera	S4S5
BOTTLEBRUSH SHIELD LICHEN	PARMELIACEAE	Parmelia squarrosa	S5
HAMMERED SHIELD LICHEN	PARMELIACEAE	Parmelia sulcata	S5
VARIED RAG LICHEN	PARMELIACEAE	Platismatia glauca	S5
CRUMPLED RAG LICHEN	PARMELIACEAE	Platismatia tuckermanii	S3S4
ROUGH SPECKLEBACK LICHEN	PARMELIACEAE	Punctelia rudecta	S4S5
VARIABLE WRINKLE LICHEN	PARMELIACEAE	Tuckermannopsis orbata	S4S5
USNEA	PARMELIACEAE	Usnea sp	N/A

Associated Species: Poor-Drainage Deciduous Forests

BUSHY BEARD LICHEN	PARMELIACEAE	Usnea strigosa	S4S5
PELT LICHEN	PELTIGERACEAE	Peltigera sp.	N/A
BUELLIA SPP.	PHYSICIACEAE	Buellia sp	N/A
POWDERED FRINGE LICHEN	PHYSICIACEAE	Heterodermia speciosa	S2
ORANGE-CORED SHADOW LICHEN	PHYSICIACEAE	Phaeophyscia rubropulchra	S4S5
MUSTARD LICHEN	PHYSICIACEAE	Pyxine soorediata	SU
SINEWED RAMALINA LICHEN	RAMALINACEAE	Ramalina americana	S4S5
NORTHERN CORAL LICHEN	SPHAEROPHORACEAE	Sphaerophorus globosus	S2S3
MARITIME SUNBURST LICHEN		Xanthoria parietina	S4S5
FUNGI	FAMILY	SCIENTIFIC NAME	SRANK
WHITE CORAL FUNGI	CLAVARIACEAE	Clavulina coralloides	SU?
GOLDEN SPINDLE FUNGI	CLAVARIACEAE	Clavulinopsis fusiformis	SU?
WHITE CORAL FUNGI	CLAVARIACEAE	Ramariopsis kunzei	SU
FALSE CHANTERELLE	HYGROPHOROPSISACEAE	Hygrophoropsis aurantiaca	SU
BOLETE MUSHROOM	N/A	N/A	N/A
CHANTERELLE	N/A	N/A	N/A
HEMLOCK VARNISH SHELF	POLYPORACEAE	Ganoderma tsugae	SU
TURKEY TAIL	POLYPORACEAE	Trametes versicolor	SU
LATE OYSTER	SARCOMYXACEAE	Sarcomyxa serotina	SU

SPECIES LIST

PROJECT:	ABEGWEIT FIRST NATION STEWARDSHIP OF BLACK ASH
HABITAT	CONIFEROUS FORESTS WITH POOR DRAINAGE
TOTAL # BA:	229

CONIFEROUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
EASTERN WHITE CEDAR	Cupressaceae	Thuja occidentalis	S3S4
BALSAM FIR	Pinaceae	Abies balsamea	S5
TAMARACK	Pinaceae	Larix laricina	S5
WHITE SPRUCE	Pinaceae	Picea glauca	S5
BLACK SPRUCE	Pinaceae	Picea mariana	S5
RED SPRUCE	Pinaceae	Picea rubens	S5
RED PINE	Pinaceae	Pinus resinosa	S2
EASTERN WHITE PINE	Pinaceae	Pinus strobus	S3S4
EASTERN HEMLOCK	Pinaceae	Tsuga canadensis	S3
DECIDUOUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
YELLOW BIRCH	Betulaceae	Betula alleghaniensis	S5
HEART-LEAVED BIRCH	Betulaceae	Betula cordifolia	S3S4
PAPER BIRCH	Betulaceae	Betula papyrifera	S5
GRAY BIRCH	Betulaceae	Betula populifolia	S5
AMERICAN BEECH	Fagaceae	Fagus grandifolia	S3S4
NORTHERN RED OAK	Fagaceae	Quercus rubra	S3S4
WHITE ASH	Oleaceae	Fraxinus americana	S2S3
BLACK ASH	Oleaceae	Fraxinus nigra	S2
PIN CHERRY	Rosaceae	Prunus pensylvanica	S5
AMERICAN MOUNTAIN ASH	Rosaceae	Sorbus americana	S5
BALSAM POPLAR	Salicaceae	Populus balsamifera	S3
TREMBLING ASPEN	Salicaceae	Populus tremuloides	S5
STRIPED MAPLE	Sapindaceae	Acer pensylvanicum	S5
RED MAPLE	Sapindaceae	Acer rubrum	S5
SUGAR MAPLE	Sapindaceae	Acer saccharum	S4
WHITE ELM	Ulmaceae	Ulmus americana	S3
SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
WESTERN POISON IVY	Anacardiaceae	Toxicodendron radicans var. rydbergii	S4
MOUNTAIN HOLLY	Aquifoliaceae	Ilex mucronata	S5
COMMON WINTERBERRY	Aquifoliaceae	Ilex verticillata	S5
GREEN ALDER	Betulaceae	Alnus alnobetula	S4S5
SPECKLED ALDER	Betulaceae	Alnus incana	S5
BOG BIRCH	Betulaceae	Betula pumila	S3
BEAKED HAZEL	Betulaceae	Corylus cornuta	S5
NORTHERN BUSH HONEYSUCKLE	Caprifoliaceae	Diervilla lonicera	S4
CANADA FLY HONEYSUCKLE	Caprifoliaceae	Lonicera canadensis	S5
MOUNTAIN FLY HONEYSUCKLE	Caprifoliaceae	Lonicera villosa	S4
WOOLLY BEACH-HEATH	Cistaceae	Hudsonia tomentosa	S3
ALTERNATE-LEAVED DOGWOOD	Cornaceae	Cornus alternifolia	S4
RED OSIER DOGWOOD	Cornaceae	Cornus sericea	S5
COMMON JUNIPER	Cupressaceae	Juniperus communis	S3
COMMON BEARBERRY	Ericaceae	Arctostaphylos uva-ursi	S3

Associated Species: Poor-Drainage Coniferous Forests

LEATHERLEAF	Ericaceae	Chamaedaphne calyculata	S4
BLACK CROWBERRY	Ericaceae	Empetrum nigrum	S3
BLACK HUCKLEBERRY	Ericaceae	Gaylussacia baccata	S4S5
DWARF HUCKLEBERRY	Ericaceae	Gaylussacia bigeloviana	S3
SHEEP LAUREL	Ericaceae	Kalmia angustifolia	S5
PALE BOG LAUREL	Ericaceae	Kalmia polifolia	S4
RHODORA	Ericaceae	Rhododendron canadense	S5
COMMON LABRADOR TEA	Ericaceae	Rhododendron groenlandicum	S5
LATE LOWBUSH BLUEBERRY	Ericaceae	Vaccinium angustifolium	S5
VELVET-LEAVED BLUEBERRY	Ericaceae	Vaccinium myrtilloides	S4S5
SKUNK CURRANT	Grossulariaceae	Ribes glandulosum	S5
SMOOTH GOOSEBERRY	Grossulariaceae	Ribes hirtellum	S5
BRISTLY BLACK CURRANT	Grossulariaceae	Ribes lacustre	S5
SWAMP RED CURRANT	Grossulariaceae	Ribes triste	S3S4
AMERICAN WITCH-HAZEL	Hamamelidaceae	Hamamelis virginiana	S1
SWEET-FERN	Myricaceae	Comptonia peregrina	S4
NORTHERN BAYBERRY	Myricaceae	Morella pensylvanica	S5
SWEET GALE	Myricaceae	Myrica gale	S5
VIRGINIA CLEMATIS	Ranunculaceae	Clematis virginiana	S4
ALDER-LEAVED BUCKTHORN	Rhamnaceae	Endotropis alnifolia	S3S4
SERVICEBERRY	Rosaceae	Amelanchier sp	N/A
BLACK CHOKEBERRY	Rosaceae	Aronia melanocarpa	S4S5
ARONIA SP	Rosaceae	Aronia sp	N/A
CHOKECHERRY	Rosaceae	Prunus virginiana	S5
SHINING ROSE	Rosaceae	Rosa nitida	S4
VIRGINIA ROSE	Rosaceae	Rosa virginiana	S5
ALLEGHANEY BLACKBERRY	Rosaceae	Rubus allegheniensis	S4S5
SMOOTH BLACKBERRY	Rosaceae	Rubus canadensis	S5
BRISTLY DEWBERRY	Rosaceae	Rubus hispidus	S4
RED RASPBERRY	Rosaceae	Rubus idaeus	S5
DWARF RED RASPBERRY	Rosaceae	Rubus pubescens	S5
WHITE MEADOWSWEET	Rosaceae	Spiraea alba	S5
STEEPLEBUSH	Rosaceae	Spiraea tomentosa	S4
WILLOW	Salicaceae	Salix spp.	N/A
MOUNTAIN MAPLE	Sapindaceae	Acer spicatum	S5
CANADA YEW	Taxaceae	Taxus canadensis	S4
COMMON ELDERBERRY	Viburnaceae	Sambucus canadensis	S4S5
RED ELDERBERRY	Viburnaceae	Sambucus racemosa	S5
NORTHERN WILD RAISIN	Viburnaceae	Viburnum cassinoides	S5
HOBBLEBUSH	Viburnaceae	Viburnum lantanoides	S1S2
HIGHBUSH CRANBERRY	Viburnaceae	Viburnum opulus	S3
NON-NATIVE TREES	FAMILY	SCIENTIFIC NAME	SRANK
RED ASH	Oleaceae	Fraxinus pennsylvanica	SNA
COMMON APPLE	Rosaceae	Malus pumila	SNA
EUROPEAN MOUNTAIN ASH	Rosaceae	Sorbus aucuparia	SNA
NORWAY MAPLE	Sapindaceae	Acer platanoides	SNA
NON-NATIVE SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
GLOSSY BUCKTHORN	Rhamnaceae	Frangula alnus	SNA
MULTIFLORA ROSE	Rosaceae	Rosa multiflora	SNA

Associated Species: Poor-Drainage Coniferous Forests

WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK
BROAD-LEAVED ARROWHEAD	Alismataceae	Sagittaria latifolia	S4
THIN-LEAVED ORACHE	Amaranthaceae	Atriplex prostrata	S4
SEA GLASSWORT	Amaranthaceae	Salicornia maritima	S4S5
WHITE SEA-BLITE	Amaranthaceae	Suaeda maritima	S4S5
PURPLE-STEMMED ANGELICA	Apiaceae	Angelica atropurpurea	S3
BULBOUS WATER-HEMLOCK	Apiaceae	Cicuta bulbifera	S4S5
SCOTCH LOVAGE	Apiaceae	Ligusticum scoticum	S4
COMMON WATER PARSNIP	Apiaceae	Sium suave	S5
SWAMP MILKWEED	Apocynaceae	Asclepias incarnata	S2
JACK-IN-THE-PULPIT	Araceae	Arisaema triphyllum	S4
WILD CALLA	Araceae	Calla palustris	S4
TURION DUCKWEED	Araceae	Lemna turionifera	S4S5
BRISTLY SARSAPARILLA	Araliaceae	Aralia hispida	S4
WILD SARSAPARILLA	Araliaceae	Aralia nudicaulis	S5
WILD LILY-OF-THE-VALLEY	Asparagaceae	Maianthemum canadense	S5
LARGE FALSE SOLOMON'S SEAL	Asparagaceae	Maianthemum racemosum	S4
THREE-LEAVED FALSE SOLOMAN'S SEAL	Asparagaceae	Maianthemum trifolium	S4
COMMON RAGWEED	Asteraceae	Ambrosia artemisiifolia	S4
PEARLY EVERLASTING	Asteraceae	Anaphalis margaritacea	S5
BEGGARTICK	Asteraceae	Biden sp.	SU
NODDING BEGGARTICKS	Asteraceae	Bidens cernua	S4
PURPLE-STEMMED BEGGARTICKS	Asteraceae	Bidens connata	S4
SWAMP THISTLE	Asteraceae	Cirsium muticum	S3
HAIRY FLAT-TOP WHITE ASTER	Asteraceae	Doellingeria umbellata	S5
EASTERN BURNWEED	Asteraceae	Erechtites hieraciifolius	S4
GRASS-LEAVED GOLDENROD	Asteraceae	Euthamia graminifolia	S5
SPOTTED JOE PYE WEED	Asteraceae	Eutrochium maculatum	S5
ROUGH HAWKWEED	Asteraceae	Hieracium scabrum	S4
HAWKWEED SPP.	Asteraceae	Hieracium sp	N/A
TALL BLUE LETTUCE	Asteraceae	Lactuca biennis	S5
TALL RATTLESNAKEROOT	Asteraceae	Nabalus altissimus	S4
THREE-LEAVED RATTLESNAKEROOT	Asteraceae	Nabalus trifoliolatus	S5
WHORLED WOOD ASTER	Asteraceae	Oclemena acuminata	S5
SCHWEINITZ'S GROUNDSEL	Asteraceae	Packera schweinitziana	S2S3
CUT-LEAVED CONEFLOWER	Asteraceae	Rudbeckia laciniata	S2
WHITE GOLDENROD	Asteraceae	Solidago bicolor	S4
CANADA GOLDENROD	Asteraceae	Solidago canadensis	S5
GIANT GOLDENROD	Asteraceae	Solidago gigantea	S4
LARGE-LEAVED GOLDENROD	Asteraceae	Solidago macrophylla	S2
DOWNY GOLDENROD	Asteraceae	Solidago puberula	S4S5
ROUGH-STEMMED GOLDENROD	Asteraceae	Solidago rugosa	S5
SEASIDE GOLDENROD	Asteraceae	Solidago sempervirens	S4S5
GOLDENROD SP.	Asteraceae	Solidago sp.	N/A
NORTHERN BOG GOLDENROD	Asteraceae	Solidago uliginosa	S4
CALICO ASTER	Asteraceae	Symphyotrichum lateriflorum	S5
NEW YORK ASTER	Asteraceae	Symphyotrichum novi-belgii	S5
PURPLE-STEMMED ASTER	Asteraceae	Symphyotrichum puniceum	S5
ASTER SPP.	Asteraceae	Symphyotrichum sp	N/A

Associated Species: Poor-Drainage Coniferous Forests

ROUGH COCKLEBUR	Asteraceae	Xanthium strumarium	S4
SPOTTED JEWELWEED	Balsaminaceae	Impatiens capensis	S5
SMALL FORGET-ME-NOT	Boraginaceae	Myosotis laxa	S4
AMERICAN SEAROCKET	Brassicaceae	Cakile edentula	S4S5
PENNSYLVANIA BITTERCRESS	Brassicaceae	Cardamine pensylvanica	S4S5
TWINFLOWER	Caprifoliaceae	Linnaea borealis	S5
SEABEACH SANDWORT	Caryophyllaceae	Honckenya peploides	S3S4
BLUNT-LEAVED SANDWORT	Caryophyllaceae	Moehringia lateriflora	S5
SALTMARSH SANDSPURREY	Caryophyllaceae	Spergularia salina	S4
HEDGE FALSE BINDWEED	Convolvulaceae	Calystegia sepium	S5
BUNCHBERRY	Cornaceae	Cornus canadensis	S5
ROUND-LEAVED SUNDEW	Droseraceae	Drosera rotundifolia	S4
COMMON PIPSISSEWA	Ericaceae	Chimaphila umbellata	S4
TRAILING ARBUTUS	Ericaceae	Epigaea repens	S4
CREeping SNOWBERRY	Ericaceae	Gaultheria hispidula	S5
EASTERN TEABERRY	Ericaceae	Gaultheria procumbens	S4S5
ONE-FLOWERED WINTERGREEN	Ericaceae	Moneses uniflora	S3
CONVULSION-ROOT	ERICACEAE	Monotropa uniflora	S5
ONE-SIDED WINTERGREEN	Ericaceae	Orthilia secunda	S4S5
SHINLEAF	Ericaceae	Pyrola elliptica	S5
LARGE CRANBERRY	Ericaceae	Vaccinium macrocarpon	S4S5
SMALL CRANBERRY	Ericaceae	Vaccinium oxycoccos	S4
MOUNTAIN CRANBERRY	Ericaceae	Vaccinium vitis-idaea	S3
CLOVER SPP.	Fabaceae	Clover spp.	N/A
BEACH PEA	Fabaceae	Lathyrus japonicus	S4S5
SIBERIAN WATER MILFOIL	Haloragaceae	Myriophyllum sibiricum	S4
CANADA ST JOHN'S-WORT	Hypericaceae	Hypericum canadense	S4
FRASER'S ST. JOHN'S-WORT	Hypericaceae	Hypericum fraseri	S5
HARLEQUIN BLUE FLAG	Iridaceae	Iris versicolor	S5
SEASIDE ARROWGRASS	Juncaginaceae	Triglochin maritima	S4S5
AMERICAN WATER HOREHOUND	Lamiaceae	Lycopus americanus	S4S5
NORTHERN WATER HOREHOUND	Lamiaceae	Lycopus uniflorus	S5
CANADIAN MINT	Lamiaceae	Mentha canadensis	S4S5
COMMON SELF-HEAL	Lamiaceae	Prunella vulgaris	S5
MARSH SKULLCAP	Lamiaceae	Scutellaria galericulata	S4S5
MAD-DOG SKULLCAP	Lamiaceae	Scutellaria lateriflora	S5
CANADA GERMANDER	Lamiaceae	Teucrium canadense	S3S4
YELLOW BLUEBEAD LILY	Liliaceae	Clintonia borealis	S5
CUCUMBER ROOT	Liliaceae	Medeola virginiana	S3S4
CLASPING-LEAVED TWISTED-STALK	Liliaceae	Streptopus amplexifolius	S4
PAINTED TRILLIUM	Melanthiaceae	Trillidium undulatum	S5
NODDING TRILLIUM	Melanthiaceae	Trillium cernuum	S4
BOG BUCKBEAN	Menyanthaceae	Menyanthes trifoliata	S4
FRAGRANT WATER-LILY	Nymphaeaceae	Nymphaea odorata	S2
FIREWEED	Onagraceae	Chamaenerion angustifolium	S5
SMALL ENCHANTER'S NIGHTSHADE	Onagraceae	Circaea alpina	S5
BROAD-LEAVED ENCHANTER'S NIGHTSHADE	Onagraceae	Circaea canadensis	S2S3
NORTHERN WILLOWHERB	Onagraceae	Epilobium ciliatum	S5

Associated Species: Poor-Drainage Coniferous Forests

BOG WILLOWHERB	Onagraceae	<i>Epilobium leptophyllum</i>	S4S5
MARSH WILLOWHERB	Onagraceae	<i>Epilobium palustre</i>	S4
WILLHERB SPP.	Onagraceae	<i>Epilobium</i> sp	N/A
PERENNIAL EVENING PRIMROSE	Onagraceae	<i>Oenothera perennis</i>	S4
TUBEROUS GRASS PINK	Orchidaceae	<i>Calopogon tuberosus</i>	S3
PINK LADY'S-SLIPPER	Orchidaceae	<i>Cypripedium acaule</i>	S5
YELLOW LADY'S-SLIPPER	Orchidaceae	<i>Cypripedium parviflorum</i>	S2S3
SHOWY LADY'S-SLIPPER	Orchidaceae	<i>Cypripedium reginae</i>	S2S3
WHITE FRINGED ORCHID	Orchidaceae	<i>Platanthera blephariglottis</i>	S3S4
CLUB SPUR ORCHID	Orchidaceae	<i>Platanthera clavellata</i>	S3S4
WHITE BOG ORCHID	Orchidaceae	<i>Platanthera dilatata</i>	S3
SMALL PURPLE FRINGED ORCHID	Orchidaceae	<i>Platanthera psycodes</i>	S4
PLATANTERA ORCHID	Orchidaceae	<i>Platanthera</i> sp.	N/A
COMMON WOOD SORREL	Oxalidaceae	<i>Oxalis montana</i>	S4
EUROPEAN WOOD SORREL	Oxalidaceae	<i>Oxalis stricta</i>	S5
SQUARE-STEMMED MONKEYFLOWER	Phrymaceae	<i>Mimulus ringens</i>	S3S4
MARSH WATER-STARWORT	Plantaginaceae	<i>Callitriche palustris</i>	S4
WHITE TURTLEHEAD	Plantaginaceae	<i>Chelone glabra</i>	S5
AMERICAN SPEEDWELL	Plantaginaceae	<i>Veronica americana</i>	S4
SEA LAVENDER	Plumbaginaceae	<i>Limonium carolinianum</i>	S4S5
AMERICAN BEACH GRASS	Poaceae	<i>Calamagrostis breviligulata</i>	S4S5
VIRGINIA WILD RYE	Poaceae	<i>Elymus virginicus</i>	S2S3
SMOOTH CORDGRASS	Poaceae	<i>Sporobolus alterniflorus</i>	S4S5
PRAIRIE CORDGRASS	Poaceae	<i>Sporobolus michauxianus</i>	S5
SALTMEADOW CORDGRASS	Poaceae	<i>Sporobolus pumilus</i>	S4S5
FRINGED BLACK BINDWEED	Polygonaceae	<i>Fallopia cilinodis</i>	S4
WATER SMARTWEED	Polygonaceae	<i>Persicaria amphibia</i>	S4
HALBERD-LEAVED TEARTHUMB	Polygonaceae	<i>Persicaria arifolia</i>	S3
DOTTED SMARTWEED	Polygonaceae	<i>Persicaria punctata</i>	S4
ARROW-LEAVED SMARTWEED	Polygonaceae	<i>Persicaria sagittata</i>	S5
PERSICARIA SP.	Polygonaceae	<i>Persicaria</i> sp.	N/A
GREATER WATER DOCK	Polygonaceae	<i>Rumex britannica</i>	S5
TIERRA DEL FUEGO DOCK	Polygonaceae	<i>Rumex fueginus</i>	S4
FLOATING-LEAVED PONDWEED	Potamogetonaceae	<i>Potamogeton natans</i>	S4
CLASPING-LEAVED PONDWEED	Potamogetonaceae	<i>Potamogeton perfoliatus</i>	S4
NORTHERN STARFLOWER	Primulaceae	<i>Lysimachia borealis</i>	S5
SEA MILKWORT	Primulaceae	<i>Lysimachia maritima</i>	S4S5
TUFTED YELLOW LOOSESTRIFE	Primulaceae	<i>Lysimachia thyrsoflora</i>	S4S5
RED BANEERRY	Ranunculaceae	<i>Actaea rubra</i>	S4
YELLOW MARSH MARIGOLD	Ranunculaceae	<i>Caltha palustris</i>	S4S5
GOLDTHREAD	Ranunculaceae	<i>Coptis trifolia</i>	S5
KIDNEY-LEAVED BUTTERCUP	Ranunculaceae	<i>Ranunculus abortivus</i>	S4
GMELIN'S WATER BUTTERCUP	Ranunculaceae	<i>Ranunculus gmelinii</i>	S4
WHITE WATER BUTTERCUP	Ranunculaceae	<i>Ranunculus trichophyllus</i>	S4
TALL MEADOW-RUE	Ranunculaceae	<i>Thalictrum pubescens</i>	S5
HOOKEED AGRIMONY	Rosaceae	<i>Agrimonia gryposepala</i>	S3
WOODLAND AGRIMONY	Rosaceae	<i>Agrimonia striata</i>	S4
MARSH CINQUEFOIL	Rosaceae	<i>Comarum palustre</i>	S4

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WILD STRAWBERRY	Rosaceae	Fragaria virginiana	S5
ROUGH AVENS	Rosaceae	Geum laciniatum	S4
WATER AVENS	Rosaceae	Geum rivale	S4
AVENS	Rosaceae	Geum sp	N/A
COMMON SILVERWEED	Rosaceae	Potentilla anserina	S5
ROUGH CINQUEFOIL	Rosaceae	Potentilla norvegica	S4S5
ROUGH BEDSTRAW	Rubiaceae	Galium asprellum	S4S5
COMMON MARSH BEDSTRAW	Rubiaceae	Galium palustre	S5
BEDSTRAW	Rubiaceae	Galium sp	N/A
THREE-PETALED BEDSTRAW	Rubiaceae	Galium trifidum	S4S5
THREE-FLOWERED BEDSTRAW	Rubiaceae	Galium triflorum	S5
NORTHERN PITCHER PLANT	Sarraceniaceae	Sarracenia purpurea	S4
AMERICAN GOLDEN SAXIFRAGE	Saxifragaceae	Chrysosplenium americanum	S4
NAKED BISHOP'S-CAP	Saxifragaceae	Mitella nuda	S4
AMERICAN BURREED	Typhaceae	Sparganium americanum	S4
GREEN-FRUITED BURREED	Typhaceae	Sparganium emersum	S4S5
BROAD-LEAVED CATTAIL	Typhaceae	Typha latifolia	S5
DWARF CLEARWEED	Urticaceae	Pilea pumila	S4
STINGING NETTLE	Urticaceae	Urtica dioica ssp. gracilis	S4
SMALL WHITE VIOLET	Violaceae	Viola macloskeyi	S5
VIOLET SP.	Violaceae	Viola sp.	N/A
COMMON EELGRASS	Zosteraceae	Zostera marina	S4
SEDGES	FAMILY	SCIENTIFIC NAME	SRANK
SILVERY SEDGE	Cyperaceae	Carex canescens	S4S5
FRINGED SEDGE	Cyperaceae	Carex crinita	S4?
NODDING SEDGE	Cyperaceae	Carex gynandra	S5
BLADDER SEDGE	Cyperaceae	Carex intumescens	S4S5
LAKE SEDGE	Cyperaceae	Carex lacustris	S4
BRISTLY-STALKED SEDGE	Cyperaceae	Carex leptalea	S5
CHAFFY SEDGE	Cyperaceae	Carex paleacea	S4S5
CYPERUSLIKE SEDGE	Cyperaceae	Carex pseudocyperus	S5
SEABEACH SEDGE	Cyperaceae	Carex silicea	S4
SEDGE SP.	Cyperaceae	Carex sp.	N/A
AWL-FRUITED SEDGE	Cyperaceae	Carex stipata	S5
THREE-SEEDED SEDGE	Cyperaceae	Carex trisperma	S5
THREE-WAY SEDGE	Cyperaceae	Dulichium arundinaceum	S3
TUSsock COTTONGRASS	Cyperaceae	Eriophorum vaginatum	S4
TAWNY COTTONGRASS	Cyperaceae	Eriophorum virginicum	S4
WHITE BEAKRUSH	Cyperaceae	Rhynchospora alba	S4
HARDSTEM BULRUSH	Cyperaceae	Schoenoplectus acutus	S4
SOFTSTEM BULRUSH	Cyperaceae	Schoenoplectus tabernaemontani	S4
BLACK-GIRDLED BULRUSH	Cyperaceae	Scirpus atrocinctus	S4S5
DARK-GREEN BULRUSH	Cyperaceae	Scirpus atrovirens	S1
COMMON WOOLLY BULRUSH	Cyperaceae	Scirpus cyperinus	S5
GRASSES	FAMILY	SCIENTIFIC NAME	SRANK
WAVY HAIRGRASS	Poaceae	Avenella flexuosa	S4
WAVY HAIRGRASS	Poaceae	Avenella flexuosa	S4
BLUEJOINT REED GRASS	Poaceae	Calamagrostis canadensis	S5
COMMON TALL MANNA GRASS	Poaceae	Glyceria grandis	S4S5

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FOWL MANNA GRASS	Poaceae	Glyceria striata	S5
GRASS SPP.	Poaceae	Grass Spp.	N/A
CANADA BLUE GRASS	Poaceae	Poa compressa	N/A
RUSHES	FAMILY	SCIENTIFIC NAME	SRANK
BALTIC RUSH	Juncaceae	Juncus balticus	S5
NARROW-PANICLED RUSH	Juncaceae	Juncus brevicaudatus	S4S5
TOAD RUSH	Juncaceae	Juncus bufonius	S4S5
CANADA RUSH	Juncaceae	Juncus canadensis	S4
SOFT RUSH	Juncaceae	Juncus effusus	S5
PYLAIE'S RUSH	Juncaceae	Juncus pylaei	S4S5
RUSH	Juncaceae	Juncus sp	N/A
COMMON WOODRUSH	Juncaceae	Luzula multiflora	S5
NON-NATIVE WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK
COMMON LAMB'S QUARTERS	Amaranthaceae	Chenopodium album	SNA
COMMON SALTWORT	Amaranthaceae	Kali turgidum	SNA
WOODLAND ANGELICA	Apiaceae	Angelica sylvestris	SNA
COMMON YARROW	Asteraceae	Achillea millefolium	SNA
BEACH WORMWOOD	Asteraceae	Artemisia stelleriana	SNA
PINEAPPLE WEED	Asteraceae	Matricaria discoidea	SNA
MOUSE-EAR HAWKWEED	Asteraceae	Pilosella officinarum	SNA
FIELD SOW THISTLE	Asteraceae	Sonchus arvensis	SNA
COMMON DANDELION	Asteraceae	Taraxacum officinale	SNA
MEADOW GOATSBEARD	Asteraceae	Tragopogon pratensis	SNA
COLTSFOOT	Asteraceae	Tussilago farfara	SNA
WATERCRESS	Brassicaceae	Nasturtium officinale	SNA
BOUNCING-BET	Caryophyllaceae	Saponaria officinalis	SNA
WILD CUCUMBER	Cucurbitaceae	Echinocystis lobata	SNA
TUFTED VETCH	Fabaceae	Vicia cracca	SNA
COMMON HEMP-NETTLE	Lamiaceae	Galeopsis tetrahit	SNA
HELLEBORINE	Orchidaceae	Epipactis helleborine	SNA
COMMON PLANTAIN	Plantaginaceae	Plantago major	SNA
COMMON SPEEDWELL	Plantaginaceae	Veronica officinalis	SNA
FALSE WATERPEPPER	Polygonaceae	Persicaria hydropiperoides	SNA
SPOTTED LADY'S-THUMB	Polygonaceae	Persicaria maculosa	SNA
CURLED DOCK	Polygonaceae	Rumex crispus	SNA
COMMON BUTTERCUP	Ranunculaceae	Ranunculus acris	SNA
CREEPING BUTTERCUP	Ranunculaceae	Ranunculus repens	SNA
BITTERSWEET NIGHTSHADE	Solanaceae	Solanum dulcamara	SNA
FERNS	FAMILY	SCIENTIFIC NAME	SRANK
COMMON LADY FERN	Athyriaceae	Athyrium filix-femina	S5
VIRGINIA CHAIN FERN	Blechnaceae	Anchistea virginica	S2S3
COMMON OAK FERN	Cystopteridaceae	Gymnocarpium dryopteris	S5
EASTERN HAY-SCENTED FERN	Dennstaedtiaceae	Dennstaedtia punctilobula	S5
BRACKEN FERN	Dennstaedtiaceae	Pteridium aquilinum	S5
MOUNTAIN WOOD FERN	Dryopteridaceae	Dryopteris campyloptera	S4
SPINULOSE WOOD FERN	Dryopteridaceae	Dryopteris carthusiana	S4S5
CRESTED WOOD FERN	Dryopteridaceae	Dryopteris cristata	S5
EVERGREEN WOOD FERN	Dryopteridaceae	Dryopteris intermedia	S5

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OSTRICH FERN	Onocleaceae	Matteuccia struthiopteris	S4
SENSITIVE FERN	Onocleaceae	Onoclea sensibilis	S5
INTERRUPTED FERN	Osmundaceae	Claytosmunda claytoniana	S5
ROYAL FERN	Osmundaceae	Osmunda regalis var. spectabilis	S4
CINNAMON FERN	Osmundaceae	Osmundastrum cinnamomeum	S5
NEW YORK FERN	Thelypteridaceae	Parathelypteris noveboracensis	S5
NORTHERN BEECH FERN	Thelypteridaceae	Phegopteris connectilis	S5
EASTERN MARSH FERN	Thelypteridaceae	Thelypteris palustris	S4S5
CLUBMOSES	FAMILY	SCIENTIFIC NAME	SRANK
ROUND-BRANCHED TREE-CLUBMOSS	Lycopodiaceae	Dendrolycopodium dendroideum	S5
NORTHERN GROUND-CEDAR	Lycopodiaceae	Diphasiastrum complanatum	S3
SHINING FIRMOSS	Lycopodiaceae	Huperzia lucidula	S4
NORTHERN BOG CLUBMOSS	Lycopodiaceae	Lycopodiella inundata	S3
HORSETAILS	FAMILY	SCIENTIFIC NAME	SRANK
FIELD HORSETAIL	Equisetaceae	Equisetum arvense	S5
WOODLAND HORSETAIL	Equisetaceae	Equisetum sylvaticum	S5
MOSES	FAMILY	SCIENTIFIC NAME	SRANK
HEART-LEAVED SPEAR MOSS	AMBLYSTEGIACEAE	Calliergon cordifolium	S4S5
GLOW MOSS	AULACOMNIACEAE	Aulacomnium palustre	S5
NORTHERN TREE MOSS	CLIMACIACEAE	Climacium dendroides	S5
WHIP BROOM MOSS	DICRANACEAE	Dicranum flagellare	S5
MOUNTAIN BROOM MOSS	DICRANACEAE	Dicranum montanum	S5
WAVY-LEAVED BROOM MOSS	DICRANACEAE	Dicranum polysetum	S5
COMMON BROOM MOSS	DICRANACEAE	Dicranum scoparium	S5
GREEN BROOM MOSS	DICRANACEAE	Dicranum viride	S4?
FISSIDEN MOSS	FISSIDENTACEAE	Fissidens sp.	SU
STAIRSTEP MOSS	HYLOCOMIACEAE	Hylocomium splendens	S5
ELECTRIFIED CAT'S-TAIL MOSS	HYLOCOMIACEAE	Rhytidiadelphus triquetrus	S5
RED-STEMMED FEATHER MOSS	HYLOCOMIACEAE	Pleurozium schreberi	S5
BEAUTIFUL BRANCH MOSS	HYPNACEAE	Callicladium haldanianum	S5
PELLUCID PLAIT MOSS	Hypnaceae	Hypnum imponens	S5
KNIGHT'S PLUME MOSS	Hypnaceae	Ptilium crista-castrensis	S5
WHITE PINCUSHION MOSS	LEUCOBRYACEAE	Leucobryum glaucum	SU
SQUIRREL-TAIL MOSS	LEUCODONTACEAE	Leucodon sciuroides	SU?
SWAN'S-NECK LEAFY MOSS	Mniaceae	Mnium hornum	S5
WOODSY LEAFY MOSS	Mniaceae	Plagiomnium cuspidatum	S4S5
APPALACHIAN LEAFY MOSS	MNIACEAE	Rhizomnium appalachianum	S4S5
DOTTED LEAFY MOSS	MNIACEAE	Rhizomnium punctatum	S4?
COMMON FLAT-BRANCH MOSS	NECKERACEAE	Homalia trichomanoides	SU
FEATHERY NECKERA MOSS	NECKERACEAE	Neckera pennata	S5
DARKGREEN BRISTLE MOSS	Orthotrichaceae	Orthotrichum sordidum	S5
CRISPED PINCUSHION MOSS	ORTHOTRICHACEAE	Ulota crispa	S5
A MOSS	ORTHOTRICHACEAE	Ulota sp.	SU
SMOOTHCAP MOSS	POLYTRICHACEAE	Atrichum sp	N/A
COMMON SMOOTHCAP MOSS	POLYTRICHACEAE	Atrichum undulatum	S4S5
COMMON HAIRCAP MOSS	Polytrichaceae	Polytrichum commune	S5
BRISTLY HAIRCAP MOSS	Polytrichaceae	Polytrichum piliferum	S4S5
BOG HAIRCAP MOSS	Polytrichaceae	Polytrichum strictum	S4S5
COMPACT PEAT MOSS	Sphagnaceae	Sphagnum compactum	S3?

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GREEN PEAT MOSS	SPHAGNACEAE	Sphagnum girgensohnii	S5
RED PEAT MOSS	SPHAGNACEAE	Sphagnum rubellum	S4S5
PEATMOSS	SPHAGNACEAE	Sphagnum sp	N/A
SHAGGY PEAT MOSS	SPHAGNACEAE	Sphagnum squarrosum	S5
COMMON FOUR-TOOTH MOSS	TETRAPHIDACEAE	Tetraphis pellucida	S5
DELICATE FERN MOSS	Thuidiaceae	Thuidium delicatulum	S4S5
LIVERWORTS	FAMILY	SCIENTIFIC NAME	SRANK
WOOD RUSTWORT	CEPHALOZIACEAE	Nowellia curvifolia	SU
ASA GRAY'S SCALEWORT	JUBULACEAE	Frullania asagrayana	SU
SCALEWORT	JUBULACEAE	Frullania sp	N/A
FRULLANIA LIVERWORT	JUBULACEAE	Frullania sp.	SU
THREE-LOBED WHIPWORT	LEPIDOZIACEAE	Bazzania trilobata	S5
VARIABLE-LEAVED CRESTWORT	LOPHOCOLEACEAE	Lophocolea heterophylla	SU
GREEN-TONGUE LIVERWORT	MARCHANTIACEAE	Marchantia polymorpha	SU
COMMON PELLIA	PELLIACEAE	Pellia epiphylla	SU
COMMON PELLIA	PELLIACEAE	Pellia epiphylla	SU
LESSER FEATHERWORT	PLAGIOCHILACEAE	Plagiochila porelloides	SU
WALL SCALEWORT	PORELLACEAE	Porella platyphylla	SU
CILIATE FRINGEWORT	PTILIDIACEAE	Ptilidium ciliare	SU
TREE FRINGEWORT	PTILIDIACEAE	Ptilidium pulcherrimum	SU
FLAT-LEAVED SCALEWORT	RADULACEAE	Radula complanata	SU
WOOLLY LIVERWORT	TRICHOCOLEACEAE	Trichocolea tomentella	SU
LICHENS	FAMILY	SCIENTIFIC NAME	SRANK
PINK EARTH LICHEN	BAEOMYCETACEAE	Dibaeis baeomyces	S4S5
REINDEER LICHEN	CLADONIAACEAE	Cladonia arbuscula	S5
POWDERED FUNNEL LICHEN	CLADONIAACEAE	Cladonia cenotea	S4S5
MEALY PIXIE-CUP LICHEN	CLADONIAACEAE	Cladonia chlorophaea	S4S5
BRITISH SOLDIERS LICHEN	CLADONIAACEAE	Cladonia cristatella	S5
LIPSTICK POWDERHORN LICHEN	CLADONIAACEAE	Cladonia macilenta	SU
GIANT CLADONIA LICHEN	CLADONIAACEAE	Cladonia maxima	SU
SMOOTH-FOOTED POWDERHORN LICHEN	CLADONIAACEAE	CLADONIA OCHROCHLORA	S4S5
GRAY REINDEER LICHEN	CLADONIAACEAE	Cladonia rangiferina	S5
CLADONIA SPP.	CLADONIAACEAE	Cladonia sp	N/A
DRAGON LICHEN	CLADONIAACEAE	Cladonia squamosa	S4S5
STAR-TIPPED REINDEER LICHEN	CLADONIAACEAE	Cladonia stellaris	S4S5
BLUE JELLYSKIN LICHEN	COLLEMATACEAE	Leptogium cyanescens	S5
A LICHEN	GRAPHIDACEAE	Graphis scripta	S5
A LICHEN	HAEMATOMMATACEAE	Loxospora ochrophaea	S5
LUNGWORT LICHEN	LOBARIAACEAE	Lobaria pulmonaria	S4S5
TEXTURED LUNGWORT LICHEN	LOBARIAACEAE	Lobaria scrobiculata	S4
YELLOW SPECKLEBELLY LICHEN	LOBARIAACEAE	Pseudocyphellaria holarctica	S2S3
SMOOTH LUNG LICHEN	LOBARIAACEAE	Ricasolia quercizans	S4S5
MUSTARD KIDNEY LICHEN	NEPHROMATACEAE	Nephroma laevigatum	S3?
MEALY-RIMMED SHINGLE LICHEN	PANNARIAACEAE	Pannaria conoplea	S1S2
BROWN-EYED SHINGLE LICHEN	PANNARIAACEAE	Pannaria rubiginosa	S1
BURRED HORSEHAIR LICHEN	PARMELIACEAE	Bryoria furcellata	S5
BLONDE HORSEHAIR LICHEN	PARMELIACEAE	Bryoria nadvornikiana	S2?
BRYORIA LICHEN	PARMELIACEAE	Bryoria sp	N/A
BOREAL OAKMOSS LICHEN	PARMELIACEAE	Evernia mesomorpha	S5

Associated Species: Poor-Drainage Coniferous Forests

MONK'S HOOD LICHEN	PARMELIACEAE	Hypogymnia physodes	S5
POWDER-HEADED TUBE LICHEN	PARMELIACEAE	Hypogymnia tubulosa	S4S5
SALTED STARBURST LICHEN	PARMELIACEAE	Imshaugia aleurites	SU
ABRADING CAMOUFLAGE LICHEN	PARMELIACEAE	Melanelixia subaurifera	S4S5
MAGIC FLUTE LICHEN	PARMELIACEAE	Menegazzia terebrata	S1S2
BOTTLEBRUSH SHIELD LICHEN	PARMELIACEAE	Parmelia squarrosa	S5
HAMMERED SHIELD LICHEN	PARMELIACEAE	Parmelia sulcata	S5
VARIED RAG LICHEN	PARMELIACEAE	Platismatia glauca	S5
CRUMPLED RAG LICHEN	PARMELIACEAE	Platismatia tuckermanii	S3S4
VARIABLE WRINKLE LICHEN	PARMELIACEAE	Tuckermannopsis orbata	S4S5
USNEA	PARMELIACEAE	Usnea sp	N/A
BUSHY BEARD LICHEN	PARMELIACEAE	Usnea strigosa	S4S5
POWDERED SUNSHINE LICHEN	PARMELIACEAE	Vulpicida pinastri	S4S5
PEPPERED PELT LICHEN	PELTIGERACEAE	Peltigera evansiana	S3?
BUELLIA SPP.	PHYSICIACEAE	Buellia sp	N/A
POWDERED FRINGE LICHEN	PHYSICIACEAE	Heterodermia speciosa	S2
ORANGE-CORED SHADOW LICHEN	PHYSICIACEAE	Phaeophyscia rubropulchra	S4S5
HOODED ROSETTE LICHEN	PHYSICIACEAE	Physcia adscendens	S4S5
FRAYED RAMALINA LICHEN	RAMALINACEAE	Ramalina roesleri	S4S5
RAMALINA LICHEN	RAMALINACEAE	Ramalina spp.	N/A
NORTHERN CORAL LICHEN	SPHAEROPHORACEAE	Sphaerophorus globosus	S2S3
MARITIME SUNBURST LICHEN		Xanthoria parietina	S4S5
FUNGI	FAMILY	SCIENTIFIC NAME	SRANK
BAROMETER EARTHSTAR	ASTRAEACEAE	Astraeus hygrometricus	SU
WHITE CORAL FUNGI	CLAVARIACEAE	Clavulina coralloides	SU?
GOLDEN SPINDLE FUNGI	CLAVARIACEAE	Clavulinopsis fusiformis	SU?
RED BELT FUNGUS	FOMITOPSISACEAE	Fomitopsis mounceae	SU
TURKEY TAIL	POLYPORACEAE	Trametes versicolor	SU

SPECIES LIST

PROJECT:	ABEGWEIT FIRST NATION STEWARDSHIP OF BLACK ASH
HABITAT	RIPARIAN FORESTS
TOTAL # BA:	179

CONIFEROUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
EASTERN WHITE CEDAR	Cupressaceae	Thuja occidentalis	S3S4
BALSAM FIR	Pinaceae	Abies balsamea	S5
TAMARACK	Pinaceae	Larix laricina	S5
WHITE SPRUCE	Pinaceae	Picea glauca	S5
BLACK SPRUCE	Pinaceae	Picea mariana	S5
RED SPRUCE	Pinaceae	Picea rubens	S5
EASTERN WHITE PINE	Pinaceae	Pinus strobus	S3S4
EASTERN HEMLOCK	Pinaceae	Tsuga canadensis	S3
DECIDUOUS TREES	FAMILY	SCIENTIFIC NAME	SRANK
YELLOW BIRCH	Betulaceae	Betula alleghaniensis	S5
HEART-LEAVED BIRCH	Betulaceae	Betula cordifolia	S3S4
PAPER BIRCH	Betulaceae	Betula papyrifera	S5
GRAY BIRCH	Betulaceae	Betula populifolia	S5
IRONWOOD	Betulaceae	Ostrya virginiana	S2
AMERICAN BEECH	Fagaceae	Fagus grandifolia	S3S4
NORTHERN RED OAK	Fagaceae	Quercus rubra	S3S4
WHITE ASH	Oleaceae	Fraxinus americana	S2S3
BLACK ASH	Oleaceae	Fraxinus nigra	S2
PIN CHERRY	Rosaceae	Prunus pensylvanica	S5
AMERICAN MOUNTAIN ASH	Rosaceae	Sorbus americana	S5
LARGE-TOOTHED ASPEN	Salicaceae	Populus grandidentata	S4S5
TREMBLING ASPEN	Salicaceae	Populus tremuloides	S5
STRIPED MAPLE	Sapindaceae	Acer pensylvanicum	S5
RED MAPLE	Sapindaceae	Acer rubrum	S5
SUGAR MAPLE	Sapindaceae	Acer saccharum	S4
WHITE ELM	Ulmaceae	Ulmus americana	S3
SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
SPREADING DOGBANE	Apocynaceae	Apocynum androsaemifolium	S4
MOUNTAIN HOLLY	Aquifoliaceae	Ilex mucronata	S5
COMMON WINTERBERRY	Aquifoliaceae	Ilex verticillata	S5
GREEN ALDER	Betulaceae	Alnus alnobetula	S4S5
SPECKLED ALDER	Betulaceae	Alnus incana	S5
BEAKED HAZEL	Betulaceae	Corylus cornuta	S5
NORTHERN BUSH HONEYSUCKLE	Caprifoliaceae	Diervilla lonicera	S4
CANADA FLY HONEYSUCKLE	Caprifoliaceae	Lonicera canadensis	S5
MOUNTAIN FLY HONEYSUCKLE	Caprifoliaceae	Lonicera villosa	S4
ALTERNATE-LEAVED DOGWOOD	Cornaceae	Cornus alternifolia	S4
ROUND-LEAVED DOGWOOD	Cornaceae	Cornus rugosa	S2
RED OSIER DOGWOOD	Cornaceae	Cornus sericea	S5
SHEEP LAUREL	Ericaceae	Kalmia angustifolia	S5
RHODORA	Ericaceae	Rhododendron canadense	S5
COMMON LABRADOR TEA	Ericaceae	Rhododendron groenlandicum	S5
LATE LOWBUSH BLUEBERRY	Ericaceae	Vaccinium angustifolium	S5

Associated Species: Forested Riparian Zones

VELVET-LEAVED BLUEBERRY	Ericaceae	Vaccinium myrtilloides	S4S5
SKUNK CURRANT	Grossulariaceae	Ribes glandulosum	S5
SMOOTH GOOSEBERRY	Grossulariaceae	Ribes hirtellum	S5
BRISTLY BLACK CURRANT	Grossulariaceae	Ribes lacustre	S5
AMERICAN WITCH-HAZEL	Hamamelidaceae	Hamamelis virginiana	S1
SWEET-FERN	Myricaceae	Comptonia peregrina	S4
NORTHERN BAYBERRY	Myricaceae	Morella pensylvanica	S5
SWEET GALE	Myricaceae	Myrica gale	S5
VIRGINIA CLEMATIS	Ranunculaceae	Clematis virginiana	S4
ALDER-LEAVED BUCKTHORN	Rhamnaceae	Endotropis alnifolia	S3S4
SERVICEBERRY	Rosaceae	Amelanchier sp	N/A
BLACK CHOKEBERRY	Rosaceae	Aronia melanocarpa	S4S5
CHOCKECHERRY	Rosaceae	Prunus virginiana	S5
SHINING ROSE	Rosaceae	Rosa nitida	S4
VIRGINIA ROSE	Rosaceae	Rosa virginiana	S5
SMOOTH BLACKBERRY	Rosaceae	Rubus canadensis	S5
BRISTLY DEWBERRY	Rosaceae	Rubus hispidus	S4
RED RASPBERRY	Rosaceae	Rubus idaeus	S5
DWARF RED RASPBERRY	Rosaceae	Rubus pubescens	S5
WHITE MEADOWSWEET	Rosaceae	Spiraea alba	S5
STEEPLEBUSH	Rosaceae	Spiraea tomentosa	S4
PUSSY WILLOW	Salicaceae	Salix discolor	S5
WILLOW	Salicaceae	Salix spp.	N/A
MOUNTAIN MAPLE	Sapindaceae	Acer spicatum	S5
CANADA YEW	Taxaceae	Taxus canadensis	S4
COMMON ELDERBERRY	Viburnaceae	Sambucus canadensis	S4S5
RED ELDERBERRY	Viburnaceae	Sambucus racemosa	S5
NORTHERN WILD RAISIN	Viburnaceae	Viburnum cassinoides	S5
HOBBLEBUSH	Viburnaceae	Viburnum lantanoides	S1S2
HIGHBUSH CRANBERRY	Viburnaceae	Viburnum opulus	S3
NON-NATIVE TREES	FAMILY	SCIENTIFIC NAME	SRANK
ENGLISH OAK	Fagaceae	Quercus robur	SNA
BUTTERNUT	Juglandaceae	Juglans cinerea	SNA
LINDEN TREE	Malvaceae	Tilia sp.	SNA
EUROPEAN ASH	Oleaceae	Fraxinus excelsior	SNA
RED ASH	Oleaceae	Fraxinus pennsylvanica	SNA
COMMON APPLE	Rosaceae	Malus pumila	SNA
EUROPEAN MOUNTAIN ASH	Rosaceae	Sorbus aucuparia	SNA
NORWAY MAPLE	Sapindaceae	Acer platanoides	SNA
WYCH ELM	Ulmaceae	Ulmus glabra	SNA
NON-NATIVE SHRUBS	FAMILY	SCIENTIFIC NAME	SRANK
GLOSSY BUCKTHORN	Rhamnaceae	Frangula alnus	SNA
WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK
BROAD-LEAVED ARROWHEAD	Alismataceae	Sagittaria latifolia	S4
BULBOUS WATER-HEMLOCK	Apiaceae	Cicuta bulbifera	S4S5
COMMON COW PARSNIP	Apiaceae	Heracleum maximum	S4
MARYLAND SANICLE	Apiaceae	Sanicula marilandica	S3S4
COMMON WATER PARSNIP	Apiaceae	Sium suave	S5
SWAMP MILKWEED	Apocynaceae	Asclepias incarnata	S2

Associated Species: Forested Riparian Zones

JACK-IN-THE-PULPIT	Araceae	Arisaema triphyllum	S4
SWAMP JACK-IN-THE-PULPIT	Araceae	Arisaema triphyllum ssp. stewardsoni	S4
WILD CALLA	Araceae	Calla palustris	S4
STAR DUCKWEED	Araceae	Lemna trisulca	S3S4
TURION DUCKWEED	Araceae	Lemna turionifera	S4S5
BRISTLY SARSAPARILLA	Araliaceae	Aralia hispida	S4
WILD SARSAPARILLA	Araliaceae	Aralia nudicaulis	S5
WILD LILY-OF-THE-VALLEY	Asparagaceae	Maianthemum canadense	S5
LARGE FALSE SOLOMON'S SEAL	Asparagaceae	Maianthemum racemosum	S4
THREE-LEAVED FALSE SOLOMAN'S SEAL	Asparagaceae	Maianthemum trifolium	S4
PEARLY EVERLASTING	Asteraceae	Anaphalis margaritacea	S5
BEGGARTICK	Asteraceae	Biden sp.	SU
DEVIL'S BEGGARTICKS	Asteraceae	Bidens frondosa	S5
HAIRY FLAT-TOP WHITE ASTER	Asteraceae	Doellingeria umbellata	S5
EASTERN BURNWEED	Asteraceae	Erechtites hieraciifolius	S4
GRASS-LEAVED GOLDENROD	Asteraceae	Euthamia graminifolia	S5
SPOTTED JOE PYE WEED	Asteraceae	Eutrochium maculatum	S5
ROUGH HAWKWEED	Asteraceae	Hieracium scabrum	S4
HAWKWEED SPP.	Asteraceae	Hieracium sp	N/A
TALL BLUE LETTUCE	Asteraceae	Lactuca biennis	S5
TALL RATTLESNAKEROOT	Asteraceae	Nabalus altissimus	S4
THREE-LEAVED RATTLESNAKEROOT	Asteraceae	Nabalus trifoliolatus	S5
WHORLED WOOD ASTER	Asteraceae	Oclemena acuminata	S5
CUT-LEAVED CONEFLOWER	Asteraceae	Rudbeckia laciniata	S2
WHITE GOLDENROD	Asteraceae	Solidago bicolor	S4
CANADA GOLDENROD	Asteraceae	Solidago canadensis	S5
ZIGZAG GOLDENROD	Asteraceae	Solidago flexicaulis	S3
GIANT GOLDENROD	Asteraceae	Solidago gigantea	S4
DOWNY GOLDENROD	Asteraceae	Solidago puberula	S4S5
ROUGH-STEMMED GOLDENROD	Asteraceae	Solidago rugosa	S5
NORTHERN BOG GOLDENROD	Asteraceae	Solidago uliginosa	S4
HEART-LEAVED ASTER	Asteraceae	Symphyotrichum cordifolium	S4
LANCE-LEAVED ASTER	Asteraceae	Symphyotrichum lanceolatum	S4
CALICO ASTER	Asteraceae	Symphyotrichum lateriflorum	S5
NEW YORK ASTER	Asteraceae	Symphyotrichum novi-belgii	S5
PURPLE-STEMMED ASTER	Asteraceae	Symphyotrichum puniceum	S5
ASTER SPP.	Asteraceae	Symphyotrichum sp	N/A
SPOTTED JEWELWEED	Balsaminaceae	Impatiens capensis	S5
SMALL FORGET-ME-NOT	Boraginaceae	Myosotis laxa	S4
PENNSYLVANIA BITTERCRESS	Brassicaceae	Cardamine pensylvanica	S4S5
TWINFLOWER	Caprifoliaceae	Linnaea borealis	S5
BLUNT-LEAVED SANDWORT	Caryophyllaceae	Moehringia lateriflora	S5
BUNCHBERRY	Cornaceae	Cornus canadensis	S5
COMMON PIPSISSEWA	Ericaceae	Chimaphila umbellata	S4
TRAILING ARBUTUS	Ericaceae	Epigaea repens	S4
CREeping SNOWBERRY	Ericaceae	Gaultheria hispidula	S5
EASTERN TEABERRY	Ericaceae	Gaultheria procumbens	S4S5
CONVULSION-ROOT	ERICACEAE	Monotropa uniflora	S5

Associated Species: Forested Riparian Zones

ONE-SIDED WINTERGREEN	Ericaceae	<i>Orthilia secunda</i>	S4S5
ROUND-LEAVED PYROLA	Ericaceae	<i>Pyrola americana</i>	S4
PINK PYROLA	Ericaceae	<i>Pyrola asarifolia</i>	S2S3
SHINLEAF	Ericaceae	<i>Pyrola elliptica</i>	S5
MOUNTAIN CRANBERRY	Ericaceae	<i>Vaccinium vitis-idaea</i>	S3
HERB ROBERT	Geraniaceae	<i>Geranium robertianum</i>	S4
SIBERIAN WATER MILFOIL	Haloragaceae	<i>Myriophyllum sibiricum</i>	S4
HARLEQUIN BLUE FLAG	Iridaceae	<i>Iris versicolor</i>	S5
AMERICAN WATER HOREHOUND	Lamiaceae	<i>Lycopus americanus</i>	S4S5
NORTHERN WATER HOREHOUND	Lamiaceae	<i>Lycopus uniflorus</i>	S5
CANADIAN MINT	Lamiaceae	<i>Mentha canadensis</i>	S4S5
COMMON SELF-HEAL	Lamiaceae	<i>Prunella vulgaris</i>	S5
MARSH SKULLCAP	Lamiaceae	<i>Scutellaria galericulata</i>	S4S5
MAD-DOG SKULLCAP	Lamiaceae	<i>Scutellaria lateriflora</i>	S5
YELLOW BLUEBEAD LILY	Liliaceae	<i>Clintonia borealis</i>	S5
CUCUMBER ROOT	Liliaceae	<i>Medeola virginiana</i>	S3S4
ROSE TWISTED-STALK	Liliaceae	<i>Streptopus lanceolatus</i>	S4
PAINTED TRILLIUM	Melanthiaceae	<i>Trillidium undulatum</i>	S5
NODDING TRILLIUM	Melanthiaceae	<i>Trillium cernuum</i>	S4
BOG BUCKBEAN	Menyanthaceae	<i>Menyanthes trifoliata</i>	S4
FIREWEED	Onagraceae	<i>Chamaenerion angustifolium</i>	S5
SMALL ENCHANTER'S NIGHTSHADE	Onagraceae	<i>Circaea alpina</i>	S5
BROAD-LEAVED ENCHANTER'S NIGHTSHADE	Onagraceae	<i>Circaea canadensis</i>	S2S3
NORTHERN WILLOWHERB	Onagraceae	<i>Epilobium ciliatum</i>	S5
BOG WILLOWHERB	Onagraceae	<i>Epilobium leptophyllum</i>	S4S5
MARSH WILLOWHERB	Onagraceae	<i>Epilobium palustre</i>	S4
WILLHERB SPP.	Onagraceae	<i>Epilobium</i> sp	N/A
COMMON EVENING PRIMROSE	Onagraceae	<i>Oenothera biennis</i>	S5
PINK LADY'S-SLIPPER	Orchidaceae	<i>Cypripedium acaule</i>	S5
MENZIES' RATTLESNAKE-PLANTAIN	Orchidaceae	<i>Goodyera oblongifolia</i>	S1
SMALL PURPLE FRINGED ORCHID	Orchidaceae	<i>Platanthera psycodes</i>	S4
PLATANTERA ORCHID	Orchidaceae	<i>Platanthera</i> sp.	N/A
AMERICAN COW WHEAT	Orobanchaceae	<i>Melampyrum lineare</i>	S4S5
COMMON WOOD SORREL	Oxalidaceae	<i>Oxalis montana</i>	S4
EUROPEAN WOOD SORREL	Oxalidaceae	<i>Oxalis stricta</i>	S5
SQUARE-STEMMED MONKEYFLOWER	Phrymaceae	<i>Mimulus ringens</i>	S3S4
MARSH WATER-STARWORT	Plantaginaceae	<i>Callitriche palustris</i>	S4
WHITE TURTLEHEAD	Plantaginaceae	<i>Chelone glabra</i>	S5
AMERICAN SPEEDWELL	Plantaginaceae	<i>Veronica americana</i>	S4
MARSH SPEEDWELL	Plantaginaceae	<i>Veronica scutellata</i>	S4
FRINGED BLACK BINDWEED	Polygonaceae	<i>Fallopia cilioidis</i>	S4
WATER SMARTWEED	Polygonaceae	<i>Persicaria amphibia</i>	S4
PALE SMARTWEED	Polygonaceae	<i>Persicaria lapathifolia</i>	S4S5
ARROW-LEAVED SMARTWEED	Polygonaceae	<i>Persicaria sagittata</i>	S5
PERSICARIA SP.	Polygonaceae	<i>Persicaria</i> sp.	N/A
GREATER WATER DOCK	Polygonaceae	<i>Rumex britannica</i>	S5
FLOATING-LEAVED PONDWEED	Potamogetonaceae	<i>Potamogeton natans</i>	S4
CLASPING-LEAVED PONDWEED	Potamogetonaceae	<i>Potamogeton perfoliatus</i>	S4

Associated Species: Forested Riparian Zones

NORTHERN STARFLOWER	Primulaceae	Lysimachia borealis	S5
TUFTED YELLOW LOOSESTRIFE	Primulaceae	Lysimachia thyrsoflora	S4S5
RED BANEERRY	Ranunculaceae	Actaea rubra	S4
YELLOW MARSH MARIGOLD	Ranunculaceae	Caltha palustris	S4S5
GOLDTHREAD	Ranunculaceae	Coptis trifolia	S5
KIDNEY-LEAVED BUTTERCUP	Ranunculaceae	Ranunculus abortivus	S4
GMELIN'S WATER BUTTERCUP	Ranunculaceae	Ranunculus gmelinii	S4
HOOKEED BUTTERCUP	Ranunculaceae	Ranunculus recurvatus	S2
CURSED BUTTERCUP	Ranunculaceae	Ranunculus sceleratus	S1
WHITE WATER BUTTERCUP	Ranunculaceae	Ranunculus trichophyllus	S4
TALL MEADOW-RUE	Ranunculaceae	Thalictrum pubescens	S5
HOOKEED AGRIMONY	Rosaceae	Agrimonia gryposepala	S3
WOODLAND AGRIMONY	Rosaceae	Agrimonia striata	S4
WILD STRAWBERRY	Rosaceae	Fragaria virginiana	S5
YELLOW AVENS	Rosaceae	Geum aleppicum	S4
ROUGH AVENS	Rosaceae	Geum laciniatum	S4
LARGE-LEAVED AVENS	Rosaceae	Geum macrophyllum	S3S4
WATER AVENS	Rosaceae	Geum rivale	S4
AVENS	Rosaceae	Geum sp	N/A
ROUGH CINQUEFOIL	Rosaceae	Potentilla norvegica	S4S5
ROUGH BEDSTRAW	Rubiaceae	Galium asprellum	S4S5
COMMON MARSH BEDSTRAW	Rubiaceae	Galium palustre	S5
THREE-PETALED BEDSTRAW	Rubiaceae	Galium trifidum	S4S5
THREE-FLOWERED BEDSTRAW	Rubiaceae	Galium triflorum	S5
PARTRIDGEBERRY	Rubiaceae	Mitchella repens	S2S3
AMERICAN GOLDEN SAXIFRAGE	Saxifragaceae	Chrysosplenium americanum	S4
NAKED BISHOP'S-CAP	Saxifragaceae	Mitella nuda	S4
AMERICAN BURREED	Typhaceae	Sparganium americanum	S4
SMALL BURREED	Typhaceae	Sparganium natans	S3
BROAD-LEAVED CATTAIL	Typhaceae	Typha latifolia	S5
STINGING NETTLE	Urticaceae	Urtica dioica ssp. gracilis	S4
MARSH BLUE VIOLET	Violaceae	Viola cucullata	S5
SMALL WHITE VIOLET	Violaceae	Viola macloskeyi	S5
WOOLLY BLUE VIOLET	Violaceae	Viola sororia	S4S5
VIOLET SP.	Violaceae	Viola sp.	N/A
SEDGES	FAMILY	SCIENTIFIC NAME	SRANK
BROWNISH SEDGE	Cyperaceae	Carex brunnescens	S5
SILVERY SEDGE	Cyperaceae	Carex canescens	S4S5
FRINGED SEDGE	Cyperaceae	Carex crinita	S4?
NODDING SEDGE	Cyperaceae	Carex gynandra	S5
BLADDER SEDGE	Cyperaceae	Carex intumescens	S4S5
BRISTLY-STALKED SEDGE	Cyperaceae	Carex leptalea	S5
NECKLACE SEDGE	Cyperaceae	Carex projecta	S4S5
CYPERUSLIKE SEDGE	Cyperaceae	Carex pseudocyperus	S5
ROUGH SEDGE	Cyperaceae	Carex scabrata	S4
BROOM SEDGE	Cyperaceae	Carex scoparia	S4S5
SEDGE SP.	Cyperaceae	Carex sp.	N/A
AWL-FRUITED SEDGE	Cyperaceae	Carex stipata	S5
THREE-SEEDED SEDGE	Cyperaceae	Carex trisperma	S5

Associated Species: Forested Riparian Zones

COMMON WOOLLY BULRUSH	Cyperaceae	Scirpus cyperinus	S5
GRASSES	FAMILY	SCIENTIFIC NAME	SRANK
BLUEJOINT REED GRASS	Poaceae	Calamagrostis canadensis	S5
COMMON TALL MANNA GRASS	Poaceae	Glyceria grandis	S4S5
FOWL MANNA GRASS	Poaceae	Glyceria striata	S5
GRASS SPP.	Poaceae	Grass Spp.	N/A
RUSHES	FAMILY	SCIENTIFIC NAME	SRANK
SOFT RUSH	Juncaceae	Juncus effusus	S5
PYLAEI'S RUSH	Juncaceae	Juncus pylaei	S4S5
RUSH	Juncaceae	Juncus sp	N/A
COMMON WOODRUSH	Juncaceae	Luzula multiflora	S5
NON-NATIVE WILDFLOWERS	FAMILY	SCIENTIFIC NAME	SRANK
WOODLAND ANGELICA	Apiaceae	Angelica sylvestris	SNA
WILD CHERVIL	Apiaceae	Anthriscus sylvestris	SNA
MARSH CUDWEED	Asteraceae	Gnaphalium uliginosum	SNA
TANSY RAGWORT	Asteraceae	Jacobaea vulgaris	SNA
FIELD SOW THISTLE	Asteraceae	Sonchus arvensis	SNA
COMMON DANDELION	Asteraceae	Taraxacum officinale	SNA
COLTSFOOT	Asteraceae	Tussilago farfara	SNA
PALE JEWELWEED	Balsaminaceae	Impatiens pallida	SNA
WORM-SEEDED WALLFLOWER	Brassicaceae	Erysimum cheiranthoides	SNA
DAME'S ROCKET	Brassicaceae	Hesperis matronalis	N/A
WATERCRESS	Brassicaceae	Nasturtium officinale	SNA
COMMON STARWORT	Caryophyllaceae	Stellaria media	SNA
MOSSY STONECROP	Crassulaceae	Sedum acre	SNA
WILD CUCUMBER	Cucurbitaceae	Echinocystis lobata	SNA
TUFTED VETCH	Fabaceae	Vicia cracca	SNA
COMMON HEMP-NETTLE	Lamiaceae	Galeopsis tetrahit	SNA
HELLEBORINE	Orchidaceae	Epipactis helleborine	SNA
COMMON SPEEDWELL	Plantaginaceae	Veronica officinalis	SNA
FALSE WATERPEPPER	Polygonaceae	Persicaria hydropiperoides	SNA
CURLED DOCK	Polygonaceae	Rumex crispus	SNA
BITTER DOCK	Polygonaceae	Rumex obtusifolius	SNA
COMMON BUTTERCUP	Ranunculaceae	Ranunculus acris	SNA
CREeping BUTTERCUP	Ranunculaceae	Ranunculus repens	SNA
KNOTTY FIGWORT	Scrophulariaceae	Scrophularia nodosa	SNA
BITTERSWEET NIGHTSHADE	Solanaceae	Solanum dulcamara	SNA
FERNS	FAMILY	SCIENTIFIC NAME	SRANK
COMMON LADY FERN	Athyriaceae	Athyrium filix-femina	S5
NORTHEASTERN LADY FERN	Athyriaceae	Athyrium filix-femina var. angustum	S5
SILVERY GLADE FERN	Athyriaceae	Deparia acrostichoides	S3
COMMON OAK FERN	Cystopteridaceae	Gymnocarpium dryopteris	S5
EASTERN HAY-SCENTED FERN	Dennstaedtiaceae	Dennstaedtia punctilobula	S5
BRACKEN FERN	Dennstaedtiaceae	Pteridium aquilinum	S5
MOUNTAIN WOOD FERN	Dryopteridaceae	Dryopteris campyloptera	S4
SPINULOSE WOOD FERN	Dryopteridaceae	Dryopteris carthusiana	S4S5
CRESTED WOOD FERN	Dryopteridaceae	Dryopteris cristata	S5
EVERGREEN WOOD FERN	Dryopteridaceae	Dryopteris intermedia	S5
CHRISTMAS FERN	Dryopteridaceae	Polystichum acrostichoides	S2S3

Associated Species: Forested Riparian Zones

BRAUN'S HOLLY FERN	Dryopteridaceae	Polystichum braunii	S1
OSTRICH FERN	Onocleaceae	Matteuccia struthiopteris	S4
SENSITIVE FERN	Onocleaceae	Onoclea sensibilis	S5
INTERRUPTED FERN	Osmundaceae	Claytosmunda claytoniana	S5
ROYAL FERN	Osmundaceae	Osmunda regalis var. spectabilis	S4
CINNAMON FERN	Osmundaceae	Osmundastrum cinnamomeum	S5
NEW YORK FERN	Thelypteridaceae	Parathelypteris noveboracensis	S5
NORTHERN BEECH FERN	Thelypteridaceae	Phegopteris connectilis	S5
EASTERN MARSH FERN	Thelypteridaceae	Thelypteris palustris	S4S5
CLUBMOSES	FAMILY	SCIENTIFIC NAME	SRANK
ROUND-BRANCHED TREE-CLUBMOSS	Lycopodiaceae	Dendrolycopodium dendroideum	S5
SHINING FIRMOSS	Lycopodiaceae	Huperzia lucidula	S4
RUNNING CLUBMOSS	Lycopodiaceae	Lycopodium clavatum	S4S5
HORSETAILS	FAMILY	SCIENTIFIC NAME	SRANK
FIELD HORSETAIL	Equisetaceae	Equisetum arvense	S5
WATER HORSETAIL	Equisetaceae	Equisetum fluviatile	S4
WOODLAND HORSETAIL	Equisetaceae	Equisetum sylvaticum	S5
MOSES	FAMILY	SCIENTIFIC NAME	SRANK
HEART-LEAVED SPEAR MOSS	AMBLYSTEGIACEAE	Calliergon cordifolium	S4S5
SLENDER ANOMODON MOSS	ANOMODONTACEAE	Anomodon attenuatus	S3
TREE SKIRT MOSS	ANOMODONTACEAE	Anomodon attenuatus	S3
GLOW MOSS	AULACOMNIACEAE	Aulacomnium palustre	S5
NORTHERN TREE MOSS	CLIMACIACEAE	Climacium dendroides	S5
WHIP BROOM MOSS	DICRANACEAE	Dicranum flagellare	S5
MOUNTAIN BROOM MOSS	DICRANACEAE	Dicranum montanum	S5
WAVY-LEAVED BROOM MOSS	DICRANACEAE	Dicranum polysetum	S5
COMMON BROOM MOSS	DICRANACEAE	Dicranum scoparium	S5
GREEN BROOM MOSS	DICRANACEAE	Dicranum viride	S4?
POWDER-GUN MOSS	DIPHYSCIACEAE	Diphyscium foliosum	SU
STAIRSTEP MOSS	HYLOCOMIACEAE	Hylocomium splendens	S5
ELECTRIFIED CAT'S-TAIL MOSS	HYLOCOMIACEAE	Rhytidiadelphus triquetrus	S5
RED-STEMMED FEATHER MOSS	HYLOCOMIACEAE	Pleurozium schreberi	S5
BEAUTIFUL BRANCH MOSS	HYPNACEAE	Callicladium haldanianum	S5
PELLUCID PLAIT MOSS	Hypnaceae	Hypnum imponens	S5
KNIGHT'S PLUME MOSS	Hypnaceae	Ptilium crista-castrensis	S5
WHITE PINCUSHION MOSS	LEUCOBRYACEAE	Leucobryum glaucum	SU
SQUIRREL-TAIL MOSS	LEUCODONTACEAE	Leucodon sciuroides	SU?
SWAN'S-NECK LEAFY MOSS	Mniaceae	Mnium hornum	S5
WOODSY LEAFY MOSS	Mniaceae	Plagiomnium cuspidatum	S4S5
APPALACHIAN LEAFY MOSS	MNIACEAE	Rhizomnium appalachianum	S4S5
DOTTED LEAFY MOSS	MNIACEAE	Rhizomnium punctatum	S4?
COMMON FLAT-BRANCH MOSS	NECKERACEAE	Homalia trichomanoides	SU
FEATHERY NECKERA MOSS	NECKERACEAE	Neckera pennata	S5
CRISPED PINCUSHION MOSS	ORTHOTRICHACEAE	Ulota crispa	S5
A MOSS	ORTHOTRICHACEAE	Ulota sp.	SU
FOUNTAIN SMOOTH CAP	POLYTRICHACEAE	Atrichum crispulum	S5
SMOOTHCAP MOSS	POLYTRICHACEAE	Atrichum sp	N/A
COMMON SMOOTHCAP MOSS	POLYTRICHACEAE	Atrichum undulatum	S4S5
COMMON HAIRCAP MOSS	Polytrichaceae	Polytrichum commune	S5

Associated Species: Forested Riparian Zones

JUNIPER HAIRCAP MOSS	Polytrichaceae	Polytrichum juniperinum	S4S5
GREEN PEAT MOSS	SPHAGNACEAE	Sphagnum girgensohnii	S5
PEATMOSS	SPHAGNACEAE	Sphagnum sp	N/A
SHAGGY PEAT MOSS	SPHAGNACEAE	Sphagnum squarrosum	S5
COMMON FOUR-TOOTH MOSS	TETRAPHIDACEAE	Tetraphis pellucida	S5
DELICATE FERN MOSS	Thuidiaceae	Thuidium delicatulum	S4S5
LIVERWORTS	FAMILY	SCIENTIFIC NAME	SRANK
WOOD RUSTWORT	CEPHALOZIACEAE	Nowellia curvifolia	SU
SNAKE LIVERWORT	CONOCEPHALACEAE	Conocephalum salebrosum	SU
ASA GRAY'S SCALEWORT	JUBULACEAE	Frullania asagrayana	SU
SCALEWORT	JUBULACEAE	Frullania sp	N/A
FRULLANIA LIVERWORT	JUBULACEAE	Frullania sp.	SU
THREE-LOBED WHIPWORT	LEPIDOZIACEAE	Bazzania trilobata	S5
CREEPING FINGERWORT	LEPIDOZIACEAE	Lepidozia reptans	S5
VARIABLE-LEAVED CRESTWORT	LOPHOCOLEACEAE	Lophocolea heterophylla	SU
GREEN-TONGUE LIVERWORT	MARCHANTACEAE	Marchantia polymorpha	SU
COMMON PELLIA	PELLIACEAE	Pellia epiphylla	SU
COMMON PELLIA	PELLIACEAE	Pellia epiphylla	SU
LESSER FEATHERWORT	PLAGIOCHILACEAE	Plagiochila porelloides	SU
WALL SCALEWORT	PORELLACEAE	Porella platyphylla	SU
TREE FRINGEWORT	PTILIDIACEAE	Ptilidium pulcherrimum	SU
FLAT-LEAVED SCALEWORT	RADULACEAE	Radula complanata	SU
EARWORT	SCAPANIACEAE	Scapania sp.	SU
WOOLLY LIVERWORT	TRICHOCOLEACEAE	Trichocolea tomentella	SU
LICHENS	FAMILY	SCIENTIFIC NAME	SRANK
ELFIN CANDLEFLAME LICHEN	CANDELARIACEAE	Candelaria concolor	SU
REINDEER LICHEN	CLADONIACEAE	Cladonia arbuscula	S5
POWDERED FUNNEL LICHEN	CLADONIACEAE	Cladonia cenotea	S4S5
SMOOTH-FOOTED POWDERHORN LICHEN	CLADONIACEAE	CLADONIA OCHROCHLORA	S4S5
GRAY REINDEER LICHEN	CLADONIACEAE	Cladonia rangiferina	S5
CLADONIA SPP.	CLADONIACEAE	Cladonia sp	N/A
DRAGON LICHEN	CLADONIACEAE	Cladonia squamosa	S4S5
TREE TARPAPER LICHEN	COLLEMATACEAE	Collema subflaccidum	S4S5
BLUE JELLYSKIN LICHEN	COLLEMATACEAE	Leptogium cyanescens	S5
A LICHEN	GRAPHIDACEAE	Graphis scripta	S5
A LICHEN	HAEMATOMMATACEAE	Loxospora ochrophaea	S5
WHITE GREEN-ALGAE CORAL	HYDNACEAE	Multiclavula mucida	SU
LECANORA SPP.	LECANORACEAE	Lecanora spp.	N/A
LUNGWORT LICHEN	LOBARIACEAE	Lobaria pulmonaria	S4S5
TEXTURED LUNGWORT LICHEN	LOBARIACEAE	Lobaria scrobiculata	S4
SMOOTH LUNG LICHEN	LOBARIACEAE	Ricasolia quercizans	S4S5
MUSTARD KIDNEY LICHEN	NEPHROMATACEAE	Nephroma laevigatum	S3?
BROWN-GRAY MOSS-SHINGLE LICHEN	PANNARIACEAE	Protopannaria pezizoides	S2S3
BRYORIA LICHEN	PARMELIACEAE	Bryoria sp	N/A
BOREAL OAKMOSS LICHEN	PARMELIACEAE	Evernia mesomorpha	S5
VALLEY OAKMOSS LICHEN	PARMELIACEAE	Evernia prunastri	S3?
MONK'S HOOD LICHEN	PARMELIACEAE	Hypogymnia physodes	S5
POWDER-HEADED TUBE LICHEN	PARMELIACEAE	Hypogymnia tubulosa	S4S5
ABRADING CAMOUFLAGE LICHEN	PARMELIACEAE	Melanelixia subaurifera	S4S5

Associated Species: Forested Riparian Zones

BOTTLEBRUSH SHIELD LICHEN	PARMELIACEAE	<i>Parmelia squarrosa</i>	S5
HAMMERED SHIELD LICHEN	PARMELIACEAE	<i>Parmelia sulcata</i>	S5
VARIED RAG LICHEN	PARMELIACEAE	<i>Platismatia glauca</i>	S5
ROUGH SPECKLEBACK LICHEN	PARMELIACEAE	<i>Punctelia rudecta</i>	S4S5
USNEA	PARMELIACEAE	<i>Usnea</i> sp	N/A
BUSHY BEARD LICHEN	PARMELIACEAE	<i>Usnea strigosa</i>	S4S5
DOG LICHEN	PELTIGERACEAE	<i>Peltigera canina</i>	SU
MANY-FRUITED PELT LICHEN	PELTIGERACEAE	<i>Peltigera polydactylon</i>	SU
MANY-FRUITED PELT LICHEN	PELTIGERACEAE	<i>Peltigera polydactylon</i>	SU
PELT LICHEN	PELTIGERACEAE	<i>Peltigera</i> sp.	N/A
BUELLIA SPP.	PHYSICIACEAE	<i>Buellia</i> sp	N/A
POWDERED FRINGE LICHEN	PHYSICIACEAE	<i>Heterodermia speciosa</i>	S2
MUSTARD LICHEN	PHYSICIACEAE	<i>Pyxine soorediata</i>	SU
SINEWED RAMALINA LICHEN	RAMALINACEAE	<i>Ramalina americana</i>	S4S5
FRAYED RAMALINA LICHEN	RAMALINACEAE	<i>Ramalina roesleri</i>	S4S5
RAMALINA LICHEN	RAMALINACEAE	<i>Ramalina</i> spp.	N/A
NORTHERN CORAL LICHEN	SPHAEROPHORACEAE	<i>Sphaerophorus globosus</i>	S2S3
MARITIME SUNBURST LICHEN		<i>Xanthoria parietina</i>	S4S5
FUNGI	FAMILY	SCIENTIFIC NAME	SRANK
WHITE CORAL FUNGI	CLAVARIACEAE	<i>Clavulina coralloides</i>	SU?
GOLDEN SPINDLE FUNGI	CLAVARIACEAE	<i>Clavulinopsis fusiformis</i>	SU?
RED BELT FUNGUS	FOMITOPSIDACEAE	<i>Fomitopsis mounceae</i>	SU
BOLETE MUSHROOM	N/A	N/A	N/A
CHANTERELLE	N/A	N/A	N/A
HEMLOCK VARNISH SHELF	POLYPORACEAE	<i>Ganoderma tsugae</i>	SU
TURKEY TAIL	POLYPORACEAE	<i>Trametes versicolor</i>	SU
LATE OYSTER	SARCOMYXACEAE	<i>Sarcomyxa serotina</i>	SU

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