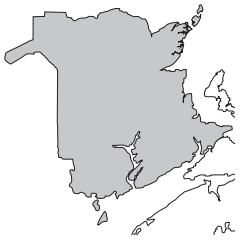
Bald Eagle



Habitat areas

Photo: Richard Kuzminski

Haliaeetus leucephalus

NB Status:	*Endangered*
COSEWIC Status:	*Not-at-Risk*
Species group:	*Bird*

Facts about the Bald Eagle

Description:

- The Bald Eagle is a large bird of prey with a wingspan often exceeding 2 metres.
- Adult birds have a white feathered head, neck and tail.
- Immature birds are uniformly dark brown colored until their second year, when they begin developing white feathers.
- They develop full adult plumage after 4 or 5 years.
- They have yellow beaks and yellow feet, with sharp talons.

Habitat:

- Bald Eagles occur and breed across most of Canada and the United States.
- They nest near areas of open water (lakes, rivers, bays, and seacoast).
- Nests are very large (up to 2 meters wide), with a grass lining and are typically built in the tops of large mature trees and made out of branches.
- Nests may be used for several years before being abandoned.
- In NB the highest concentration of nests are located in the southwestern section of the province and along the lower St. John River.
- In the winter, many NB Bald Eagles move towards the Southeastern coast of the province or further south to the U.S., where food abundance is generally higher due to the open water.

Biology:

- In NB, we have 2 subspecies of Bald Eagle; the 'northern' subspecies breeds here and spends winter in NB or neighbouring areas, while the 'southern' subspecies is a non-breeding annual summer migrant, from the southeastern US.
- Bald Eagles typically breed in early spring (April or May) and the female will lay usually 2 (occasionally 3) eggs.
- During the breeding season, eagles may defend a nesting territory of up to 2 km^2.
- Eagles are able to catch live fish, but they will also eat dead fish found in the water or along shores.
- They may also eat small mammals and waterfowl.

Threats:

- Currently, there are few major threats to eagles in the province, although pesticides and other pollutants, limits to food, and access to suitable nesting trees, represent minor threats.
- Persecution is a problem. Historically, eagles and other birds of prey were shot indiscriminately as nuisance species or to prevent them from taking other species (fish, smaller birds). Today, there are occasional reports of eagles being shot.
- Historically, eagles throughout North America suffered from pesticide pollution (mostly DDT).

Recovery Efforts:

- Surveys are conducted for new nest locations, and several existing nest locations are monitored on a yearly basis.

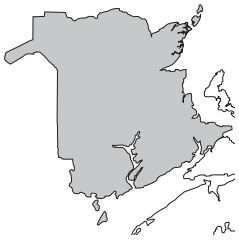
What can be done to protect the Bald Eagle?

- Give wildlife space - respect a healthy distance from nesting birds; value mature trees, as these are often used for nesting or regular perches.
- Protect nesting sites and respect prohibitions on shooting raptors.

Similar or Related Species:

- Osprey

Cougar



Habitat areas

Photo: Mountain Lion Foundation.

Puma concolor couguar

NB Status:	*Endangered*
COSEWIC Status:	*Data deficient*
Species group:	*Mammal*

Facts about the Cougar

Description:

- Despite the fact that many observations of cougar are reported every year, the continued existence of the Eastern Cougar species is in question so they are referred to in this document as Cougar, or eastern population of Cougar, rather than Eastern Cougar.
- Cougars are one of the largest members of the cat family; they are often 2 metres in length.
- They have light tan or light brown, reddish-brown to grey-brown fur that is short and coarse.
- They have a strikingly long, cylindrical (or rope-like) black-tipped tail.
- Some sightings of Cougar describe a black cat, though at present black panthers are only known in the southwest US, and Central and South America.

Habitat:

- The eastern population of Cougar is believed to have once occurred from Nova Scotia to southern Quebec and southwestern Ontario, and south to South Carolina and Tennessee
- It was once the mammal with the widest distribution in the western world, being found across much of southern Canada through the US and South America.
- Cougars use a variety of habitats. In New Brunswick, they were associated with a forested habitat.
- They are believed to have been rare in NB, even in early times.
- Sightings in NB, although difficult to prove, have been scattered all across the province with concentrations in southern and central regions.
- The most recent evidence of the cougar's presence in the province is an individual that was shot in Kent County, in 1932.
- Cougars are highly territorial and the range for males can be as large as 200 to 1800 km^2.
- They shelter in the limbs and trunks of downed trees, or in natural depressions or caves

Biology:

- Cougars are solitary and elusive.
- In the west, mating can occur any time of the year, and litter sizes range from 1 to 4 cubs.
- In the west, Cougars feed mostly on large ungulates; in NB, this would include moose, white-tailed deer and, historically, caribou.

Threats:

- As eastern North America was settled by Europeans, Cougar were hunted and shot as threats to livestock and for personal safety.
- Current threats are difficult to determine, given the uncertainty about the size and status of the Cougar population in eastern North America.
- If this species is in fact present, cougars may have difficulty finding a mate and suffer from inbreeding.

Recovery Efforts:

- The Cougar is the subject of much confusion and controversy in NB. Although there are continued reports of Cougar sightings, there is little concrete evidence of a resident population of Cougar in NB. Further, it is unclear if these animals would be from the wild, or would have escaped from captivity in other parts of eastern North America.

What can be done to protect the Cougar?

- Sightings reported to the NB Museum by the public may help to determine if the species is still found in the province.
- Promote maintenance of large continuously forested areas, to match the males home range size.

Similar or Related Species:

- Lynx
- Bobcat

Harlequin Duck

Habitat areas

Photo: Richard kuzminski

Histrionicus histrionicus

NB Status:	*Endangered*
COSEWIC Status:	*Special Concern*
Species group:	*Bird*

Facts about the Harlequin Duck

Description:

- The Harlequin is a small duck, approximately 45 cm long.
- Adult males have blue-grey plumage with sharply defined white patches on the head, neck and torso, and reddish-brown or chestnut sides.
- The female is dusky brown with similarly located white patches.
- Males develop adult plumage in their second or third year.

Habitat:

- The Harlequin Duck is a migratory sea duck found on both North American coasts, as well as in northern and eastern Asia, Iceland, and Greenland. Harlequins frequent traditional wintering sites.
- There are only a few breeding records for Harlequins in New Brunswick, on two rivers in the northern region of the province.
- Breeding occurs in fast, clear, turbulent inland rivers and streams.
- Nests are built on the ground, often among thick shrub cover, and usually near swift, rocky-bottomed rivers or streams.
- Harlequins use New Brunswick primarily as wintering habitat (December to March). In NB, they winter in the Bay of Fundy.
- During the winter months, they are most often seen along exposed rocky shorelines and on offshore ledges.

Biology:

- Breeding occurs in May or early June; 5 0 to 6 eggs are laid.
- In summer they feed primarily on aquatic insect larvae.
- In winter their diet is varied, and includes snails, limpets, crabs, bivalves, amphipods, gastropods, copepods and, possibly, fish eggs.
- They will return to the same wintering site year after year.

Threats:

- In NB, disturbing wintering sites due to increased coastal development and activity could have a significant impact on our already low population.
- There is little historical information on the numbers of Harlequin Duck in NB.
- Hunting may have contributed to the currently low numbers of Harlequin Ducks, but their low reproductive rate is also a likely factor.
- Poaching, or accidental kills during hunting, may still be a threat despite the duck's protected status in most eastern areas.
- Oil spills near traditional wintering areas have the potential to harm a large proportion of the Harlequin Ducks wintering in New Brunswick

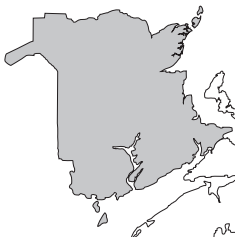
Recovery Efforts:

- Currently, there is a ban on hunting Harlequin Duck in Eastern Canada.
- Research has recently demonstrated that a large population of Harlequin Ducks winters off the coast of Greenland, but breeds in Canada. Thus, the eastern population of Harlequin Duck is much higher than previously believed.
- As a result, the eastern population of Harlequin duck was down-listed by COSEWIC from endangered to special concern in 2001.
- The Harlequin Duck occurs in very low numbers in NB and is thus listed as endangered.
- Existing wintering areas are monitored on a yearly basis.

What can be done to protect the Harlequin Duck?

- Support hunter education programs.
- Support protection of wintering area from disturbance and development.
- Support measures that reduce the chances of oil spills in all coastal waters but especially near traditional wintering sites.

Canada Lynx



Habitat areas

Photo: Dr. Gordon Court

Lynx canadensis

NB Status:	*Endangered*
COSEWIC Status:	*Not-at-Risk*
Species group:	*Mammal*

Facts about the Canada Lynx

Description

- The Lynx may reach up to 85 cm in length and weigh up to 10 kg.
- It has long pointed ear tufts and a short black-tipped tail.
- Broad paws allow it to move through deep snow
- Males are slightly larger and heavier than females.
- It is closely related to the Bobcat, but the Bobcat's tail is longer and black only on the upper surface of the tip. The bobcat is unable to live in regions with deep snow, where the Lynx thrives.

Habitat:

- The Lynx occurs across most forested regions of northern Canada, and is now considered rare along the southern margins of its range, including NB.
- It is typically associated with extensive tracts of dense coniferous forests, interspersed with rocky outcrops, bogs, and thickets.
- In the winter, deep snow and low temperatures usually characterize these areas.
- Most sightings and accidental trappings occur in the extreme northwestern corner of NB.

Biology:

- Peak breeding occurs between mid-March and early April.
- The litter size is usually 2-3 and can be as high as 5.
- Home range estimates have varied from 10 to 250 km^2, depending on age, population size, sex and availability of prey.
- Snowshoe Hare are the primary prey of Lynx, but they will eat other small mammals.
- Lynx numbers are believed to be directly related to the 10 year cycle of Snowshoe Hare abundance.
- As hare numbers decrease, Lynx breeding success decreases and their population goes down too.

Threats:

- Lack of knowledge about this species in NB makes it difficult to assess threats.
- Concerns are related to changes in the landscape (forestry, agriculture, urbanization), competition from Bobcat and forestry practices.
- Due to its small population size, accidental trappings and limited Snowshoe Hare availability adversely impact Lynx.

Recovery Efforts:

- There is an ongoing provincial ban on trapping and hunting Lynx in NB.
- The Department of Natural Resources collects Lynx locations and information about sightings and accidental trappings.

What can be done to protect the Lynx?

- Support forest management that emphasizes the value of wildlife and its habitat.
- Promote education efforts to prevent accidental trapping

Similar or Related Species:

- Bobcat

Maritime Ringlet Butterfly

Habitat areas

Photo: Reginald Webster

Coenonympha inornata nipisiquit

NB Status:	*Endangered*
COSEWIC Status:	*Endangered*
Species group:	*Insect*

Facts about the Maritime Ringlet Butterfly

Description:

- Maritime Ringlet Butterflies are small (3.8 cm wing span) tan-coloured butterflies.
- They have an eyespot on the underside of the front wing.
- They are similar to the Common Ringlet Butterfly, but the Common Ringlet is most abundant in upland areas adjacent to salt marshes.

Habitat:

- They are restricted to a very few sites globally along the shores of Chaleur Bay, in NB and Quebec.
- They are strictly limited to a salt marsh habitat.
- Their distribution and abundance within the marsh varies depending on the presence of the larval host plant (Saltmeadow Cordgrass) and the main adult nectar source (Sea Lavender).
- The primary habitat occurs where both plant species predominate.
- The butterfly is not abundant in very wet areas that are frequently flooded by tides, or in very dry areas in the high marsh.

Biology:

- The Maritime Ringlet has 4 life cycle stages that, together, last the whole year: egg, caterpillar (larvae), pupa and adult.
- Adult butterflies begin emerging in mid-July and continue to be present in the marsh through late August.
- Individual adults live for only one week.
- Developing larvae or caterpillars feed on the shoots of Saltmeadow Cordgrass.
- Adults feed on nectar, which they extract from Sea Lavender.

Threats:

- habitat damage, either by human development or sea-borne pollution (oils, toxins, detergents)
- human disturbance from vehicles in the salt marsh (an illegal activity)
- dumping or infilling the marsh
- inadequate septic systems that pollute the marsh

Recovery Efforts:

- A provincial recovery team is in place.
- Known sites are surveyed on an annual basis to monitor the population.
- One Maritime Ringlet location near Bathurst is protected as a reserve.

What can be done to protect the Maritime Ringlet?

- Promote conservation of salt marshes
- Promote and respect good stewardship at the edges of marshes or shores.
- Do not use salt marshes as dump sites.
- Do not pick or harvest salt marsh plants and do not trample beach grass.
- Do not drive ATV's and other vehicles on salt marshes.

Similar or Related Species:

- Common Ringlet Butterfly

Peregrine Falcon

Habitat areas

Photo: Richard kuzminski

Falco peregrinus

NB Status:	*Endangered*
COSEWIC Status:	*Threatened*
Species group:	*Bird*

Facts about the Peregrine Falcon

Description:

- Peregrine Falcons are crow-sized, with females being approximately 1/3 larger than males.
- They have a black cap and moustache, and long pointed wings and a long tail.
- They measure 38 to 50 cm long.

Habitat:

- In NB, Peregrine Falcons have been found nesting only in the Bay of Fundy region, and occasionally during migration in other areas of the province.
- In NB, most Peregrine Falcon nests are built on ledges in steep cliffs, however, artificial cliffs such as buildings and bridges are sometimes used.
- They hunt over open areas, such as marshes, seacoast and sometimes open forest.
- They are territorial during the breeding season.
- No nest sites are very close together; most of them are more than 20 km apart.
- They have never been considered common in NB
- They are distributed worldwide, and have been known to breed in most provinces in Canada.

Biology:

- Breeding occurs in the spring; 3 or 4 eggs are laid.
- They feed mostly on small and medium sized birds. Their favorite prey includes shorebirds, songbirds, waterfowl, pigeons, and other small birds.
- They catch most of their prey while in flight.
- The 2 subspecies in NB are: Tundra Peregrine Falcon - a migrant traveling between northern breeding and southern wintering areas, and Anatum Peregrine Falcon – a breeding sub-species that may be observed any time of year, however it does not overwinter every year.

Threats:

- Historically, DDT and similar pollutants were the primary threat to Peregrine Falcons.
- The threat of DDT seems to have been reduced since the banning of DDT in North America.
- Accumulation of pesticides and pollutants in the environment still poses a potential risk to Peregrines on their wintering grounds.
- Egg collecting, shooting, and collecting young for falconry were historical threats.

Recovery Efforts:

- Following their disappearance in the early 1950's, Anatum's Peregrine Falcon was re-introduced to the Bay of Fundy through the release of captive-bred birds, from 1982 - 1990.
- Re-introduction efforts are considered a success, as numbers in NB are now near estimated historical levels.
- The Anatum Peregrine Falcon was downlisted from Endangered to Threatened by COSEWIC, in 2000.
- Surveys are conducted for new nest locations on a regular basis (every 5 years) and existing nest locations are monitored on a yearly basis.

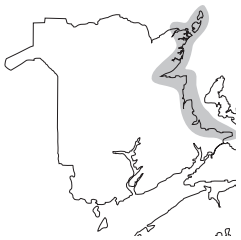
What can be done to protect the Peregrine Falcon?

- Promote measures that protect Falcon nesting sites from disturbance.
- Reduce use of pesticides and toxins.
- Support programs that protect coastal habitat.

Similar or Related Species:

- Merlin

Piping Plover



Habitat areas

Photo: Richard kuzminski

Charadrius melodus melodus

NB Status:	*Endangered*
COSEWIC Status:	*Endangered*
Species group:	*Bird*

Facts about the Piping Plover

Description:

- Piping Plovers are smaller than a robin and weigh approximately 50 grams.
- When in breeding plumage (spring) they have a single black ring (often broken) across the forehead and around the neck – the rings are not there in winter or on young birds.
- They are primarily the colour of dry sand - are sandy-grey on top with a white underside.

Habitat:

- Piping Plovers feed on tidal flats or mud flats in coastal areas.
- They nest on NB's coastal sandy beaches, where they make shallow depressions often lined with pieces of pebble or shell in the sand above the high water mark.
- In NB, Piping Plovers breed on coastal beaches along the Northumberland Strait, from Miscou Island to Cape Jourmain National Wildlife Area.
- In the east, the Piping Plover breeds in NB, Nova Scotia, PEI, Newfoundland, the Magdalen Islands, St. Pierre and Miquelon (France), and from Maine to South Carolina in the US.
- A large proportion of the provincial nesting population is found in the Acadian Peninsula.
- Piping Plovers migrate to their wintering grounds in the southern US and Caribbean by late August or early September.

Biology:

- Atlantic Coast Plovers migrate to the Southern US and Caribbean in the winter.
- They arrive in New Brunswick to breed in early spring (mid April – May), and fly to the southern US in early to mid-August.
- Clutch size is typically 4 eggs.
- They eat marine worms, tiny crustaceans, fly larvae, beetles, beach hoppers, and shore flies.

Threats:

- Vehicles and other activities on beaches result in disturbance that may affect survival of young.
- Garbage left on the beach may attract predators.
- Nest and chick predation by foxes, gulls, crows, raccoons and domestic dogs are a threat.
- Dogs off their leashes may disturb Piping Plovers and their young.
- Coastal development may result in habitat loss.

Recovery Efforts:

- A recovery plan is in place.
- Various groups are involved in protecting the Piping Plover and its habitat such as the Piper Project, Kouchibouguac National Park, and Irving Ecocentre - La Dune de Bouctouche.
- Piping Plover Guardian Programs monitor species and educate people.
- Canadian Wildlife Service and partners monitor species distribution (i.e. count the number of adults per beach) and fledgling success (the number of chicks per pair that become old enough to fly). Research is being conducted to determine survival rates and evaluate success of conservation programs.

What can be done to protect the Piping Plover?

- Support education programs for beach users, school children and the general public.
- Respect signs placed to protect Piping Plover nesting sites. Avoid using areas designated as Plover habitat.
- Do not drive on beaches; it is illegal and can kill or disturb plovers.
- Do not litter or leave garbage on beaches.
- Keep pets on a leash when at the shore.

Similar or Related Species:

- Semipalmated Plover
- Kildeer

Anticosti Aster

Habitat areas

Photo: Piper Project

Symphyotrichum anticostense

NB Status:	*Endangered*
COSEWIC Status:	*Threatened*
Species group:	*Plant*

Facts about the Anticosti Aster

Description:

- Their 'petals' are blue, though variations of pink and white are possible. As with all asters, what we call petals are actually tiny individual flowers.
- It has narrow, lance-shaped leaves.
- It can reach a height of 1 metre.
- It can be confused with the New York Aster.

Habitat:

- In NB, it is restricted to the upper St. John and Restigouche Rivers.
- It colonizes seasonally flooded calcareous banks of large or fast flowing rivers.
- It grows on gravel or cobble strands at the base of river banks.
- It does not grow in adjacent forested areas.
- Outside NB, the Anticosti Aster only occurs in Quebec and at a few sites in Maine.

Biology:

- The Anticosti Aster is a perennial species, meaning that the same plant will live for more than one year.
- The seeds germinate in spring and the plants can flower and produce seeds in their first year.
- Flowers appear from mid-July until the first frosts in late summer or early fall.
- Very little is known about the biology of this species.

Threats:

- The Anticosti Aster appears to be more abundant than previously thought.
- It appears that the New York Aster can hybridize with the Anticosti Aster, thus lowering the potential number of pure Anticosti Aster. It is unclear how much this affects the abundance of Anticosti Aster.
- The main threats by humans are trampling or disturbing plants along the river bank, and ATV traffic along shores.
- Dam construction on the St. John River has probably led to loss of habitat in the past.

Recovery Efforts:

- Most recovery efforts have been directed toward searching for new sites and monitoring, or relocating, known sites.

What can be done to protect the Anticosti Aster?

- Prevent human disturbance on the river banks where these plants occur.

Similar or Related Species:

- New York Aster
- Other asters

Bathurst Aster

Habitat areas

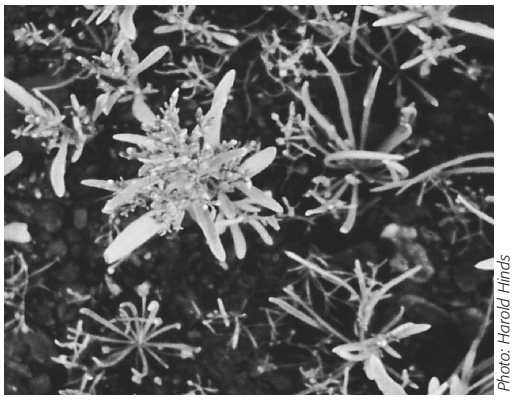


Photo: Harold Hinds

Symphyotrichum subulatum var obtusifolius

NB Status:	*Endangered*
COSEWIC Status:	*Special Concern*
Species group:	*Plant*

Facts about the Bathurst Aster

Description:

- Bathurst Asters have very small flowers with only a few 'petals' (as with all asters, what we call petals are the tiny individual flowers).
- 'Petals' are white to pale blue.
- Leaves are pressed close to the stem.
- They are seldom more than 20 cm tall.
- The Bathrust Aster is a distinct variant of the Saltmarsh Aster.

Habitat:

- It is found on tidally influenced gravel substrate and adjacent salt marsh habitats.
- Its habitat is regularly flooded by brackish water at high tide.
- It grows in areas with limited competition by other species.
- It occurs only along the Chaleur coast of NB, in or near Bathurst.
- It does not occur elsewhere in the world.

Biology:

- The Bathurst Aster is an annual plant, meaning that its lifecycle lasts one year, from seed, to bloom, to seed.
- It flowers in mid to late August.
- It is self-pollinating, meaning it can produce seed without receiving pollen from other plants.
- Because it is an annual and develops from seed every year, its numbers can fluctuate widely between years, depending on conditions that promote germination and seed growth.
- Changing shorelines from tides and storms can cause the location and number of plants to vary between years.

Threats:

- Disturbance to salt marsh habitat from human activity (e.g. coastal development) is the main threat.
- Bathurst Asters are susceptible to catastrophic events, such as sea borne pollution and intense storm tides.

Recovery Efforts:

- Monitoring and protection of known sites.
- Search efforts for new locations.

What can be done to protect the Bathurst Aster?

- Promote good stewardship of our marshes and coastlines.
- Do not use salt marshes as dump sites.
- Do not pick or harvest salt marsh plants, and do not trample beach grass.
- Do not drive ATV's or other vehicles on salt marshes.

Similar or Related Species:

- Salt Marsh Aster
- Other Asters

Furbish's Lousewort

Habitat areas

Photo: Piper Project

Pedicularis furbishiae

NB Status:	*Endangered*
COSEWIC Status:	*Endangered*
Species group:	*Plant*

Facts about the Furbish's Lousewort

Description:

- Furbish's Lousewort has a dark red or maroon stem with few or no branches, and only a few scattered dark-green leaves which are narrow and deeply dissected.
- It has a tight cluster of small greenish-yellow flowers, with only a few open at a time.
- It has a cluster of fern-like leaves at the base of the stem.
- It grows to 75 cm, on average but may reach 1 metre.
- It is a member of the Snapdragon family.

Habitat:

- It grows along the shores of the Upper St. John River.
- It grows in moist soil, on shaded slopes, between the forest and the water.
- It lives in open to shady areas, on shores that have been scoured by ice in spring floods.
- It is very restricted in global distribution: outside of NB, it is only found along the upper St. John River, in Maine.

Biology:

- Furbish's Lousewort flowers from July to August, and is pollinated by bumble bees.
- It takes 2 to 3 years for plants to mature to the flowering stage.
- It reproduces from seeds. The seedlings are root parasites and depend on nearby host plants for nutrients. Host plants could be clover, alder or other nitrogen-fixing plants.
- It is a perennial species, meaning that the same plant will live for more than one year.
- Much of its natural habitat experiences annual disturbance, either from flooding or ice scouring; thus it is prone to fluctuating population levels.

Threats:

- Current threats are largely local in nature, such as such garbage dumps, litter, gravel pit operations and removal of trees along river banks.
- Industrial, agricultural or residential development on the river-edge may affect the habitat of this plant.
- Hydro dams have altered some of the shorelines where Furbish's Lousewort is presently found, or was found in the past.

Recovery Efforts:

- The Nature Trust of New Brunswick has purchased the first Furbish's Lousewort reserve in order to protect this plant.
- Known sites are monitored.
- A Furbish's Lousewort Recovery Team is in place.

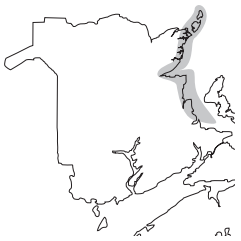
What can be done to protect Furbish's Lousewort:

- Promote good shoreline stewardship.
- Join local and provincial conservation organizations that provide opportunities for learning about special natural areas around the province.
- Foster protection of river shores, such as creation of forest buffers.

Similar or Related Species:

- Common Lousewort

Gulf of St. Lawrence Aster



Habitat areas

Photo: Piper Project

Symphyotrichum laurentianum

NB Status:	*Endangered*
COSEWIC Status:	*Special Concern*
Species group:	*Plant*

Facts about the Gulf of St. Lawrence Aster

Description:

- Like all asters, the Gulf of St. Lawrence Aster has a flower that is actually composed of many tiny flowers. However, these tiny flowers appear to be more like bristles than 'petals'.
- The flower heads are whitish to pinkish.
- The leaves are succulent (or fleshy) and pale green.
- It grows up to 30 cm tall, with some plants barely reaching 5 cm in height.

Habitat:

- It grows in coastal marshes, along salt water ponds, or in depressions behind dunes.
- It grows in brackish sand or mud, usually in drier areas of the salt marsh.
- It lives where vegetation is usually sparse and there is less competition.
- In NB, it is found at a few sites along the Northumberland Coast.
- It is also found in Quebec (Madeleine Islands) and PEI.

Biology:

- The Gulf of St. Lawrence Aster is an annual plant, meaning that its lifecycle lasts one year, from seed, to bloom, to seed.
- It flowers in early to mid-September.
- Seeds develop in late September and are dispersed by wind and water in late October.
- Because it is an annual and develops from seed every year, its numbers can fluctuate greatly between years, depending on conditions that promote germination and seed growth.
- Changing shorelines, from tides and storms, can cause the location and number of plants to vary between years.

Threats:

- It is susceptible to catastrophic events, such as sea borne pollution and intense storm tides.
- Disturbance to salt marsh habitat from human activity (e.g. coastal development) is the main threat.

Recovery Efforts:

- Known sites are monitored on a yearly basis.
- Various groups such as the Piper Project, Kouchibouguac National Park, and Irving Ecocentre – La Dune de Bouctouche are involved in monitoring efforts.
- Surveys are conducted on a regular basis for new locations.

What can be done to protect the Gulf of St. Lawrence Aster?

- Promote good stewardship of our marshes and coastlines.
- Do not use salt marshes as dump sites.
- Do not pick or harvest salt marsh plants and do not trample beach grass.
- Do not drive ATV's or other vehicles on salt marshes.

Similar or Related Species:

- Other Asters

Parker's Pipewort

Habitat areas

Photo: NBDNRE

Eriocaulon parkeri

NB Status:	*Endangered*
COSEWIC Status:	*Not assessed*
Species group:	*Plant*

Facts about Parker's Pipewort

Description:

- It has whitish coloured 'buttons' of tiny flowers on a single stem.
- Small tufts of leaves grow at the base of the stem.
- It can grow up to 10 cm tall in height, but is often smaller.
- Duck Grass is a similar species, but it is distinguished from Parker's Pipewort based on morphology and habitat.

Habitat:

- Brackish shallow waters, tidal flats and muddy or gravelly shores are habitat for Parker's Pipewort
- It's restricted to areas where fresh water (rivers and streams) meets salt water (estuaries).
- In NB, it has been found only along the Miramichi estuary.
- Outside NB, it is found along the St. Lawrence River and south to Maine and Virginia.

Biology:

- Parker's Pipewort flowers from late August to early September.
- It is a perennial species, meaning that the same plant will live for more than one year.

Threats:

- Disturbance to shorelines from human development
- Pollution from water-borne contaminants or from run-off

Recovery Efforts:

- Monitoring known sites
- Landowner education
- Stewardship and education projects

What can be done to protect Parker's Pipewort:

- Promote shoreline stewardship and respect buffer zones along waterways.
- Join local and provincial conservation organizations that provide opportunities for learning about endangered species and their habitats around the province.

Similar or Related Species:

- Duck Grass

Pinedrops

Habitat areas

Photo: NBDNRE

Pterospora endromedea

NB Status:	*Endangered*
COSEWIC Status:	*Not assessed*
Species group:	*Plant*

Facts about Pinedrops

Description:

- Pinedrops lack chlorophyll and, therefore, do not have the typical green leaves that we expect to see on plants.
- They have a straight unbranched stem.
- They are a distinctive red in summer, turning brown as the season progresses.
- The height ranges from 30 - 100 cm.
- They have nodding, urn-shaped flowers that are white to reddish in colour, growing along the stem.
- They are closely related to Indian Pipe and Pinesap, which also lack chlorophyll.

Habitat:

- Pinedrops grow in mature white pine, or white pine and hemlock, forests.
- They grow in areas with a well-developed layer of old needles and other plant matter.
- It is unclear why they will not colonize younger stands, but this is possibly due to soil composition or micro-environmental conditions, or availability of fungal associates.
- In NB, sites are often on steep slopes.
- The population in NB is low, but it is much more abundant in western Canada.

Biology:

- Pinedrops are unable to photosynthesize because they lack chlorophyll (i.e. they don't obtain their energy from the sun).
- They depend on special fungi to obtain nutrients by connecting their roots to the roots of old pine and hemlock.
- The majority of growth happens in a few weeks in mid to late summer.
- The special fungi absorb the water and nutrients that then feed Pinedrops from the soil humus layer.

Threats:

- Disturbance of mature and old growth white pine and hemlock forests in NB for example, by cutting the trees.

Recovery Efforts:

- Known sites are being monitored.

What can be done to protect Pinedrops?

- Promote protection of mature coniferous forests that have white pine and hemlock trees.
- Join local and provincial conservation organizations that provide opportunities for learning about endangered species and their habitat around the province.

Similar or Related Species:

- Indian Pipe
- Pinesap

Prototype Quillwort

Habitat areas

Photo: Jim Goltz

Isoetes prototypus

NB Status:	*Endangered*
COSEWIC Status:	*Not assessed*
Species group:	*Plant*

Facts about the Prototype Quillwort

Description:

- It has the appearance of a fist-full of green quills growing on the lake bottom.
- Its leaves, or quills, are attached at the base of the plant and point upward.
- It is dark green in colour with a reddish-brown base.
- It has leaves, or quills, growing to 15 cm in length.

Habitat:

- It grows in cool spring-fed lakes, in water depths around 2 m.
- It grows in submerged substrates of soft loose silt, mud, sand, or gravel.
- In New Brunswick, it is found in only a single lake in Southwestern NB.
- It is also found in Nova Scotia and Maine.

Biology:

- It was recognized as a new species only in 1991.
- It does not have flowers, but produces spores in late summer or early fall.
- It is a perennial species, meaning that the same plant will live for more than one year.
- It is an evergreen, which means it retains its green colour all year long.

Threats:

- The level of threat to Prototype Quillwort is unclear. It could include habitat destruction, by dumping, raking, creating swimming areas, removing aquatic plants, or indirectly, by pollution.

Recovery Efforts:

- The lone NB site is monitored on a regular basis.
- Botanists in the province are searching for other Prototype Quillwort sites.

What can be done to protect the Prototype Quillwort?

- Promote freshwater shoreline stewardship.
- Join local and provincial conservation organizations that provide opportunities for learning about endangered species and their habitats around the province.

Similar or Related Species:

- Lake Quillwort

Southern Twayblade

Habitat areas

Photo: Jim Goltz

Listera australis

NB Status:	*Endangered*
COSEWIC Status:	*Not assessed*
Species group:	*Plant*

Facts about the Southern Twayblade

Description:

- The Southern Twayblade is a small plant with one pair of small spoon-shaped leaves halfway up the stem.
- It has very small reddish-purple flowers (there is a subset of this species with pale green flowers).
- It grows up to 20 cm tall.

Habitat:

- It grows on the edge of sphagnum bogs, usually on mounds of sphagnum.
- It prefers the base of stunted black spruce, near the edge of bogs.
- It is also found in Nova Scotia, Quebec, Ontario, and the eastern US.

Biology:

- The Southern Twayblade typically flowers from mid-June to July.
- It is a perennial species, meaning that the same plant will live for more than one year.
- The Southern Twayblade has a complicated life cycle that may include one or more years when it doesn't produce above-ground foliage. Therefore, failure to observe this species at a site may not necessarily indicate its absence.

Threats:

- loss of habitat through logging or peat mining, either by direct impact or by changing the hydrological regime, thereby resulting in drying out of the sphagnum

Recovery Efforts:

- New Brunswick sites are monitored on a regular basis.
- One site, located within Kouchibouguac National Park, is protected.

What can be done to protect the Southern Twayblade?

- Join local and provincial conservation organizations that provide opportunities for learning about endangered species and their habitats around the province.

Similar or Related Species:

- Other twayblades