SSAC

Species Status Advisory Committee

Woodland Caribou

Fernald's Braya

Boreal Felt lichen

Piping Plover

Annual Report 2003-2004

THE COMMITTEE

The Species Status Advisory Committee (SSAC) was established under the Endangered Species Act which was passed on December 13, 2001. Its role is to review and recommend to the minister designations and re-designations of species based on the best scientific knowledge available and on traditional and local ecological knowledge about the species.

MEMBERSHIP

The Act allows a committee of up to nine members. At present the committee consists of six members. Five members were appointed by Minister Bettney in September 2003:

Dr. Howard J. Clase (Chair)	- General natural history, interest in vascular plants and birds
Dr. Stephen Carr (Vice Chair)	- Vertebrates
Dr. Luise Hermanutz	- Plant ecology, conservation biology
Dr. William Montevecchi	- Ornithology
Ms. Christine Doucet	- Terrestrial mammals

a sixth member was appointed by Minister Osbourne in March 2004:

Ms. Nathalie Djan-Chékar	- Vascular and non-vascular plants

Additional members, with expertise in the areas of invertebrates, fresh water fishes and traditional knowledge are currently being sought.

The secretariat is provided by The Inland Fish & Wildlife Division in the person of Mr. Joe Brazil.

THE MINISTERS

Since its formation, the committee has reported to three different ministers. The committee was established by the Minister for Tourism, Culture and Recreation, the Hon. Julie Bettney. Following the fall general election and change of government Minister Bettney was replaced by the Hon. Paul Shelley and when, in February 2004, responsibility for Wildlife was transferred to the Department of the Environment and Conservation, the responsible minister became the Hon. Tom Osbourne. The committee was pleased to be able to meet with Minister Osbourne and the Deputy Minister for wildlife, Mr. Paul Dean, during their February 2004 meeting to discuss issues of importance to the administration of the Act.

MEETINGS

The committee met four times during the 2003/04 fiscal year: September 30th 2003, December 4th 2003, February 24th & 25th 2004 and March 17th 2004. All meetings were held in St John's, where the majority of the members reside, to minimize travel expenses. Most of the initial discussion and decisions related to the *modus operandi* of the committee. We were fortunate that several members of the committee and the secretary already have experience with similar committees at both the federal and provincial level and the procedures and criteria adopted largely follow established practices in these other bodies.

PROCEDURES

It was agreed that, while every effort would be made to convene meetings only when all members could be present, a quorum would be 50%+1 of the membership.

Voting on procedural matters would be on the basis of a simple majority of members present but, in the event of a status recommendation to the minister, failing a consensus, a two thirds majority of all members, whether present or not, would be required.

CRITERIA

The criteria for decisions on the level of risk for a species (endangered, threatened, vulnerable) will follow those of the federal COSEWIC committee, which in turn are based on those of the International Union for the Conservation of Nature and Natural Resources (IUCN) with minor adjustments for local circumstances and conditions. A copy of the COSEWIC criteria can be found in appendix 1.

STATUS REPORTS AND PRIORITY LISTS

Two templates for status reports were developed: one for the submission of data to the committee for consideration and a modified version for the final report to be submitted to the minister. Copies of these blank templates are provided in appendix 2.

A status report for one species, the Low Northern Rockcress (*Neotorularia humilis*), which is known from only one site in the Province, has been prepared by members of the committee. The report will be presented to the Minister early in the 2004/05 fiscal year.

We are already aware of other species which are at some level of risk. Priority lists have been drawn up for vascular plants and mammals, based on the general status of these groups prepared by IFWD; these are provided in appendix 3. A list for birds is under preparation. Development of priority lists for other taxonomic groups will depend upon finding members with the appropriate interests and knowledge.

THE FUTURE

Now that we have established procedures and criteria most of our future work will consist of commissioning status reports and evaluating threats. Some of this can be done electronically so that we may not have to hold as formal meetings as frequently as during the initial period. Bringing the committee up to full membership to cover other taxonomic groups and knowledge bases is also important.

In most cases status reports for species on the priority lists will have to be contracted out to individuals with detailed knowledge about the species under consideration. The number of status reports we can commission and evaluate will depend primarily upon our budget.

APPENDICES

Appendix 1. COSEWIC criteria.
Appendix 2. Report templates.
Appendix 3. Priority lists

Appendix 1. COSEWIC quantitative criteria and guidelines for the status assessment of species.

COSEWIC's revised criteria to guide the status assessment of species. These were in use by COSEWIC by November 2001, and are based on the revised IUCN Red List categories (IUCN 2001). Definitions of terms are provided at the end.

	Endangered	**Threatened**
A. Declining Total Population		
Reduction in population size based on any of the following 4 options and specifying a-e as appropriate:		
	> 70 %	> 50 %
(1) population size reduction that is observed, estimated, inferred, or suspected in the past 10 years or 3 generations, whichever is longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any combination of a-e below.		
	> 50 %	> 30 %
(2) population size reduction that is observed, estimated, inferred or suspected over the last 10 years or 3 generations, whichever is longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any combination of a-e below.		
(3) population size reduction that is projected or suspected to be met within in the next 10 years or 3 generations, whichever is longer (up to a maximum of 100 years), based on (and specifying) any combination of b-e below.		
(4) population size reduction that is observed, estimated, inferred, projected or suspected over any 10 year or 3 generation period, whichever is longer (up to a maximum of 100 years), where the time period includes both the past and the future, AND where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of a-e below.		

a) direct observation
b) an index of abundance appropriate for the taxon
c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
d) actual or potential levels of exploitation
e) the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites

	Endangered	Threatened
B. Small Distribution, and Decline or Fluctuation		
1. Extent of occurrence	< 5,000 km^2	< 20,000 km^2
Or		
2. Area of occupancy	< 500 km^2	< 2,000 km^2
For either of the above, specify at least two of a-c:		
(a) either severely fragmented or known to exist at # locations	≤ 5	≤ 10
(b) continuing decline observed, inferred or projected in any of the following:		
i) extent of occurrence ii) area of occupancy iii) area, extent and/or quality of habitat iv) number of locations or populations v) number of mature individuals		
(c) extreme fluctuations in any of the following:	> 1 order of magnitude	> 1 order of magnitude
i) extent of occurrence ii) area of occupancy iii) number of locations or populations iv) number of mature individuals		
C. Small Total Population Size and Decline		
Number of mature individuals	< 2,500	< 10,000
and 1 of the following 2:		
(1) an estimated continuing decline rate of at least:	20% in 5 years or 2 generations (up to a maximum of 100 years in the future)	10% in 10 years or 3 generations (up to a maximum of 100 years in the future)
(2) continuing decline, observed, projected, or inferred, in numbers of mature individuals and at least one of the following (a-b):		
(a) fragmentation--population structure in the form of one of the following:	(i) no population estimated to contain >250 mature individuals	(i) no population estimated to contain >1,000 mature individuals
	(ii) at least 95 % of mature individuals in one population	(ii) all mature individuals are in one population
(b) extreme fluctuations in the number of mature individuals		

	Endangered	Threatened
D. Very Small Population or Restricted Distribution		
(1) Number of mature individuals	< 250	< 1,000
(2) Applies only to threatened: Population with a very restricted area of occupancy or number of locations such that it is prone to the effects of human activities or stochastic events within a very short time period in an uncertain future, and thus is capable of becoming highly endangered or even extinct in a very short time period.		
	(not applicable)	area of occupancy typically < 20 km² or number of locations < 5
E. Quantitative Analysis		
Indicating the probability of extinction in the wild to be at least:	20% in 20 years or 5 generations, whichever is longer (up to a maximum of 100 years)	10% in 100 years

Special Concern:

those species that are particularly sensitive to human activities or natural events but are not endangered or threatened species.

Species may be classified as being of Special Concern if:

a. the species has declined to a level of abundance at which its persistence is increasingly threatened by genetic, demographic or environmental stochasticity, but the decline is not sufficient to qualify the species as Threatened; or
b. the species is likely to become Threatened if factors suspected of negatively influencing the persistence of the species are neither reversed nor managed with demonstrable effectiveness; or
c. the species is near to qualifying, under any criterion, for Threatened status; or
d. the species qualifies for Threatened status but there is clear indication of rescue effect from extra-limital populations.

Examples of reasons why a species may qualify for "Special Concern":

- A species that is particularly susceptible to a catastrophic event (e.g., a seabird population near an oil tanker route)
- A species with very restricted habitat or food requirements for which a potential threat to that habitat or food supply has been identified (e.g., a bird that forages primarily in old-growth forest, a plant that grows primarily on undisturbed sand dunes, a fish that spawns primarily in estuaries, a snake that feeds primarily on a crayfish whose habitat is threatened by siltation)
- A recovering species no longer considered to be Threatened or Endangered but not yet clearly secure

Examples of reasons why a species may not qualify for "Special Concern":

- A species existing at low density in the absence of recognized threat (e.g., a large predatory animal defending a large home range or territory)
- A species existing at low density that does not qualify for Threatened status for which there is a clear indication of rescue effect

Definitions. COSEWIC definitions associated with quantitative criteria.

Area of occupancy: Area of occupancy is defined as the area within its 'extent of occurrence' which is occupied by a taxon, excluding cases of vagrancy. The measure reflects the fact that a taxon will not usually occur throughout the area of its extent of occurrence, which may contain unsuitable or unoccupied habitats. In some cases (e.g. irreplaceable colonial nesting sites, crucial feeding sites for migratory taxa) the area of occupancy is the smallest area essential at any stage to the survival of existing populations of a taxon. The size of the area of occupancy will be a function of the scale at which it is measured, and should be at a scale appropriate to relevant biological aspects of the taxon, the nature of threats and the available data. To avoid inconsistencies and bias in assessments caused by estimating area of occupancy at different scales, it may be necessary to standardize estimates by applying a scale-correction factor. It is difficult to give strict guidance on how standardization should be done because different types of taxa have different scale-area relationships.

Continuing decline: A continuing decline is a recent, current or projected future decline (which may be smooth, irregular or sporadic) which is liable to continue unless remedial measures are taken. Fluctuations will not normally count as continuing declines, but an observed decline should not be considered as a fluctuation unless there is evidence for this.

Extent of occurrence: Extent of occurrence is defined as the area contained within the shortest continuous imaginary boundary which can be drawn to encompass all the known, inferred or projected sites of present occurrence of a taxon, excluding cases of vagrancy. This measure may exclude discontinuities or disjunctions within the overall distributions of taxa (e.g. large areas of obviously unsuitable habitat) (but see 'area of occupancy'). Extent of occurrence can often be measured by a minimum convex polygon (the smallest polygon in which no internal angle exceeds 180 degrees and which contains all the sites of occurrence).

Extreme fluctuations : Extreme fluctuations can be said to occur in a number of taxa when population size or distribution area varies widely, rapidly and frequently, typically with a variation greater than one order of magnitude (i.e., a tenfold increase or decrease).

Generation: Generation length is the average age of parents of the current cohort (i.e. newborn individuals in the population). Generation length therefore reflects the turnover rate of breeding individuals in a population. Generation length is greater than the age at first breeding and less than the age of the oldest breeding individual, except in taxa that breed only once. Where generation length varies under threat, the more natural, i.e. pre-disturbance, generation length should be used.

Location/Site : a geographically distinct area where a group of individuals of a species is (or has been) found. The total population or a population may comprise a number of sites.

Mature individuals (Number of) : The number of mature individuals is the number of individuals known, estimated or inferred to be capable of reproduction. When estimating this quantity, the following points should be borne in mind:

* Mature individuals that will never produce new recruits should not be counted (e.g. densities are too low for fertilization).
* In the case of populations with biased adult or breeding sex ratios, it is appropriate to use lower estimates for the number of mature individuals which take this into account.
* Where the population size fluctuates, use a lower estimate. In most cases this will be much less than the mean
* Reproducing units within a clone should be counted as individuals, except where such units are unable to survive alone (e.g. corals).
* In the case of taxa that naturally lose all or a subset of mature individuals at some point in their life cycle, the estimate should be made at the appropriate time, when mature individuals are available for breeding.
* Re-introduced individuals must have produced viable offspring before they are counted as mature individuals.

A population: A population is defined as a geographically or otherwise distinct group (a portion of the total population) that has little demographic or genetic exchange with other such groups (populations) -- typically one successful migrant individual or gamete per year or less.

Quantitative analysis: A quantitative analysis is defined here as any form of analysis which estimates the extinction probability of a taxon based on known life history, habitat requirements, threats and any specified management options. Population viability analysis (PVA) is one such technique. Quantitative analyses should make full use of all relevant available data. In a situation in which there is limited information, such data as are available can be used to provide an estimate of extinction risk (for instance, estimating the impact of stochastic events on habitat). In presenting the results of quantitative analyses, the assumptions (which must be appropriate and defensible), the data used and the uncertainty in the data or quantitative model must all be documented.

Reduction: A reduction is a decline in the number of mature individuals of at least the amount (%) stated under criterion A over the time period (years) specified, although the decline need not be continuing. A reduction should not be interpreted as part of a fluctuation unless there is good evidence for this. The downward phase of a fluctuation will not normally count as a reduction.

Severely fragmented: The phrase 'severely fragmented' refers to the situation in which increased extinction risk to the taxon results from the fact that most of its individuals are found in small and relatively isolated populations (in certain circumstances this may be inferred from habitat information). These small populations may go extinct, with a reduced probability of recolonization.

Total population: Population is here defined as the total number of individuals of the taxon in Canada. For functional reasons, primarily owing to differences between life forms, population size is measured as numbers of mature individuals only. In the case of taxa obligately dependent on other taxa for all or part of their life cycles, biologically appropriate values for the host taxon should be used.

Species - Any indigenous species, subspecies, variety, or geographically or genetically distinct population of wild fauna and flora.

Extinct (X) - A species that no longer exists.

Extirpated (XT) - A species no longer existing in the wild in Canada, but occurring elsewhere.

Endangered (E) - A species facing imminent extirpation or extinction.

Threatened (T) - A species likely to become endangered if limiting factors are not reversed.

Special Concern (SC) - A species that is particularly sensitive to human activities or natural events but is not an endangered or threatened species.

Data Deficient (DD) - A species for which there is inadequate information to make a direct, or indirect, assessment of its risk of extinction.

Not At Risk (NAR) - A species that has been evaluated and found to be not at risk.

Environment Canada | Canadian Wildlife Service | Species at Risk
Date Published: 2003-04-28
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Appendix 2. Status Report Templates

1. Draft Report Template

DRAFT

Update [if not an update, delete]

The Status of

[English Common Name]

[(Scientific Name)]

in Newfoundland and Labrador

[insert picture or sketch]

prepared for

THE SPECIES STATUS ADVISORY COMMITTEE

by

[Name of Author]
[Address]

Submitted [Date]

STATUS REPORT

[Full scientific name including authority]
[Common name (English)] [Common name (French, aboriginal, and/or local) (if available)]

[Name of population(s) or subspecies (if applicable)]

[Family]
[Life form]

Distribution

Global: [Describe global range of occurrence (Species as a whole, and individual populations or subspecies, if applicable)]
National: [Describe national range of occurrence (Species as a whole, and individual populations or subspecies, if applicable)]
Provincial: [Describe provincial range of occurrence (Species as a whole, and individual populations or subspecies, if applicable)]

Annotated range map

[Insert map outlining provincial occurrences/distribution.
[Use properly geo-referenced map of either Newfoundland, or Labrador, or both, as appropriate. Templates are provided for use if desired (see attached files).
Include detailed annotations in Appendix A.
Maps should include verified occurrences/range use. Additional (unverified) information, if included, should be clearly distinct from verified information.]

Description and habitat

[Insert picture of organism in habitat and/or habitat]
[In one paragraph briefly describe the organism, its general habitat, and specific habitat requirements.]

Overview of Biology

[Briefly outline life history details, demographic information, generation time, and ecology pertinent to conservation. Include appropriate references in Appendix B.]

Population size

[Describe current population, briefly present the results of PVA (if available), include details in Appendix A.]

Traditional and local ecological knowledge

[Outline any applicable traditional and/or local ecological knowledge.]

Trends

[Describe trends in population, habitat or distribution.]

Threats and limiting factors

[Outline actual or imminent limiting factors and threats to populations or habitats. Indicate scale and immediacy of threats in a single paragraph. Include appropriate references in Appendix B. Describe any other potential threats. Consider threats to species in all part of its life cycle.]

Existing protection

[Outline existing protection, including occurrence in protected or management areas, or under stewardship agreements.]

Special significance [optional]

[Outline scientific or cultural significance of the species]

Ranks or Status

	Rank or Status
G-rank/IUCN	
N-rank/National General Status/COSEWIC	
General Status " provincial Newfoundland " S-rank/General Status	
Labrador " S-rank/General Status	

[Use latest available rank/status (verify with the Inland and Wildlife Division). If applicable, add rank or status information for adjacent jurisdictions.]

Sources of information and list of references

NOTE: all information to be supplied to the Inland Fish & Wildlife Division.

[List references with a space between each. A hanging indent is used for the second and subsequent lines of each reference.]

Collections examined

[List institutions and number of specimens examined.]

TECHNICAL SUMMARY

Distribution and Population Information	**Criteria Assessment**
extent of occurrence (EO)(km^2)	
area of occupancy (AO) (km^2)	
number of extant locations	
• *specify trend in # locations, EO, AO (decline, stable, increasing, unknown)*	
habitat trend: specify declining, stable, increasing or unknown trend in area, extent or quality of habitat	
generation time (average age of parents in the population) (indicate years, months, days, etc.)	
number of mature individuals (capable of reproduction) in the Provincial population (or, specify a range of plausible values)	
total population trend: specify declining, stable, increasing or unknown trend in number of mature individuals or number of populations	
• *are there extreme fluctuations (>1 order of magnitude) in number of mature individuals, number of locations, AO and/or EO?*	
is the total population severely fragmented (most individuals found within small and isolated populations	
Rescue Effect (immigration from an outside source)	
does species exist elsewhere?	
status of the outside population(s)?	
is immigration known or possible?	
would immigrants be adapted to survive here?	
is there sufficient habitat for immigrants here?	

NOTE: Information presented in Appendices may not be included in the published status report. The data will be archived by and, if available, may be requested from the Inland Fish & Wildlife Division.

Appendix A. Population Information

[Include table(s) detailing: 1) recently verified occurrences/range use (verified within the last 25 years), 2) recent search effort (areas searched within the last 25 years with estimate of effort), 3) historical verified occurrences/range use (not verified in the last 25 years), 4) other observations (unverified occurrences) and 5)potential sites unexplored (explain reason for potential)

Include details on locations, population size and data accuracy, and describe what constitutes a verified occurrence.]

Appendix B. Sources and References.

[Present data associated with conclusions. Cite sources and references and briefly support your assessment of the biological data, and threat level assignments.]

Update [if not an update, delete]

The Status of

[English Common Name]

[(Scientific Name)]

in Newfoundland and Labrador

[insert picture or sketch]

THE SPECIES STATUS ADVISORY COMMITTEE
REPORT NO. [#]

Recommended Status: [STATUS]

[Date]

[Logo]

RECOMMENDED STATUS

Recommended status: [STATUS]	**Current designation:** NL Endangered Species Act: [designation, date] Federal Species at Risk Act: [designation, date]
Criteria met: [SSAC criteria met]	
Reasons for designation: [Rationale for the recommended status]	

STATUS REPORT

[Full scientific name including authority]

[Common name (English)]

[Common name (French, aboriginal, and/or local) (if available)]

[Name of population(s) or subspecies (if applicable)]

[Family]
[Life form]

Distribution

Global: [Describe global range of occurrence (Species as a whole, and individual populations or subspecies, if applicable)]
National: [Describe national range of occurrence (Species as a whole, and individual populations or subspecies, if applicable)]
Provincial: [Describe provincial range of occurrence (Species as a whole, and individual populations or subspecies, if applicable)]

Annotated range map

[Insert map outlining provincial occurrences/distribution.
[Use properly geo-referenced map of either Newfoundland, or Labrador, or both, as appropriate. Templates are provided for use if desired (see attached files).
Include detailed annotations in Appendix A.
Maps should include verified occurrences/range use. Additional (unverified) information, if included, should be clearly distinct from verified information.]

Description and habitat

[Insert picture of organism in habitat and/or habitat]
[In one paragraph briefly describe the organism, its general habitat, and specific habitat requirements.]

Overview of Biology

[Briefly outline life history details, demographic information, generation time, and ecology pertinent to conservation. Include appropriate references in Appendix B.]

Population size

[Describe current population, briefly present the results of PVA (if available), include details in Appendix A.]

Traditional and local ecological knowledge

[Outline any applicable traditional and/or local ecological knowledge.]

Trends

[Describe trends in population, habitat or distribution.]

Threats and limiting factors

[Outline actual or imminent limiting factors and threats to populations or habitats. Indicate scale and immediacy of threats in a single paragraph. Include appropriate references in Appendix B. Describe any other potential threats. Consider threats to species in all part of its life cycle.]

Existing protection

[Outline existing protection, including occurrence in protected or management areas, or under stewardship agreements.]

Special significance [optional]

[Outline scientific or cultural significance of the species]

Ranks or Status

	Rank or Status
G-rank/IUCN	
N-rank/National General Status/COSEWIC	
General Status – provincial	
Newfoundland – S-rank/General Status	
Labrador – S-rank/General Status	

[Use latest available rank/status (verify with the Inland and Wildlife Division). If applicable, add rank or status information for adjacent jurisdictions.]

Sources of information and list of references
NOTE: all information to be supplied to the Inland Fish & Wildlife Division.

[List references with a space between each. A hanging indent is used for the second and subsequent lines of each reference.]

Collections examined

[List institutions and number of specimens examined.]

TECHNICAL SUMMARY

Distribution and Population Information	**Criteria Assessment**
● *extent of occurrence (EO)(km²)*	
area of occupancy (AO) (km²)	
number of extant locations	
● *specify trend in # locations, EO, AO (decline, stable, increasing, unknown)*	
● *habitat trend: specify declining, stable, increasing or unknown trend in area, extent or quality of habitat*	
generation time (average age of parents in the population) (indicate years, months, days, etc.)	
number of mature individuals (capable of reproduction) in the Provincial population (or, specify a range of plausible values)	
total population trend: specify declining, stable, increasing or unknown trend in number of mature individuals or number of populations	
● *are there extreme fluctuations (>1 order of magnitude) in number of mature individuals, number of locations, AO and/or EO?*	
● *is the total population severely fragmented (most individuals found within small and isolated populations between which there is little exchange, i.e., ≤ 1 successful migrant / year)?*	
Rescue Effect (immigration from an outside source)	
does species exist elsewhere?	
● *status of the outside population(s)?*	
● *is immigration known or possible?*	
● *would immigrants be adapted to survive here?*	
● *is there sufficient habitat for immigrants here?*	

NOTE: Information presented in Appendices may not be included in the published status report. The data will be archived by and, if available, may be requested from the Inland Fish & Wildlife Division.

Appendix A. Population Information

[Include table(s) detailing: 1) recently verified occurrences/range use (verified within the last 25 years), 2) recent search effort (areas searched within the last 25 years with estimate of effort), 3) historical verified occurrences/range use (not verified in the last 25 years), 4) other observations (unverified occurrences) and 5)potential sites unexplored (explain reason for potential)

Include details on locations, population size and data accuracy, and describe what constitutes a verified occurrence.]

Appendix B. Sources and References.

[Present data associated with conclusions. Cite sources and references and briefly support your assessment of the biological data, and threat level assignments.]

Appendix 3. Priority Lists.

SSAC Vascular Plant Priority List

Species/ Population	SSAC Priority Rationale	S-rank (NF)	S-rank (Lab)	N-rank	G-rank
Neotorularia humilis	Only one known occurrence	S1		N?	G4
Astragalus bodinii	Only one known occurrence (near Cook's Harbour), northern Cordilleran disjunct, near area of human activity	S1		NNR	G4
Symphotrichum boreale	Only one known occurrence (Wild Cove Brook), near populated area and commercial activities	S1		N5	G5
Prenanthes racemosa var racemosa	Only one known occurrence (Wild Cove Brook), near populated area and commercial activities	S1	S?	N?	G5T?
Erigeron compositus	Only one known occurrence (near Corner Brook), calciphile; arctic-alpine disjunct	S1		N5	G5
Carex petricosa var misandroides	Only five occurrences, relocated at only a single location in NF, reported for Labrador	S1	S?	N1N2	G1G2Q
Platanthera foetida	Only one known occurrence, cordilleran disjunct, calciphile, small population	S1		N9	G5
Potamogeton strictifolius	Only one known location (Flower's Cove), grows in alkaline waters; type locality	S1		N?	G5
Erysimum inconspicuum var coarctatum	Only one known location (Gros Morne National Park); endemic to the Gulf of St. Lawrence	S1		N2	G5?T2
Sagina saginoides	Only one known location (White Hills); wide arctic-alpine circumpolar disjunct	S1	S?	N?	G5

Species/ Population	SSAC Priority Rationale	S-rank (NF)	S-rank (Lab)	N-rank	G-rank
Hedysarum boreale subsp. *mackenzii*	Only two known occurrences (Port au Port); one population threatened by human activity; boreal North American disjunct; mostly western and Hudson Bay	S1		N5?	G5T5?
Taraxacum lyratum	Only one known occurrence (Northern Peninsula); maybe second population at Big Brook; wide arctic disjunct	S1	S?	N?	G5
Poa laxa subsp. *fernaldiana*	Less than five known occurrences (Gros Morne National Park, Northern Peninsula and Southern Labrador) on quartzite	S1	S?	N2	G2G3
Thelypteris quelpaertensis	Only one known occurrence (Gros Morne National Park); wide cordilleran disjunct (amphiberingian)	S1		N3	G4

SSAC Mammal Priority List

Species/ Population	SSAC Priority Rationale	S-rank (NF)	S-rank (Lab)	N-rank	G-rank
Woodland Caribou (LAB)	Decreasing population, very low number of adult animals, illegal harvest	S5	S2S3	N?	G5T?
Arctic Hare (NF)	Population status difficult to determine, small isolated populations	S3	S5	N5	G5
Northern Myotis (NF)	Population status unknown, national status -sensitive	S2S3		N4	G5
Rock Vole (Lab)	Population status unknown		S1	N4	G5
Little Brown Bat (NF)	Population status unknown, winter hibernacula areas may be limiting or under threat	S4	S4	N5	G5
Gray Wolf (NF)	Population extirpated or extinct, genetic work to confirm species status	SX	S4	N4	G4

Understanding the Ranks

All conservation data centres (CDC's) and NatureServe use a standard system for ranking species for their rarity, or as sometimes referred to, their "conservation status". The process used to rank species is a broad brush, best-estimate approach for deriving ranks as accurately as possible using existing information and expertise. For biological and ecological reasons, ranks for species found in the Province of Newfoundland and Labrador are separated into ranks for species on the island of Newfoundland and ranks for species in Labrador. Information supporting the S-ranks in turn supports ranking at two other geographic scales, the national (N-rank) and global (G-rank) scales. In Canada and with external assistance when needed, CDCs from Atlantic Canada to British Columbia have developed and continue to develop N-ranks for Canadian flora and fauna. Global ranks are assigned by the staff of NatureServe, in consultation with CDC biologists and scientific experts.

To assign the S-ranks for species in Atlantic Canada, the AC CDC works with species experts to assess the rarity of species in each jurisdiction. To assign ranks, AC CDC biologists review available information and usually convene meetings of species experts to complete ranking matrices of ecological factors for each species. These factors include number of element occurrences, distribution within the jurisdiction, species population size, trends in abundance and distribution, and degree of threats to the species.

The following two tables describe ranks at the sub-national (provincial/state) (S-Rank) and global levels (G-Rank). National rankings (N-Rank) would follow the same pattern.

Sub-national Rank Definitions: S-ranks

S1	Extremely rare throughout its range in the province (typically 5 or fewer occurrences or very few remaining individuals). May be especially vulnerable to extirpation.
S2	Rare throughout its range in the province (6 to 20 occurrences or few remaining individuals). May be vulnerable to extirpation due to rarity or other factors.
S3	Uncommon throughout its range in the province, or found only in a restricted range, even if abundant in at some locations. (21 to 100 occurrences).
S4	Usually widespread, fairly common throughout its range in the province, and apparently secure with many occurrences, but the Element is of long-term concern (e.g. watch list). (100+ occurrences).
S5	Demonstrably widespread, abundant, and secure throughout its range in the province, and essentially ineradicable under present conditions.
S#S#	Numeric range rank: A range between two consecutive numeric ranks. Denotes uncertainty about the exact rarity of the Element (e.g., S1S2).
SH	Historical: Element occurred historically throughout its range in the province (with expectation that it may be rediscovered), perhaps having not been verified in the past 20 - 70 years (depending on the species), and suspected to be still extant.
SU	Unrankable: Possibly in peril throughout its range in the province, but status uncertain; need more information.
SX	Extinct/Extirpated: Element is believed to be extirpated within the province.
S?	Unranked: Element is not yet ranked.
SA	Accidental: Accidental or casual in the province (i.e., infrequent and far outside usual range). Includes species (usually birds or butterflies) recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usu
SE	Exotic: An exotic established in the province (e.g., Purple Loosestrife or Coltsfoot); may be native in nearby regions.
SE#	Exotic numeric: An exotic established in the province that has been assigned a numeric rank.
SP	Potential: Potential that Element occurs in the province, but no occurrences reported
SR	Reported: Element reported in the province but without persuasive documentation which would provide a basis for either accepting or rejecting the report (e.g., misidentified specimen).
SRF	Reported falsely: Element erroneously reported in the province and the error has persisted in the literature.
SZ	Not of practical conservation concern in the province, because there are no definable occurrences, although the species is native and appears regularly. An NZ rank will generally be used for long distance migrants whose occurrences during their migration

Qualifiers

Breeding Status

B	Breeding: Basic rank refers to the breeding population of the element in the province.
M	Non-breeding, Migratory: Basic rank refers to the non-breeding migratory population of the element in the province.
N	Non-breeding: Basic rank refers to the non-breeding population of the element in the province.

Other

?	Inexact or uncertain: for numeric ranks, denotes inexactness, e.g., SE? denotes uncertainty of exotic status. (The ? qualifies the character immediately preceding it in the SRANK)
C	Captive or cultivated: Element is presently extant in the country or province only in captivity or cultivation.

Global Rank Definitions: G-ranks

G1	Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2	Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individual) or because of vulnerability to extinction due to some natural or man-made factor.
G3	Either very rare and local throughout its range (21 to 100 occurrences or less than 10,000 individuals) or locally in a restricted range or vulnerable to extinction from other factors.
G4	Apparently secure globally (may be rare in parts of its range).
G5	Demonstrably secure globally.
GH	Of historical occurrence throughout its range, may be rediscovered.
GX	Believed to be extinct throughout its range.
GXC	Extirpated in the wild but still known from captivity or cultivation.
G#?	Tentative rank (eg. G2?)
G#G#	Range of rank; insufficient data to assign specific global rank (eg. G2G3).
G#T#	Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definitions as above (eg. G3T1).
G#Q	Rank of a questionable species - ranked as species but questionable whether it is a species or subspecies; numbers have same definitions as above (eg. G2Q).
G#T#Q	Same as above, but validity as subspecies or variety is questioned.
GU	Due to lack of information, no rank or range can be assigned.
G?	Not yet ranked (temporary).