



Red Pine ©Claudia Hanel



Mummichog ©B. Gratwicke, Creative Commons



White Pine ©Claudia Hanel



Red Pine Cone ©John E. Maunder



White Pine ©Susan d'Entremont

# SSAC Annual Report

## 2015-2016

Prepared by the Species Status Advisory Committee

## 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 responsible Minister, species status designations and re-designations based on the best scientific, traditional, and local ecological knowledge available for the species.

### MEMBERSHIP

The *Act* allows for a committee of up to nine members. At the end of the 2015-2016 fiscal year, the Committee consisted of eight members:

#### Committee Members from 2015-16

Dr. Christine Campbell (Chair) – Aquatic invertebrates

Dr. Thomas Knight – Freshwater fish, small mammals

Dr. Paul Marino – Mosses, terrestrial invertebrates

Mr. John E. Maunder – General natural history, plants, invertebrates, vertebrates

Dr. William Montevecchi – Birds

#### New Members

Dr. André Arsenault – Lichen and Bryophytes, forest ecology

Dr. David Langor – Terrestrial Arthropods, forest ecology

Dr. Susan Squires – Rare and at risk vascular plants, conservation biology

#### Members from 2015-16 who have resigned

Dr. Luise Hermanutz – Former vascular plant expert, conservation biology; resigned on March 9, 2015 but ended her participation on the Committee in June.

The Committee was formally re-appointed and three new members were appointed on October 30, 2015. The Committee still has one vacancy. The Committee will be providing the Minister with advice on what expertise is still needed on the SSAC during the upcoming fiscal year.

The secretariat to the SSAC is provided by the Wildlife Division. The role of the secretariat is to help organize meetings and keep minutes, arrange contracts, and provide other necessary logistical support to the Committee. The secretariat is managed by:

Endangered Species and Biodiversity Section, Wildlife Division  
Department of Environment and Conservation  
PO Box 2007, 117 Riverside Dr.  
Corner Brook, NL, A2H 7S1

### THE MINISTER AND THE DEPARTMENT

Responsibility for species at risk, the *Endangered Species Act* and the SSAC rests with the Department of Environment and Conservation. Ministers Dan Crummell and Perry Trimper were responsible for the Department during the period covered by this report.

## **MEETINGS AND BUSINESS**

The Committee met once in the 2015-2016 fiscal year on November 17, 2015. A discussion was had over the possible need to provide emergency designation to Eastern White Pine (*Pinus strobus*) under the *Endangered Species Act*. It was determined based on the expertise around the table and the available science that the species was not at imminent risk of extirpation. The Committee agreed to consider the species under upcoming priority setting exercises.

This was the first SSAC meeting since the Committee was re-appointed and the new members appointed. It was an opportunity to discuss process and procedures and to begin to set priorities for the Committee given the membership changes.

Additional time was spent by members, outside of the confines of the meeting, discussing species of conservation concern, revisions to reports, administration of the Committee, preparing reports as required under the *Endangered Species Act* and the *Transparency and Accountability Act*, and preparing correspondence to the Minister and Deputy Minister.

## **PROCEDURES**

While every effort is made to convene meetings only when all members can be present, a quorum of 50% + 1 of the membership will be the minimum required to hold a meeting.

Voting on procedural matters is 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, will be required.

## **CRITERIA**

The criteria for decisions on the level of risk for a species (Endangered, Threatened, Vulnerable, Extinct, or Extirpated) follow those of the federal Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 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**

All finalized SSAC status reports are available on the SSAC website (see address below). Note that some sensitive data – mostly locational – may be omitted from this public resource.

The status report template designed by the SSAC is recorded in Appendix 2.

Priority lists are regularly updated and can also be found on the SSAC website. Priority lists are in the process of being re-assessed and will be revised in 2016-17 in light of new species status information identified through the 2015 General Status re-assessments

<http://www.env.gov.nl.ca/env/wildlife/endangeredspecies/ssac/index.html>

**Report commissioned in 2010-2011, assessment completed in 2014-15, review and revisions to the report are currently underway, however, a recommendation has not yet been sent to the Minister**

Vascular Plants

- Red Pine (*Pinus resinosa*)

**Report commissioned in 2013-2014, assessment completed in 2014-2015, review and revisions to the report are currently underway, however, a recommendation has not yet been sent to the Minister**

Freshwater Fish

- Mummichog (*Fundulus heteroclitus*)

**Species referred back to the SSAC**

**Vascular Plant**

- Shaved Sedge (*Carex tonsa* var. *tonsa*): Recommended in 2008 and referred back to the SSAC because of new information. The committee continues to evaluate and verify this new information.

**Priority species identified as requiring additional information**

Vascular Plants

- Eastern Star Sedge (*Carex radiata*)
- Ascending Moonwort (*Botrychium ascendens*)
- Common Dodder (*Cuscuta gronovii*)
- Menzie's Rattlesnake Plantain (*Goodyera oblongifolia*)
- Hops (*Humulus lupulus* var. *lupuloides*)
- Mermaidweed (*Proserpinaca pectinata*)

Lichens

- Matchstick Lichen (*Pilophorus fibula*)

The committee will begin to focus on revising priority lists over the next calendar year.

## **RECOMMENDATIONS**

Five species were listed under the *Endangered Species Act* in 2015-16: Gmelin's Watercrowfoot, Tradescant's Aster, and Water Pygmyweed, (recommended to the Minister in 2008); and Griscom's Arnica, and Woolly Arnica (recommended in 2012). Written recommendations for Red Pine and Mummichog will be forwarded to the Minister early in the 2016-17 fiscal year.

Recommendations for the listing of two additional species have previously been submitted to the Minister, as detailed below.

### **Recommendations made in 2013, government decisions outstanding**

#### Vascular Plants

- Northern Twayblade (*Listera borealis*) – Endangered
- Mountain Bladder Fern (*Cystopteris montana*) – Endangered

## **THE FUTURE**

Given that the committee has been only recently re-appointed and that several new faces are around the table the committee will spend considerable time this year pulling together lists of species in each taxonomic group for consideration in a priority setting exercise. COSEWIC has had several processes to identify those species who are a priority for assessment and the SSAC will examine these processes as part of its priority setting.

In most cases status reports for species on the priority lists have to be contracted out to individuals with detailed knowledge about the species under consideration. The number of status reports that can be commissioned and evaluated will depend primarily upon the SSAC budget, author availability and the capacity of the Committee to review and assess the reports. The priority will be to find authors and commission reports for two new species over the next year. It is anticipated that only one those may be completed and assessed before March 31, 2017.

## **APPENDICES**

- Appendix 1. COSEWIC criteria.
- Appendix 2. Status Report template
- Appendix 3. Chronology of assessments completed by the Species Status Advisory Committee

## Appendix 1.

### COSEWIC quantitative criteria and guidelines for the status assessment of wildlife species

	<b>Endangered</b>	<b>Threatened</b>
<b>A. Decline in Total Number of Mature Individuals</b>		
A1. An observed, estimated, inferred or suspected reduction in total number of mature individual over the last 10 years or 3 generations, whichever is the longer, where the causes of the reduction are: clearly reversible <b>and</b> understood <b>and</b> ceased, based on (and specifying) any of the following: (a) direct observation (b) an index of abundance appropriate to the taxon (c) a decline in index of area of occupancy, extent of occurrence and/or quality of habitat (d) actual or potential levels of exploitation (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.	Reduction of $\geq 70\%$	Reduction of $\geq 50\%$
A2. An observed, estimated, inferred or suspected reduction in total number of mature individuals over the last 10 years or 3 generations, whichever is the longer, where the reduction or its causes may not have ceased <b>or</b> may not be understood <b>or</b> may not be reversible, based on (and specifying) any of (a) to (e) under A1.	Reduction of $\geq 50\%$	Reduction of $\geq 30\%$
A3. A reduction in total number of mature individuals, projected or suspected to be met within the next 10 years or 3 generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.	Reduction of $\geq 50\%$	Reduction of $\geq 30\%$
A4. An observed, estimated, inferred, projected or suspected reduction in total number of mature individuals over any 10 year or 3 generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased <b>or</b> may not be understood <b>or</b> may not be reversible, based on (and specifying) any of (a) to (e) under A1.	Reduction of $\geq 50\%$	Reduction of $\geq 30\%$
<b>B. Small Distribution Range and Decline or Fluctuation</b>		
B1. Extent of occurrence estimated to be	$< 5,000 \text{ km}^2$	$< 20,000 \text{ km}^2$
<b>or</b>		
B2. Index of area of occupancy estimated to be	$< 500 \text{ km}^2$	$< 2,000 \text{ km}^2$
<b>and</b> (for either B1 or B2) estimates indicating at least two of a – c:		
a. Severely fragmented <b>or</b> known to exist at:	$\leq 5$ locations	$\leq 10$ locations
b. Continuing decline, observed, inferred or projected, in any of (i) extent of occurrence, (ii) index of 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 (i) extent of occurrence, (ii) index of area of occupancy, (iii) number of locations or populations, (iv) number of mature individuals.

**C. Small and Declining Number of Mature Individuals**

C. Total number of mature individuals estimated to be:

< 2,500

< 10, 000

**and** one of either C1 or C2:

C1. An estimated continuing decline in total number of mature individuals of at least:

20% within 5 years or two generations, whichever is longer, up to a maximum of 100 years in the future

10% within 10 years or three generations, whichever is longer, up to a maximum of 100 years in the future

**or**

C2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals

**and**

a.(i) No population estimated to contain

> 250 mature individuals

> 1000 mature individuals

**or**

a.(ii) one population has

≥ 95% of all mature individuals

100% of all mature individuals

**or**

b. There are extreme fluctuations in number of mature individuals.

**D. Very Small or Restricted Total Population**

D. Total number of mature individuals very small or restricted in the form of either of the following:

D1. Population estimated to have

< 250 mature individuals

< 1000 mature individuals

**or**

D2.

Does not apply

Index of area of occupancy

For threatened only: Population with a very restricted index of area of occupancy (typically < 20 km<sup>2</sup>) or number of locations (typically < 5) 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 is thus capable of becoming endangered or extinct in a very short time period.

< 20 km<sup>2</sup>

or

≤ 5 locations

**E. Quantitative Analysis**

E. Quantitative analysis (population projections) showing the probability of extinction in the wild is at least

20% within 20 years or 5 generations, whichever is longer, up to a maximum of 100 years

10% within 100 years

### **Special Concern:**

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

#### **Wildlife species may be classified as being of Special Concern if:**

- (a) the wildlife 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 wildlife species as Threatened; or
- (b) the wildlife species may become Threatened if factors suspected of negatively influencing the persistence of the wildlife species are neither reversed nor managed with demonstrable effectiveness; or
- (c) the wildlife species is near to qualifying, under any criterion, for Threatened status; or
- (d) the wildlife species qualifies for Threatened status but there is clear indication of rescue effect from extra-limital populations.

#### **Examples of reasons why a wildlife species may qualify for “Special Concern”:**

- a wildlife species that is particularly susceptible to a catastrophic event (e.g., a seabird population near an oil tanker route); or
- a wildlife species with very restricted habitat or food requirements for which a 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; or a recovering wildlife species no longer considered to be Threatened or Endangered but not yet clearly secure.

#### **Examples of reasons why a wildlife species may not qualify for “Special Concern”:**

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

### **Guidelines for use of Extinct or Extirpated**

#### **A wildlife species may be assessed as extinct or extirpated from Canada if:**

- there exists no remaining habitat for the wildlife species and there have been no records of the wildlife species despite recent surveys; or
- 50 years have passed since the last credible record of the wildlife species, despite surveys in the interim; or there is sufficient information to document that no individuals of the wildlife species remain alive.

### **Guidelines for use of Data Deficient**

Data Deficient should be used for cases where the status report has fully investigated all best available information yet that information is insufficient to: a) satisfy any criteria or assign any status, or b) resolve the wildlife species' eligibility for assessment.

#### *Examples:*

- Records of occurrence are too infrequent or too widespread to make any conclusions about extent of occurrence, population size, threats, or trends.
- Surveys to verify occurrences, when undertaken, have not been sufficiently intensive or extensive or have not been conducted at the appropriate time of the year or under suitable conditions to ensure the reliability of the conclusions drawn from the data gathered.
- The wildlife species' occurrence in Canada cannot be confirmed or denied with assurance.

Data Deficient should **not** be used if: a) the choice between two status designations is difficult to resolve by COSEWIC, or b) the status report is inadequate and has not fully investigated all best available information (in which case the report should be rejected), or c) the information available is minimally sufficient to assign status but inadequate for recovery planning or other such use.



Appendix 2.

Status Report Template.  
DRAFT

The Status of  
**[English Common Name]**  
(*[Scientific Name]* no author or date here)  
in Newfoundland and Labrador

[Image of taxon]

Photo: [Photographer; plus any permissions required]

prepared for  
**THE SPECIES STATUS ADVISORY COMMITTEE**

by  
[Author Name]  
[Author Address]

Submitted: [Date]

**[Format report exactly as indicated in this template, except where impractical. Arial font; use 12pt for main body of text. Use Canadian English; not American English. Always italicize the Latin term “*et al.*”]**

## TECHNICAL SUMMARY

**[Instructions:** Complete the Technical Summary after you have finished the report. Provide one Technical Summary for each proposed designatable unit as well as the species in its entirety within Canada. If the insular Newfoundland situation is significantly different from the Labrador situation, or if populations in the two areas are significantly disjunct, include separate entries for each region.

For the meanings of terms in this Technical Summary, refer to the section entitled Definitions and Abbreviations found on the COSEWIC/COSEPAC website (<http://www.cosewic.gc.ca/>).

Provide requested data and estimations in the right-hand column and relevant auxiliary information in the left-hand column. Replace text within square brackets [ ] with the information requested (e.g. calculation of extent of occurrence) and remove the brackets. **If there is a range of options specified in the square brackets (e.g., [observed, inferred or projected]) then choose the option(s) that apply.** If details of items in the technical summary are provided in status report text, cite relevant status report section(s). If an item in the technical summary is not applicable (e.g. a quantitative analysis was not done) delete the bracketed text. Delete these two paragraphs of instructions upon completion of the Technical Summary.]

*Genus species*

English common name

Nom commun français

Range of occurrence in Newfoundland and Labrador:

### Demographic Information

Generation time (usually average age of parents in the population; indicate if another method of estimating generation time indicated in the IUCN guidelines(2008) is being used)	yrs
Is there an [observed, inferred, or projected] continuing decline in number of mature individuals?	
Estimated percent of continuing decline in total number of mature individuals within [5 years or 2 generations]	
[Observed, estimated, inferred, or suspected] percent [reduction or increase] in total number of mature individuals over the last [10 years, or 3 generations].	
[Projected or suspected] percent [reduction or increase] in total number of mature individuals over the next [10 years, or 3 generations].	

[Observed, estimated, inferred, or suspected] percent [reduction or increase] in total number of mature individuals over any [10 years, or 3 generations] period, over a time period including both the past and the future.	
Are the causes of the decline clearly reversible and understood and ceased?	
Are there extreme fluctuations in number of mature individuals?	

### **Extent and Occupancy Information**

Estimated extent of occurrence	km <sup>2</sup>
Index of area of occupancy (IAO) (Always report 2x2 grid value).	km <sup>2</sup>
Is the total population severely fragmented?	
Number of locations*	
Is there an [observed, inferred, or projected] continuing decline in extent of occurrence?	
Is there an [observed, inferred, or projected] continuing decline in index of area of occupancy?	
Is there an [observed, inferred, or projected] continuing decline in number of populations?	
Is there an [observed, inferred, or projected] continuing decline in number of locations*?	
Is there an [observed, inferred, or projected] continuing decline in [area, extent and/or quality] of habitat?	
Are there extreme fluctuations in number of populations?	
Are there extreme fluctuations in number of locations*?	
Are there extreme fluctuations in extent of occurrence?	

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\* See Definitions and Abbreviations on [COSEWIC website](#) and [IUCN 2010](#) for more information on this term.

Are there extreme fluctuations in index of area of occupancy?	
---	--

**Number of Mature Individuals (in each population)**

Population	N Mature Individuals
Total	

**Quantitative Analysis**

Probability of extinction in the wild is at least [20% within 20 years or 5 generations, or 10% within 100 years].	
--	--

**Threats (actual or imminent, to populations or habitats)**

--

**Rescue Effect (immigration from outside NL)**

Status of outside population(s)?	
Is immigration known or possible?	
Would immigrants be adapted to survive in NL?	
Is there sufficient habitat for immigrants in NL?	
Is rescue from outside populations likely?	

**Current Status**

COSEWIC:
SSAC:

Author of Technical Summary:

Additional Sources of Information:

**Recommended Status and Reasons for Designation (to be completed by SSAC)**

<b>Recommended Status:</b>	<b>Alpha-numeric code:</b>
<b>Reasons for designation:</b>	

**Applicability of Criteria**

<p><b>Criterion A</b> (Decline in Total Number of Mature Individuals):</p> <p><b>Criterion B</b> (Small Distribution Range and Decline or Fluctuation):</p> <p><b>Criterion C</b> (Small and Declining Number of Mature Individuals):</p> <p><b>Criterion D</b> (Very Small or Restricted Total Population):</p> <p><b>Criterion E</b> (Quantitative Analysis):</p>
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## STATUS REPORT

[Full Scientific Name, including author; in general, use the SSAC-specified “designatable unit” (ie. species, subspecies, variety, etc.); however, the report writer may suggest a modification of the specified “designatable unit” if report-based research suggests a better alternative]

[Common Name (English)]; [Common Name (French, aboriginal, and/or local) – if available] [Refine according to the level of “designatable unit” used, if required (ie. Newfoundland Arctic Hare)]

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

Synonyms: [Full Scientific Name, including author; list several entries, if applicable; synonyms should be assignable to the “designatable unit” only; clear *errors* should be excluded, but may be discussed in the “Systematic/Taxonomic Clarifications” section]

Family: [Latin Name] [(Common Name)]

Life Form: [examples: “Herbaceous, perennial, amphibious forb”; “Animal, vertebrate, bird, woodpecker” ... there is no exact taxonomy here.].

### **[Systematic/Taxonomic Clarifications (if required)]**

[A systematic/taxonomic clarification may be critical to properly understanding the precise taxon being discussed, and/or to facilitate more precise delimitation of global, national or even provincial distributions.

A brief entry should be inserted here if such is critical to the general understanding of the main text, and to the ability of the reader to assess the status of the species being reported upon.

A more detailed systematic/taxonomic clarification may, nevertheless, be critical to a more comprehensive technical understanding of the subject as a whole; if so, a more detailed entry should be placed in Appendix B.

In some cases, both a brief entry and a more detailed entry may be useful.]

## Distribution

**Global:** (Figure x [if required])

North America (excluding Canada) [if the taxon being reported upon occurs only in Canada, simply state that fact]:

[Country: vertically list country headings: e.g.: United States, Greenland, Mexico, St.-Pierre et Miquelon (France)] [For each country, include a general statement of national distribution, followed by a comprehensive listing of individual states where the taxon being reported upon is found (if applicable), in logical geographical order]

Other Continents or Individual Political Jurisdictions [if required] [vertically list continents, and included countries, where the taxon is found, in logical geographical order]

**National** [i.e. Canada]: (Figure x) [if required]

[Include a general statement of national distribution, followed by a list of provinces where the taxon is found, in logical geographical order]

**Provincial:** (Figure x)

[List all known occurrence localities (or, if localities are particularly numerous, list localities more generally), in logical geographical order.]

[List localities separately for Newfoundland, and for Labrador]

[Note any qualifications, and/or discrepancies.]

[In all cases, distribution entries should refer only to the specific “designatable unit” being reported upon; not to the “species as a whole”... unless there is some specific reason for doing so.]

[In all cases, if a taxon is migratory and/or nomadic, distinguish between breeding and wintering/other distributions; if appropriate, also note distribution during the migratory period.]

[In all cases, cite references.]



**Annotated Global Range Map** [if required; show overall global species range, broken down into lower taxon range units if such exist]

Figure x. Global distribution of [taxon]

**Annotated National Range Map** [if required; show overall national species range, broken down into lower taxon range units if such exist]

Figure x. National distribution of [taxon]

### **Annotated Provincial Range Map**

[Good quality outline map of Newfoundland and/or Labrador, identifying individual known occurrence localities. If a migratory/nomadic taxon, distinguish between breeding/nesting localities, and other occurrence localities if required. Show overall provincial species range, broken down into lower taxon range units if such exist]

[With regard to St.-Pierre et Miquelon: since the archipelago is geographically part of Newfoundland, it is generally useful to map and discuss SPM distributions as if they were part of the political entity of Newfoundland. ]

Figure x. Known occurrence localities for [taxon] in Newfoundland and Labrador:  
[List localities.]

[For all maps: if a map is from the literature or from the Internet, obtain written permission to use, and record that permission in the figure caption; otherwise re-draft. Make map symbols large enough to be seen properly; if colours are used, make sure that they are of different enough contrast to be distinguishable in black-and-white printed copies; treat breeding and “other” distributions separately (ie. use different symbols); additionally, for provincial map/s, treat historical and recent distributions, as well as verified and unverified records, separately; if things get too complicated, add additional maps.]

### **Description**

[BRIEFLY describe the organism, in a way that presents a good visual impression to the layperson. If deemed to be useful, a more detailed description, including photographs, may be placed in Appendix B. Obtain permission to use all photos, if necessary, and credit appropriately.]

## Habitat

[Briefly describe the habitat. If a migratory/nomadic species, distinguish between breeding/nesting habitats and other occurrence-related habitats. Begin with a general description of habitat throughout the taxon's range. Follow up with a more detailed description of its habitat within Newfoundland and Labrador. If habitat differs significantly between occurrence localities, it may be necessary to describe habitat specifically for each locality. A photo of the organism in its habitat may be useful to include here, if the habitat does not vary too greatly between occurrence localities. Obtain permission to use all photos, if necessary, and credit appropriately. If appropriate, a more detailed description, including photographs, may be placed in Appendix B. For plants, and for aquatic taxa in general, soil and water chemistry may be a particularly important factor. Climatic factors, both micro- and macro- should also be discussed. For smaller organisms, microhabitat/microclimate may be just as significant, or even more significant, than gross habitat/climate.]

## Overview of Biology

[Briefly outline life history details, demographic information, generation time, and ecology, *as each is pertinent to conservation*. If appropriate, a more detailed description may be placed in Appendix B.]

## Population Size and Area of Occupancy

[Briefly describe present population size, and area of occupancy [make sure you understand the definition of "area of occupancy"], for each Provincial occurrence locality, where this is possible. Where populations are dispersed, a direct calculation of AO may not be possible; however, in some cases, proxies may be useful, such as the estimated total area of several individual territories or home ranges. A general statement addressing the entire/larger range of the taxon may also be useful. For migratory and/or nomadic taxa, the population size and area of occupancy entries may need specific comment. Briefly discuss methodologies for arriving at the figures presented, where applicable. Information could be provided in table format if appropriate. Ensure that the information from this report section both documents and agrees with that also placed in the technical summary, and in other related report sections. Please consult the instructions for calculating IAO included in the author package.]

## **Aboriginal, Traditional and Local Ecological Knowledge**

[Outline any known applicable aboriginal, traditional and/or local ecological knowledge. The report writer is responsible for contacting local aboriginal resources.]

## **Trends**

[Describe known trends in distribution, population, and habitat. If sufficient data are available, a graphical figure should be included. Ensure that the information from this report section both documents and agrees with that also placed in the technical summary, and in other related report sections.]

## **Threats and Limiting Factors**

[Outline actual or imminent threats and limiting factors affecting populations or habitats; if a taxon is migratory and/or nomadic, also treat threats and limiting factors within breeding versus wintering/other distributions separately; if appropriate also note threats and limiting factors during the migratory/nomadic period. Briefly indicate scale and immediacy of threats. A RENEW Threat Assessment Table, which ranks threats by value, may be useful. Describe any additional potential threats. Consider threats to the taxon in all parts of its range and life cycle. Briefly present the results of any available Population Viability Analysis (PVA). A more detailed analysis may be placed in Appendix B.]

[If “critical habitat” (habitat necessary for the survival of the species) is identified/identifiable, include description and provincial location. Any precise location information should be placed in Appendix A.]

## **Existing Protection**

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

## **Special Significance**

[Outline any known scientific or cultural significance of the taxon.]

## Cited References

[Provide a complete list of literature and/or similar references that are cited either within the main text or within any of the included appendices. List references with a space between each, using hanging indents.

Examples for literature citations:

Arnason, T., R. J. Hebda, and T. Johns. 1981. Use of plants for food and medicine by native peoples of eastern Canada. *Canadian Journal of Botany* 59: 2189-2325.

Fernald, M. L. 1950. *Gray's Manual of Botany*. Eighth edition. American Book Company. Ixiv + 1632 pp.

Examples for Web citations (record full document title, full URL, and "date last accessed:")

Meades, S. J., S. G. Hay, and L. Brouillet. 2000. Annotated checklist of the vascular plants of Newfoundland and Labrador. <http://digitalnaturalhistory.com/meades.htm> (Last accessed October 15, 2007)

DeGrace, J. 1974. Limestone resources of Newfoundland and Labrador. Report 74-2. Department of Mines and Energy, Mineral Development Division. St. John's, Newfoundland. [web version available at: <http://www.nr.gov.nl.ca/mines&en/publications/geology/DeGrace.pdf> (Last accessed October 13, 2007)]

## Personal Communications [if required]

[For each entry, include professional affiliations and a statement of relevant expertise.]

## Additional Sources of information [if required]

## Collections Examined

[List by institution, citing the number of specimen lots examined.]

## Rank or Status

[A suggested format is presented below. Use the latest Newfoundland and Labrador rank/status data, available from the Provincial Wildlife Division. Additional data, for adjacent jurisdictions, are available from sources including (but not necessarily exclusive to) NatureServe Explorer, and Canadian Endangered Species Conservation Council (CESCC). 2006. Wild Species 2005. Cite sources used.]

<b>Global</b>	
G-rank	
IUCN	
<b>National</b>	
N-rank	
National General Status	[e.g. May be at risk (2)]
COSEWIC	
<b>Provincial</b>	
Provincial General Status	[e.g. May be at risk (2)]
Newfoundland S-rank	
Newfoundland General Status	[e.g. May be at risk (2)]
Labrador S-rank	
Labrador General Status	[e.g. May be at risk (2)]
<b>Adjacent Jurisdictions</b>	
Nova Scotia S-Rank	[e.g. May be at risk (2)]
Nova Scotia General Status	
Prince Edward Island S-Rank	
Prince Edward Island General Status	[e.g. May be at risk (2)]
New Brunswick S-Rank	
New Brunswick General Status	[e.g. May be at risk (2)]
Québec S-Rank	
Québec General Status	[e.g. May be at risk (2)]

## **Appendix A. Population Information**

[This appendix contains population-related information in support of the main report. The main report should reference entries in Appendix A, with the exception of detailed maps.]

### **Recently Verified Occurrences/Range Use (recorded within the last 25 years)**

[Verified occurrences consist of observations supported by the collection of a voucher specimen (i.e., a sample to be identified/confirmed by experts and deposited in a museum); or well-documented, diagnostic, photographs; or well-documented field observations meeting the observational standards for verification accepted by reputable workers in any particular field (this is particularly relevant to bird or mammal field observations). Note: records from databases or Internet listings may or may not qualify as “verified” records; knowledgeable judgment is required here; when in doubt, such records should be included in the “Other Observations ...” section.]

[For all occurrence records, where data is available: note [1] dates of observation/collections, [2] general and specific occurrence localities (including lat/long or UTM coordinates (specify datum), where available), [3] habitat, [4] estimates of population size and area of occupancy (where available), [5] observer and/or collector, and [6] collection/museum catalogue number and/or photo reference (if applicable). Where detailed information is available, and where practical, records should be listed by individual site. Otherwise, or in addition, the records may be compiled into one or more summarizing tables.]

[List Newfoundland records separately from Labrador records; also separate St.-Pierre et Miquelon records, if included.]

### **Historical Verified Occurrences/Range Use (recorded prior to the last 25 years)**

[For all occurrence records, where data is available: note [1] dates of observation/collections, [2] general and specific occurrence localities (including lat/long or UTM coordinates (specify datum), where available), [3] habitat, [4] estimates of population size and area of occupancy (where available), [5] observer and/or collector, and [6] collection/museum catalogue number and/or photo reference (if applicable). Where detailed information is available, and where practical, records should be listed by individual site. Otherwise, or in addition, the records may be compiled into one or more summarizing tables.]

[List Newfoundland records separately from Labrador records; also separate St.-Pierre et Miquelon records, if included.]

## **Other Observations (Unverified)**

[While unverified, all records listed here should, nevertheless, be considered to be basically credible. May include some or all records from databases and internet lists; see additional comments above]

[For all occurrence records, where data is available: note [1] dates of observation/collections, [2] general and specific occurrence localities (including lat/long or UTM coordinates (specify datum), where available), [3] habitat, [4] estimates of population size and area of occupancy (where available), [5] observer and/or collector, and [6] collection/museum catalogue number and/or photo reference (if applicable). Where detailed information is available, and where practical, records should be listed by individual site. Otherwise, or in addition, the records may be compiled into one or more summarizing tables.]

[List Newfoundland records separately from Labrador records; also separate St.-Pierre et Miquelon records, if included.]

## **Recent Search Effort (areas searched within the last 25 years with estimate of effort)**

[A comprehensive accounting of the efforts of earlier researchers, and, if applicable, any additional efforts by the author of the report.]

## **Potential Sites Unexplored**

[Analysis of the potential of as yet unexplored sites to harbour the taxon being reported upon.]

## **Appendix B. Supplementary Details**

[This appendix should contain all supplementary details that are considered to be useful additional background support for the main report (other than population-related information, which should be placed in Appendix A). The main report should contain ONLY information that is critically required for actually assigning species status. The main report should reference entries included in Appendix B.]

### **Taxonomic Clarifications**

[Detailed entry, if required]

### **Description**

[Detailed entry, if required. Photos if required.]

### **Habitat**

[Detailed entry, if required. Photos if required.]

### **Biology**

[Detailed entry, if required]

### **Threats and Limiting Factors**

[Detailed entry, if required. Include precise or sensitive information about critical habitat.]

### **Collections Examined**

[Detailed entry, if required. Indicate museum/institutional collections, and catalogue/collection numbers.]

**[Additional entries, as appropriate]**



## Appendix 3

### Chronology of Assessments by the Species Status Advisory Committee

Common Name	Scientific Name	SSAC Assessment	Date of Recommendation:	Decision from Government Required By:**	Designated Status or Reason Not Designated:
Low Northern Rockcress	<i>Neotorularia humilis</i>	Endangered	6-Oct-04		Endangered
Gray-cheeked Thrush Reassessed June 21, 2010	<i>Catharus minimus</i>	Vulnerable	4-Nov-05		Vulnerable
Northern Wheatear	<i>Oenanthe oenanthe leucorhoa</i>	Not at Risk		No recommendation required.	
Caspian Tern	<i>Sterna caspia</i>	Not at Risk		No recommendation required.	
Redwine Caribou Herd	<i>Rangifer tarandus caribou</i> (Redwine Population)			SSAC has decided not to assess populations but species as a whole. This assessment was never completed.	
Blowout Tiger Beetle	<i>Cicindela limbata labradorensis</i>	Data Deficient		Status report being revised due to new information.	
MacKenzie's SweetVetch	<i>Hedysarum boreale</i> subsp. <i>mackenzii</i>	Endangered	21-Oct-06		Endangered
Rattlesnakeroot	<i>Prenanthes racemosa</i>	Endangered	21-Oct-06		Endangered
Northern Bog Aster	<i>Symphyotrichum boreale</i>	Endangered	21-Oct-06		Endangered
Crowded Wormseed Mustard	<i>Erysimum inconspicuum</i> var. <i>coarctatum</i>	Endangered	21-Oct-06		Endangered
Mountain Fern	<i>Thelypteris quelpaertensis</i>	Vulnerable	21-Oct-06		Vulnerable
Graceful Felt Lichen	<i>Erioderma mollissimum</i>	Endangered	8-May-08		Endangered
Bodin's Milkvetch	<i>Astragalus bodinii</i>	Threatened	29-May-08		Threatened
Shaved Sedge	<i>Carex tonsa</i> var. <i>tonsa</i>	Threatened	29-May-08		Returned to SSAC for re-assessment (new data)
Cutleaf Fleabane	<i>Erigeron compositus</i>	Endangered	29-May-08		Endangered
Feathery False Solomon's Seal	<i>Maianthemum racemosum</i> subsp. <i>racemosum</i>	Endangered	29-May-08		Endangered
Sharpleaf Aster	<i>Ocelmena acuminata</i>	Threatened	29-May-08		Threatened
Alaska Rein Orchid	<i>Platanthera foetida</i>	Endangered	29-May-08		Endangered
Gmelin's Watercrowfoot	<i>Ranunculus gmelinii</i>	Endangered	29-May-08		Endangered
Tradescant's Aster	<i>Symphyotrichum tradescantii</i>	Threatened	29-May-08		Threatened
Water Pygmyweed	<i>Tillaea aquatica</i>	Vulnerable	29-May-08		Vulnerable
Rock Dwelling Sedge	<i>Carex petricosa</i> var. <i>misandroides</i>	Endangered	29-May-08		Endangered
Oval-leaved Creeping Spearwort	<i>Ranunculus flammula</i> var. <i>ovalis</i>	Endangered	29-May-08		Endangered
Lindley's Aster	<i>Symphyotrichum ciliolatum</i>	Endangered	07-Oct-10		Endangered

### Appendix 3: Chronology of Assessments by the Species Status Advisory Committee (continued)

Common Name	Scientific Name	SSAC Assessment	Date of Recommendation:	Decision from Government Required By:**	Designated Status or Reason Not Designated:
Arctic Hare	<i>Lepus arcticus</i>	Data Deficient		No recommendation required.	
Bobolink	<i>Dolichonyx oryzivorus</i>	Vulnerable	07-Oct-10		Vulnerable
Bank Swallow	<i>Riparia riparia riparia</i>	Not at Risk		No recommendation required.	
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Data Deficient		No recommendation required.	
Vreeland's Striped Coralroot	<i>Corallorhiza striata</i> var. <i>vreelandii</i>	Endangered	07-Oct-10		Endangered
Gray-cheeked Thrush (Newfoundland subspecies)	<i>Catharus minimus minimus</i>	Threatened	07-Oct-10		Threatened
Gray-cheeked Thrush (Northern subspecies)	<i>Catharus minimus aliciae</i>	Not at Risk		No recommendation required.	
Woolly Arnica	<i>Arnica angustifolia</i> subsp. <i>tomentosa</i>	Endangered	22-Oct-12		Endangered
Griscom's Arnica	<i>Arnica griscomii</i> subsp. <i>griscomii</i>	Endangered	22-Oct-12		Endangered
<b>Northern Twayblade</b>	<b><i>Listera borealis</i></b>	<b>Endangered</b>	<b>25-Sep-13</b>	<b>24-Dec-13</b>	<b>Response overdue</b>
<b>Mountain Bladder Fern (Newfoundland Designatable Unit)</b>	<b><i>Cystopteris montana</i></b>	<b>Endangered</b>	<b>25-Sep-13</b>	<b>24-Dec-13</b>	<b>Response overdue</b>
Red Pine	<i>Pinus resinosa</i>		Recommendation not yet sent to Minister		
Mummichog	<i>Fundulus heteroclitus macrolepidotus</i>		Recommendation not yet sent to Minister		

\*\*The Lieutenant-Governor in Council shall within 90 days of the minister receiving a written recommendation from SSAC to designate a species, give the minister approval to do one of the following: (a) designate the species under section 7 in the recommended or an equivalent category; (b) designate the species under section 7 in a different category and release to the public the reason for using a different category; or (c) make no designation and release to the public the reason there will be no designation. Section 8 of the Endangered Species Act.

**Based on the legislated timeline above, a decision from Government is overdue.**