



2021

**IMPLEMENTATION
REPORT:**
MULTI-SPECIES ACTION
PLAN
for Gros Morne National Park
of Canada
(2016-2021)



Parks
Canada

Parcs
Canada

Canada

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For copies of the report, or for additional information on species at risk, including the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Status Reports, residence descriptions, recovery strategies, action plans and other related recovery documents, please visit the Species at Risk (SAR) Public Registry¹.

Photo credits:

Cover illustration, clockwise from top left: Gros Morne Mountain, J. Hoffman, Parks Canada Agency (PCA); Caribou, C. Davignon, PCA; Harlequin ducks, M. Burzynski; Mountain Fern, M. Burzynski; Barrow's Goldeneye, D. Whitaker, PCA. This page: American Marten (Newfoundland population), R. Reid, PCA. Page i: Piping Plover chick, D. Whitaker, PCA. Page ii: Piping Plover, D. Whitaker, PCA. Page iii: Griscom's Arnica, M. Burzynski.

Page 1, left to right: Piping Plover chick, American Marten, Barrow's Goldeneye, D. Whitaker, PCA; Griscom's Arnica, M. Burzynski; Badweather Pond, J. Hoffman, PCA; Checking nest boxes in the Long Range mountains, Red Crossbill, Little Brown Myotis, Moose, Common Goldeneye eggs in nest box, D. Whitaker, PCA. Page 9: American Marten (Newfoundland population), D. Whitaker, PCA; American marten suitable habitat map, J. Burton and S. Taylor, PCA. Page 12: Moose, M. Vaters. Page 13: Barrow's Goldeneye nest survey, H. Lightfoot, PCA. Page 14: Badweather Pond, J. Hoffman, PCA. Page 15: Western Brook Pond, J. Hoffman, PCA.

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¹ <http://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>

Preface

The federal, provincial, and territorial government signatories under the [Accord for the Protection of Species at Risk \(1996\)](#)² agreed to establish complementary legislation and programs that provide for effective protection of species at risk throughout Canada. Under the *Species at Risk Act* (S.C. 2002, c.29) (SARA), action plans outline measures that will be taken to implement recovery strategies for SARA-listed Extirpated, Endangered and Threatened species. Parks Canada's multi-species action plans address a suite of species of conservation concern within one or more Parks Canada managed areas, including species that require an action plan under SARA.

The Minister responsible for the Parks Canada Agency (the Minister of the Environment and Climate Change) is the competent minister under SARA for species found in Gros Morne National Park of Canada and in 2016 published the Multi-species Action Plan for Gros Morne National Park of Canada.

Under section 55 of SARA, the competent minister must monitor the implementation of an action plan and the progress towards meeting its objectives and assess and report on its implementation and its ecological and socio-economic impacts five years after the action plan comes into effect. A copy of the report must be included in the Species at Risk Public Registry. The Minister responsible for the Parks Canada Agency has prepared this Implementation Report: Multi-species Action Plan for Gros Morne National Park of Canada (2016-2021).

The achievement of population and distribution objectives identified within the recovery strategy or management plan for a species may require a long time frame. In these cases, a five-year reporting window may not be sufficient to show demonstrable progress towards meeting site-based population and distribution objectives identified for that species within a Parks Canada site-based action plan. Parks Canada monitors, evaluates and, as necessary, adapts measures taken to achieve species survival or recovery, and will report on progress towards meeting site-based population and distribution objectives every five years.

² <https://www.canada.ca/en/environment-climate-change/services/species-risk-act-accord-funding.html>

Acknowledgments

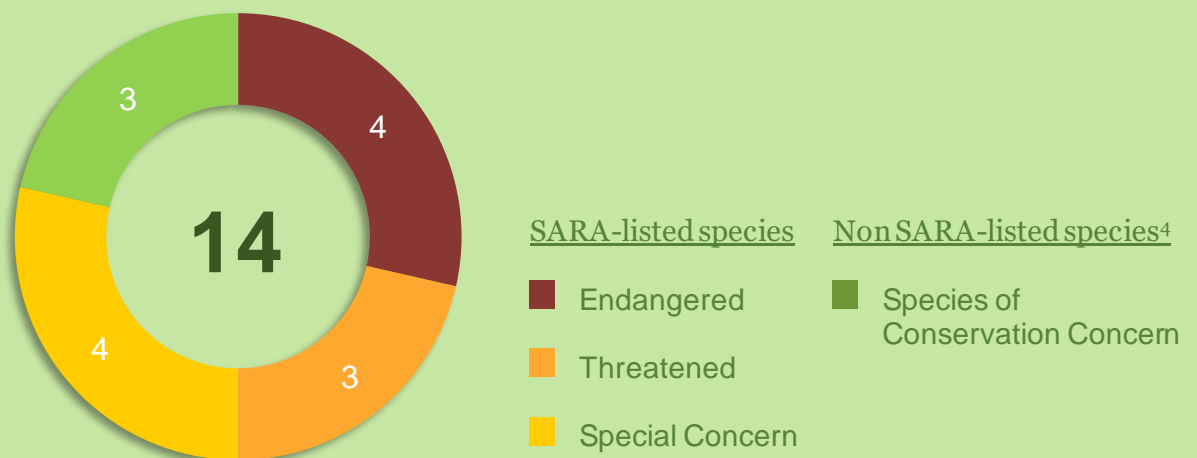
Parks Canada would like to acknowledge those who have contributed to implementation of the Multi-species Action Plan for Gros Morne National Park of Canada. Thanks are extended to: Parks Canada staff members Darroch Whitaker, Holly Lightfoot, Gabrielle Robineau Charette, Jake Burton, Scott Taylor, Shawn Gerrow, Margie Wilkes, Greg Knott, Ray Reid, Tom Knight, Randy Thompson (ret.), Carson Wentzell (ret.), Jennifer Hoffman, Noah Campbell and Darien Ure. In addition, thanks are extended to Qalipu Mi'kmaq First Nation and Miawpukek First Nation; Jordi Segers, Scott McBurney and Tessa McBurney (Canadian Wildlife Health Cooperative); and Erin Fraser, Darrian Washinger, Ian Warkentin and Jenna McDermott (Memorial University, Grenfell Campus).

EXECUTIVE SUMMARY

This document reports on implementation of the Multi-species Action Plan for Gros Morne National Park of Canada between 2016 and 2021. It reports on implementation of measures identified in the plan, assesses progress towards meeting site-based population and distribution objectives and evaluates socio-economic impacts.

Species Addressed³

The action plan addressed 11 SARA-listed species and three species of conservation concern. Measures and site-based population and distribution objectives identified within the action plan were focused on two species, for which management actions within Gros Morne National Park could have a substantive impact on species survival or recovery: Piping plover (melodus subspecies) and American marten, Newfoundland population.



³ The SARA-listing classifications for the species in this report may differ from the Multi-species Action Plan due to changes made to Schedule 1 of the *Species at Risk Act* since the action plan was published.

⁴ Including non SARA-listed species of conservation concern (COSEWIC assessed, provincially listed, culturally significant species) in addition to SARA-listed species provides the Parks Canada Agency with a comprehensive plan for species conservation and recovery at the site.

Implementation of the Action Plan

9 measures (recovery actions) were identified in the multi-species action plan. Implementation of the action plan is assessed by determining progress towards completing each measure and is outlined in Section 2 of this report. During the five-year period, all 9 measures were initiated⁵ and 9 were completed. An additional 4 measures identified in the action plan were implemented because resources and/or partnerships became available to support the work.



Measures
Initiated
100%⁵



Measures
Completed
100%



PDOs
Partially
Achieved
100%



PDOs Fully
Achieved
100%

Ecological Impacts

2 site-based, population and distribution objectives (PDOs) were developed in the action plan; however, one was not applicable as the species (Piping Plover) did not breed within the site over the last 5 years. Ecological impacts are assessed by measuring progress towards achieving the site-based population and distribution objectives and are outlined in Section 4. The one objective that was implemented was fully achieved.

Socio-Economic Impacts

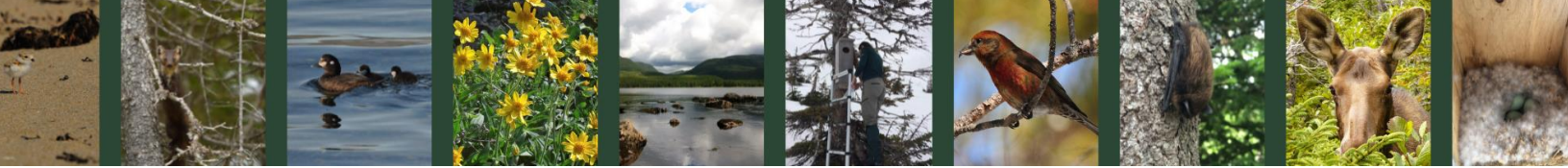
The measures proposed in the action plan had limited socio-economic impact and placed no restrictions on land outside the boundary of the national park. Direct costs of implementing this action plan were borne by Parks Canada. Indirect costs were minimal while benefits included positive impacts on park ecological integrity, greater awareness of species and enhanced opportunities for engagement of visitors, local communities and Indigenous groups.



⁵ Includes measures that are 100% completed.

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1. CONTEXT

This document reports on implementation of the Multi-species Action Plan for Gros Morne National Park of Canada⁶ between 2016 and 2021, assesses progress towards meeting its population and distribution objectives, and evaluates its socio-economic impacts. It addresses 14 species, including 7 SARA-listed Extirpated, Endangered, and Threatened species (for which an action plan is required) as well as four SARA-listed Special Concern species⁷.

Site-based population and distribution objectives were developed for two species for which implementation measures within Gros Morne National Park could have a substantive impact on recovery: Piping plover (melodus subspecies) and American marten (Newfoundland population).

2. IMPLEMENTATION OF THE ACTION PLAN

Implementation of the Multi-species Action Plan for Gros Morne National Park of Canada is assessed by measuring progress towards completing the recovery measures identified in the action plan (Table 1). Refer to the original action plan⁶ for a description of each measure, the desired outcomes, and the threats that each measure addresses.

⁶ Parks Canada Agency. 2016. Multi-species Action Plan for Gros Morne National Park [Final Version]. Species at Risk Act Action Plan Series. Parks Canada Agency, Ottawa. iv + 19 pp.

⁷ The status of these species may have changed over the reporting period.

Table 1. Progress towards completing recovery measures committed to by Gros Morne National Park (* indicates an ongoing measure that may continue into a future multi-species action plan).

Species and measure	Desired outcome	Progress towards outcome	Progress (% complete)
<p>1) Piping plover</p> <p>Reduce human disturbance of breeding plovers: Take steps to reduce disturbance of breeding plovers, including use of interpretative panels and signage to promote compliance with disturbance mitigation measures (e.g., dogs on leash) and, if warranted, area closures in the vicinity of nests coupled with signage to redirect visitors to nearby open beaches.</p>	<p>Signage is present on plover beaches and nesting areas are closed when nesting occurs⁸.</p>	<ul style="list-style-type: none"> • Interpretive panels and signage are used to promote compliance with beach regulations (e.g., dogs on leash) and, when closures occur, to redirect visitors to open beaches. • Suitable habitat is surveyed each spring; if a pair is found, productivity is monitored following Parks Canada's Piping Plover monitoring protocol. • No breeding pairs have been observed since 2013. GMNP is at the northern limit of their range. 	<p>100%</p>
<p>2) Red Knot</p> <p>Visitor awareness about shorebird stopovers: Install interpretative panels and signage at Belldown's</p>	<p>Information on site importance to shorebirds and park regulations is available to visitors at stopover sites to encourage compliance and</p>	<ul style="list-style-type: none"> • Information panels describing the significance of shorebirds are in place at two day-use areas along route 430. • Low numbers of Red Knot pass through and stopover in GMNP during fall migration. Monitoring of shorebirds, including Red Knot, 	<p>100%</p>

⁸ This desired outcome was modified from the outcome identified in the action plan in order to avoid duplication with the Population and Distribution Objective outlined in Table 3.

Species and measure	Desired outcome	Progress towards outcome	Progress (% complete)
Point and other stopover sites in the future.	minimize human disturbance.	occurs each fall at Belldown's Point using Environment and Climate Change Canada's Atlantic Canada Shorebird Survey protocol.	
<p>3) American Marten, Newfoundland population</p> <p>Snaring Regulations: Develop initiatives to promote compliance with brass/picture cord snare wire regulations in GMNP and adjacent areas.</p>	No stainless steel wire is used in GMNP.	<ul style="list-style-type: none"> • When a snaring permit is issued for Gros Morne National Park, a park staff member explains the legal and biological need for modified snares and discusses the importance and practical considerations for their successful use. The user then signs a form saying they will use brass snares instead of stainless steel to comply with SARA requirements to protect the species and the park staff member gives them a complimentary roll of high quality brass snare wire. • Field staff and wardens continue to monitor for compliance in the use of stainless steel snares. 	100%*
<p>4) American Marten, Newfoundland population</p> <p>Habitat mapping: Update GIS land cover maps for GMNP and in conjunction with the province, use the updated classification to map suitable and critical habitat for marten.</p>	Updated GIS land cover data is available and marten habitat in GMNP is mapped by 2016.	<ul style="list-style-type: none"> • An updated digital forest inventory was developed for the park based on 2010 aerial photography. • A marten habitat model was developed based on the description of critical habitat presented in the species' recovery strategy. Suitable habitat was identified at the scales of typical male (30km²/ 3090 m radius) and female (14km²/ 2185 m radius) marten home ranges. A map of suitable marten habitat based on the 2010 forest inventory was developed using this model. • Results show that over 30% of the park is suitable marten habitat. While marten have been observed in much of this area there are large areas (e.g., south of Sally's Cove, the back 	100%

Species and measure	Desired outcome	Progress towards outcome	Progress (% complete)
		<p>of Trout River Pond and the Lookout Hills) where marten have not yet been observed. Future survey and monitoring efforts will focus on these areas in an effort to determine if they have been re-colonized by marten.</p>	
<p>5) American Marten, Newfoundland population</p> <p>Moose population management: Reduce moose populations and maintain them at a target density of 1-2 moose/km².</p>	<p>Moose population density is reduced by 2018 and is maintained at between 1 and 2 moose/km² over survey area by 2023.</p>	<ul style="list-style-type: none"> • The GMNP moose management strategy involves an ongoing resident moose hunt in collaboration with the provincial government. This has been underway since 2011 and has been successful in reducing the moose population to target densities within the park. • Park wide aerial moose population surveys are conducted every 5 years and annual index surveys in lowland areas help assess success and identify high density moose areas. These areas are usually more difficult for hunters to access. In an effort to target these high density areas, the park used a lottery system to enlist hunters and fly them in by helicopter, dropping them off to hunt, then flying the hunters and moose out. • In addition, the Nunatsiavut government has participated in several helicopter-based hunts to provide moose to their community-based food program. 25 to 50 licences are provided annually and harvesting is directed at inaccessible areas. • The 2019 moose survey resulted in a density estimate of 2 moose/km² for the park. • Monitoring in browse plots continues to show improvements in forest growth and in the diversity of understory woody plants. 	<p>100%*</p>

Species and measure	Desired outcome	Progress towards outcome	Progress (% complete)
<p>6) Little Brown Myotis and Northern Myotis</p> <p>Bat Inventory: Assess distribution and relative abundance of bats in GMNP using digital ultrasonic activity recorders.</p>	<p>The distribution and relative abundance of bat species in GMNP is understood and a long-term bat monitoring protocol is developed by 2016.</p>	<ul style="list-style-type: none"> • Data collection (recording) has been ongoing since 2013 and a national monitoring protocol based on North American Bat Monitoring Program (NABAT) has been developed. This protocol is now guiding long-term monitoring of bats in GMNP, which includes monitoring three NABAT grid cells annually as well as short-term, targeted research in partnership with Memorial University of Newfoundland and Labrador and monitoring of bat house occupancy. • Data analysis indicates the presence of both Little Brown Myotis and Northern Myotis, although the former is more common. • A road survey has shown decreased numbers of Little Brown Myotis from 2018 to 2019. Further surveys are planned for 2022. • Bat monitoring in GMNP also provided the first evidence that Hoary Bats are a rare but regular visitor to the region. 	<p>100%*</p>
<p>7) Little Brown Myotis</p> <p>Bat Best Management Practices (BMP): Develop and implement Best Management Practices for maintenance of infrastructure used by roosting bats.</p>	<p>Bat BMPs are available and in use by 2016.</p>	<ul style="list-style-type: none"> • The BMP for bat maternity roosts in built assets is complete and in use at GMNP. It outlines standardized actions to be taken to protect individuals and residences when a bat roosting site is found. • Bat boxes were installed at three day-use areas during facility upgrades in 2020. Construction activities were scheduled according to the BMP to account for bat presence and activity. • The Visitor Centre at GMNP has a colony of bats in the attic. A major renovation of the building is planned. In anticipation of this, 5 bat boxes and 	<p>100%*</p>

Species and measure	Desired outcome	Progress towards outcome	Progress (% complete)
		<p>a bat condo were installed near the building to provide an alternate roosting site. Commencement of construction will be timed to take place once the bats leave the site in the fall.</p>	
<p>8) Barrow's Goldeneye Breeding status of Barrow's Goldeneye: Monitor use of nest boxes by Barrow's Goldeneye.</p>	<p>Breeding status of Barrow's Goldeneye in GMNP is clarified by 2018.</p>	<ul style="list-style-type: none"> • A survey completed in 2019 found no evidence of Barrow's Goldeneye nesting in the park and suggested it is unlikely that the species is a regular breeder in GMNP. • Opportunistic observations will continue during other monitoring activities. If funding is available in future, the nest box and genetic survey could be repeated to confirm this finding. 	<p>100%</p>
<p>9) American Eel Mitigate barriers to fish passage: Implement BMPs for fish passage at road crossings when culverts are replaced during road maintenance.</p>	<p>All new / replaced culverts in GMNP are passable to eels.</p>	<ul style="list-style-type: none"> • An assessment of proportion of culverts that are passable to fish following installation or replacement has been completed. • 100% of the culverts replaced in fish bearing streams under the Federal Infrastructure Initiative (FII) are passable to fish. 	<p>100%</p>

Additional measures were identified in the action plan that would be beneficial to complete should resources become available. Table 2 describes the actions that Gros Morne National Park was able to initiate between 2016 and 2021. Measures from the action plan that were not initiated will be carried forward for consideration in a future multi-species action plan.

Table 2. Progress towards completing additional recovery measures implemented because partnerships and/or resources became available (progress is influenced by the amount of funding/ support received; * indicates an ongoing measure that may continue into a future multi-species action plan).

Species and measure	Desired outcome	Progress towards outcome	Progress (% complete)
<p>Develop and implement media strategy</p> <p>(All species at risk in GMNP)</p>	<p>At least one media story highlighting species at risk in GMNP annually.</p>	<ul style="list-style-type: none"> • Both traditional media and social media have been used to communicate species at risk stories in the park. At least one story on American Marten, Gray-cheeked Thrush or bats has been featured annually since 2017. • A media strategy has been developed that includes species at risk as a priority topic for future outreach communications. 	<p>100%</p>
<p>Contribute to in-park programming</p> <p>(All species at risk in GMNP)</p>	<p>School-aged children in the region are aware of species at risk conservation in GMNP.</p>	<ul style="list-style-type: none"> • No programming specific to species at risk was developed for local school-aged children, however species at risk messaging has been incorporated into several outreach and education events including a shorebirds program at the Cow Head Fall festival in 2017, a program on Piping Plover in 2018 at the Shallow Bay Family Day in Cow Head, as well as several programs on bats at local children’s summer day camps. • GMNP will prioritize species at risk messaging as a topic for future education programs aimed at school-aged children. 	<p>50%</p>

Species and measure	Desired outcome	Progress towards outcome	Progress (% complete)
<p>Incorporate species at risk monitoring and recovery into Visitor Experience Opportunities</p> <p>(All species at risk in GMNP)</p>	<p>A connection to place is fostered by incorporating species at risk content into visitor experience opportunities.</p>	<ul style="list-style-type: none"> • A Visitor Experience program delivered by Park Interpreters concerning species at risk was the “Night Life” Program, delivered in 2016 and 2017. The focus was on bat species, particularly Little Brown Myotis and Northern Myotis. Information on Piping Plover and Gray-cheeked Thrush was also provided. • GMNP will prioritize species at risk messaging in its future Visitor Experience programming. 	<p>50%</p>
<p>Provide species at risk information throughout park</p> <p>(All species at risk in GMNP)</p>	<p>Park visitors learn about species at risk through a diverse suite of non-personal media.</p>	<ul style="list-style-type: none"> • Information about at-risk shorebirds and American Marten is posted on signage at two Day Use areas and two trails in the park. • Information on species at risk is available at the Visitor Reception Centre and Discovery Centre through exhibit information and staff. • Exhibits and content on species at risk are being developed for the new GMNP Visitor Reception Centre, which Parks Canada began on in 2022. 	<p>100%</p>

3. ACTION PLAN HIGHLIGHT:

American marten (Newfoundland pop.) population estimate



The key threats to this population identified in the Recovery Strategy⁹ are incidental mortality from snaring and trapping and habitat loss and degradation. These are relevant in GMNP because residents are permitted to snare Snowshoe Hare and browsing by hyper-abundant moose may have led to habitat degradation.

Population and distribution objectives for GMNP (based on national objectives⁹):

- (1) Short-term goal: Maintain occupancy of potential marten habitat at current level.
- (2) Long-term goal: Maintain or increase occupancy of potential marten habitat.

Trend in GMNP:

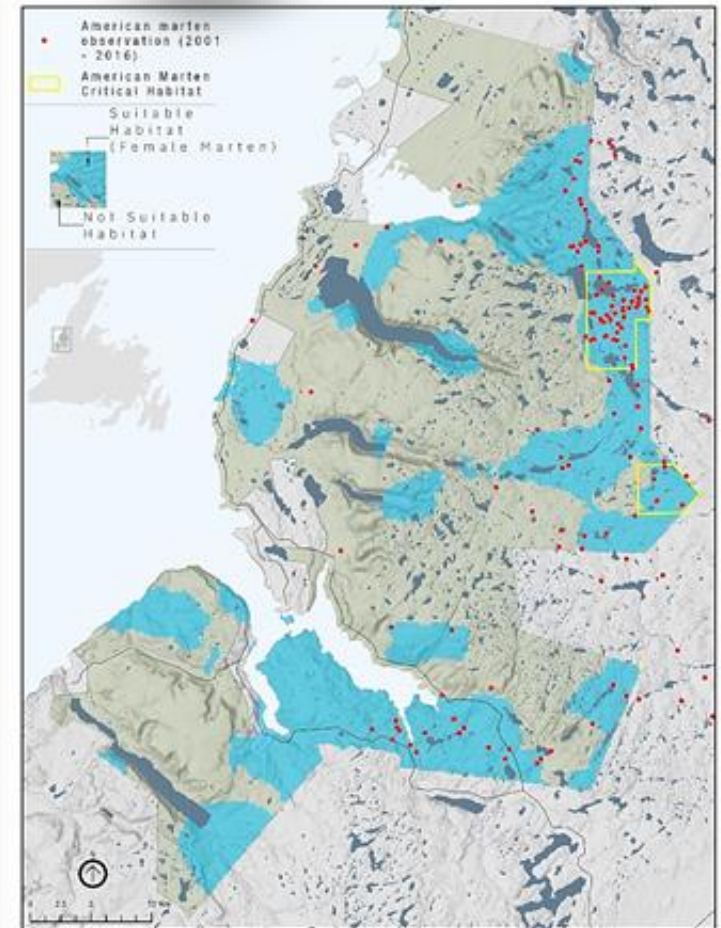
Increasing: Population of marten in GMNP presumed extirpated through 1990s, estimated as <5 in 2001–2002, 15–20 in 2012 and 26–36 individuals in 2017.

Population monitoring:

Monitoring consisted of presence (occupancy) detection in suitable habitat units using winter track transects supplemented with observations obtained through hair trapping, incidental sightings and citizen science monitoring.

Results:

Hair samples collected in 2016–2017 in marten suitable habitat confirmed the presence of 20 individuals in GMNP. A marten habitat model developed based on the description of critical habitat presented in the recovery strategy shows that over 30% of the park is suitable marten habitat.



⁹ Environment Canada. 2013. Recovery Strategy for the American Marten (*Martes americana atrata*), Newfoundland population, in Canada. Species at Risk Act Recovery Strategy Series. Environment Canada, Ottawa. xi pp. + appendix

4. ECOLOGICAL IMPACTS

Ecological impacts of the action plan are assessed by measuring progress towards meeting the site-based population and distribution objectives described in the action plan (Table 3). See the original action plan for national Population and Distribution Objectives (where available) and General Information and Broad Park Approach for each species.

Table 3. Progress towards achieving site-based population and distribution objectives for species at risk in Gros Morne National Park of Canada.

Species	Site-based population & distribution objectives	Population monitoring	Progress towards site-based population and distribution objectives	Progress (% achieved)
Piping Plover (melodus subspecies)	Maintain productivity of 1.65 chicks/pair/year, calculated as a 5 year running average.	Suitable habitat is surveyed each spring; if a pair is found, productivity is monitored following Parks Canada's Piping Plover monitoring protocol.	<ul style="list-style-type: none"> • Surveys done from 2015 to 2021 found individual Piping Plovers in 2017 and 2019, though no mates were observed and no territories were established. GMNP is considered to be at the northern limit of their breeding range. • Since there were no nesting attempts in GMNP during the period of the action plan, this objective was removed from calculations on progress. • The park continues to maintain and protect high quality plover habitat, should this species choose to nest in the park. 	n/a

Species	Site-based population & distribution objectives	Population monitoring	Progress towards site-based population and distribution objectives	Progress (% achieved)
American Marten (Newfoundland population)	Short-term goal: Maintain occupancy of potential marten habitat at current level; Long-term goal: Maintain or increase occupancy of potential marten habitat.	Monitoring consists of presence (occupancy) detection in suitable habitat units using hair trapping, incidental sightings and citizen science monitoring.	<ul style="list-style-type: none"> • Population trend is increasing: The population of marten in GMNP was presumed extirpated through 1990s, estimated as <5 in 2001-2002, 15-20 in 2012, and 26-36 in 2017. • Hair samples collected in 2016-2017 in marten suitable habitat and sent for genetic analysis and identification confirmed the presence of 20 individuals (13 males, 5 females, 2 unknown) in GMNP. • Given these results, both the short-term and long-term objectives of maintaining and increasing occupancy of potential marten habitat are currently being met. 	100%

These additional species were considered in the Multi-species Action Plan for Gros Morne National Park¹⁰, however no population and distribution objectives were developed for them: Red Crossbill (Endangered), Red Knot (Endangered), Olive-sided Flycatcher (Threatened), Harlequin Duck, Rusty Blackbird, and Short Eared Owl (all Special Concern). Most are occasional visitors to the park and GMNP is of limited importance to the species' national recovery. There is no systematic survey effort for most of these species however, the park Ecological Integrity Monitoring Program assesses Red Crossbill through the ongoing winter forest bird surveys as well as Harlequin Duck through ongoing population size and productivity surveys at 5-year intervals. While no Red Crossbill were detected during winter bird surveys in 2016, 2017 and 2021, 20 Harlequin Ducks (8 pairs and four individuals) were observed along four rivers in GMNP during the 2018 survey. Population monitoring of the remainder of species is through opportunistic recording of observations.



¹⁰Parks Canada Agency. 2016. Multi-species Action Plan for Gros Morne National Park [Final Version]. Species at Risk Act Action Plan Series. Parks Canada Agency, Ottawa. iv + 19 pp.



5. SOCIO-ECONOMIC IMPACTS

The *Species at Risk Act* requires the responsible federal minister to report on the socio-economic costs of the multi-species action plan (MSAP) and the benefits derived from its implementation. The MSAP only applies to protected lands and waters under the authority of the Parks Canada Agency, which are often subject to fewer threats (e.g., industrial activities) compared to other areas as the lands are managed to preserve ecological and commemorative integrity. This section does not include socio-economic impacts of existing permitted activities that may be occurring in Parks Canada places as those have been addressed through other processes (e.g., impact assessments). This socio-economic assessment is narrow in scope, as it is focused on the measures implemented within the action plan, and primarily focuses on Indigenous partners, leaseholders, licensees, residents and visitors. The overall socio-economic impacts of the multi-species action plan for Gros Morne National Park, described as costs and benefits, are outlined below.



Costs

The majority of costs to implement the action plan were borne by Parks Canada out of existing salaries and goods and services dollars. This includes incremental salary costs, materials, equipment, and contracting of professional services for measures outlined in Tables 3 (Recovery measures that will be conducted by Gros Morne National Park) and 4 (Other recovery measures that will be encouraged through partnerships or when additional resources become available) of the action plan. Action plan measures were integrated into the operational management of Gros Morne National Park. These costs to the Parks Canada Agency were covered by prioritization of existing funds and salary dollars and did not result in additional costs to society.

No major socio-economic costs to partners, stakeholders or Indigenous groups were incurred as a result of this action plan. The action plan applies only to lands and waters in Gros Morne National Park, and did not bring any restrictions to land use outside the national park. As such, this action plan placed no extraneous socio-economic costs on the public. No restrictions were required on visitor activities on regulated lands to protect and recover species at risk. However, local residents with snaring permits for Snowshoe Hare are required to use brass snare wire. Some may see this as a negative restriction, although most people are supportive of the requirement and willingly comply.

Benefits

Measures presented in the action plan for Gros Morne National Park contributed to meeting recovery and population and distribution objectives for Threatened and Endangered species, and also contributed to meeting management objectives for species of Special Concern. These measures are expected to have an overall positive impact on ecological integrity and enhance opportunities for appreciation of the sites and the species by visitors and the general public, resulting in positive impacts on biodiversity and the value individuals place on preserving biodiversity.

The measures sought a balanced approach to reducing or eliminating threats to species at risk populations and habitats, and included



protection of individuals and their habitat, species re-establishment, and increasing public awareness and stewardship. These measures had an overall positive impact on ecological integrity in GMNP.

In particular, the moose population reduction program in GMNP is helping to restore forest habitat and promote natural forest regeneration and biodiversity. This in turn supports the expansion of the American Marten population. Additionally, snaring regulations have mitigated the risk of marten being caught and killed in Snowshoe Hare snares in the cutting blocks. Bat boxes have also been installed at several campgrounds and day use areas throughout the park to provide secure roosting sites in or near renovated buildings.

Potential economic benefits of the recovery of the species at risk found in these sites cannot be easily quantified, as many of the values derived from wildlife are non-market commodities that are difficult to appraise in financial terms. Wildlife, in all its forms, has value in and of itself, and is valued by Canadians for aesthetic, cultural, spiritual, recreational, educational, historical, economic, medical, ecological and scientific reasons. The conservation of wildlife at risk is an important component of the Government of Canada's commitment to conserving biological diversity, and is important to Canada's current and future economic and natural wealth.

To this end, the park has worked to:

1. Raise awareness of the importance of Species at Risk to the region and how the park and visitors can help protect them;
2. Engage and inform hundreds of local students and the public on Little Brown Myotis and American Eel through Species at Risk interpretation events;
3. Share data and information products with regional conservation partners to better understand and protect Species at Risk that move in and out of GMNP lands;

4. Further develop relationships and partnerships with Qalipu Mi'kmaq and Miawpukek First Nations, weaving Indigenous Knowledge into recovery actions with a focus on the recovery of culturally important species such as American Eel.

Summary

The measures proposed in the action plan had limited socio-economic impact and placed no restrictions on land outside the boundary of the national park. Direct costs of implementing this action plan were borne by Parks Canada. Indirect costs were minimal, while benefits included positive impacts on park ecological integrity, greater awareness of species and enhanced opportunities for engagement of visitors, local communities and Indigenous groups.