CANADA
PRIVY COUNCIL • CONSEIL PRIVÉ

P.C. 2012-837
June 19, 2012

His Excellency the Governor General in Council, on the recommendation of the Minister of the Environment, pursuant to subsection 27(1) of the *Species at Risk Act*, makes the annexed *Order Amending Schedule 1 to the Species at Risk Act*.

REGISTRATION - ENREGISTREMENT
NO. SOR/2012-133 DATE June 20, 2012
REGISTRAR OF STATUTORY INSTRUMENTS
CANADA
REGISTRAIRE DES TEXTES REGLEMENTAIRES

CERTIFIED TO BE A TRUE COPY–COPIE CERTIFIÉE CONFORME

CLERK OF THE PRIVY COUNCIL–LE GREFFIER DU CONSEIL PRIVÉ

ORDER AMENDING SCHEDULE 1 TO THE SPECIES AT RISK ACT

AMENDMENTS

1. Part 1 of Schedule 1 to the *Species at Risk Act*[1] is amended by striking out the following under the heading "MAMMALS":

Whale, Grey (*Eschrichtius robustus*) Atlantic population

Baleine grise de Californie population de l'Atlantique

2. Part 1 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "MAMMALS":

Whale, Grey (*Eschrichtius robustus*) Atlantic population

Baleine grise population de l'Atlantique

3. Part 1 of Schedule 1 to the English version of the Act is amended by striking out the following under the heading "REPTILES":

Lizard, Pigmy Short-horned (*Phrynosoma douglasii*)

Iguane pygmée à cornes courtes

4. Part 1 of Schedule 1 to the English version of the Act is amended by adding the following in alphabetical order under the heading "REPTILES":

Lizard, Pygmy Short-horned (*Phrynosoma douglasii*)

Iguane pygmée à cornes courtes

5. Part 1 of Schedule 1 to the Act is amended by striking out the following under the heading "ARTHROPODS":

Blue, Karner (*Lycaeides melissa samuelis*)

Mélissa bleu

Elfin, Frosted (*Callophrys [Incisalia] irus*)

Lutin givré

Marble, Island (*Euchloe ausonides*)

Marbré insulaire

6. Part 1 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "ARTHROPODS":

Blue, Karner (*Lycaeides melissa samuelis*)

Bleu mélissa

Elfin, Frosted (*Callophrys irus*)

[1] S.C. 2002, c. 29

Lutin givré

Marble, Island (*Euchloe ausonides insulanus*)

Marbré insulaire

7. Part 2 of Schedule 1 to the Act is amended by striking out the following under the heading "MAMMALS":

Fox, Swift (*Vulpes velox*)

Renard véloce

Marmot, Vancouver Island (*Marmota vancouverensis*)

Marmotte de l'Île Vancouver

8. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "MAMMALS":

Marmot, Vancouver Island (*Marmota vancouverensis*)

Marmotte de l'île Vancouver

9. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "BIRDS":

Knot *rufa* subspecies, Red (*Calidris canutus rufa*)

Bécasseau maubèche de la sous-espèce rufa

10. Part 2 of Schedule 1 to the Act is amended by striking out the following under the heading "AMPHIBIANS":

Frog, Northern Cricket (*Acris crepitans*)

Rainette grillon

Frog, Northern Leopard (*Rana pipiens*) Southern Mountain population

Grenouille léopard population des montagnes du Sud

11. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "AMPHIBIANS":

Frog, Blanchard's Cricket (*Acris blanchardi*)

Rainette grillon de Blanchard

Frog, Northern Leopard (*Lithobates pipiens*) Rocky Mountain population

Grenouille léopard population des Rocheuses

Toad, Fowler's (*Anaxyrus fowleri*)

Crapaud de Fowler

12. Part 2 of Schedule 1 to the Act is amended by striking out the following under the heading "REPTILES":

Nightsnake (*Hypsiglena torquata*)

Couleuvre nocturne

Ratsnake, Gray (*Elaphe spiloides*) Carolinian population

Couleuvre obscure population carolinienne

Seaturtle, Leatherback (*Dermochelys coriacea*)

Tortue luth

Skink, Five-lined (*Eumeces fasciatus*) Carolinian population

Scinque pentaligne population carolinienne

Skink, Prairie (*Eumeces septentrionalis*)

Scinque des Prairies

13. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "REPTILES":

Nightsnake, Desert (*Hypsiglena chlorophaea*)

Couleuvre nocturne du désert

Queensnake (*Regina septemvittata*)

Couleuvre royale

Ratsnake, Gray (*Pantherophis spiloides*) Carolinian population

Couleuvre obscure population carolinienne

Sea Turtle, Leatherback (*Dermochelys coriacea*)

Tortue luth

Skink, Five-lined (*Plestiodon fasciatus*) Carolinian population

Scinque pentaligne population carolinienne

Skink, Prairie (*Plestiodon septentrionalis*)

Scinque des Prairies

14. Part 2 of Schedule 1 to the Act is amended by striking out the following under the heading "FISH":

Lamprey, Morrison Creek (*Lampetra richardsoni*)

Lamproie du ruisseau Morrison

Salmon, Atlantic (*Salmo salar*) Inner Bay of Fundy populations

Saumon atlantique populations de l'intérieur de la baie de Fundy

Stickleback, Benthic Enos Lake (*Gasterosteus* sp.)

Épinoche benthique du lac Enos

Stickleback, Benthic Paxton Lake (*Gasterosteus* sp.)

Épinoche benthique du lac Paxton

Stickleback, Benthic Vananda Creek (*Gasterosteus* sp.)

Épinoche benthique du ruisseau Vananda

Stickleback, Limnetic Enos Lake (*Gasterosteus* sp.)

Épinoche limnétique du lac Enos

Stickleback, Limnetic Paxton Lake (*Gasterosteus* sp.)

Épinoche limnétique du lac Paxton

Stickleback, Limnetic Vananda Creek (*Gasterosteus* sp.)

Épinoche limnétique du ruisseau Vananda

Stickleback, Misty Lake Lentic (*Gasterosteus* sp.)

Épinoche lentique du lac Misty

Stickleback, Misty Lake Lotic (*Gasterosteus* sp.)

Épinoche lotique du lac Misty

15. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "FISH":

Lamprey, Western Brook (*Lampetra richardsoni*) Morrison Creek population

Lamproie de l'ouest population du ruisseau Morrison

Salmon, Atlantic (*Salmo salar*) Inner Bay of Fundy population

Saumon atlantique population de l'intérieur de la baie de Fundy

Stickleback, Enos Lake Benthic Threespine (*Gasterosteus aculeatus*)

Épinoche à trois épines benthique du lac Enos

Stickleback, Enos Lake Limnetic Threespine (*Gasterosteus aculeatus*)

Épinoche à trois épines limnétique du lac Enos

Stickleback, Misty Lake Lentic Threespine (*Gasterosteus aculeatus*)

Épinoche à trois épines lentique du lac Misty

Stickleback, Misty Lake Lotic Threespine (*Gasterosteus aculeatus*)

Épinoche à trois épines lotique du lac Misty

Stickleback, Paxton Lake Benthic Threespine (*Gasterosteus aculeatus*)

Épinoche à trois épines benthique du lac Paxton

Stickleback, Paxton Lake Limnetic Threespine (*Gasterosteus aculeatus*)

Épinoche à trois épines limnétique du lac Paxton

Stickleback, Vananda Creek Benthic Threespine (*Gasterosteus aculeatus*)

Épinoche à trois épines benthique du ruisseau Vananda

Stickleback, Vananda Creek Limnetic Threespine (*Gasterosteus aculeatus*)

Épinoche à trois épines limnétique du ruisseau Vananda

16. Part 2 of Schedule 1 to the Act is amended by striking out the following under the heading "MOLLUSCS":

Mussel, Mudpuppy (*Simpsonaias ambigua*)

Mulette du Necturus

Riffleshell, Northern (*Epioblasma torulosa rangiana*)

Dysnomie ventrue jaune

17. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "MOLLUSCS":

Mussel, Salamander (*Simpsonaias ambigua*)

Mulette du Necture

Riffleshell, Northern (*Epioblasma torulosa rangiana*)

Épioblasme ventrue

18. Part 2 of Schedule 1 to the Act is amended by striking out the following under the heading "ARTHROPODS":

Skipper, Ottoe (*Hesperia ottoe*)

Hespéri Ottoé

19. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "ARTHROPODS":

Buckmoth, Bogbean (*Hemileuca* sp.)

Hémileucin du ményanthe

Bumble Bee, Rusty-patched (*Bombus affinis*)

Bourdon à tache rousse

Diving Beetle, Bert's Predaceous (*Sanfilippodytes bertae*)

Hydropore de Bertha

Skipper, Ottoe (*Hesperia ottoe*)

Hespérie Ottoé

Tiger Beetle, Northern Barrens (*Cicindela patruela*)

Cicindèle verte des pinèdes

Tiger Beetle, Wallis' Dark Saltflat (*Cicindela parowana wallisi*)

Cicindèle de Wallis

20. Part 2 of Schedule 1 to the Act is amended by striking out the following under the heading "PLANTS":

Buttercup, Water-plantain (*Ranunculus alismifolius* var. *alismifolius*)

Renoncule à feuilles d'alisme

Cryptanthe, Tiny (*Cryptantha minima*)

Cryptanthe minuscule

Fringed-Orchid, Eastern Prairie (*Platanthera leucophaea*)

Platanthère blanchâtre de l'Est

Lupine, Prairie (*Lupinus lepidus* var. *lepidus*)

Lupin élégant

21. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "PLANTS":

Buttercup, Water-plantain (*Ranunculus alismifolius*)

Renoncule à feuilles d'alisme

Cryptantha, Tiny (*Cryptantha minima*)

Cryptanthe minuscule

Fringed-orchid, Eastern Prairie (*Platanthera leucophaea*)

Platanthère blanchâtre de l'Est

Lupine, Prairie (*Lupinus lepidus*)

Lupin élégant

Mallow, Virginia (*Sida hermaphrodita*)

Mauve de Virginie

Owl-clover, Victoria's (*Castilleja victoriae*)

Castilléjie de Victoria

Pine, Whitebark (*Pinus albicaulis*)

Pin à écorce blanche

22. Part 2 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "LICHENS":

Lichen, Pale-bellied Frost (*Physconia subpallida*)

Physconie pâle

Lichen, Vole Ears (*Erioderma mollissimum*)

Érioderme mou

23. Part 3 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "MAMMALS":

Fox, Swift (*Vulpes velox*)

Renard véloce

24. Part 3 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "BIRDS":

Longspur, Chestnut-collared (*Calcarius ornatus*)

Bruant à ventre noir

Thrush, Bicknell's (*Catharus bicknelli*)

Grive de Bicknell

Woodpecker, Lewis's (*Melanerpes lewis*)

Pic de Lewis

25. Part 3 of Schedule 1 to the Act is amended by striking out the following under the heading "AMPHIBIANS":

Toad, Fowler's (*Bufo fowleri*)

Crapaud de Fowler

26. Part 3 of Schedule 1 to the Act is amended by striking out the following under the heading "REPTILES":

Ratsnake, Gray (*Elaphe spiloides*) Great Lakes – St. Lawrence population

Couleuvre obscure population des Grands Lacs et du Saint-Laurent

Snake, Queen (*Regina septemvittata*)

Couleuvre royale

Stinkpot (*Sternotherus odoratus*)

Tortue musquée

27. Part 3 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "REPTILES":

Ratsnake, Gray (*Pantherophis spiloides*) Great Lakes/St. Lawrence population

Couleuvre obscure population des Grands Lacs et du Saint-Laurent

Turtle, Eastern Musk (*Sternotherus odoratus*)

Tortue musquée

28. Part 3 of Schedule 1 to the Act is amended by striking out the following under the heading "FISH":

Sculpin, Cultus Pygmy (*Cottus* sp.)

Chabot pygmée

Sculpin, "Eastslope" (*Cottus* sp.) St. Mary and Milk River populations

Chabot du versant est populations des rivières St. Mary et Milk

Smelt, Lake Utopia Dwarf (*Osmerus spectrum*)

Éperlan nain du lac Utopia

29. Part 3 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "FISH":

Sculpin, Coastrange (*Cottus aleuticus*) Cultus population

Chabot de la chaîne côtière population Cultus

Sculpin, Rocky Mountain (*Cottus* sp.) Eastslope populations

Chabot des montagnes Rocheuses populations du versant est

Smelt, Rainbow (*Osmerus mordax*) Lake Utopia small-bodied population

Éperlan arc-en-ciel population d'individus de petite taille du lac Utopia

30. Part 3 of Schedule 1 to the Act is amended by striking out the following under the heading "PLANTS":

Aster, White Wood (*Eurybia divaricata*)

Aster divariqué

Blue Flag, Western (*Iris missouriensis*)

Iris du Missouri

Redroot (*Lachnanthes caroliana*)

Lachnanthe de Caroline

Spike-rush, Tubercled (*Eleocharis tuberculosa*)

Éléocharide tuberculée

31. Part 3 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "PLANTS":

Aster, White Wood (*Eurybia divaricata*)

Aster à rameaux étalés

32. Part 4 of Schedule 1 to the Act is amended by striking out the following under the heading "BIRDS":

Woodpecker, Lewis's (*Melanerpes lewis*)

Pic de Lewis

33. Part 4 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "BIRDS":

Falcon *anatum/tundrius*, Peregrine (*Falco peregrinus anatum/tundrius*)

Faucon pèlerin anatum/tundrius

Knot *islandica* subspecies, Red (*Calidris canutus islandica*)

Bécasseau maubèche de la sous-espèce islandica

Owl, Short-eared (*Asio flammeus*)

Hibou des marais

34. Part 4 of Schedule 1 to the Act is amended by striking out the following under the heading "AMPHIBIANS":

Frog, Coast Tailed (*Ascaphus truei*)

Grenouille-à-queue côtière

Frog, Northern Leopard (*Rana pipiens*) Western Boreal/Prairie populations

Grenouille léopard populations de l'Ouest de la zone boréale et des Prairies

Toad, Great Plains (*Bufo cognatus*)

Crapaud des steppes

Toad, Western (*Bufo boreas*)

Crapaud de l'Ouest

35. Part 4 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "AMPHIBIANS":

Frog, Coastal Tailed (*Ascaphus truei*)

Grenouille-à-queue côtière

Frog, Northern Leopard (*Lithobates pipiens*) Western Boreal/Prairie populations

Grenouille léopard populations des Prairies et de l'ouest de la zone boréale

Toad, Great Plains (*Anaxyrus cognatus*)

Crapaud des steppes

Toad, Western (*Anaxyrus boreas*)

Crapaud de l'Ouest

36. Part 4 of Schedule 1 to the Act is amended by striking out the following under the heading "REPTILES":

Skink, Five-lined (*Eumeces fasciatus*) Great Lakes – St. Lawrence population

Scinque pentaligne population des Grands Lacs et du Saint-Laurent

Skink, Western (*Eumeces skiltonianus*)

Scinque de l'Ouest

37. Part 4 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "REPTILES":

Skink, Five-lined (*Plestiodon fasciatus*) Great Lakes/St. Lawrence population

Scinque pentaligne population des Grands Lacs et du Saint-Laurent

Skink, Western (*Plestiodon skiltonianus*)

Scinque de l'Ouest

38. Part 4 of Schedule 1 to the Act is amended by striking out the following under the heading "MOLLUSCS":

Oyster, Olympia (*Ostrea conchaphila*)

Huître plate du Pacifique

39. Part 4 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "MOLLUSCS":

Oyster, Olympia (*Ostrea lurida*)

Huître plate du Pacifique

Vertigo, Threaded (*Nearctula* sp.)

Vertigo à crêtes fines

40. Part 4 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "PLANTS":

Blue Flag, Western (*Iris missouriensis*)

Iris du Missouri

Redroot (*Lachnanthes caroliniana*)

Lachnanthe de Caroline

Spike-rush, Tubercled (*Eleocharis tuberculosa*)

Éléocharide tuberculée

41. Part 4 of Schedule 1 to the Act is amended by striking out the following under the heading "LICHENS":

Cryptic Paw (*Nephroma occultum*)

Lichen cryptique

42. Part 4 of Schedule 1 to the Act is amended by adding the following in alphabetical order under the heading "LICHENS":

Lichen, Cryptic Paw (*Nephroma occultum*)

Néphrome cryptique

Lichen, Oldgrowth Specklebelly (*Pseudocyphellaria rainierensis*)

Pseudocyphellie des forêts surannées

COMING INTO FORCE

43. This Order comes into force on the day on which it is registered.

REGULATORY IMPACT ANALYSIS STATEMENT

(This statement is not part of the Order)

EXECUTIVE SUMMARY

Issue: A growing number of wildlife species in Canada face pressures and threats that put them at risk of extirpation or extinction. They serve important biological functions and have intrinsic, recreational and existence value to the Canadian public. They require conservation and protection to ensure healthy ecosystems for future generations.

Description: This Order, made pursuant to the recommendation of the Minister of the Environment, adds 18 terrestrial species to Schedule 1 to the *Species at Risk Act* (SARA) and reclassifies seven terrestrial species already listed on Schedule 1. There are also three species that are not being added to Schedule 1 to SARA. The addition of species to Schedule 1 as extirpated, endangered or threatened invokes prohibitions in Canada to protect those species from extinction or extirpation. SARA also requires the preparation of recovery strategies and action plans to provide for the recovery and survival of these species. When a species is added to Schedule 1 as a species of special concern, SARA requires the preparation of a management plan to prevent the species from becoming endangered or threatened.

Administrative amendments that address taxonomic name changes and other changes to the names of species, as they currently appear on Schedule 1, are also included in this Order. The administrative amendments apply to both terrestrial and aquatic species.

Cost-benefit statement: Impacts associated with the addition of 18 species and reclassification of seven species under this Order are anticipated to be low. Given the relatively small portion of the species range included in the area covered by the application of prohibitions, there is protection for some species under statutes such as the *Migratory Birds Convention Act, 1994*, the *Canada National Parks Act* and the *Wildlife Area Regulations*. However, the Order is an important commitment to Canadians regarding the scarcity of these species and their vulnerability, and the Order sets in motion the development of long-term recovery, action, and management plans, as appropriate for the specific species designation under SARA.

Business and consumer impacts: The impacts of listing on governments, industries and individuals are expected to be low for all terrestrial species considered under this Order due to limited distribution and overlap with human activities and the protection that some of the species already receive under various statutes of Parliament and provincial acts.

Domestic and international coordination and cooperation: International coordination and cooperation for the conservation of biodiversity is provided through the Convention on Biological Diversity (CBD)[1] to which Canada is a signatory. Regarding migratory birds included in this Order, Canada cooperates with the United States through the Migratory Birds Convention and with the United States and Mexico through the North American Bird Conservation Initiative. Domestic coordination and cooperation is covered by several mechanisms developed to coordinate implementation of the Species at Risk (SAR) Program across the various domestic jurisdictions. These mechanisms include inter-governmental committees, a National Framework for Species at Risk Conservation (NFSARC), and negotiated SAR bilateral agreements. The SAR bilateral agreements foster collaboration in the implementation of SARA and provincial and territorial legislation on endangered species.

Performance measurement and evaluation plan: Environment Canada has put in place a Results-based Management and Accountability Framework (RMAF) and a Risk-based Audit Framework (RBAF) for the Species at Risk Program. The specific measurable outcomes for the program and the performance measurement and evaluation strategy are described in the Species at Risk Program RMAF-RBAF. An evaluation of Species at Risk Act Implementation is currently being finalized and is anticipated to become available in the summer or fall of 2012.

ISSUE

A growing number of wildlife species in Canada face pressures and threats that put them at risk of extirpation or extinction. Canada's natural heritage is an integral part of Canada's national identity and history. 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, ecologic-al and scientific reasons. Canadian wildlife species and ecosystems are also part of the world's heritage, and the Government of Canada has ratified the United Nations Convention on the Conservation of Biological Diversity.

OBJECTIVES

The purposes of SARA are to prevent wildlife species from becoming extirpated or extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity, and to manage species of special concern to prevent them from becoming endangered or threatened.

The purpose of the *Order Amending Schedule 1 to the Species at Risk Act* is to add 18 species to Schedule 1, the List of Wildlife Species at Risk (the List), and to reclassify 7 listed species, pursuant to subsection 27(1) of SARA. This amendment is made on the recommendation of the Minister of the Environment based on scientific assessments by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and on

[1] Further information on the CBD is available at www.cbd.int.

consultations with governments, Aboriginal peoples, stakeholders and the Canadian public.

BACKGROUND

On October 27, 2011, the Governor in Council (GIC) acknowledged receipt of the 28 species assessments from COSEWIC. COSEWIC is a committee of experts established under SARA that assesses and designates which wildlife species are in some danger of disappearing from Canada. Information relating to COSEWIC can be found on its Web site at www.cosewic.gc.ca.

In this case, COSEWIC has assessed 14 wildlife species as endangered, 2 as threatened, and 5 as special concern. Two species, the Queensnake and Fowler's Toad, already appear on Schedule 1 and are recommended for reclassification from threatened to endangered. One species, Lewis's Woodpecker, already appears on Schedule 1 and is recommended for reclassification from special concern to threatened. One species, the Swift Fox, already appears on Schedule 1 and is recommended for reclassification from endangered to threatened. Three plant species, the Western Blue Flag, the Redroot, and the Tubercled Spike-rush, already appear on Schedule 1 and are recommended for reclassification from threatened to special concern.

A separate order, *Decisions Not to Add Certain Species Order*, will be published on the decision not to add Coast Manroot, Four-leaved Milkweed and Laura's Clubtail to Schedule 1. In light of the existing protection afforded to two of the species under provincial legislation, their extremely small ranges in Canada and the limited contribution that recovery efforts in Canada could make to their conservation, they are not being added to Schedule 1 so that available resources can be allocated more efficiently to species where Canada can make a more significant difference.

Table 1 provides a list of the species for addition and reclassification to Schedule 1. The COSEWIC status reports can be found at www.sararegistry.gc.ca/search/advSearchResults_e.cfm?stype=doc&docID=18.

Table 1: Addition of 18 species and reclassification of 7 species to Schedule 1 of SARA

Species added to Schedule 1 of SARA (18)	
Common name (*Scientific Name*)	**Proposed Status**
Arthropods	
1. Buckmoth, Bogbean *Hemileuca* sp.	Endangered
2. Bumble Bee, Rusty-Patched *Bombus affinis*	Endangered

3. Diving Beetle, Burt's Predacious *Sanfilippodytes bertae*	Endangered
4. Tiger Beetle, Northern Barrens *Cicindela patruela*	Endangered
5. Tiger Beetle, Wallis' Dark Saltflat *Cicindela parowana wallisi*	Endangered
Birds	
6. Falcon *anatum/tundrius*, Peregrine *Falco peregrinus anatum/tundrius*	Special Concern
7. Knot *islandica* subspecies, Red *Calidris canutus islandica*	Special Concern
8. Knot *rufa* subspecies, Red *Calidris canutus rufa*	Endangered
9. Longspur, Chestnut-collared *Calcarius ornatus*	Threatened
10. Owl, Short-eared *Asio flammeus*	Special Concern
11. Thrush, Bicknell's *Catharus bicknelli*	Threatened
Lichens	
12. Lichen, Oldgrowth Specklebelly *Pseudocyphellaria rainierensis*	Special Concern
13. Lichen, Pale-bellied Frost *Physconia subpallida*	Endangered
14. Lichen, Vole Ears *Erioderma mollissimum*	Endangered
Molluscs	

15. Vertigo, Threaded *Nearctula sp.*	Special Concern
Plants	
16. Mallow, Virginia *Sida hermaphrodita*	Endangered
17. Owl-Clover, Victoria's *Castilleja victoriae*	Endangered
18. Pine, Whitebark *Pinus albicaulis*	Endangered

Species proposed to be reclassified in Schedule 1 of SARA (7)	
Common name (*Scientific Name*)	**Proposed Status Change**
Reptiles	
1. Queensnake *Regina septemvittata*	Threatened to Endangered
Amphibians	
2. Toad, Fowler's *Anaxyrus fowleri*	Threatened to Endangered
Birds	
3. Lewis's Woodpecker *Melanerpes lewis*	Special Concern to Threatened
Mammals	
4. Swift Fox *Vulpes velox*	Endangered to Threatened
Plants	
5. Blue Flag, Western *Iris missouriensis*	Threatened to Special Concern
6. Redroot *Lachnanthes caroliniana*	Threatened to Special Concern
7. Spike-rush, Tubercled	Threatened to Special Concern

Eleocharis tuberculosa	

Upon listing on Schedule 1, wildlife species classified as threatened and endangered on federal lands and the migratory birds as defined by the *Migratory Birds Convention Act, 1994* (MBCA), wherever they are found, will benefit from immediate protection through general prohibitions under SARA.

Under sections 32 and 33 of the *Species at Risk Act*, it is an offence to

- kill, harm, harass, capture or take an individual of a listed species that is extirpated, endangered or threatened;
- possess, collect, buy, sell or trade an individual of a listed species that is extirpated, endangered or threatened, or its part or derivative; and
- damage or destroy the residence of one or more individuals of a listed endangered or threatened species or of a listed extirpated species if a recovery strategy has proposed its reintroduction into the wild in Canada.

When the species is found within national parks of Canada or other lands administered by the Parks Canada Agency, it is protected or managed under the *Canada National Parks Act* or through measures or management tools available to the Parks Canada Agency under other legislation. Eight species already receive protections under the *Canada National Parks Act*: Bicknell's Thrush, Chestnut-collared Longspur, Oldgrowth Specklebelly Lichen, Queensnake, Swift Fox, Threaded Vertigo, Western Blue Flag, and Whitebark Pine.

Protection of species listed as endangered or threatened on Schedule 1 of SARA on non-federal lands falls under the jurisdiction of the provincial and territorial governments. Should the species or the residences of its individuals not be protected effectively by the laws of a province or a territory, SARA has provisions that give the federal government the power to apply the prohibitions mentioned above on non-federal lands to secure their protection. If the Minister of the Environment is of the opinion that the laws of a jurisdiction do not effectively protect a species or the residences of its individuals, the Minister is required to make a recommendation to the GIC to make an order to invoke the prohibitions in SARA. The Minister of the Environment is also required to consult with the minister of the jurisdiction concerned and, where appropriate, the wildlife management board before making a recommendation to the GIC. The GIC considers the recommendation of the Minister of the Environment and decides whether or not to make the order invoking the prohibitions in SARA for the protection of listed wildlife species on non-federal lands.

Under section 37 of SARA, once a terrestrial species is listed on Schedule 1 as endangered or threatened, the Minister of the Environment is required to prepare a strategy for its recovery. Proposed recovery strategies must be posted on the Species at Risk (SAR) Public Registry within the timelines set out under SARA. Pursuant to section 41 of SARA, if recovery is deemed feasible, the recovery strategy must, *inter alia*, address threats to the species' survival, identify critical habitat to the extent

possible based on the best available information, and identify research and potential management measures needed to recover the population. The recovery strategy also provides a timeline for completion of one or more action plans. A management plan must be prepared for species listed as special concern.

Action plans are required to implement recovery strategies for species listed as endangered or threatened. Action plans can identify measures to achieve the population and distribution objectives for the species and when these may take place; a species' critical habitat, to the extent possible, based on the best available information and consistent with the recovery strategy; examples of activities that would likely result in the destruction of the species' critical habitat; measures proposed to be taken to protect the critical habitat; measures to address threats to the species; and methods to monitor the recovery of the species and its long-term viability. These action plans also require an evaluation of the socio-economic costs and the benefits to be derived from the plan's implementation. For species listed as special concern, management plans that include measures for the conservation of the species and their habitat must be prepared. Recovery strategies, action plans and management plans must be posted on the SAR Public Registry within the timelines set out under SARA.

REGULATORY AND NON-REGULATORY OPTIONS CONSIDERED

As required in the *Species at Risk Act*, once COSEWIC submits assessments of the status of the species to the Minister of the Environment, there are only regulatory options available.

COSEWIC meets twice annually to review information collected on wildlife species and assigns each wildlife species to one of seven categories: extinct, extirpated, endangered, threatened, special concern, data deficient, or not at risk. It provides the Minister of the Environment with assessments of the status of wildlife species and reasons for the designations. The Minister of the Environment must then indicate how he or she will respond to each of the assessments and, to the extent possible, provide timelines for action. As stipulated under SARA, response statements are prepared, in consultation with the Parks Canada Agency, and posted on the Species at Risk Public Registry within the required 90-day timeline.

For species proposed to be added to the List, the receipt of status assessments by the Minister of the Environment from COSEWIC triggers a regulatory process in which the Minister of the Environment may recommend to the GIC (1) to add a species to Schedule 1 of SARA according to COSEWIC's status assessment; (2) not to add the species to Schedule 1; or (3) to refer the assessment back to COSEWIC for further information or consideration.

The first option, to add the species to Schedule 1 of SARA, would ensure that a wildlife species receives protection in accordance with the provisions of SARA, including mandatory recovery or management planning.

The second option is not to add the species to Schedule 1. Although the species would neither benefit from prohibitions afforded by SARA nor from the recovery or management activities required under SARA, species may still be protected under other federal, provincial or territorial legislation. When deciding not to add a species to Schedule 1, it is not referred back to COSEWIC for further information or consideration. COSEWIC reassesses species once every 10 years or at any time it has reason to believe that the status of a species has changed.

The third option is to refer the assessment back to COSEWIC for further information or consideration. It would be appropriate to send an assessment back if, for example, significant new information became available after the species had been assessed by COSEWIC. In these cases, the Minister shall include a statement in the public registry setting out the reasons.

For more details about the listing process, please refer to www.sararegistry.gc.ca.

BENEFIT AND COSTS

Overview

This analysis looks qualitatively at the incremental impacts of the Order to list or reclassify species. For species that are extirpated, endangered or threatened, this includes an assessment of any costs and benefits associated with implementing the SARA prohibitions and the cost to Government to develop a recovery strategy. For species of special concern, the prohibitions do not apply and the analysis only looks at the cost to Government of developing a management plan. Further analysis will be necessary to evaluate the benefits and costs that would result from actually implementing recovery strategies, action plans, and management plans. This analysis cannot be done until the plans have been developed.

A summary of the qualitative analysis of socio-economic impacts by species is presented for each species at the end of this Regulatory Impact Analysis Statement.

Benefits

Protecting species at risk can provide numerous benefits to Canadians beyond the direct economic benefits. Many species at risk serve as indicators of environmental quality, while some may be culturally important, such as the Swift Fox and Whitebark Pine due to their symbolism, popularity or role in the cultural history of Canada. Various studies[2] indicate that Canadians place value on preserving species for future generations to enjoy and from knowing the species exist. Furthermore, the unique characteristics and evolutionary histories of species at risk may also be of special interest to the scientific community.

---

[2] Rollins, K., and A. Lyke, "The Case of Diminishing Marginal Existence Values," *Journal of Environmental Economics and Management 36*, No. 3, 324–344, Publication date: 1998-11-01.

When seeking to quantify the economic benefits to society provided by a species, the most commonly used framework is the Total Economic Value (TEV). The TEV of a species can be broken down into active and passive use values.

Active use values include:

- Direct Use - consumptive uses of a resource, such as hunting;
- Indirect Use - non-consumptive activities, such as bird watching or recreational value;
- Option Use Value - preserving a species for future direct and indirect use;

Passive use values include:

- Bequest value - value of preserving a species for future generations; and
- Existence value - altruistic value represents the value individuals derive from simply knowing that a given species exists, regardless of potential for any future use.[1]

Passive values tend to dominate the TEV for species at risk,[4] due to the scarcity of these species and the value that is accordingly attributed to their existence. Even if a given species is not readily accessible to society, existence value may be the most significant or only known benefit of a particular species.[5] These passive values can be estimated using the willingness to pay methodology, which is the amount an individual is willing to pay to preserve a species.

Given that the costs of listing and reclassifying the species are estimated to be low, Environment Canada has not undertaken this type of benefit analysis, nor has it attempted to transfer the benefits from existing studies into the context of protecting these species in Canada.

Costs

The analysis of the Order examines costs attributed to this regulatory action only. Most of the costs attributed to the Order will be borne by existing federal government resources. These costs include promoting compliance with the prohibitions, enforcing them, and evaluating performance. They also include the resources required to develop recovery strategies and management plans. Costs that could arise from the application of SARA, in particular for the implementation of recovery strategies, action plans, or management plans depending on the classification of the species, will be evaluated at the time they are developed.

Costs arising from the enforcement activities associated with the listing recommendations under this Order are anticipated to be low. This is mainly due to limited distribution of species on federal lands and the fact that some already benefit

1 Wallmo, K. Threatened and Endangered Species Valuation: Literature Review and Assessment (Online) http://www.st.nmfs.gov/st5/documents/bibliography/Protected_Resources_Valuation%20.pdf#search='endangered%20species%20economic%20valuation

4 Ibid. 23

5 Jakobsson, Kristin M., and Andrew K. Dragun, "Contingent Valuation and Endangered Species: Methodological Issues and Applications," *New Horizons in Environmental Economics* Series. Cheltenham, U.K. and Lyme, N. H.: Edward Elgar, 1996.

from different levels of protection under different statutes such as the MBCA, the *Canada National Parks Act* and the *Wildlife Area Regulations*.

There are a number of costs associated with developing recovery strategies and management plans under SARA, including the costs of consulting relevant stakeholders. The cost of a routine recovery strategy or a management plan ranges from $10,000 to $200,000. Should recovery strategies and management plans be required for all the newly listed species and the seven reclassified species, efforts will be made to group species in order to reduce the overall cost. These costs are covered by existing program funding; therefore, no incremental costs are expected.

The analysis presented hereafter is limited in scope for all species, using mostly qualitative information, proportional to anticipated impacts.

Net Benefits

Given the limited distribution, low level of industrial/human activities within the area of application of the general prohibitions and the existing level of protection, impacts stemming from the 25 terrestrial species under the Order are anticipated to be low. It is expected that the net impact to Canadian society would be positive and the Order will result in net benefits to Canadians.

CONSULTATIONS OVERVIEW

Under SARA, the scientific assessment of species status and the decision to place a species on the list of wildlife species at risk are comprised of two distinct processes. This separation guarantees that scientists may work independently when making assessments of the biological status of wildlife species and that Canadians have the opportunity to participate in the decision-making process in determining whether or not species will be listed under SARA.

Initial Consultations

Environment Canada began initial public consultations on December 2, 2010, with the posting of the response statements on the SAR Public Registry. Stakeholders and the general public were also consulted by means of a document titled *Consultation on Amending the List of Species under the* Species at Risk Act*, Terrestrial Species, November 2010.*

The consultation document included 24 of the 28 terrestrial species assessments from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) that were presented to the Governor in Council (GIC) and for which it acknowledged receipt on October 27, 2011. The consultation document outlined the reasons for considering listing and the implications of listing species. The document was posted on the SAR Public Registry in December 2010 and members of the public were invited to comment. The consultation process also included the distribution of the consultation document to, and direct consultation with, approximately 1 740 identified stakeholders. Stakeholders included various industrial sectors, provincial and territorial governments, federal

departments and agencies, Aboriginal organizations, wildlife management boards, resource users, landowners and environmental non-governmental organizations.

The four species not covered in the consultation document (the Short-eared Owl, the Red Knot *rufa* subspecies, the Red Knot *islandica* subspecies, and the Peregrine Falcon *anatum/tundrius* subspecies) were handled through separate consultation processes that followed a similar approach. Fifty-five comments were received with regard to these four species. Further details are included in the descriptions of the species below.

There was general support for most of the listings. Several parties expressed concerns about issues that could arise as recovery strategies and management plans are developed. There was also opposition from some parties to select listings. The reactions of stakeholders regarding each listing or reclassification will be detailed in a section of the Regulatory Impact Analysis Statement (RIAS) that provides details on each of the species for listing.

During the initial consultations, a total of 69 written comments were received from 30 different sources (where respondents provided comments on several species separately, the comments were counted separately) with regard to the species proposed in the December 2010 consultations document that are part of this Order. Of these, the majority of the comments received from interested stakeholders and the general public were in support of listing COSEWIC recommended species or did not specifically oppose listing. Out of the 69 comments received during the consultations, 2 recommended listing all species, 6 were information requests about one or all listed species, 1 was an acknowledgement of receipt of the consultation package and 2 came from First Nations organizations indicating concern about the consultations process itself; these are not added in the comments tally per species below.

Out of the 69 comments, 7 expressed opposition to listing: 1 opposed listing Bert's Predaceous Diving Beetle, 1 opposed listing Bicknell's Thrush, 2 opposed listing Chestnut-collared Longspur, 1 opposed down-listing Redroot, 1 opposed down-listing Swift Fox, and 1 opposed down-listing Tubercled Spike-rush.

Concerns were raised by a number of people regarding listing of migratory birds and the recovery activities that would ensue from listing. Migratory birds are already protected by the MBCA, which provides them with strong protections, closely comparable to SARA's general prohibitions. Listing a species under SARA also provides for the development of recovery measures. Recovery strategies are developed through consultation and cooperation with stakeholders affected by their implementation.

Canada Gazette Part I Public Consultations

Following pre-publication of the proposed *Order Amending Schedule 1 to the Species at Risk Act* in the Canada Gazette, Part 1, on April 21st 2012 for a 30-day comment period,

twelve comments were received; 2 from environmental non-governmental organizations (one of these was on behalf of seven environmental non-governmental organizations), 2 from recovery team members and 8 from individuals. No submissions were received regarding the 18 terrestrial species being proposed for addition to the list. One submission from an individual objected to the proposed downlisting of the Peregrine Falcon. This individual opposed the combining of the two subspecies for the assessment and expressed concern that the observed increase in population size has not been assessed over a long period of time.

Eleven objected to the proposed recommendation not to list the Coast Manroot, Four-leaved Milkweed, and / or Laura's Clubtail that was mentioned in the RIAS which accompanied the proposed *Order Amending Schedule 1 to the Species at Risk Act*. For these three species, a separate order, the *Decisions Not to Add Certain Species Order*, will be published in the Canada Gazette on the decision not to add to Schedule 1 the Coast Manroot, Four-leaved Milkweed and Laura's Clubtail.

TERRESTRIAL SPECIES BEING PROPOSED FOR ADDITION TO SCHEDULE 1 OF SARA (18)

Arthropods

Bogbean Buckmoth

COSEWIC assessed the Bogbean Buckmoth as endangered in November 2009. This very rare moth is only found in New York and Ontario. In Ontario, it is found in two widely separated fens, each having different potential threats. The actual area occupied by this species in Canada is less than 3 km^2. COSEWIC's status report of the Bogbean Buckmoth states that it is threatened by a combination of habitat changes such as water level fluctuations, land development and possibly pest control programs. Habitat degradation is partly due to the effects of exotic invasive plants, especially European Common Reed, that are crowding out its preferred food plant, the Bogbean, and of potential flooding or drying of habitat resulting from manipulation of water levels at one of the sites.

Consultations
Only one comment received during the initial consultations specifically addressed listing the Bogbean Buckmoth. A federal department did not oppose its listing. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Bogbean Buckmoth shares its specialized habitat with a number of other rare species including the globally rare Eastern Prairie Fringed Orchid. Buckmoths are a well studied diverse genus of silk moths that are popular with naturalists and entomologists, for their large size and striking colouration.

Listing the species supports enhanced conservation, preserved biological diversity and maintenance of a healthy ecosystem stemming from the recovery strategy/action plan measures.

Costs
Costs are expected to be minimal, as the species exists in only two fens in Ontario. It is listed as endangered on the Species at Risk in Ontario List and is subject to a recovery strategy. Costs related to potential mitigation measures will be contained in the federal recovery strategy/action plans and will be evaluated at that time.

Rationale
Bogbean Buckmoth is believed to have declined between 25–90% globally. The decline is associated with habitat loss. It is highly unlikely that local populations in Ontario would be recolonized from New York or from another Canadian population.

Rusty-patched Bumble Bee
COSEWIC assessed the Rusty-patched Bumble Bee as endangered in April 2010. This species, which has a distinctive colour pattern, was once commonly found throughout southern Ontario and southwestern Quebec. Active searches throughout its Canadian range have detected only one small population over the past 7 years which suggests a decline of at least 99% over the past 30 years. According to COSEWIC's status report, this species is threatened by disease, pesticides, and habitat fragmentation, each of which could cause extirpation in the near future.

Consultations
Four comments were received during the initial consultation period specific to the Rusty-patched Bumble Bee. One Aboriginal organization endorsed its listing, another Aboriginal organization has noted and was not opposed to listing, and a federal department and a provincial organization were not opposed, but asked to be consulted during the recovery planning. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
The Rusty-patched Bumble Bee is in flight for a longer period than most other Bumble Bees and it visits numerous plant genera in many habitat types. Thus, it is likely an important pollinator of both agricultural crops and native flowering plants. The loss of this species may result in increased vulnerability of native mammals, birds and other organisms which rely on pollinated plants for food and shelter. This species has also been used in the past for scientific study as it is easily reared in captivity and has become an important reference species for research in physiology and sociobiology.[6]
Benefits of listing the species supports enhanced conservation, preserved biological

[6] COSEWIC assessment and status report on the Rusty-patched Bumble Bee *Bombus affinis* in Canada.

diversity and an environmental indicator of healthy eco-systems stemming from the recovery strategy/action plan measures.

Costs
Costs are expected to be minimal, as the species exists only in Ontario in Pinery Provincial Park and in limited locations in Quebec. It is listed as endangered on the Species at Risk in Ontario List and is subject to a recovery strategy. There are currently no protections in Quebec. Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time.

Rationale
In the 1970s, the Rusty-patched Bumble Bee was common. Dramatic declines were noticed by the mid-1990s in Canada. However, despite extensive targeted searches from 2005–2009, only three specimens were observed — one in 2005 and two in 2009.

Bert's Predaceous Diving Beetle

COSEWIC assessed Bert's Predaceous Diving Beetle as endangered in November 2009. Despite extensive searches, this Canadian endemic species is known from only two locations in southern Alberta, of which one location has been destroyed and the insect could not be found. It is limited to springs and seepage areas along steep cliff edges or river bends. According to the COSEWIC status report of this species, its habitat is declining due to trampling by livestock and lowering of the water table stemming from withdrawals for irrigation.

Consultations
During the initial consultation period, Bert's Predaceous Diving Beetle received four comments in total. The comments came from two departments in a provincial government, a business association and another non-governmental organization. The non-governmental organization supports its listing. The business association raised concerns about recovery measures and have asked that further research be conducted with regard to the impact of water levels on Bert's Predaceous Diving Beetle. The business association and a provincial department expressed concerns with the socio-economic impact of potential irrigation restrictions on the region's communities and agriculture. The provincial department indicated that these impacts need to be considered, along with the potential socio-economic impact of fencing, which would restrict the cattle's access to the river. A comment from another provincial government department indicated opposition, as it believes this listing would be premature. It indicated that insufficient survey effort was carried out and the species should be listed as data deficient. The Minister of the Environment is satisfied that the search effort was adequate and a data deficient finding is not warranted. There will be further opportunity to consider the impact of measures to recover the species during the development of the recovery strategy. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits

Bert's Predaceous Diving Beetle is an indicator species for reasonably uncompromised spring and seepage habitat found in southern Alberta. Springs and seeps are important because their arthropod fauna includes a limited number of species and diverse and specialized organisms, including groundwater, stream and water-film specialists. Bert's Predaceous Diving Beetle might act as an indicator of occurrence of other unusual or significant species. Benefits of listing the species are contingent on the recovery strategy/action plan measures adopted. These could support enhanced conservation, preservation of biological diversity, and maintaining an environmental indicator.

Costs
Costs are expected to be minimal as this species has only been confirmed in two locations in southern Alberta, of which one location appears to have been eliminated and the insect could not be found. Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time.

Rationale
This species is found only in Canada. In 2008, only two specimens were recovered from a new location near Head-Smashed-In Buffalo Jump, a UNESCO world heritage site in Alberta. Only 42 specimens were known previously (collected in 1984) from two locations near Fort Macleod. The population size of Bert's Predaceous Diving Beetle is unknown, but as with most species, a minimum population of several hundred individuals would likely be required to sustain a viable population. The data at hand is insufficient to speculate about fluctuation of the populations. Listing Bert's Predaceous Diving Beetle may prevent the species from becoming extinct.

Northern Barrens Tiger Beetle
COSEWIC assessed the Northern Barrens Tiger Beetle as endangered in November 2009. This showy metallic green beetle inhabits sandy, open forest habitat dominated by pine and/or oak trees. Found in northeastern and north-central North America, it reaches its northern limit in southern Ontario where it is currently found at only two localities. The species has disappeared from one well known historic site. As outlined in COSEWIC's status report, habitat loss resulting from natural succession and increased pedestrian traffic is a significant threat. The species is also threatened by habitat degradation due to natural succession of savannah and woodland habitat to more shaded conditions, particularly as a consequence of lack of natural fire.

Consultations
Four comments were received during the initial consultation period specific to the Northern Barrens Tiger Beetle. An Aboriginal organization supported listing. A federal department and another Aboriginal organization noted and were not opposed to listing. A provincial stakeholder was not opposed to listing and requested to be a part of the recovery process. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits

Tiger beetles are of interest to amateur and professional entomologists and are important models for the study of ecology and evolution. Although the Northern Barrens Tiger Beetle is too uncommon and obscure through most of its range to be known by most people, tiger beetles are increasingly popular for wildlife viewing as evidenced by the recent publication of a number of field guides. They are the first group of beetles to become part of the trend toward insect viewing which has grown to some extent out of bird watching. This species and other tiger beetles serve as useful environmental indicators. Benefits of listing the species are contingent on the recovery strategy/action plan measures adopted. These could include enhanced conservation, preservation of biological diversity, and maintaining an environmental indicator.

Costs
Costs are expected to be minimal as this species is isolated to two known locations in southern Ontario. It is listed as endangered on the Species at Risk in Ontario List. Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time.

Rationale
The only extant Canadian population of Northern Barrens Tiger Beetle is within Pinery Provincial Park. The total population size at Pinery Provincial Park is estimated at 400 to 1 000 individuals. Numbers of Northern Barrens Tiger Beetle observed at one of the subsites at Pinery Provincial Park appear to have declined over the past 15 years, and trends at the other nearby subsite are unknown. Information on population numbers is considered insufficient for assessment purposes. Listing may prevent it from becoming extirpated.

Wallis' Dark Saltflat Tiger Beetle
COSEWIC assessed Wallis' Dark Saltflat Tiger Beetle in November 2009 as endangered. This distinctively marked beetle is historically known from five locations in southern British Columbia, a region where urban and agricultural expansions have reduced and continue to reduce habitat. In general, tiger beetles appear to be sensitive to soil disturbances such as beach groomers and soil compaction from vehicles. Although these beetles are not particularly shy of humans, conversion of their habitat to paved roads or residential housing would undoubtedly result in population declines. Extensive recent searches have failed to find the beetle and it may occur at only a single location. The index of area of occupancy is small and there is potential future decline in habitat and in number of individuals due to development.

Consultations
One comment was received during the initial consultation period from a non-governmental organization, which supported the listing of the Wallis' Dark Saltflat Tiger Beetle. No comments were received during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits

Benefits of listing the species results in enhanced conservation, preserved biological diversity and an environmental indicator of healthy ecosystems stemming from the recovery strategy/action plan measures.

Costs
Costs are expected to be minimal as this species is restricted to five known locations in British Columbia. It is listed as "red" by the province of British Columbia. Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time.

Rationale
Wallis' Dark Saltflat Tiger Beetle is a charismatic predator in a scarce habitat in the Okanagan Valley, a region with special natural habitats that are under considerable stress from development and other factors. Globally, tiger beetles are extensively studied and very popular as a result of their attractive metallic colouration. They are the only group of beetles for which a North American field guide is available and one of very few beetle groups for which popular regional guides are also available.

Birds

Peregrine Falcon *anatum/tundrius*
COSEWIC assessed the Peregrine Falcon *anatum/tundrius* as a species of special concern in April 2007. The *anatum* and the *tundrius* have traditionally been considered two subspecies of Peregrine Falcon. Newer genetic evidence suggests that prior to the widespread use of organochlorine pesticides, these two subspecies could not be distinguished genetically.. In April 2007, COSEWIC therefore assessed the *anatum* and the *tundrius* as one unit instead of two, finding it to be a species of special concern. *Tundrius* peregrines are found across northern Canada, while *anatum* peregrines can be found in all provinces and territories, with the two ranges overlapping south of the treeline in some areas. Continental populations of the Peregrine Falcon *anatum/tundrius* have shown continuing increases in population size since the 1970s, up to near historical numbers. Population thresholds for downlisting have been achieved for both the *tundrius* and *anatum* subspecies. This recovery has been the result of reintroductions across much of southern Canada, and natural increases in productivity following the ban in Canada of organochlorine pesticides (e.g. DDT). These compounds were the primary factor responsible for the historic decline. These pesticides continue to be used on the wintering grounds, and continue to be found in peregrine tissues, albeit at levels that do not significantly affect reproductive success. New pesticides, which continue to be licensed for use, may have an impact.

Consultations
Initial consultations for the Peregrine Falcon *anatum/tundrius* began in December 2007 by way of the document *Consultation on Amending the List of Species under the Species at Risk Act: Terrestrial Species, January 2008*. Between the time the Minister received the assessment and sent it to the GIC, extended consultations took place with the Nunavut Wildlife Management Board (NWMB) as outlined in the Nunavut Land

Claims Agreement. Officials from the CWS completed consultations in communities in Nunavut. The NWMB supports listing this species. Fourteen comments were received. Eight comments that supported listing the Peregrine Falcon were received: one from a federal government body, four from provincial government bodies and three from Aboriginal organizations. Five comments that were not opposed to listing were received: one from a federal government department, one from a provincial government, and three from Aboriginal organizations. Only one individual from the public was opposed to downlisting the Peregrine Falcon *anatum/tundrius* (citing low numbers, dangers of a random event that could place the population in jeopardy, adaptability, falconry, and species of special concern not being protected by the general prohibitions of SARA).

One comment was received from an individual in regards to this species, during the public consultation period following the publication of the proposed order in the Canada Gazette Part I. This individual opposed the combining of the two subspecies for the assessment and suggested that genetic testing was required to support combining the anatum and tundrius subspecies into one designatable unit. The individual also expressed concern that the observed increase in population size had not been assessed for a long enough period of time. The two subspecies were combined by COSEWIC because recent genetic analysis was unable to separate the two subspecies. This analysis also indicated that the weak contemporary differences between these two subspecies were likely due to anthropogenic causes, such as the limited gene pool used in reintroductions. Analysis of historical pre DDT samples also did not show distinguishable anatum tundrius subspecies. Peregrines, along with many other raptor species, have been recovering steadily since the use of DDT was banned. With this key threat eliminated, there is no current evidence to suggest that continued recovery will be reversed.

Benefits
The benefits of protecting the species will stem from the management plan measures.

Costs
Costs are expected to be minimal as there will be no prohibitions to enforce under SARA. Therefore, the costs of listing will be limited to the preparation of a management plan.

Rationale
The Peregrine Falcon has become an icon of the environmental movement in North America and elsewhere. The collapse of Peregrine Falcon populations in southern Canada and the United States helped galvanize the public in general into shifting its attitude toward better environmental stewardship.

Red Knot *islandica* subspecies
COSEWIC assessed the Red Knot *islandica* subspecies as a species of special concern in April 2007. This subspecies is a migratory bird that receives protection under the MBCA. It is a medium-sized northeastern Arctic breeding shorebird that migrates to wintering grounds in Europe. Forty percent of the breeding population of this subspecies

is found in Canada. The population of this subspecies has declined by 17% over the last three generations (15 years). There are no identified threats to individuals in Canada. Habitat on the Canadian breeding grounds is likely stable, but shellfish harvesting on the wintering grounds in Europe presents an ongoing threat, while increased predation could pose a long-term threat to this subspecies.

Consultations
Initial consultations for the Red Knot *islandica* subspecies began in December 2007 by way of the document *Consultation on Amending the List of Species under the Species at Risk Act: Terrestrial Species, January 2008*. Between the time the Minister received the assessment and sent it to the GIC, extended consultations took place with the Nunavut Wildlife Management Board (NWMB) as outlined in the Nunavut Land Claims Agreement. Officials from the CWS completed consultations in communities in Nunavut. The NWMB supports listing this species. Ten comments indicated general support for listing the species. This support was indicated through specific mention of the species or general acceptance for listing all the species proposed at that time. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Red Knots have long been regarded as a flagship species for shorebird conservation because of their enormously long, inter-continental migrations and their vulnerability owing to their concentration in large numbers (involving a large proportion of the population) at a limited number of key sites. Conservation of sites used by Red Knots will also benefit several other shorebird species.

Costs
Costs are expected to be minimal as there are no prohibitions to enforce under SARA. Therefore, the costs of listing will be limited to the preparation of a management plan.

Rationale
This subspecies is a medium-sized Arctic breeding shorebird that migrates to wintering grounds in Europe. Forty percent of the breeding population of this subspecies is found in Canada. The population of this subspecies has declined by 17% over the last three generations (15 years). There are no identified threats to individuals in Canada. Habitat on the Canadian breeding grounds is likely stable, but shellfish harvesting on the wintering grounds in Europe presents an ongoing threat.

Red Knot *rufa* subspecies
COSEWIC assessed the Red Knot *rufa* subspecies as endangered in April 2007. This subspecies is a medium-sized shorebird that breeds only in the central Canadian Arctic and migrates thousands of kilometres between its Arctic breeding grounds and wintering areas at the tip of South America. The subspecies has shown a 70% decline in abundance over the past three generations (15 years). According to COSEWIC's status report, this subspecies is threatened by a depletion of horseshoe crab eggs, a critical

food source used during northern migration. There is no potential for rescue from other populations.

Consultations
Initial consultations for the Red Knot *rufa* subspecies began in December 2007 by way of the document *Consultation on Amending the List of Species under the Species at Risk Act: Terrestrial Species, January 2008*. Between the time the Minister received the assessment and sent it to the GIC, extended consultations took place with the Nunavut Wildlife Management Board (NWMB) as outlined in the Nunavut Land Claims Agreement. Officials from the CWS completed consultations in communities in Nunavut. The NWMB supports listing this species. Ten comments were received that indicated general support for listing the subspecies. This support was indicated through specific mention of the subspecies or general acceptance for listing all the species proposed at that time. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Benefits of protecting the species will stem from the recovery strategy/action plan measures.

Costs
Costs are expected to be minimal, as there will be no incremental increase in enforcement activities. Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time. Incremental costs of the Order are also expected to be low due to existing protection by the MBCA.

Rationale
This subspecies is a medium-sized Arctic breeding shorebird that migrates to wintering grounds in South America. Forty percent of the breeding population of this subspecies occurs in Canada. This subspecies has declined by 70% over the last three generations (15 years). There are no identified threats to individuals in Canada. Habitat on the Canadian breeding grounds is likely stable, but a depletion of horseshoe crab eggs in their final stopover during spring migration in Delaware Bay presents an ongoing threat. Studies have shown that the densities of the horseshoe crab eggs are too low for the efficient foraging by Red Knots and the birds may not be able to meet their energetic requirements during their stopover on the trip. As a result, the birds are unable to attain adequate departure masses before the flight to their Arctic breeding grounds. Failure to attain the required stores before migration can have severe fitness consequences.

Chestnut-collared Longspur
COSEWIC assessed the Chestnut-collared Longspur as threatened in April 2007. This species is a native prairie grassland specialist that occurs in Alberta, Saskatchewan and Manitoba. The greatest threat to the Chestnut-collared Longspur has been the loss and fragmentation of the native prairie grassland. The species has suffered severe population declines since the late 1960s, and the results of several surveys suggest that

the declines have continued over the last decade, albeit at a slower rate. The species is threatened by habitat loss and fragmentation from road development associated with the energy sector, as identified in the COSEWIC status report. The remaining patches may offer suboptimal breeding conditions for the longspurs.

Consultations

Six comments were received during the initial consultation period regarding the Chestnut-collared Longspur. A provincial department and a non-governmental organization support the listing recommendation. Two non-governmental organizations do not oppose the listing and one recommends that consideration be given to provide compensation to impacted individuals. One business opposed its listing and recommended it be postponed to allow for more in-depth consultations or be referred back to COSEWIC. A provincial department also opposed its listing. Both parties questioned the relevance of one of the surveys used by COSEWIC in arriving at its trend analysis. The COSEWIC analysis combined datasets from two surveys: the Grassland Bird Monitoring (GBM) program and the North American Breeding Bird Survey (BBS). These two parties expressed that the GBM data has more relevance to this species than the BBS data and, in that context, the declines would not meet the criteria for threatened. In its status report, COSEWIC explains that it considered this issue. It decided that the combined BBS and GBM datasets provide the best trend information, include both high and low quality habitat and also provide a larger sample size. The GBM, by focusing on remaining suitable habitat, provides important information relating to the well-being of the species where habitat persists. The BBS continues to collect data in locations where habitat has either declined in quality or is gone. Since habitat loss is the main threat to this species, fewer birds can breed successfully and the population declines. The BBS therefore provides important and relevant information on overall population trends.

The provincial department also referenced data that was not included in the status report. The data provided was a population count from a specific location with high quality habitat. While the data indicate that the species is frequently found at this location, no trend information was provided. It would therefore not alter the trend analysis upon which COSEWIC based its assessment and does not warrant referring this assessment back to COSEWIC.

COSEWIC balanced BBS and GBM data and other appropriate survey data in reaching its conclusions; therefore, additional consultations were not necessary.

No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits

The Chestnut-collared Longspur may have once been one of the most common grassland birds on flat level plains of the Great Plains of Canada and the United States. Restricted to short- and mixed-grass prairie, for many, it is symbolic of native prairie

grasslands. Elders from the Blackfoot First Nation (Nitsitapii) called the Chestnut-collared Longspur "Aapinakoisisttsii" (little morning bird); other sources suggest the Chestnut-collared Longspur is called "Iskiokae" (black breast). Listing the Chestnut-collared Longspur under SARA offers protections under SARA's general prohibitions, in addition to its protections under the MBCA. The species will benefit from the drafting of a recovery strategy. This could lead to a better understanding of the species and its threats. Action plans could result in improved stewardship or conservation practices.

Costs
Incremental costs of the Order are expected to be low due to existing protection by the MBCA.

Rationale
The MBCA already provides this species with protection closely comparable to SARA's general prohibitions. However, recovery strategies under SARA are developed through consultation and cooperation with stakeholders affected by their implementation. Action plans are required to implement recovery strategies for species listed as extirpated, endangered or threatened. Action plans require an evaluation of the socio-economic costs as well as the benefits to be derived from its implementation. Protection of critical habitat for migratory bird species applies after a recovery strategy or action plan that identifies the habitat necessary for the recovery or survival of the species has been finalized.

Short-eared Owl
COSEWIC assessed the Short-eared Owl as a species of special concern in April 2008. The Short-eared Owl is found throughout Canada, but is most frequently found in the Prairie Provinces and along the Arctic coast. This owl has suffered a continuing population decline over the past 40 years, including a loss of 23% in the last decade alone. COSEWIC's status report identifies habitat loss and degradation on its wintering grounds as the most likely major threats, while continuing habitat loss and degradation on its breeding grounds in southern Canada and pesticide use are secondary threats. The disappearance of these habitats is mainly attributed to wetland drainage, urban development and increasing farming activity. This species nearly meets the criteria for threatened status.

Consultations
Initial consultations with respect to the Short-eared Owl began in November 2008 by way of the document *Consultation on Amending the List of Species under the Species at Risk Act: Terrestrial Species, January 2009.* Between the time the Minister received the assessment and sent it to the GIC, extended consultations took place with the NWMB as outlined under the Nunavut Land Claims Agreement. CWS officials completed consultations in communities in Nunavut. The NWMB supports listing this species. In total, twenty-one comments were received from provincial/territorial, aboriginal, municipal, ENGO, and business stakeholders. Thirteen comments were in support of listing the Short-eared Owl: two from non-governmental organizations, two from federal departments, five from provincial governments, three from Aboriginal

organizations, and one from an industrial stakeholder. Eight comments, received from one non-governmental organization, two federal departments, two Aboriginal organizations and three provincial governments, noted and were not opposed to its listing. No comments were received opposing the listing of the Short-eared Owl. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Benefits of protecting the species will stem from the management plan measures.

Costs
Costs are expected to be minimal, as there are no prohibitions to enforce under SARA. Therefore, the costs of listing will be limited to the preparation of a management plan.

Rationale
This owl has suffered a continuing population decline over the past 40 years, including a loss of 23% in the last decade alone. Habitat loss and degradation on its wintering grounds are most likely the major threat, while continuing habitat loss and degradation on its breeding grounds in southern Canada and pesticide use are secondary threats. This species nearly meets the criteria for threatened status.

Bicknell's Thrush
COSEWIC assessed the Bicknell's Thrush as threatened in November 2009. This species has one of the most restricted breeding ranges among the forest birds of North America. It inhabits the forests of montane and cool coastal zones, as well as high elevation regenerating forests over 600 m in Quebec, New Brunswick, Nova Scotia, and the northeastern United States. It winters in the Greater Antilles, where the bulk of its population appears to be in the Dominican Republic. Despite the difficulty of adequately monitoring the species, all the available indices on trends point to significant declines in population and area of occupancy.

According to the COSEWIC status report, the species is at risk in Canada due to its low numbers, patchy distribution, low reproductive potential, and range-wide habitat pressure. Large tracts of Bicknell's Thrush habitat in Canada are vulnerable to future forestry operations, or are in various stages of regeneration following clear cutting. Extensive logging of primary habitat on the Gaspé Peninsula and the Parc des Laurentides region north of the city of Québec is causing particular concern.

Consultations
Four comments were received regarding the Bicknell's Thrush during the initial consultation period. Two comments were provided by Aboriginal organizations. One supported its listing and the other noted and did not oppose its listing. A third comment came from a provincial government organization that noted and does not oppose its listing but would like to be included in the recovery consultations. The fourth comment was from a New Brunswick business that opposed listing. The company is concerned

with potential economic losses and other impacts of listing on its industry and contends that the species is difficult to monitor, stating that the reasons for the population decline are unclear, and a large part of the threat toward the species may occur on its wintering grounds outside of Canada.

Every program monitoring this species has shown a decline. Difficulty of monitoring and uncertainty as to cause of decline would not be reasons not to list a species under SARA. Furthermore, many species at risk are inherently difficult to monitor because of their very scarcity. Reliable surveys can and have been conducted for this species nevertheless.

The Minister of the Environment is satisfied that the MBCA already provides this species with strong protections comparable to SARA's general prohibitions. Once a species is listed, recovery strategies under SARA are developed through consultation and cooperation with stakeholders affected by their implementation. Action plans are required to implement recovery strategies for species listed as extirpated, endangered or threatened. Action plans require an evaluation of the socio-economic costs as well as the benefits to be derived from its implementation. Protection of critical habitat for migratory bird species applies after a recovery strategy or action plan that identifies the habitat necessary for the recovery or survival of the species has been finalized.

No comments were received in regards to listing this particular species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits

This species qualifies as a potential, long-term indicator of the health of subalpine forest habitats and its avian populations. It's Canadian range represents a significant portion of its global range. Also, finding Bicknell's Thrush is a challenge for birdwatchers and ornithologists because of its remote high elevation and impenetrable forest habitat.

Costs

Incremental costs of the Order are expected to be low due to existing protection by the MBCA.

Rationale

Factors leading to population decline are the major threats to the survival of this species. Preliminary results from the Maritimes Breeding Bird Atlas project suggest a 40% decline in the area occupied over the last three generations, while the High Elevation Landbirds Program suggests more dramatic declines in the same regions. Recent surveys in Quebec also indicate declines in some locations. While reasons for the decline are unclear, habitat loss on the wintering grounds, management practices such as pre-commercial thinning in regenerating forests on breeding grounds, and climate change are leading to a reduction of suitable high-elevation habitat.

Lichens

Oldgrowth Specklebelly Lichen

COSEWIC assessed the Oldgrowth Specklebelly Lichen as a species of special concern in April 2010. This foliose, tree-inhabiting lichen is endemic to old-growth rainforests of western North America. In Canada, it is limited to coastal or near-coastal areas of southern British Columbia. Recent discoveries of additional records have only slightly expanded the known range of occurrence, and the lichen remains threatened by ongoing loss of old growth forests through clear-cut logging as identified in COSEWIC's status report. The low dispersal ability of its heavy propagules contributes to its rarity, as does its restriction to nutrient hotspots, such as dripzones under old Yellow-cedars, toe slope positions, and sheltered seaside forests. It tends to occur discontinuously and on very few trees in the stands where it is established.

Consultations

One comment for Oldgrowth Specklebelly Lichen during the initial consultation period, from a non-governmental organization supported its listing. No comments were received during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits

Oldgrowth Specklebelly Lichen is an indicator of long-term environmental continuity in the oldest coastal temperate rainforests of western North America.

Costs

Costs are expected to be minimal, as there are no prohibitions to enforce under SARA. Therefore, the costs of listing will be limited to the preparation of a management plan.

Rationale

Oldgrowth Specklebelly Lichen is confined in Canada to coastal temperate rainforests older than 200 years old. Here, it is further restricted to the branches and trunks of conifers growing in nutrient hotspots. Because such habitat types are restricted to very old forest ecosystems, it is clear that oldgrowth is critical to the long-term survival of Oldgrowth Specklebelly Lichen. Hence, any human activity or natural process that results in a loss or significant reduction in old growth constitutes a major threat to this species. In one of the site areas in British Columbia, nearly half of the original oldgrowth forest land base within the horizontal and elevational range of Oldgrowth Specklebelly Lichen has been harvested, most of it within the past 25 years. In a rainforest region where wildfire is rare, industrial scale forestry is by far the most important cause of decline in Oldgrowth Specklebelly Lichen, both as a result of habitat loss and the ongoing fragmentation of the remaining oldgrowth islands.

Pale-bellied Frost Lichen

COSEWIC assessed the Pale-bellied Frost Lichen as endangered in November 2009. This lichen is an eastern North American endemic that, in Canada, is restricted to two known locations in southern Ontario. The lichen grows as an epiphyte on hardwoods and requires bark with high pH and high moisture holding capacity. Only 45 individuals are known, growing on 16 trees. The lichen appears to have suffered a dramatic

population decline throughout its range since the early 1900s; in Canada, four historical sites have been lost. According to the COSEWIC status report, the major threats to the lichen are air pollution and timber harvest.

Consultations
One comment specific to the Pale-Bellied Frost Lichen was received during the initial consultation period from a federal department noted and did not specifically oppose its listing. No comments were received during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
As the interest in the preservation of biodiversity has increased, it becomes vital that all species, even if they do not have a currently known value, are preserved. This lichen is apparently sensitive to SO_2 concentrations and so has value as an air quality indicator.

Costs
With only two known locations, costs are expected to be minimal. Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time.

Rationale
Habitat availability for this lichen in southern Ontario has been negatively affected over the past century. The two extant Canadian populations are both currently unprotected on provincial lands that are open to logging operations. Improvements in air quality have significantly decreased sulfate deposition and so this rare lichen may be able to expand its populations in the long term.

Vole Ears Lichen
COSEWIC assessed Vole Ears Lichen as endangered in November 2009. This large foliose lichen is known in Canada only from Nova Scotia, New Brunswick, and the island of Newfoundland, where it inhabits cool, humid and coastal conifer forests dominated by Balsam Fir. Although there are 24 known sites for the lichen in these regions, few individuals (133 thalli) are known to exist. While recent surveys have increased the number of known locations, the lichen has been extirpated from 11 sites in the last 30 years. According to COSEWIC's status report, this lichen is sensitive to air pollution and acid precipitation, which are its main threats. Other threats include forest harvest and browsing by moose. Logging may also limit available habitat and decreases in frequency of fog and herbivores by introduced slugs may also be a threat.

Consultations
One comment was received during the initial consultation period, from a non-governmental organization, which indicated support for its listing. No comments were received following the publication of the proposed order in the Canada Gazette Part I.

Benefits

As the interest in the preservation of biodiversity has increased, it is important that all species, even if they do not have a currently known value, are preserved. This lichen is apparently sensitive to SO_2 concentrations and so has value as an air quality indicator.

Costs
In Nova Scotia, New Brunswick, and on the island of Newfoundland, there are 133 adult individuals. There are 24 sites where this species has been known to exist; however, it is now extirpated from 11 of the sites. Costs will be minimal, and will be related to mitigation measures and will be contained in the federal recovery strategy/action plans and will be evaluated at that time.

Rationale
Vole Ears Lichen is not currently listed under SARA nor is it protected by provincial legislation. There is only one occurrence of the species at the present time in Nova Scotia within a fully protected area. However, other occurrences in the province may receive protection in the near future. All the occurrences on the island of Newfoundland are on Crown land and receive protection upon listing.

Molluscs

Threaded Vertigo
COSEWIC assessed the Threaded Vertigo as a species of special concern in April 2010. This minute terrestrial snail species is at the northern extent of its range, and found in lowland areas in southern British Columbia. Most individuals live on the bark of Bigleaf Maple trees and appear to have poor capacity for dispersal between trees and sites. According to the COSEWIC status report, removal of trees and habitat degradation due to urban expansion, roads and associated infrastructure, forestry, and agriculture are the main threats.

Consultations
During the initial consultation period, one comment specific to Threaded Vertigo, from a non-governmental organization, supported its listing. No comments were received during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
The species is of no known socio-economic or cultural significance. It contributes to the biodiversity of the rich, extraordinary arboreal communities supported by Bigleaf Maples. At suitable moist sites, epiphytic mosses, liverworts, lichens, ferns, and other vascular plants drape large old maples, in turn providing habitat for a variety of fungi, invertebrates, and other organisms. The ecological roles and services of the different components of these arboreal communities, including the Threaded Vertigo, are yet to be elucidated.

Costs

Costs are expected to be minimal, as there are no prohibitions to enforce under SARA. Therefore, the costs of listing will be limited to the preparation of a management plan.

Rationale
The distribution of the species coincides with densely populated and highly modified parts of British Columbia. Much of the land conversion is historical in these lowland coastal areas, but human developments continue to encroach on remaining natural areas concomitant with an expanding population. Housing developments, road building and other associated infrastructure, agriculture, and forestry are shrinking and fragmenting habitats. Most records for this species are from parks or federal lands protected from land conversion, but potential habitats on private lands throughout most of the species' range continue to diminish. Populations in protected areas are not necessarily secure due to habitat degradation from intensive recreational or other uses, and invasion by introduced plants and animals.

Plants

Virginia Mallow
COSEWIC assessed Virginia Mallow as endangered in April 2010. This globally rare, showy perennial herb of the mallow family occurs in open riparian and wetland habitats where it reproduces by seed and asexually by spreading rhizomes. Only two small populations, separated by about 35 km, are known from southwestern Ontario, where they are at risk from continued decline in habitat area and quality due to an aggressive invasive grass and quarry expansion, as outlined in the COSEWIC status report.

Consultations
During the initial consultation period, one comment from a federal department noted and did not oppose listing Virginia Mallow. No comments were received following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Virginia Mallow survives until the first frost and is therefore useful in apiculture. It contains substances similar to medical comfrey and could be used in the pharmaceutical industry. Virginia Mallow has been used for planting in chemically degraded terrain and garbage dumps. It can also be grown on slopes of eroding terrain.

Costs
In Canada, the species only occurs in Ontario where it is listed as critically imperilled and subject to a recovery strategy. Costs will be minimal as they relate to mitigation measures contained in the federal recovery strategy/action plans and will be evaluated at that time.

Rationale
In Canada, it is ranked both nationally and provincially as critically imperilled. Habitat destruction seems to be the most detrimental limiting factor for this species throughout its range, including Ontario. Undisturbed riparian woodlands with natural openings and

stream terraces are exceptionally rare in Ontario and in the United States. The quality of the species' habitat continues to decline in Ontario. Specific threats include the spread of Common Reed, an aggressive exotic grass, quarry expansion, and pipeline maintenance activities.

Victoria's Owl-Clover

COSEWIC assessed Victoria's Owl-Clover as endangered in April 2010. This small annual herb is confined to a very small area of British Columbia and one site in adjacent Washington State. This species is restricted to seasonally wet microhabitats within the highly fragmented and declining Garry Oak ecosystem. Five of the nine Canadian populations disappeared before 1957 and one other population may have been recently extirpated. The three to four extant populations are subject to ongoing competition with several invasive exotic plants and two of the populations are very small and occur in areas used for recreational activities where trampling is a problem.

Consultations

One comment was received during the initial consultation period from a non-governmental organization. It supported listing Victoria's Owl-Clover. No comments were received following the publication of the proposed order in the Canada Gazette Part I.

Benefits

Listing the species will benefit the scientific community, due to its genetic and evolutionary characteristics. Benefits of protecting the species will stem from the recovery strategy/action plan measures.

Costs

Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time.

Rationale

This species is on the decline in Canada and two populations have disappeared due to habitat loss, two other populations are small and affected by trampling, and one population has been lost due to trampling.

Whitebark Pine

COSEWIC assessed the Whitebark Pine as endangered in April 2010. This long-lived, five-needled pine is restricted in Canada to high elevations in the mountains of British Columbia and Alberta. According to COSEWIC's status report, White Pine Blister Rust is a threat to the survival of the species and is projected to cause a decline of this species of more than 50% over a 100-year time period. The effects of Mountain Pine Beetle, climate change, and fire exclusion also threaten the species' survival and will increase the decline rate further. It is likely that none of the causes of decline can be reversed. The lack of potential for rescue effect, life history traits such as delayed age at maturity, low dispersal rate, and reliance on dispersal agents all contribute to placing this species at high risk of extirpation in Canada.

Consultations
During the initial consultations, the Whitebark Pine received nine comments. They were received from provincial governments, non-governmental organizations, an aboriginal organization, and individual members of the public. All comments supported its listing, many of which were strongly in favour. No comments were received during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Listing the species will benefit the scientific community, due to its genetic and evolutionary characteristics. Benefits of protecting the species will stem from the recovery strategy/action plan measures.

Costs
Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time.

Rationale
According to the COSEWIC status report, this long-lived, five-needled pine is restricted in Canada to high elevations in the mountains of British Columbia and Alberta. White Pine Blister Rust alone is projected to cause a decline of the species of more than 50% over a 100-year time period. The effects of Mountain Pine Beetle, climate change, and fire exclusion will increase the decline rate further. It is likely that none of the causes of decline can be reversed. The lack of potential for rescue effect, life history traits such as delayed age at maturity, low dispersal rate, and reliance on dispersal agents all contribute to placing this species at high risk of extirpation in Canada.

TERRESTRIAL SPECIES BEING PROPOSED FOR RECLASSIFICATION WITHIN SCHEDULE 1 OF SARA (7)

Reptiles

Queensnake
COSEWIC reassessed the Queensnake as endangered in April 2010; it was previously assessed as threatened in 1999 and 2000. This species has a restricted and shrinking distribution in southwestern Ontario. As outlined in COSEWIC's status report, loss, fragmentation and degradation of habitat and decline in prey abundance represent the most significant threats to Queensnakes in Ontario.

Consultations
One comment was received during the initial consultations from a federal department. They are not opposed to the reclassification of the Queensnake but would like to be included during the recovery planning, should the snake be found on their property. No comments were received during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
The Queensnake reaches the northern limit of its range in southern Ontario, and therefore snakes in this region may have genetic characteristics distinct from more centrally located populations. In the few Ontario watersheds where the Queensnake occurs, the species may serve as an indicator of environmental quality because its aquatic habits and specialized diet may make it particularly susceptible to water and prey contamination. In addition, its crayfish prey is vulnerable to contamination and increased silt in the water, and declines in crayfish numbers will be reflected in the viability of Queensnake populations. The highly specialized feeding behaviour of the Queensnake makes it an interesting species from ecological and evolutionary perspectives.

Costs
Costs related to mitigation measures will be contained in the recovery strategy/action plans and will be evaluated at that time.

Rationale
This species consists of scattered small populations which are isolated due to habitat fragmentation and the species' limited dispersal capacity. Over the last decade, the number of extant locations has declined and the species' riparian and riverine habitat has continued to be lost and degraded. The species is limited by its extremely specialized diet and threatened by decline in its prey of freshly moulted juvenile crayfish. Other threats include persecution and effects of invasive Zebra Mussels and Common Reed.

Fowler's Toad
COSEWIC reassessed the Fowler's Toad as endangered in April 2010; it is currently threatened. This species only occurs on sandy beaches in three disjunct areas along the north shore of Lake Erie. According to the COSEWIC status report, this species has disappeared from numerous historic sites on the Lake Erie shore and continues to decline in abundance and number of populations with further habitat loss and degradation due to invasive species (Common Reed, Zebra Mussels) and anthropogenic activities including shoreline development, beach cleaning, construction of breakwalls, bulldozing of beaches, vehicle use on beaches and agricultural and industrial contaminants. In addition, a population viability analysis (PVA) model suggests that over the last decade, the probability of extirpation within 20 years has increased substantially.

Stewardship and outreach activities designed for children ages 12 and under, include "Meet the Fowler's Toad night," and school curriculum lesson plans. To secure the recovery of Fowler's Toad populations, landowners are provided with information on stewardship practices as well.

Fowler's Toad fact sheets, landowner contact pamphlets, photo stickers, identification CDs and provincial park displays have been developed and are available to the public

at Ontario Parks offices. Furthermore, the existing parks system is being used to improve and expand the public's understanding of species at risk and the Fowler's Toad.

Habitat enhancement, restoration, and monitoring of these efforts are underway. The main areas of interest for concentrating efforts on Fowler's Toad conservation are the dunes and breeding ponds in public and private lands of Morgan's Point, Rock Point Provincial Park, Nickel Beach, Lakewood (formerly Easter Seal Camp) in Wainfleet, and James N. Allan Provincial Park.

Consultations
One comment was received from a federal department regarding Fowler's Toad during the initial consultation period. It noted and did not oppose its reclassification. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Adult Fowler's Toads are important small insectivores, specializing in ants and beetles, whereas their tadpoles are significant detritivores in small ponds, rocky pools and embayments.

Costs
Costs related to mitigation measures will be contained in recovery strategy/action plans and will be evaluated at that time.

Rationale
This species has been the subject of the longest (>30 years) population and demographic study of a Canadian amphibian. This research has elucidated much of the nature of demographic, intrinsic and extrinsic factors on population fluctuations and abundance in an anuran species. In addition, the impacts of humans on the species are now becoming understood.

Birds

Lewis's Woodpecker
COSEWIC re-assessed Lewis's Woodpecker as threatened in April 2010; it was previously assessed as a species of special concern. In Canada, this woodpecker breeds only in British Columbia. Its population is small, with fewer than 1 000 individuals, and there is evidence of ongoing declines in parts of its Canadian range where it has been monitored over time. The global population (Canada and the United States) is also showing significant declines. Threats include habitat loss and degradation from increasing urban and agriculture development, and fire suppression, as outlined in the COSEWIC status report.

Consultations

Two comments were received during the initial consultation period specific to Lewis's Woodpecker from non-governmental organizations. Both supported its reclassification. No comments were received following the publication of the proposed order in the Canada Gazette Part I.

Benefits
The Lewis's Woodpecker is a unique woodpecker in behaviour and appearance. It is sought after by recreational birders and is an indicator species for fire-maintained Ponderosa Pine ecosystems. Woodpeckers are also culturally significant to First Nations people.

Costs
Costs related to mitigation measures will be contained in recovery strategy/action plans and will be evaluated at that time. Incremental costs of the Order are likely to be low due to existing protection by the MBCA.

Rationale
Recent surveys have shown the species to be far less numerous than previously believed. Urbanization, increasingly industrialized agricultural practices and forestry practices have all contributed to habitat loss and degradation. Removal of trees for firewood, human safety or aesthetic reasons reduces habitat quality by eliminating nest trees, a critical habitat feature for this species. Many decades of fire suppression in Ponderosa Pine forests has resulted in infilling by Douglas-fir and reduction of open pine forests which are suitable for this species. Competition from the introduced European Starling may be a threat to Lewis's Woodpeckers in areas where European Starling populations are high and nest sites are scarce. Accidental mortality of breeding adults through collision with vehicles may affect populations around highway corridors, many of which are in prime Lewis's Woodpecker valley bottom habitat.

Mammals

Swift Fox
COSEWIC re-assessed the Swift Fox as threatened in November 2009; it was previously assessed as endangered. This species was extirpated from Canada in the 1930s. Following reintroduction programs in Alberta and Saskatchewan initiated in 1983, they have re-established populations in these areas and in northern Montana. Population numbers and distribution have increased since that time, with the current estimate in Canada having doubled to 647 since the last COSEWIC assessment in 2000. Connectivity between populations has also improved during this time, particularly through northern Montana.

Consultations
Five comments were received during the initial consultation period specific to the Swift Fox. Two comments were provided by provincial governments and supported its reclassification to threatened. Two non-governmental organizations noted and did not oppose its reclassification. One non-governmental organization opposed its down-

listing, stating inconsistencies in the population data and that the Swift Fox has not recolonized its former range and the species still faces habitat loss and degradation. The Minister of the Environment has reviewed these concerns and is confident that COSEWIC's data analysis and application of criteria were appropriate, both in terms of population data and colonization of its possible suitable habitat. Furthermore, threatened species also benefit from a recovery strategy under SARA, and down-listing the Swift Fox from endangered to threatened would not hinder recovery efforts. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Able to run at speeds of up to 60 km/h, Swift Foxes are one of the fastest animals in North America. As meso-predators, they are important to the biodiversity of the Canadian Prairies. Swift Foxes also play a vital role in the spirituality of some of Canada's First Nation cultures.

Costs
Costs related to mitigation measures will be contained in recovery strategy/action plans and will be evaluated at that time.

Rationale
Swift Fox populations in Canada increased by 130% between 1996 and 2006; however, there are no confidence limits associated with this data. Since 2001, population numbers and distribution have remained stable and habitat for this species within Canada appears to be saturated. Most improvement in overall population status can be attributed to populations in Montana, which are still demonstrating increasing trends in numbers and distribution. Habitat loss and fragmentation in Canada along with predation and the threat of disease (as seen in other canids) could threaten the continued recovery of this species. For further information, consult the recovery strategy for the Swift Fox at www.registrelep-sararegistry.gc.ca/document/doc1459f/16_e.cfm.

Plants

Western Blue Flag
COSEWIC re-assessed the Western Blue Flag as a species of special concern in April 2010; it was previously assessed as threatened. This showy perennial is restricted to 10 native sites and is also present at a few sites where it is believed to have been introduced. It occurs primarily in the grasslands of southern Alberta. Several new populations have been discovered since the species was last assessed. The area occupied and total population size of native plants is now known to be larger than previously determined. According to COSEWIC's status report, the species is subject to ongoing competition from invasive plants, but trampling in areas heavily grazed by cattle has been largely mitigated by recovery actions.

Consultations

During the initial consultation period, two comments for the Western Blue Flag supported its reclassification. One was from a non-governmental organization and another from a provincial government. No comments were received following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Western Blue Flag has a narrow environmental tolerance with specific habitat requirements. The species is found in some of the most threatened landscapes in Alberta. No information has been found on Aboriginal or confirmed human use in Canada for Western Blue Flag; however, medicinal and ceremonial uses have been reported for First Nations in the United States. Change in classification from threatened to special concern of this now-recovering species allows resources to be directed towards other species that are at greater risk.

Costs
Costs will likely be minimal as the change in classification from threatened to special concern results in removing the SARA prohibitions. Therefore, the cost is limited to the preparation of a management plan.

Rationale
The total Canadian population appears to be stable but fluctuates in size. The total native Canadian population in 2009 was estimated at between 110 000 and 120 000 stems; however, some sites were not visited. This estimate has significantly increased since the last COSEWIC report in 1999 of 7 500 stems. Since 1999, two populations previously recorded no longer exist and two are considered to possibly be extirpated. A number of new populations have been discovered within the known native range, and a series of other populations have been found disjunct from the known native populations. The increase in population size and number of previously unidentified sites is more an indication of increased cooperation and participation by land managers and land owners, increased search effort and public interest in conservation and management activities of this species than it is an actual increase in the number of existing populations; presumably, the "new" populations existed previously, but there are no data to confirm this.

Redroot
COSEWIC re-assessed Redroot as a species of special concern in November 2009; it was previously assessed as threatened. A highly disjunct Atlantic Coastal Plain species, it is restricted in Canada mainly to two connected, extensive, lakeshore populations in southern Nova Scotia. Comprehensive new surveys and other information indicate that the risk of extinction for this species is less than previously thought. Its lakeshore habitat has been subject to slow but steady loss and decline in quality due to cottage and residential development for 30 to 40 years. As outlined in COSEWIC's status report, losses are likely to continue through the foreseeable future with new development and intensification of existing development, but the proportion of habitat currently developed is still low and the species' locally widespread occurrence and asexual reproduction mitigates the threat of extirpation in the short term.

Consultations

During the initial consultation period, two comments were received for Redroot. One non-governmental organization supported its down-listing. One member of the public opposed the down-listing. The basis of the opposition was that very little has changed since the previous assessment in 2000 with respect to the species' restricted distribution and the impacts of threats it faces; COSEWIC's assessment also did not take into consideration new comprehensive surveys currently underway. Finally, a concern was raised that ongoing recovery activities would be compromised by the down-listing. The Minister of the Environment is satisfied that COSEWIC considered all available information regarding abundance, distribution, the nature of the threats, and the rate of habitat decline in its assessment. The rate of habitat decline was analyzed and determined to be low relative to the species' distribution, and not to threaten the species with extirpation in the short term. In addition, COSEWIC adjusted its assessment criteria, which are based on the International Union for Conservation of Nature (IUCN) Red List criteria, in 2001 following similar revisions made by the IUCN in the same year. These changes were made to better reflect the risk of species becoming extinct or extirpated. The changes likely influenced COSEWIC's recent reassessment of the plant species, because some of the criteria used in the 2000 assessment no longer apply. Environment Canada is committed to supporting management activities for species at risk that are listed as special concern. Redroot is included in the recently published *Recovery Strategy and Management Plan for Multiple Species of Atlantic Coastal Plain Flora in Canada*, and would remain integrated within the goals of this document as a species of special concern. No comments were received following the publication of the proposed order in the Canada Gazette Part I.

Benefits

Redroot is biogeographically interesting, even among the many Atlantic Coastal Plain disjuncts in southern Nova Scotia, because of its strongly southern distribution in its American range. Being highly disjunct at the extreme northern limits of the species' distribution, the Canadian population could be significant for the genetic diversity of the species. Aboriginal peoples, including Mi'kmaq in Nova Scotia, have used the plant as a dye and medicine and Redroot extracts have been shown to have a phototoxic effect on microorganisms. Redroot's unusual biochemistry has also been investigated and further work could reveal useful economically valuable properties. Redroot has also been noted as a waterfowl food source, but due to its rarity it is probably not important in that regard in Canada. Change in classification from threatened to special concern of this now recovering species allows resources to be directed towards other species that are at greater risk.

Costs

Costs will likely be minimal as the change in classification from threatened to special concern results in removing the SARA prohibitions. Therefore, the cost is limited to the preparation of a management plan.

Rationale

Redroot population estimates could vary considerably depending on the percentage of infertile plants, making up about 99.9% of the total population, that are considered to be sufficiently mature to be reproductive, both asexually and sexually. Relative size of fertile and infertile plants suggests some portion of infertile plants are likely mature. Population trends cannot be directly assessed, but based on habitat trends, populations are likely to have been slowly and continuously declining for more than the past three generations (15 years) as a result of cottage and residential development, which is likely to continue through the foreseeable future. Neither previous nor near-future losses are likely to exceed 30% of the total population.

Tubercled Spike-rush

COSEWIC re-assessed Tubercled Spike-rush as a species of special concern in April 2010; it was previously assessed as threatened. In Canada, this sedge is known to exist only along peaty and sandy shorelines at six lakes in southwestern Nova Scotia. The use of all-terrain vehicles along the shores of the two larger lakes, where most of the Canadian population occurs, has degraded portions of the species' habitat. According to the COSEWIC status report, cottage development and related impacts (water quality and habitat disturbances) are currently limited threats that have the potential to increase in the future. More intensive surveys of lakeshore habitats indicate that the species is somewhat more abundant than previously documented.

Consultations

Two comments were received during the initial consultation period specific to Tubercled Spike-rush. One non-governmental organization supported the down-listing of the species. One member of the public opposed the down-listing of the species. The basis of the opposition was that very little has changed since the previous assessment in 2000 with respect to the species' restricted distribution and the impacts of threats it faces; COSEWIC's assessment also did not take into consideration new comprehensive surveys currently underway. Finally, a concern was raised that ongoing recovery activities would be compromised by the down-listing. The Minister of the Environment is satisfied that COSEWIC considered all available information regarding abundance, distribution, the nature of the threats, and the rate of habitat decline in its assessment. The rate of habitat decline was analyzed and determined to be low relative to the species' distribution, and to not threaten the species with extirpation in the short term. In addition, COSEWIC adjusted its assessment criteria (which are based on the IUCN Red List criteria) in 2001 following similar revisions made by the IUCN in the same year. These changes were made to better reflect the risk of species extinction or extirpation. They likely influenced COSEWIC's recent reassessment of the plant species, because some of the criteria used in the 2000 assessment no longer apply. Environment Canada is committed to supporting management activities for species at risk that are listed as special concern. Tubercled Spike-rush is included in the recently published *Recovery Strategy and Management Plan for Multiple Species of Atlantic Coastal Plain Flora in Canada*, and would remain integrated within the goals of this document as a species of special concern. No comments were received in regards to the proposed recommended listing of this species during the public consultation period following the publication of the proposed order in the Canada Gazette Part I.

Benefits
Tubercled Spike-rush is biogeographically interesting as one of a suite of Atlantic Coastal Plain endemics with disjunct populations in Nova Scotia. As a highly disjunct occurrence at the extreme northern limit of its range, the Nova Scotia populations may harbour significant genetic diversity for the species. Change in classification from threatened to special concern of this now recovering species allows resources to be directed towards other species that are at greater risk.

Costs
Costs will likely be minimal as the change in classification from threatened to special concern results in removing the SARA prohibitions. Therefore, the cost is limited to the preparation of a management plan.

Rationale
In the Canadian portion of its range, Tubercled Spike-rush is restricted to open, peaty or sandy substrates and floating peat mats along lakeshores. It occurs within the shoreline zone that is annually flooded in spring and is frequently flooded during wet years in late summer and autumn, making detection difficult in some years. The total number of population size in each location is not well defined. Beaver-induced flooding occurs frequently in one location; however, it could have neutral or positive impacts on the longer term if the water level is later reduced, since the species is noted as requiring water level fluctuation and is likely well adapted to it, but the length of time mature plants or the seed bank can survive inundation is not known.

IMPLEMENTATION, ENFORCEMENT AND SERVICE STANDARDS

Environment Canada and Parks Canada Agency developed a compliance strategy for the Order amending Schedule I of SARA to address the first five years of implementation of compliance promotion and enforcement activities related to the general prohibitions. The compliance strategy only addresses compliance with the general prohibitions for species listed as extirpated, endangered or threatened on Schedule 1 of SARA. The compliance strategy aims to increase awareness and understanding of the Order among the affected communities, promote adoption of behaviours by the affected communities that will contribute to the overall conservation and protection of wildlife at risk; achieve compliance with the proposed Order by the affected communities; and enhance the knowledge of these communities regarding species at risks.

Implementation of the Order amending Schedule 1 of SARA includes activities designed to encourage compliance with the general prohibitions. Compliance promotion initiatives are proactive measures that encourage voluntary compliance with the law through education and outreach activities, and raise awareness and understanding of the prohibitions, by offering plain language explanations of the legal requirements under the Act. Environment Canada and the Parks Canada Agency would promote compliance with the general prohibitions of SARA through activities which may include online

resources posted on the Species at Risk Public Registry, fact sheets, mail-outs and presentations. These activities would specifically target groups who may be affected by this Order and whose activities could contravene the general prohibitions, including other federal government departments, First Nations, private land owners, recreational and commercial fishers, national park visitors and recreational ATV users on parks lands. The compliance strategy outlines the priorities, affected communities, timelines and key messages for compliance activities.

At the time of listing, timelines apply for the preparation of recovery strategies, action plans or management plans. The implementation of these plans may result in recommendations for further regulatory action for protection of the species. It may draw on the provisions of other acts of Parliament, such as the MBCA, to provide required protection.

SARA provides for penalties for contraventions to the Act, including liability for costs, fines or imprisonment, alternative measures agreements, seizure and forfeiture of things seized or of the proceeds of their disposition. SARA also provides for inspections and search and seizure operations by enforcement officers designated under SARA. Under the penalty provisions of the Act, a corporation found guilty of an offence punishable on summary conviction is liable to a fine of not more than $300,000, a non-profit corporation is liable to a fine of not more than $50,000, and any other person is liable to a fine of not more than $50,000 or to imprisonment for a term of not more than one year, or to both. A corporation found guilty of an indictable offence is liable to a fine of not more than $1,000,000, a non-profit corporation to a fine of not more than $250,000, and any other person to a fine of not more than $250,000 or to imprisonment for a term of not more than five years, or to both.

CONTACT

Caroline Ladanowski, Director, Wildlife Program Support Division, Canadian Wildlife Service, Environment Canada, Gatineau, QC, K1A 0H3,
Tel: (819) 994-3432.