

November 25, 2008

John Doyle
Auditor General of British Columbia
8 Bastion Square
Victoria, BC V8V 1X4

Dear Mr. Doyle:

RE: Request for an audit and examination of the Ministry of Environment's failure to carry out its duty to identify critical habitat for species at risk

Introduction

On behalf of the Wilderness Committee¹ we hereby request that you undertake an examination of the systematic refusal of the British Columbia Ministry of Environment to identify critical habitat² for species at risk, as required by the *Canada-British Columbia Agreement on Species at Risk*, the *Accord for the Protection of Species at Risk*, and the *Species at Risk Act*.³

Please note that a number of other groups are simultaneously asking the Auditor General to conduct such an examination: see Appendix E. These groups include:

- West Coast Environmental Law Association
- David Suzuki Foundation
- Sierra Club, BC
- Dogwood Initiative
- Georgia Strait Alliance

We urge you to undertake this examination pursuant to:

- section 11 (8) of the *Auditor General Act* (the "Act"), and specifically under your authority to report on whether government is operating economically, efficiently and effectively; and

- section 13 of the *Act*, under your authority to conduct an examination respecting government, if it is in the public interest to do so.

Species at risk and their habitat constitute extraordinarily valuable Crown resources with substantial environmental, economic and social values. Identification of critical habitat for such species is an essential first step towards properly conserving these rare Crown resources.

However, we have obtained information that suggests the British Columbia government is deliberately refusing to properly identify critical habitat for species at risk. That information is outlined below.

It should be noted that habitat loss is the primary threat to BC's at-risk species. Habitat destruction and degradation threatens 86% of species at risk in the province.⁴ Therefore, this government failure to properly identify and protect critical habitat for such species is an egregious failure to steward a key public resource. It is a failure to operate "economically, efficiently and effectively," as per s. 11(8) of the *Auditor General Act*.

Furthermore, it is clearly "in the public interest" for the Auditor General to investigate whether irreplaceable public resources are being wasted and lost due to government's failure to identify and protect at-risk species and their habitat.⁵ This is particularly true because the refusal to identify critical habitat is contrary to both the provincial government's legal duties under the *Species at Risk Act* and its commitments under federal-provincial agreements.

The argument for why the Auditor General should examine this matter is presented below and addresses the following issues:

- The value of species at risk to British Columbians;
- The British Columbia Government's established commitment to protect species at risk;
- The BC Government's breach of its commitment/duty to develop adequate recovery strategies for species at risk;

- How the BC Government's refusal to allow the identification of "critical habitat" in recovery strategies renders the *Species at Risk Act* ineffective;
- Evidence of the BC Government's failure to identify critical habitat;
- An egregious example: the Vancouver Island Marmot;
- Other examples: Garry Oak and related species; Spotted Owls; Mexican Mosquito Fern; Rigid Apple Moss; Mormon Metalmark Butterfly; and Night Snake;
- Legal jurisdiction for the Auditor General to act; and
- Conclusion.

The Value of At-Risk Species

Species at risk are an invaluable—and irreplaceable—public resource.

However, this precious resource is being depleted. At least 49 species and subspecies have disappeared from BC, including 22 species of plants, three freshwater fish, three mammals, four birds, three reptiles, three butterflies, and 11 mollusks. Of these species, five occurred nowhere else in the world and are now extinct.⁶

Currently, 184 BC species are formally listed as being at risk under the federal *Species at Risk Act*.⁷ Far more are actually at risk. A recent comprehensive assessment of BC's biodiversity estimated that there are approximately 1600 species at risk in BC today and that approximately 43% of BC's assessed species are at risk.⁸

The value of these at-risk species is widely recognized. The Government of Canada acknowledged the value of protecting endangered species in 1992 by signing the UN *Convention on Biological Diversity*, which committed Canada to implement a national strategy to protect endangered species and biological diversity.⁹ Canada finally delivered on this commitment in 2002 by enacting the *Species at Risk Act (SARA)* to protect and recover species that are endangered or threatened. Subsequently, the British Columbia government agreed to collaborate in implementing the *Species at Risk Act*. The Preamble of the *Species at Risk Act* notes the diverse and important values that at-risk species offer:

Canada's natural heritage is an integral part of our 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, ecological and scientific reasons,

*Canadian wildlife species and ecosystems are also part of the world's heritage.....*¹⁰

Surviving species at risk must be protected and recovered in order to maintain the multiplicity of public values described in the *Act's* Preamble. Endangered and threatened species and their habitats provide the following public values, among others:

- *Maintenance of "Supernatural British Columbia"*

Species at risk are of enormous value to this province – the province with the greatest level of biodiversity in Canada.¹¹ For example, BC represents the last refugia for many large mammals in North America, a number of which are species at risk. Species at risk in BC include the spotted owl, peregrine falcon, grizzly bear, marbled murrelets, mountain caribou, Vancouver Island marmot, and other charismatic species.

These species are an essential part of "Supernatural British Columbia" –the slogan that has long been the centerpiece of BC tourist marketing campaigns. "Supernatural British Columbia" would lose much of its appeal if we lose endangered and threatened species—and the unique habitats that they require.¹² The loss of species like the spotted owl, mountain caribou and Vancouver Island marmot would make it most difficult to claim that we continue to be "Supernatural British Columbia." And "Supernatural British Columbia" has enormous economic and social value to this province.

Furthermore, governments around the world now recognize the broader economic importance of protecting natural assets. For example, a number of US state governments have officially recognized that protection of open space must be included as a critical element in their plans for economic development.¹³ A New York state government report states: "The most rapidly growing states in the country use quality of life to attract growth. New York State will not be able to compete if it cannot retain its natural and cultural assets."¹⁴ The chief economist for one of California's largest

corporations has found that corporate decision-makers consistently rank the quality of an area's physical environment as one of the two top factors in siting an enterprise.¹⁵ With our license plates we tell businesses considering locating here that BC is the “Best Place on Earth.” That claim rests, to some considerable extent, on the fact that BC is one of the last remaining places on earth with a relatively full spectrum of wildlife species.

Recent public opinion surveys confirm that British Columbians place a high value on species at risk and their habitats. In a 2008 survey of British Columbians, more than 80% expressed support for the protection and recovery of species at risk, with about the same number expressing concern for the loss and extinction of plants and animals in British Columbia.¹⁶ Further, over three-quarters of respondents supported the enforcement of federal species at risk legislation and the majority of respondents indicated that the protection and recovery of species at risk should be given priority over economic considerations.¹⁷

A 2007 public opinion poll¹⁸ of Lower Mainland residents found that approximately 95% of residents supported prioritizing the conservation and protection of wildlife species and their habitats over economic development.¹⁹ In addition, over three-quarters of those surveyed agreed that it is important to protect natural ecosystems and plant and wildlife species in order to maintain human quality of life.²⁰

- *Ecosystem Services that Habitat Provides to Economy and Society*

Endangered and threatened species are often an essential piece of an ecosystem that provides society with ecosystem services of substantial economic and social value. An accurate accounting of the value of at-risk species must recognize this.

For example, a recent Simon Fraser University study²¹ sought to quantify the economic value of maintaining old-growth forests, a key habitat for endangered species such as the spotted owl.²² The study quantified the economic value of some of the various forest functions – e.g., their functions as carbon sinks (rapidly becoming more valuable with the development of carbon trading regimes), recreation sites and the value of non-timber forest products such as wild, harvestable mushrooms. Examining several possible outcomes based on varying timber prices and demand and varying levels of timber harvesting, the study concluded in 90% of scenarios it generally made more *economic* sense to conserve the old-growth forest—and endangered species habitat—than to harvest the timber.²³

Another example is wetland habitat. Wetlands support an extraordinarily high percentage of at-risk species.²⁴ And the same wetlands that provide habitat to endangered frogs and other species also provide valuable functions to society, including:

- *water supply;
- *water purification;
- *climate stabilization;
- *carbon sequestration;
- *waste treatment; and
- *recreation.²⁵

If the wetland habitat that supports the frog is lost, society may not just lose the frog. Society may not be able to replace the wetland's essential ecosystem services – or only at great financial cost.

For example, it has been estimated that the waste-cleansing services of natural wetlands in the lower Fraser Valley are worth at least \$230 million each year – and many times that amount if replacement infrastructure costs are added.²⁶ New York City found it more economical to pay \$1.8 billion to protect wetlands and other watershed lands than to pay the \$8 billion dollars it would have otherwise cost to build an artificial water filtration system.²⁷

Similarly, wetlands are the source of water recharge for many aquifers that serve as community water supplies. One study estimated that to replace the water supply service provided by a single acre of wetland cost almost \$300,000.²⁸

Wetlands, forests and other endangered species habitat also provide the ecosystem service of sequestering greenhouse gas emissions – a function that society is now investing billions of dollars to try to reproduce with carbon capture technology.²⁹

Clearly, when natural habitat for at-risk species is destroyed, the economic costs associated with replacing the *goods and services* provided by that habitat can be enormous. In fact, in some cases humans will simply not be able to replace critical ecosystem services provided by the environment.³⁰

- *Maintenance of Ecological Stability*

Diversity of genetic traits – including diversity of species – is essential for the long-term survival of any ecosystem. Ecosystems depend on many interactions among organisms and their physical environment. When ecosystems lose species, these interactions are compromised and the ecosystem becomes less resilient to disturbance and less likely to thrive in the long-term. When potentially catastrophic natural events take place (e.g. climate change, disease pandemic, natural disasters), their effects will be most severe in degraded areas where species have been lost and biodiversity reduced.³¹

As Environment Canada has stated:

*Everything in an ecosystem interconnects...The disappearance of a species from the earth marks not the beginning, but the end of the process of deterioration. It is a sign that the ecosystem in which the species played its integral role has also been damaged. At some point, the ecosystem itself may be so destabilized by the loss of interactive species that it will lose its integrity and collapse. Should the actions of man place that sort of stress upon the biosphere, then the human species, for all its inventiveness, could well be the author of its own extinction.*³²

British Columbia's endangered sea otters provide a good historical example of the importance of endangered species to ecological stability. In the nineteenth century, hunters eliminated the entire sea otter population on the BC coast. The loss of this species led to the destruction of massive kelp bed ecosystems along the coast that were essential nurseries for fish. As the sea otters who fed on sea urchins disappeared, the sea urchin population quickly exploded and destroyed the kelp. As a result, vast expanses of BC coastal waters were transformed from rich kelp bed ecosystems into vast sea urchin barrens – with substantial impacts on human fisheries.³³

In modern times, the steep decline of natural pollination of our food crops is another example of how the fate of species is connected to our own. North American farmers are now extremely concerned about the die-off of pollinating insects, which poses a major threat to agricultural production.³⁴

About one third of the food we eat is pollinated naturally by insects such as bees, wasps, flies and butterflies, and creatures such as hummingbirds and bats.³⁵ The value of such natural pollinators to American agriculture has been estimated at between \$5.7 and \$13.4 billion US annually.³⁶ However, numerous insect species are declining.

For example, in BC nine butterfly species are now listed as Species at Risk under *SARA*, and the BC Conservation Data Centre lists 81 butterfly species as “at risk.”³⁷ Evidence is mounting that the declining number of pollinating insects is causing widespread reductions in pollination services in southern Canada and elsewhere.³⁸ If we continue to lose at-risk insect species, we risk the essential contribution that pollinating insects provide to human food supply.

- *Maintaining the Long-Term Global Food Supply*

On a related topic, the American Council on Environmental Quality states that protecting global biodiversity is “essential to the billions of humans that need to be fed.”³⁹ It is critical that we maintain our present diverse variety of species in order to maintain global food security.⁴⁰ Such variety is necessary for the cross-breeding of plants and gene-splicing that improves agricultural yields and produces new types of food. For example, American wheat only became resistant to a variety of diseases after agronomists crossbred it with a strain of wild wheat from Turkey. Geneticists saved the Cornish chicken from extinction by crossing it with other breeds to produce the modern, fast-growing broiler chicken. Scientists are crossing a rare Mexican tall grass with corn in the hopes of producing a virus-resistant corn.⁴¹

- *Protection of Human Health*

More human medicine comes from the natural world than from any other source. Approximately 50% of all medical prescriptions contain naturally derived ingredients. From aspirin (willow trees) to heart medication (foxglove plant) to antispasmodics (belladonna), nature has provided us with countless healing and life-saving medicines. Here in British Columbia, the Pacific yew tree is a dramatic example of the importance of preserving rare species. Once discarded and burned as a “garbage tree” after clear-cut logging, in recent years scientists discovered that a chemical in the yew bark (taxol) provides one of the world’s most effective anti-cancer treatments.⁴²

Yet, scientists have only examined a minute fraction of the world’s species for medicinal properties. As species become extinct, we lose untold medical breakthroughs. The US National Cancer Institute is currently racing against time, collecting numerous endangered species and testing them for anti-cancer potential – before those species disappear forever.⁴³

- *Alternative Sources of Raw Materials*

In a world of diminishing resources, biological diversity plays an important role in providing alternative sources of industrial raw materials. Historically, the wild rubber tree played a key role in launching the Automobile Century.⁴⁴ In modern times scientists screened 6,400 plants for an alternative to petroleum lubricants – and discovered the Jojoba shrub. This plant produces liquid wax, and is now used to make polishes, linoleum, chewing gum, adhesives, disinfectants, shampoos and numerous other manufactured products. A variety of other plant species have the potential to become inexpensive alternatives to current limited energy resources. However, as species die out, we forever lose untold potential industrial resources.

In conclusion, British Columbia's species at risk are a rare and precious public resource, a resource of immense, varied and tangible value.

The BC Government's Established Commitment to Protect At-Risk Species

In recognition of the extraordinary value of at-risk species, the federal government enacted the *Species at Risk Act (SARA)* in 2002. BC and Alberta are the only provinces that have failed to enact their own provincial stand-alone endangered species laws.⁴⁵ However, BC plays an important role in implementing the federal *Species at Risk Act (SARA)*.

Recognizing that it does not have endangered species legislation of its own, the Province entered into an agreement with Canada, the 2005 *Canada-British Columbia Agreement on Species at Risk*. Specifically authorized by *SARA*, the *Agreement* commits the Province to work with the federal government to implement portions of *SARA*—including the preparation and implementation of “recovery strategies” and “action plans.”

The *Agreement* authorizes the two governments to *jointly administer recovery planning* for at risk species.⁴⁶ This includes the preparation and implementation of recovery strategies, action plans and management plans within a province. *SARA* dictates that **recovery planning** for such species proceeds in two stages:

- First, a **recovery strategy** is created, which determines whether recovery of a species is technically feasible, sets a recovery goal and objectives and strategies for achieving the objectives, and designates **critical habitat** to the **extent possible**. Recovery strategies must generally be created within one year for

species listed as endangered, and within two years for species listed as threatened or extirpated.⁴⁷

- Second, an **action plan** identifies and prioritizes detailed measures to achieve recovery and includes cost-benefit analysis of the action plan. Unlike recovery strategies, action plans need not be completed within a statutory time period. Only at this later long-term “action plan” stage can socio-economic factors be considered that might constrain habitat protection measures.⁴⁸

Under the *Canada-BC Agreement for on Species at Risk*, responsibility for recovery planning for a species at risk is generally assigned to the federal or provincial agency with legal responsibility for management of a particular species or habitat.⁴⁹

As a result, the BC Ministry of Environment is the lead agency for developing recovery strategies for the majority of SARA-listed species within the province—including most of the terrestrial species. In addition, BC Ministry of Environment representatives sit on most recovery teams for species whose recovery planning is led by a federal agency (e.g., for fisheries, federal lands).

These federal-provincial recovery teams work pursuant to the 2005 *Canada–British Columbia Agreement on Species at Risk*. Section 11 of the *Agreement* states:

11.1 The Parties will endeavour to develop recovery strategies and action plans that meet timelines and other requirements set in federal and provincial legislation. In doing so, the Parties will continue to apply a two stage approach to recovery planning. The first stage, the preparation of a recovery strategy, will include the determination of whether recovery of the listed wildlife species is technically and biologically feasible. If recovery is deemed to be feasible, the recovery strategy will include the recovery goal, objectives and strategies for achieving the objectives. The second stage, the preparation of action plan(s), will identify and prioritize detailed measures to achieve recovery and will include an evaluation of the socio-economic costs of the action plan and the benefits to be derived from its implementation.⁵⁰

As this Agreement excerpt makes clear, in agreeing to develop recovery strategies the Province agreed to:

...endeavour to develop recovery strategies ...that meet ...requirements set in federal...legislation.

What legislative requirements must those recovery plans meet, under *SARA*? The statute requires that the recovery strategy include identification of critical habitat to the extent possible, based on the best science.

Section 41(1)(c) of *SARA* specifically requires that every recovery strategy: *must include...an identification of the species' critical habitat, to the extent possible, based on the best available information.*⁵¹

“Critical habitat” is defined as:

*the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species.*⁵²

Section 2.4 of the *Agreement* clarifies that the best scientific information must be used to identify critical habitat. It states that recovery planning at both recovery strategy and action plan stages:

*will be informed by the best available science.*⁵³

To summarize, the Province has a clear duty to develop recovery strategies which include an identification of the species' critical habitat. Critical habitat must be identified to the extent possible, and be based on the best available scientific information. Recovery strategies are to focus on technical and biological feasibility. Finally, the legislation makes it clear that socio-economic costs should not be considered until the “action plan” stage of recovery planning.⁵⁴

The Province's Breach of Its Commitment/Duty to Develop Adequate Recovery Strategies for Species at Risk

Despite the Provincial duties outlined above, our client has learned from documents obtained through Freedom of Information (FOI) requests that it is now the established practice of the provincial government to *not* identify critical habitat for at-risk species in recovery strategies. This practice applies even when the exact location of such habitat is actually known.

The result of this practice is that critical habitat is left vulnerable to irreversible destruction through development, logging, mining, road-building, *etc.*

Through Freedom of Information requests, we have obtained a draft Ministry of Environment “Direction” statement to recovery team and staff members, which contains documented evidence of a British Columbia policy of:

- not identifying critical habitat in recovery strategies for species at risk; and
- issuance of a Direction to the teams developing recovery strategies to not identify critical habitat.⁵⁵ [See Appendix C]

This Direction to staff stands in direct contradiction to the requirement of s. 41 of the *Species at Risk Act*, which specifies that if critical habitat is known, it must be identified in the recovery strategy to the extent possible.⁵⁶ Consequently, it breaches the provincial obligation (set out above in s. 11 of the *Canada-British Columbia Agreement on Species at Risk*) to develop strategies that meet SARA requirements.

To be specific, under the heading “Critical Habitat (Required),” the BC Draft Direction states the following:

*DRAFT BC direction of Critical Habitat: provincial strategies should describe attributes of habitat (occupied and potential) only. **Geo-spatial identification of critical habitat should not be included in the recovery strategy. It should be made clear that critical habitat is not being proposed at this time.***⁵⁷ [See Appendix C]

The draft Direction then goes on to provide suggested wording for the recovery strategy to use, instead of identifying critical habitat. The Direction suggests the recovery strategy should use the following phrasing:

*No critical habitat, as defined under the federal Species at Risk Act [s.2], is proposed for identification at this time. While much is known about the habitat needs of the species included within this recovery strategy, more definitive work must be completed before any specific sites can be formally proposed as critical habitat. **It is expected that critical habitat will be proposed within one or more recovery action plans...***⁵⁸ [See Appendix C]

Other FOI documents confirm that this Direction is a guideline that provincial officials are generally being required to follow in the preparation of their recovery strategies for at-risk species.⁵⁹ Wording from the Direction is being found verbatim in numerous recovery strategies being developed under the leadership of provincial officials.

Clearly the Direction statement that:

Geospatial identification of critical habitat should not be included in the recovery strategy. It should be made clear that critical habitat is not being proposed at this time.

directly contradicts the requirement of s. 41(1)(c) of SARA, which states that the recovery strategy:

*must include...an identification of the species' critical habitat, to the extent possible, based on the best available information.*⁶⁰

Note that SARA requires identification of habitat "to the extent possible, based on the best available information."

In contrast, the Direction directs that no habitat is to be actually identified. It directs that critical habitat should not be proposed and "geo-spatial identification of critical habitat should not be included in the recovery strategy." It directs that critical habitat not be identified, even when "much is known about the habitat needs of the species..."

Section 41 clearly requires the recovery teams – the most qualified scientists on a particular species who have the "best available information" on the species -- to use this "best information" to identify critical habitat "to the extent possible."

Yet the provincial Direction instructs recovery team members to do just the opposite. It directs them to ignore what is known and to *never* identify the critical habitat geospatially. It directs them that the recovery strategy should never propose critical habitat. This is just the opposite of identifying critical habitat "to the extent possible."

While s. 41 of SARA makes it mandatory to identify critical habitat to the extent possible, the Direction *prohibits* that identification. Instead, the Direction suggests standard wording that states that critical habitat will only come later, at the action plan stage. By directing recovery teams to not identify critical habitat according to the requirements of s. 41 of the federal statute, the Direction clearly violates s. 11 of the *Canada-BC Agreement on Species at Risk*, which requires the Province to develop recovery strategies that

...meet... requirements set in federal... legislation.

Furthermore, the Direction violates the Precautionary Principle that is the foundation of the whole *Species at Risk Act* scheme. The Direction instructs recovery teams to wait

until “more definitive work [is] completed” even if “much is known about the habitat needs of the species included within this recovery strategy.” This Direction language is contrary to the *Accord for the Protection of Species at Risk* (“the Accord”) which reflects the Precautionary Principle stated in s. 38 of SARA and states:

We recognize that: vi) lack of full scientific certainty must not be used as a reason to delay measures to avoid or minimize threats to species at risk.”⁶¹

In addition to the direction to BC recovery teams discussed above, the BC government also co-signed a letter to recovery teams reiterating the requirement to identify attributes but not geospatial locations of critical habitat. This letter, dated 6 June 2007, was forwarded to our clients by concerned recovery team members. The letter states:

*It is important that recovery teams understand that their role in development of the recovery strategy is to provide **the best available science-based advice** to the lead agency in the form of a technical description of the **attributes** of proposed critical habitat for the species (in whole or in part)⁶² [See Appendix B, pp.20-23]*

In sum, the records obtained by our client suggest that the BC government has instituted a policy which directs that critical habitat not be identified in recovery strategies—even where there is sufficient scientific information to do so. This policy violates the legal obligations pursuant to SARA s. 41, the *Agreement*, and the *Accord*.⁶³ As examined below, this policy is rendering SARA’s provisions ineffective and causing invaluable public resources to be lost. This is not economic, efficient, or effective government stewardship.

In response to our argument on this point, Government might reply that the Direction still allows teams to “describe attributes of habitat...only” in the recovery strategy. However, it is submitted that the clear intent of SARA is to identify habitat by mapping it. Habitat is an area in the real world, not a set of adjectives. Habitat can’t be protected unless you know where it is. Describing general attributes of habitat no more identifies habitat than describing a house’s general attributes (brown, big shutters, front porch, small lawn) identifies the precise location of a house. Habitat is identified when its “geospatial” co-ordinates are mapped.

The BC Government's Refusal to Allow the Identification of Critical Habitat in Recovery Strategies Renders the *Species at Risk Act* Ineffective

Why is the refusal to identify known critical habitat in recovery strategies so important?

First, remember that *habitat* loss is by far the biggest threat to at-risk species. Identifying critical habitat in a recovery strategy, as required by s.41 of *SARA*, addresses this threat by triggering defined statutory protections against destruction of critical habitat.

However, when a recovery strategy fails to identify the critical habitat, the habitat in question is not legally "critical habitat" under the *Species at Risk Act*. *SARA* defines "critical habitat" as that "identified in the recovery strategy or action plan." Therefore, when a recovery strategy fails to identify critical habitat, the habitat upon which the species relies for survival (or recovery) is deprived of *SARA* protection. Moreover, if critical habitat is not identified in the recovery strategy – as is British Columbia's general approach – its identification is delayed until the action plan. Because action plans have no mandatory deadlines for production, the effective trigger for protecting habitat is delayed. And this delay may last indefinitely, as we will see below.

In practical terms, when a recovery strategy doesn't identify critical habitat it means that a number of *SARA* provisions for protecting such habitat simply do not apply to the habitat area. Thus, by simply instructing teams to not identify critical habitat the Province, in essence, "administratively repeals" those protective provisions for that habitat.

The following protective provisions of the *Species at Risk Act* are rendered inapplicable when the recovery team follows instructions to not identify critical habitat in a recovery strategy:

- The prohibition against destroying any critical habitat of endangered or threatened species located on federal lands (s. 58);⁶⁴
- The prohibition against destroying any critical habitat of endangered or threatened species that are not part of federal lands [s. 61(1)];⁶⁵
- The obligation of the Minister to publish a "description" of the species critical habitat in the *Canada Gazette* (s. 58);⁶⁶

- The empowerment of the federal Minister of Environment to make recommendations to the Governor in Council to apply *SARA* protective measures to specific portions of identified critical habitat outside federal lands (ss. 58 & 61),⁶⁷ including a mandatory obligation to make recommendations where federal laws do not otherwise protect the species or the laws of the province or territory do not effectively protect the critical habitat;
- The empowerment of the federal Minister of Environment to purchase lands to protect identified critical habitat (s. 62);⁶⁸
- The monitoring and reporting requirements of the federal Minister triggered by identified critical habitat (s. 63).⁶⁹

If critical habitat is not identified in the recovery strategy, application of the above protective provisions may be indefinitely delayed. A recovery strategy must be completed in a defined time period of one to three years.⁷⁰ However, when identification of critical habitat is delayed until the action plan stage, it may be delayed indefinitely – *because there is no deadline* for preparing an action plan. In fact, to date across Canada only one Action Plan has actually been finalized under *SARA* – the action plan for the Banff Springs snail.⁷¹

Thus, the effect of BC's policy to not identify critical habitat in the recovery strategy is to indefinitely delay protection of critical habitat for almost all at-risk species.

Evidence of the BC Government's Failure to Identify Critical Habitat

Government documents reveal that the BC Ministry of Environment has led or co-led the development of recovery strategies for 58 *SARA*-listed BC species. BC has completed its portion of the work for 44 of these species (32 of which have been adopted by the federal Minister as final *SARA* recovery strategies and 12 of which are likely awaiting federal approval). Although the habitat of many of these species is well known, only two (Spotted Owl and Nooksack Dace) of the 44 species with BC-led draft strategies have actually identified "critical habitat." It is important to note that for both those species, the identification of critical habitat occurred only after lawsuits were filed by Ecojustice.⁷²

Thus, 94% of the final *SARA* recovery strategies developed by BC to date fail to identify critical habitat.⁷³ This compares to just 56% of such failures in *SARA* recovery strategies for species whose recovery planning was led or co-led by any other province.⁷⁴

The pattern of refusing to identify known critical habitat continues. Consider the current draft recovery strategies that represent the most recent recovery planning work: Fourteen (of the 58 total) BC-led recovery strategies are still in draft form and require further BC input. Many of these recovery strategies give detailed descriptions of all known locations of the species in BC. In fact, five of these recovery strategies give specific numbers of hectares and locations of habitat required for short-term survival of the species and describe a detailed method used to reach these numbers.⁷⁵ In the opinion of an Ecojustice conservation biologist who has examined these draft strategies, 13 of these 14 remaining strategies describe sufficient information about habitat to identify at least partial critical habitat.⁷⁶ But none of them do. Significantly, nine of them adopt verbatim phrases from the draft BC Direction to explain why critical habitat has not been identified.

An Egregious Example: The Vancouver Island marmot

Development of the recovery strategy for the Vancouver Island marmot provides a good example of how the provincial Direction to refuse to identify critical habitat is preventing proper development of a recovery strategy.

The Vancouver Island marmot is a housecat-sized ground squirrel native to the subalpine meadows and high-elevation forests of Vancouver Island. It is one of the most critically endangered species in BC, with a total global population of fewer than 70 wild animals,⁷⁷ plus 123 in a captive breeding program.⁷⁸ This animal is a true British Columbia icon. The official Olympic 2010 cyber mascot, Mukmuk, is based on the Vancouver Island marmot.

Yet even with this iconic status, the Province is failing to prepare the Vancouver Island marmot's Recovery Strategy properly—and is delaying identification of its critical habitat until the action plan stage.

The latest draft of the Vancouver Island Marmot Recovery Strategy parrots the Provincial Direction in its section on "Critical Habitat." As a result, the draft Strategy refuses to carry out the statutory requirement under *SARA* to ensure that the recovery strategy:

*must include...an identification of the species' critical habitat, to the extent possible, based on the best available information.*⁷⁹

FOI documents reveal that recovery team members recognized that the Provincial Direction prevented them from identifying critical habitat in the Recovery Strategy. A copy of the December 2007 Draft Recovery Plan (with apparent comments from team members) uses the Direction's suggested wording. It states "No critical habitat... is proposed for identification at this time." Next to this is an apparent response from a team member, stating:

*Copied from recommended and existing approaches to habitat protection to provide context as to why we will offer a definition of CH [Critical Habitat] in the action plan rather than the recovery strategy.*⁸⁰ [See Appendix A, p. 2]

However, federal law actually requires that the recovery strategy identify the known critical habitat "to the extent possible, based on the best available information." And the FOI documents show that it was clearly possible to identify at least some of the critical habitat for the marmot.

For example, one recovery team member commented:

*CH [Critical habitat] cannot be fully identified (which would perhaps include dispersal routes and potential habitat) but it seems as though a partial identification [of Critical Habitat] would be possible (presumably at least those sites with the extant populations).*⁸¹ [See Appendix A, p. 3]

Clearly, the scientists know exactly where the few dozen remaining wild marmots currently live; every individual is closely followed by researchers. At the very least, there can be no doubt that their occupied burrows and surrounding foraging areas are critical habitat to the last few individuals on the planet. That raises the question of why at least the currently occupied areas utilized by these animals were not identified as critical habitat. Why was that obvious critical habitat not identified "to the extent possible, based on the best available information"?

The FOI documents indicate the answer to this question, from recovery team members:

- *From a very quick read, it seems like there are still some unresolved issues around SARA compliance...It is not clear from the text why currently occupied habitat couldn't be identified... I can't support sending a document to Director-*

level review that doesn't appear SARA compliant without a good rationale for it.
-- Lucy Reiss of Environment Canada (PYR) critiquing the December 2007 draft⁸²

- *The government stripped out definitions of critical habitat, etc. Things keep changing. Definition of Critical Habitat is now in the Action Plan.* -- Don Doyle, Recovery Team Chair, BC Ministry of Environment⁸³

Thus, the Provincial Direction improperly and indefinitely delayed protection that SARA requires at the recovery strategy stage. It put this protection off indefinitely, to the action plan stage. And it delayed this protection for the Vancouver Island marmot – one of the most treasured and most endangered of all BC species.

Other Examples

Garry Oak, Related Species and Spotted Owls

Freedom of Information documents obtained from the BC government show that the critical habitat identification for the Garry Oak Woodlands, Garry Oak Maritime Meadows, Garry Oak Vernal Pools and Rigid Apple Moss recovery strategies was removed pursuant to the BC policy. An “Option Paper” prepared by federal and provincial government bureaucrats identified six options regarding the potential identification of critical habitat in the recovery documents.⁸⁴ Option 1 was chosen.⁸⁵ This option recommended that the recovery strategies defer proposing all critical habitat until the action planning stage. This option was applied although **the BC government knew the exact geospatial coordinates of occupied habitat** for numerous endangered Garry Oak plant species.⁸⁶

Recovery planning documents state the following:

- *As mentioned to you, no UTM's [Universal Transverse Mercators – UTMs map specific locations]⁸⁷ are in the strategy – these have been removed.⁸⁸*
- *I am making some changes to the GOE Recovery Strategies 9 based on editing requirements, public and government comments. The most substantial changes are around critical habitat – we agreed we would amend all the strategies to indicate the state of our knowledge around critical habitat but not propose any at this stage.⁸⁹*
- *As Kari has forwarded this to you I would like to ask you for the BC response to the changes I made to the Vernal Pool strategy for Garry oak ecosystems . . . my perspective on where we are at with endorsement of these strategies is that all partners have had an opportunity to provide input on these. I presented the drafts at SARCC. SARCC flagged a few issues, key among these was the critical habitat sections. I presented an options paper (attached) on how to address critical habitat in these documents. Option 1*

was chosen – do not propose critical habitat now but present our state of knowledge on the subject.⁹⁰

The BC government's approach to not identify critical habitat was referenced repeatedly in different recovery strategy team emails:

- *What I would like to do is get a clearer picture of how Bruce has asked us to propose critical habitat, to help me think about how to approach this task. You have told the team that we have been instructed to provide a 'recipe' for identifying proposed CH, but not to identify specific areas spatially.⁹¹*
- *How is this? The strategy will describe, to the extent possible, biophysical aspects of critical habitat, but will not contain geographic locations or spatial attributes (map locations, or UTM's) of critical habitat.⁹²*

Government records show the direction to not identify critical habitat applied to one of Canada's most endangered species: the Northern spotted owl:

My fundamental concern is more strategic than these details. We have been directing recovery teams (CSORT included) that BC will not include critical habitat in recovery strategies.⁹³

The following are further examples of species for which critical habitat was known but not properly identified in BC-led recovery strategies for at-risk species.

Mexican Mosquito Fern

The draft Recovery Strategy for Mexican Mosquito Fern does not identify any critical habitat.⁹⁴ Habitat destruction is the key threat to the survival of the 8 remaining BC populations of this species. Already, three populations are known to be extirpated through habitat destruction. The locations of every known population of this species of small aquatic fern, based on recent (2007) data, are described in detail at page six of its recovery strategy, including detailed descriptions of the size and dimensions of each population, the name of each site and some specific descriptions of its location, and, for most sites, the BC Conservation Data Centre's reference number for the site, which corresponds to the known exact geographic location of the site. The recovery strategy for Mexican Mosquito Fern contains the following statements, taken verbatim from the BC direction to recovery teams:

It is expected that critical habitat will be proposed within a recovery action plan following: (1) consultation and development of stewardship options with affected landowners and organizations, and (2) completion of outstanding work required to quantify specific habitat and area requirements for these species.⁹⁵

The information clearly exists to identify at least partial critical habitat for the Mexican Mosquito Fern in BC: the locations of all or most extant populations are well known,

based on very recent data. Yet despite the ongoing threats habitat loss poses to this species' survival, no critical habitat is identified in BC's recovery strategy for this species.

Rigid Apple Moss

The final provincial Recovery Strategy for the Rigid Apple Moss does not identify critical habitat.⁹⁶ This species is threatened primarily by habitat loss and degradation. The recovery strategy includes a map that shows the plant is found in just three locations on Vancouver Island and Lasqueti Island. The recovery strategy describes in detail individual patches that have been counted and measured, down to areas as small as 0.5 square centimetres, indicating scientists know exactly where the rare plants are growing. But the Recovery Strategy for the Rigid Apple Moss states:

While much is known about the habitat needs of the species included within this recovery strategy, more definitive work must be completed before any specific sites can be formally proposed as critical habitat. It is expected that critical habitat will be proposed within one or more recovery action plans following: (1) consultation and development of stewardship options with affected landowners and organizations, and (2) completion of outstanding work required to quantify specific habitat and area requirements for these species.⁹⁷

This statement is taken verbatim from the BC Direction to recovery teams.

Mormon Metalmark Butterfly

The draft recovery strategy for the Mormon Metalmark, southern mountain population is another instance in which critical habitat is not identified.⁹⁸ This butterfly species is threatened primarily by habitat loss and degradation. There is very little habitat remaining for the Mormon Metalmark, and according to the recovery strategy, what remains is unprotected:

The Southern Mountain population is > 2000 individuals, confined to approximately 15 ha of unsecured habitat, and appears to be isolated from the closest known populations, in the United States.⁹⁹

The recovery strategy describes a small number of known locations of Mormon Metalmark populations and reports the spatial area of these locations. The strategy's recovery goal calls for a specific quantity of habitat to be protected: 13.5ha, out of the existing 15ha of occupied habitat. The information clearly exists with which to identify which 13.5ha to designate as critical habitat. With only 15ha of habitat in total, finding the appropriate 90% of this habitat cannot be a difficult scientific task. However, this recovery strategy reiterates the BC Direction as well, stating:

No critical habitat, as defined under the federal Species at Risk Act [S.2], is proposed for identification at this time. While much is known about the habitat needs of the Mormon Metalmark, more definitive work must be completed before any specific sites can be formally proposed as critical habitat.¹⁰⁰

Night Snake

The draft recovery strategy for the endangered Night Snake does not identify critical habitat either.¹⁰¹ The main threat facing this species is loss and degradation of its habitat. The recovery strategy states:

It is necessary to maintain the species in the short-term while knowledge gaps are addressed. Short-term habitat protection targets to maintain the species are presented in the objectives below.....These targets are believed to be necessary to support the species in the short-term....¹⁰²

As you can see, the recovery strategy clearly states that to maintain the Night Snake in Canada in the short term – let alone the long term – immediate habitat protection is needed. The recovery strategy goes on to describe (at page seven) in some detail a method already developed and implemented by the recovery team to determine the habitat that must compose the “short-term habitat protection targets” believed necessary to maintain this species in the immediate future. The recovery strategy describes the exact size in hectares, specific location, and precise layout of habitat that is necessary. Yet in its critical habitat section, the recovery strategy for Night Snake states:

No critical habitat, as defined under the federal Species at Risk Act [S. 2], is proposed at this time. While some is known about the habitat needs of the Night Snake, more definitive work must be completed before any specific sites can be formally proposed as critical habitat.¹⁰³

As described in the recovery strategy, a map of the exact location and layout of habitat necessary for the immediate survival of the Night Snake exists. In other words, from a scientific perspective, partial critical habitat for the Night Snake has clearly been identified and is known to the BC government. Yet from a legal perspective the critical habitat of the Night Snake has not been identified. The delay in formally identifying known critical habitat for the Night Snake jeopardizes the survival of this species in Canada.

The cases above are just a few examples of BC-led recovery strategies that fail to identify critical habitat when it appears scientifically possible to do so. As you can see, the provincial government appears to be routinely refusing to identify and protect the critical habitat for at-risk species, as required by *SARA*, and as it has committed to do.

An audit is required, to determine how the BC Government can change its procedures to better protect these Crown resources and better live up to its commitment to protect and recover species at risk.

Legal Jurisdiction for the Auditor General to Act

Threatened and endangered species are of extraordinary value to British Columbians. As trustee of these vital public resources, Government is obligated to ensure that they are not unnecessarily lost or degraded. Government's apparent failure to properly identify and protect critical habitat is a failure to steward a key public resource. It is a failure to operate "economically, efficiently and effectively," as per s. 11(8) of the *Auditor General Act*.

Furthermore, pursuant to s. 13 of the *Auditor General Act* it is clearly "in the public interest" for the Auditor General to determine whether irreplaceable public resources are being wasted and lost due to government's failure to identify and protect at-risk species and their habitat. This is particularly true because the refusal to identify critical habitat is contrary to both the provincial government's legal duties under the *Species at Risk Act* and its commitments under federal-provincial agreements, including the *Canada-British Columbia Agreement on Species at Risk* and the *Accord for the Protection of Species at Risk*.

There are precedents for such an audit. In 1998, the Auditor General audited British Columbia's drinking water and asked whether that resource was being adequately protected by the crown. Thus, the office of the Auditor General has in the past recognized the economic importance of resource protection and has acted accordingly.¹⁰⁴

Conclusion

Endangered and threatened species are irreplaceable public resources. The Province has committed to conserving such species. Yet Government is apparently instructing staff and recovery teams to routinely refuse to identify the critical habitat of this resource as required by:

- the *Canada-British Columbia Agreement on Species at Risk*, the *Accord for the Protection of Species at Risk*, and the *Species at Risk Act*; and
- Government's inherent responsibility to manage and conserve an irreplaceable economic, social and environmental public resource.

John Doyle, Auditor General

November 25, 2008

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We urge the Auditor General to conduct an examination of this systematic refusal of the British Columbia Ministry of Environment to properly identify critical habitat for endangered species, pursuant to sections 11 and 13 of the *Auditor General Act*.

Yours truly,



Calvin Sandborn
Barrister and Solicitor



Devon Page
Barrister and Solicitor



Tim Thielmann
Articled Student

"Hart Shouldice"

Hart Shouldice
Law Student

Enclosures

¹ The Wilderness Committee is the largest membership-based, citizen-funded wilderness preservation organization in Canada. It is a registered non-profit that works to protect wilderness areas by educating the public through door-to-door canvassing educational publications, rallies and events, and the media. The Wilderness Committee sees to support this educational mission with a strong research and mapping program, strategic alliances with other environmental groups, First Nations and community leaders, and regular expeditions into threatened wilderness areas.

² Section 2 of the *Species at Risk Act* S.C. 2002, c. 29 defines critical habitat as: "the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species."

³ See the *Canada-British Columbia Agreement on Species at Risk*, http://www.sararegistry.gc.ca/sar/permit/administrative_e.cfm. See also the *National Accord for the Protection of Species at Risk* signed by the federal, provincial and territorial governments of Canada, http://www.sararegistry.gc.ca/approach/strategy/Accord_e.pdf. Finally, see *Species at Risk Act*, S.C. 2002, c. 29.

⁴ B.C. Ministry of Environment. 2007. *Environmental Trends in British Columbia: 2007. State of Environment Reporting*. Victoria, B.C. Accessed October 20 2008 at: www.env.gov.bc.ca/soe/et07/07_species_conserv/threats.html A November 2006 article in *BioScience*, found that habitat loss and degradation is the primary threat facing 84% of 488 Canadian species then assessed by COSEWIC to be at risk. Venter, O., N.N. Brodeur, L. Nemiroff, B. Belland, I.J. Dolinsek and J.W.A. Grant. 2006, "Threats to endangered species in Canada," *BioScience* 56: 903-910.

⁵ Pursuant to s. 13 of the *Auditor General Act* SBC 2003, c. 2.

⁶ Moola, F., D. Page, and L. Coulter. 2007. "Waiting for the Ark: the need for endangered species legislation in British Columbia, Canada." *Biodiversity*. 8(1): 3-11.

⁷ SARA Public Registry, "A to Z Species Index", Government of Canada website http://www.sararegistry.gc.ca/sar/index/default_e.cfm, accessed October 1, 2008.

⁸ "Austin, M.A., D.A. Buffett, D.J. Nicolson, G.G.E. Scudder and V. Stevens (eds.). 2008. *Taking Nature's Pulse: The Status of Biodiversity in British Columbia*. Biodiversity BC, Victoria, BC. 268 pp. Available at: www.biodiversitybc.org. Because many taxonomic groups, such as insects, have not been thoroughly assessed, and many species' status is unknown, these numbers are certainly underestimates.

⁹ The text of the Convention is available at: <http://www.cbd.int/convention/convention.shtml>.

¹⁰ The US *Endangered Species Act* (1973) similarly acknowledges the values inherent in endangered species: "these [endangered] species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people." See s. 2(a)(3), at: <http://www.fws.gov/endangered/ESA/sec2.html>

¹¹ British Columbia contains 76% of the bird species; 70% of the freshwater species, 66% of the butterfly species; 60% of the conifer species and 56% of the fern species found in all of Canada.

Ministry of Environment, Environmental Stewardship Division. Available here:

<http://www.env.gov.bc.ca/wld/bio.htm>.

¹² Endangered species cannot be conserved without protecting their associated habitat. As the Preamble of SARA states: "...the habitat of species at risk is key to their conservation."

¹³ The governors of the five New England states have officially recognized open space as a key element in the quality of life that brought rapid economic growth and a booming tourism industry to the region. See *Report of the Governors' Committee on the Environment* (1988), as discussed in Brabec, "Land Ethics,".

¹⁴ Department of Environmental Conservation, *Conserving Open Space in New York State, 1994, New York state Draft Open Space Conservation Plan and Draft Generic Environmental Impact Statement* (Albany, 1994), p. 21.

¹⁵ Tapan Munroe, 'Quality of Life Factors in Siting Decisions,' speech delivered by Pacific Gas and Electric Company official at the Critical Issues Conference, University of Pacific, March 3, 1989.

¹⁶ About the same number expressed concern for the loss and extinction of plants and animals in British Columbia: 86.2% supported protection of species at risk; 83.7% supported recovery; 81.4% were concerned for loss and extinction of animals; and 76.9% were concerned for loss and extinction of plants. Harshaw, H.W. 2008. *British Columbia Species at Risk Public Opinion Survey 2008: Final technical report*. Vancouver, BC: University of British Columbia Collaborative for Advanced Landscape Planning, p. 40-41. Available at: http://www.sar-pos.ca/SaR-POS_reports.html

¹⁷ Harshaw, p. 70-71.

¹⁸ "Species at Risk Public Opinion Survey for the Metro Vancouver and Fraser Valley Regional Districts." March 2007. Commissioned by the South Coast Conservation Program. Conducted by Synovate Research. Available at: <http://www.sccp.ca/>

¹⁹ Such as housing and commercial development.

²⁰ In addition, two-thirds of those surveyed felt that governments should do more to conserve wildlife and habitats on private lands. "Species at Risk Public Opinion Survey for the Metro Vancouver and Fraser Valley Regional Districts." March 2007. Commissioned by the South Coast Conservation Program. Conducted by Synovate Research. Available at: <http://www.sccp.ca/>
The total sample of 1,394 is accurate to within +/-2.6%, nineteen times out of twenty. On the GVRD sample of 966, the results are accurate to within +/-3.2% and on the Fraser Valley sample of 428, the results are accurate to within +/-4.7%, both at nineteen times out of twenty.

²¹ Sandborn, Calvin. 1990. "Endangered Species and Biological Diversity." In Canadian Bar Association, British Columbia Branch, *Law Reform for Sustainable Development in British Columbia*. BC: Sustainable Development Committee of the CBA-BC, p. 60.

²² Duncan Knowler and Kristen Dust, *The Economics of Protecting Old Growth Forest: An Analysis of Spotted Owl Habitat in the Fraser Timber Supply Area of British Columbia. Final Report*. School of Resource and Environmental Management, Simon Fraser University, Burnaby, British Columbia. June 2007.

²³ Ibid.

²⁴ It has been estimated that 43% of endangered and threatened wildlife in North America rely directly or indirectly upon wetlands at some stage of their lives. Audubon International Fact Sheet, *Wildlife and Habitat Management*, p. 3 <http://www.auduboninternational.org/e-Source/pdfs/BC-Surveying%20the%20Diversity%20of%20North%20America.pdf>

²⁵ Nancy Olewiler, *The Value of Natural Capital in Settled Areas of Canada*, Ducks Unlimited Canada and the Nature Conservancy, 2004, p. 3. Available at:

www.ducks.ca/aboutduc/news/archives/pdf/ncapital.pdf

²⁶ Olewiler, p. 24.

²⁷ Daily, Gretchen and Katherine Ellison, 2002, "The New Economy of Nature", Orion magazine. A BC government publication has stated: "Retaining natural wetlands can avoid the ironic situation where, after decades of draining and filling wetlands, communities are having to build expensive artificial wetlands to fulfill the pollution-cleansing and hydrological functions of the original wetlands." McPhee, M., P. Ward, J. Kirkby, et. al. 2000. Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands, 1993-1997. Volume 2: Conservation Manual, as quoted in *The HAT Manual*, Victoria, 2004, p.10.

²⁸ These values are taken from Table 1 of the Appendix in Heimlich, R.E., Wiebe, K.D., Claassen, R.D., Gadsby, D., and R.M. House. 1998. Wetlands and agriculture: Private interests and public benefits. Agricultural Economics Report No. 765, U.S. Department of Agriculture, Economic Research Services, AER-765. Cited in: Olewiler, Nancy. *The Value of Natural Capital in Settled Areas of Canada*, Ducks Unlimited Canada and the Nature Conservancy, 2004, footnote 22. Available at: www.ducks.ca/aboutduc/news/archives/pdf/ncapital.pdf The G8 Ministers of Environment have issued a declaration emphasizing the need to protect natural areas in order to sustain human water supplies: "If we fail to protect forests and wetlands, if we do not manage soils with precaution, water will disappear. We can build all the water pipes and treatment plants we want; there will be nothing to drain or clean." -- Statement adopted by the Ministerial Declaration Environmental Meeting of the G7/G8 Countries, April, 2003. Cited in the *Environmental News Network*, June 11, 2003.

²⁹ For example, see the recently announced two billion dollar carbon capture and storage fund established by the Province of Alberta. See "Ed Stelmach: Alberta is taking action on climate change." July 18, 2008, *National Post*. Available at:

<http://network.nationalpost.com/np/blogs/fullcomment/archive/2008/07/18/ed-stelmach-alberta-is-taking-action-on-climate-change.aspx>

³⁰ As Olewiler writes, "there are many goods and services only natural capital can provide – there are no substitutes." Some forms of natural capital are clearly essential – atmospheric stabilization and the water cycle, for example. Other examples include nutrient cycling, which includes many animal and plant species and provides the service of nitrogen fixation, and fuels nitrogen/phosphorus nutrient cycles. Predator control of prey species is a service that allows for biological regulation of the pest population. Olewiler, p. 3-4.

³¹ Austin, M.A, *Taking Nature's Pulse*, pp. 174-192

³² J. A. Burnett *et al.*, *On the Brink: Endangered Species in Canada*, Environment Canada. 1989, pp. 6 and 13.

³³ Government of British Columbia, Ministry of Environment, Lands, and Parks. "Sea Otter" No date. Available at: <http://wlapwww.gov.bc.ca/wld/documents/otter.pdf>.

³⁴ This decline is due to habitat loss from urbanization, excess pesticides, and increased disease outbreaks exacerbated by industrial agricultural management. Moola *et al.*, 2007, *Rich Wildlife Poor Protection*, Vancouver: David Suzuki Foundation and Sierra Legal, p. 4. Available at: http://www.davidsuzuki.org/Publications/Rich_wildlife_poor_protection.asp.

³⁵ Among other small birds and mammals.

³⁶ Tang, J., Wice, J., Thomas, V., and P. Kevan. 2007. Assessment of Canadian federal and provincial legislation's capacity to conserve native and managed pollinators. *Int. J. Biodiversity Science and Management*. 3(1): 46-55.

³⁷ All of which could end up being listed under SARA, once fully assessed.

³⁸ This decline is due to habitat loss from urbanization, excess pesticides, and increased disease outbreaks exacerbated by industrial agricultural management. Moola *et al.*, 2007, *Rich Wildlife Poor Protection*, Vancouver: David Suzuki Foundation and Sierra Legal, p. 4.

³⁹ The American Council on Environmental Quality has emphasized the importance of this issue: "Employment of the Earth's reservoir of biological diversity to increase [food] yields and develop new and pest-resistant crops is essential to the billions of humans that need to be fed." Cited in: Versteeg, Hajo. "The Protection of Endangered Species: A Canadian Perspective," *Ecology Law Quarterly*, [1984], p. 271.

⁴⁰ According to the United Nations, more than 850 million people don't have enough food to eat. www.commondreams.org/headlines06/1020-01.htm

⁴¹ The American Council on Environmental Quality has emphasized the importance of this issue: "Employment of the Earth's reservoir of biological diversity to increase [food] yields and develop new and pest-resistant crops is essential to the billions of humans that need to be fed." Cited in: Versteeg, Hajo. "The Protection of Endangered Species: A Canadian Perspective," *Ecology Law Quarterly*, [1984], p. 271.

⁴² Extracted from the tree's bark, taxol has been shown to bring recovery from or remission of ovarian cancer in 30% of women treated with it after conventional treatments have failed. See Sandborn, Calvin (ed). *Law Reform for Sustainable Development*. British Columbia: Canadian Bar Association (British Columbia Branch). (1990), and Sandborn, Calvin, "We Won't Know What We've Got Till It's Gone", *The Vancouver Sun*, 1991 and Versteeg, Hajo. "The Protection of Endangered Species: A Canadian Perspective," *Ecology Law Quarterly*, [1984], p. 271

⁴³ National Cancer Institute. *Summary Report*. Division of Cancer Treatment, October 1, 1988 – September 30, 1989. Former US Senator Jim Buckley has addressed this issue: "What value would we have placed on the cowpox virus before Jenner, or on a penicillin mold before Fleming, or on a wild rubber tree before Goodyear? Yet the life of every American, and of practically every

citizen of the world, is different because of these species." Karen Day Boylan "How Americans Value Wildlife". Endangered Species Bulletin. March 1998. FindArticles.com. 31 Jul. 2008.

http://findarticles.com/p/articles/mi_m0ASV/is_1998_March/ai_54023079

⁴⁴ By providing suitable material for tires.

⁴⁵ The *BC Wildlife Act*, *Ministry of the Environment Act*, and the *Forest and Range Practices Act* are the three pieces of legislation in BC that touch on environmental concerns, yet none address the issue of the protection of habitat for species at risk. Moola et al., 2007, *Rich Wildlife Poor Protection*, Vancouver: David Suzuki Foundation and Sierra Legal, p. 6. There are some important ramifications of BC's failure to enact stand-alone endangered species legislation. The division of jurisdictional powers in Canada creates 'jurisdictional cracks' that numerous at-risk species have fallen through.

⁴⁶ SARA, s. 10.

⁴⁷ SARA, s. 42. (1): "Subject to subsection (2), the competent minister must include a proposed recovery strategy in the public registry within one year after the wildlife species is listed, in the case of a wildlife species listed as an endangered species, and within two years after the species is listed, in the case of a wildlife species listed as a threatened species or an extirpated species. (2) With respect to wildlife species that are set out in Schedule 1 on the day section 27 comes into force, the competent minister must include a proposed recovery strategy in the public registry within three years after that day, in the case of a wildlife species listed as an endangered species, and within four years after that day, in the case of a wildlife species listed as a threatened species or an extirpated species."

⁴⁸ Note that the Provincial government is not following this approach mandated by SARA. Instead, it has issued directions to biologists to not identify critical habitat when the recovery team issues a Recovery Strategy for a species. The Province directs the scientists to delay the identification of critical habitat until after socio-economic factors have been considered (presumably at the later Action Plan stage).

⁴⁹ The following table indicates how responsibility is typically determined

<u>Species Type</u>	<u>Lead Agency</u>
Marine species	Fisheries and Oceans Canada
Freshwater fish	Fisheries and Oceans Canada & BC Ministry of Environment
Most terrestrial species	BC Ministry of Environment
Species predominantly on/in lands/waters administered by Parks Canada (National Parks, Historic Sites and Marine Conservation Areas)	Parks Canada Agency
Migratory birds	Environment Canada

"Recovery Planning in British Columbia," Environmental Stewardship Division, BC Ministry of Environment website: <http://www.env.gov.bc.ca/wld/recoveryplans/rcvry1.htm>

While the BC Ministry of Environment is not the lead agency in recovery planning for SARA-listed species under federal jurisdiction, it is the lead agency on the majority of SARA-listed species that fall within the political boundaries of the province. In addition, BC MoE representatives sit on most if not all recovery teams for species whose recovery planning is led by a federal agency. Thus the positive or negative impact of many BC government policies and activities are felt by federal and provincial species alike.

⁵⁰ *Canada-British Columbia Agreement on Species at Risk*, http://www.sararegistry.gc.ca/sar/permit/administrative_e.cfm. Emphasis added. *The Accord for Protection of Species at Risk* [at “We Agree to”, (iii)(f)] also emphasizes that B.C. will “provide for the development of recovery plans within one year for endangered species and two years for threatened species that address the identified threats to the species and its habitat” and that their programs will “emphasize preventive measures to keep species from becoming at risk.” http://www.sararegistry.gc.ca/approach/strategy/accord_e.pdf.

⁵¹ SARA, s.41(1)(c). Emphasis added.

⁵² SARA, s. 2.

⁵³ *Canada-British Columbia Agreement*, *supra* at s.2.4. Note that recovery strategies must *identify* critical habitat to the extent possible even if a species’ recovery is ultimately deemed not to be technically feasible. See section s. 41(2) of SARA.

⁵⁴ In defining what must be in an action plan, the Act states that an evaluation of socio-economic costs and benefits must be in the action plan (s. 49(1) (e). In contrast, no mention of socio-economic costs and benefits is included in the prescribed contents of a recovery strategy. Applying the statutory interpretation doctrine of *expressio unius est exclusion alterius*, socio-economic analysis is not contemplated for the recovery strategy.

⁵⁵ FOI document, “National Guidelines for Completing Recovery Strategy Templates.” Draft, February 7, 2006, p. 12. See Appendix C. Also available at: http://www.ecojustice.ca/media-centre/media-release-files/BCmoe_dec2007.pdf.

⁵⁶ SARA, s. 41. (1) If the competent minister determines that the recovery of the listed wildlife species is feasible, the recovery strategy must address the threats to the survival of the species identified by COSEWIC, including any loss of habitat, and must include ...

(c) an identification of the species’ critical habitat, to the extent possible, based on the best available information, including the information provided by COSEWIC, and examples of activities that are likely to result in its destruction;

⁵⁷ National Guidelines, p. 12. Emphasis added. See Appendix C.

⁵⁸ National Guidelines, p. 12. Emphasis added. See Appendix C.

⁵⁹ FOI documents, February 23, 2006 email from Kari Nelson, Ministry of Environment. See Appendix B, p. 17. In her email, Nelson says: “I think the most simple solution in the short term (until we have the provincial policy work completed) is simply to tell the teams that because of uncertainty with respect to provincial policy for spatial identification of critical habitat, and federal policy for legal identification of critical habitat, provincial recovery strategies should not

contain spatially explicit identification of critical habitat. ... As I mentioned, if your recovery teams have a terms of reference, they are required to follow provincial guidance for the preparation of strategies, *and this is current provincial guidance.*" Emphasis added.

⁶⁰ SARA, s.41(1)(c). Emphasis added.

⁶¹ *National Accord for the Protection of Species At Risk*,

http://www.sararegistry.gc.ca/approach/strategy/Accord_e.pdf.

⁶² FOI Document. "Letter of Instruction to Recovery Teams", June 6, 2007. See Appendix B, p. 21.

⁶³ Furthermore, the Direction is contrary to the "National Guidelines for Completing Recovery Strategy Templates", which states that recovery strategy statements should not be generalized. The Direction, however, instructs recovery team members to "describe attributes of habitat only" – a highly generalized and vague statement. See National Guidelines, p. 2: "Lack of full knowledge of a species is a common thread for most recovery strategies. This should not act as an impediment to developing a well-constructed strategy, however the level of certainty with which statements are made should be reflected in the language of the text. This is not an indication that statements should be generalized or vague, but that the level of certainty be indicated or eluded to."

⁶⁴ SARA, s. 58(1) Subject to this section, no person shall destroy any part of the critical habitat of any listed endangered species or of any listed threatened species... [located on federal lands].

⁶⁵ SARA, s. 61(1) No person shall destroy any part of the critical habitat of a listed endangered species or a listed threatened species that is in a province or territory and that is not part of federal lands.

⁶⁶ See s. 58. The Minister is required to post this description within 90 days after the proposed critical habitat is recorded in the public registry. It is difficult to see how the Minister can fulfill this obligation if there are no geospatial coordinates of the critical habitat to describe.

⁶⁷ Sections 58 and 61 require the Minister to determine whether critical habitat is "legally protected" (S. 58) or "effectively protected" (S. 61) or not in various situations, and to make a recommendation to the Governor in Council to apply SARA protective measures if a gap in protection exists.

⁶⁸ See s. 62: A competent minister may enter into an agreement with any government in Canada, organization or person to acquire any lands or interests in land for the purpose of protecting the critical habitat of any species at risk.

⁶⁹ See s. 63: If in the opinion of the Minister any portion of the critical habitat of a listed wildlife species remains unprotected 180 days after the recovery strategy or action plan that identified the critical habitat was included in the public registry, the Minister must include in that registry a report on the steps taken to protect the critical habitat. The Minister must continue to report with respect to every subsequent period of 180 days until the portion is protected or is no longer identified as critical habitat.

⁷⁰ SARA, s. 42. (1) Subject to subsection (2), the competent minister must include a proposed recovery strategy in the public registry within one year after the wildlife species is listed, in the

case of a wildlife species listed as an endangered species, and within two years after the species is listed, in the case of a wildlife species listed as a threatened species or an extirpated species.

(2) With respect to wildlife species that are set out in Schedule 1 on the day section 27 comes into force, the competent minister must include a proposed recovery strategy in the public registry within three years after that day, in the case of a wildlife species listed as an endangered species, and within four years after that day, in the case of a wildlife species listed as a threatened species or an extirpated species.

⁷¹ As far as we know, the Banff Springs Snail is the only species that has an Action Plan.

⁷² Government of Canada, (2008-02-01). Recovery Strategies. Retrieved November 9, 2008, from Species at Risk Public Registry Web site:

http://www.sararegistry.gc.ca/sar/recovery/timelines_e.cfm

⁷³ Of the 32 species with final SARA recovery strategies, BC identified critical habitat for only two species (6%).

⁷⁴ Government of Canada, (2008-02-01). Recovery Strategies. Retrieved November 9, 2008, from Species at Risk Public Registry Web site:

http://www.sararegistry.gc.ca/sar/recovery/timelines_e.cfm

⁷⁵ These recovery strategies are currently listed on the BC Ministry of Environment's "Recovery Planning in British Columbia" web site: <http://www.env.gov.bc.ca/wld/recoveryplans/rcrvy1.htm> Accessed November 14, 2008.

⁷⁶ These recovery strategies are currently listed on the BC Ministry of Environment's "Recovery Planning in British Columbia" web site: <http://www.env.gov.bc.ca/wld/recoveryplans/rcrvy1.htm> Accessed November 14, 2008.

⁷⁷ The Vancouver Island Marmot Recovery Foundation. "Endangered Marmots Return to BC's First Park." Media Release. August 9, 2007. Available at:

http://www.marmots.org/press.php?subaction=showfull&id=1188320314&archive=&start_from=&ucat=1& .

⁷⁸ Vancouver Island Marmot Recovery Team. 2007. Recovery Strategy for the Vancouver Island Marmot (*Marmota vancouverensis*) in British Columbia. Prepared for the B.C. Ministry of Environment, Victoria, BC 23pp. Draft 2007 (with comments), p. 1. See Appendix A, p. 1.

⁷⁹ SARA, s.41(1)(c). Emphasis in the text is the author's.

⁸⁰ Vancouver Island Marmot Recovery Team. 2007. Recovery Strategy for the Vancouver Island Marmot (*Marmota vancouverensis*) in British Columbia. Prepared for the B.C. Ministry of Environment, Victoria, BC 23pp. Draft 2007 (with comments), p. 17, Comment [JB6]. See Appendix A, p. 2.

⁸¹ Bryant, A. A. 2006. National Recovery Strategy for the Vancouver Island Marmot (*Marmola vancouverensis*) Third Draft, 8 March 2006 (with comments), p. 14, Comment LR 17. See Appendix A, p.3.

⁸² FOI document, December 10, 2007 email from Lucy Reis to Jeff Brown, Ministry of Environment. See Appendix B, p.18.

⁸³ FOI document, Don Doyle, Recovery Team Chair, BC Ministry of Environment, (date unknown). See Appendix B, p. 19.

⁸⁴ FOI Document. Options for Revision of Critical Habitat Sections of Garry Oak Ecosystems Recovery Strategies. Prepared by Brian Reader, Species at Risk Ecologist, Parks Canada. 9/3/2008. See Appendix B, p. 4.

⁸⁵ FOI Document. Email Discussion Re: Critical Habitat for Garry Oak and Option 1. See Appendix B, p. 8. See also: FOI Document. Email from Myke Chutter. August 12, 2004. Appendix B, p. 13.

⁸⁶ FOI Document. Table 8. Proposed survival habitat for species in the Recovery Strategy. See Appendix B, p. 6. This FOI document included geospatial critical habitat coordinates, which were later removed from the final strategy.

⁸⁷ The Universal Transverse Mercator (UTM) coordinate system is a grid-based method of identifying locations on the Earth's surface.

⁸⁸ FOI Document. Email from Brenda Costanza to Kari Nelson. January 5, 2006. See Appendix B, p. 3.

⁸⁹ FOI Document. Email from Brian Reader to BC Ministry of Environment employees. November 21, 2005. See Appendix B, p. 11.

⁹⁰ FOI Document. Email from Brian Reader to Ministry of Environment staff. November 28, 2005. See Appendix B, p. 12.

⁹¹ FOI Document. Comment by David Cunnington, Canadian Wildlife Service. February 20, 2004. See Appendix B, p. 14.

⁹² FOI Document. Email from Keri Nelson, BC Ministry of Environment Employee. March 23, 2006. See Appendix D.

⁹³ FOI Document. Email from Sean Sharpe, BC Government employee. August 11, 2006. See Appendix B, p. 15.

⁹⁴ Southern Interior Rare Plants Recovery Team. 2008. Recovery Strategy for the Mexican Mosquito Fern (*Azolla mexicana*) in British Columbia. Prepared for the B.C. Ministry of Environment, Victoria, BC. 16 pp.
http://www.env.gov.bc.ca/wld/documents/recovery/rcvrystrat/mexican_mosquito_fern_rcvry_strat240708.pdf. Accessed November 9, 2008.

⁹⁵ Recovery Strategy for the Mexican Mosquito Fern, above, at p. 13.

⁹⁶ British Columbia Bryophyte Recovery Team and Garry Oak Ecosystems Recovery Team. 2007. Recovery strategy for the Rigid Apple Moss (*Bartramia stricta* Bridel) in British Columbia. Prepared for the B.C. Ministry of Environment, Victoria, BC. 20pp.
http://www.env.gov.bc.ca/wld/documents/recovery/rcvrystrat/bartramia_stric_rcvry_strat_010807.pdf Accessed November 9, 2008.

⁹⁷ Recovery Strategy for the Rigid Apple Moss, above, at p. 16.

⁹⁸ Southern Interior Invertebrates Recovery Team. 2008. Recovery Strategy for the Mormon Metalmark (*Apodemia mormo*), Southern Mountain Population in British Columbia. Prepared for

the B.C. Ministry of Environment, Victoria, BC. 14 pp.

http://www.env.gov.bc.ca/wld/documents/recovery/rcvrystrat/mormon_metalmark_rcvry_strat_220208.pdf Accessed November 9, 2008.

⁹⁹ Recovery Strategy for the Mormon Metalmark, above, at p. iv.

¹⁰⁰ Recovery Strategy for the Mormon Metalmark, above, at p. 11.

¹⁰¹ Southern Interior Reptile and Amphibian Recovery Team. 2008. Recovery strategy for the Night Snake (*Hypsiglena torquata*) in British Columbia. Prepared for the B.C. Ministry of Environment, Victoria, BC. 13 pp.

http://www.env.gov.bc.ca/wld/documents/recovery/rcvrystrat/nightsnake_rcvry_strat_130208.pdf Accessed November 11, 2008.

¹⁰² Recovery strategy for the Night Snake, above, at p. 7.

¹⁰³ Recovery strategy for the Night Snake, above, at p. 9.

¹⁰⁴ See Office of the Auditor General of British Columbia, 1998/1999 Report, *Protecting Drinking Water Sources*. Available at: <http://www.bcauditor.com/PUBS/1998-99/report-5/water.pdf>.