

Protected Areas Strategy for New Brunswick

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Over the past few decades, there has been a growing awareness among the scientific and conservation communities that the diversity of native species and indigenous ecological processes were not adequately protected through the existing management regimes across the landscapes of New Brunswick.

In response, a number of protection measures had been proposed by the government to address biodiversity concerns while simultaneously attempting to minimize the disruption of human, economic, and social activities across the landscape. During the past year, I have been asked by the officials from the Department of Natural Resources and Energy to evaluate the past activities and develop a strategy for protected areas in New Brunswick.

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Dutchman's
Breeches; found in
rich hardwood
forests.
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(Photo: Hal Hinds)

During the past months, I have been working towards the development of a proposal which would adhere to the following principles:

- The strategy should be based on the best available scientific information so that protected areas will firstly contribute to protecting New Brunswick's native plants and animals, along with the habitats which they need to survive.
- The strategy should provide an opportunity for interested citizens to participate during both the development and the implementation stages.
- A system of protected areas should provide for appropriate nature-based recreation for New Brunswickers and visitors.

- Within the need for nature conservation, a system of protected areas should contribute to the economic well-being of New Brunswickers.
- The borders of New Brunswick are political and they do not always respond to the biological reality within our province. Therefore, a comprehensive protected areas strategy must include a review of the linkages which exist between all of the political jurisdictions within the Acadian Bioregion.

A Three Scale Approach

Ecosystems are composed of many interacting levels, and the disturbance patterns that affect and shape ecosystems are often variable in scale. There is presently a common body of scientific knowledge that supports the concept that the enduring features, and the intensity, size and frequency of disturbances in an area, will create a landscape that plants and animals are adapted to and dependent upon.

Representativity is an important criterion for the selection of protected areas because climate, topographic relief and soils -- the enduring features upon which representativity is assessed -- are important determinants of the size and composition of vegetation patches and, at certain small-to-medium scales, of wildlife habitat as well. Therefore, representativity, in a system of protected areas at the ecoregion level, ensures the protection of broad classes of ecosystems and the genetic diversity of common species. However, representative areas cannot be expected to capture important features occurring at very fine or very coarse scale. For example, sites of outstanding value containing rare or endangered species can exist outside representative areas, but still, must be protected within a comprehensive program of protected areas.

At the opposite end of the scale, planning must be done within a regional framework, rather than solely within political boundaries, to ensure that landscape connectivity, for wide-ranging species, is maintained and that minimum representation is achieved for all ecoregions. In order to ensure that all of these criteria are integrated within a protected areas strategy, I will use the three scale approach to develop a strategy which will integrate the following scales:

- A middle Scale - large representative protected areas at the ecoregion level.
- A fine scale - unique features and species.

- A large scale - interregional planning for populations and species

Summary of Activities to Date

We have developed a computer model which has enabled us to conduct a comprehensive analysis of the enduring features at the ecoregion level within New Brunswick. We have identified large contiguous blocks within each ecoregion which contained the greatest percentage of enduring features.

We have also developed a fragmentation index for each region. We are presently in the process of reviewing each area identified in our initial analysis in order to circumscribe a precise watershed for each area. This will assist us in defining the initial boundaries for each proposed area. This work is ongoing and we would anticipate that it will be completed early this year. Once this work is completed, we will hold a workshop with interested stakeholders to obtain their input in setting the boundaries for the protected areas.

Following the workshop, we will attempt to set boundaries and describe the enduring features within each area. Upon completion of this work, we will prepare a draft strategy which will be presented to government and the public for review and consultation. Following the public consultation process, we will prepare a final document that will be submitted to government for approval and implementation. Depending on the scale of the public consultation process, I anticipate to have a final document ready for the Fall of 1998.