

A Mountain Caribou Strategy for British Columbia

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Abstract: Because of the declining population of mountain caribou in British Columbia and the increasing conflict between caribou management and timber harvesting, BC Environment recently has developed a new policy for mountain caribou management in the province. Three options were considered; 1) to manage habitats/populations to potential habitat suitability, 2) to manage habitats/populations to ensure that at least present levels are maintained and 3) to manage habitats/populations within a core area of the province only. The chosen strategy of managing habitats/populations to ensure that at least present levels are maintained is consistent with ministry goals and policies and will likely require that a network of protected areas, buffer areas and linking corridors be established. Initiatives to document existing mountain caribou distribution and to provide options for integrated caribou/timber solutions to management conflicts are ongoing. Successful implementation of this caribou management strategy will require the active participation of the Ministry of Forests since the protection of habitat is a shared responsibility.

Rangifer, Special Issue No. 9, 149-152

Concerns over logging of caribou ranges began to surface in the 1960s. Recommendations for moratoriums, reserves, extended rotations for high elevation forestry and modification to logging prescriptions in caribou range were common in the 1970s. As the demand for timber increases, so does the potential for conflict between habitat and timber management (Seip, 1987). In response, biologists, foresters and researchers within the Ministry of Environment, Lands and Parks, the Ministry of Forests and elsewhere have been looking for ways to maintain caribou habitat and populations in managed forest stands.

In 1988, the Mountain Caribou in Managed Forests (MCMF) Program was initiated within the Prince George area by the Wildlife Branch of BC Environment, the Ministry of Forests and the local Forest industry to address the issue of the potential conflict between mountain caribou and forest management. In the fall of 1990 the MCMF Advisory Committee met and identified the need to expand its membership to include all the southeastern portion of the province with similar forestry - caribou habitat related issues and concerns. The need to develop a consistent provincial strategy was clear.

The provincial version of the MCMF Committee has been inactive for over a year pending the development of a new committee structure which became necessary in light of the impen-

ding Forest Practices Code. In the interim the BC Environment component of this committee has met and continued to work on three main themes as follows:

1. Development of a management "strategy" for mountain caribou in British Columbia

Mountain caribou is classified as being "at risk" in British Columbia, (Harper *et al.*, 1994) and a clear management policy statement from BC Environment was needed to help prevent this ecotype of woodland caribou from becoming "threatened" or "endangered" in the province. By clearly articulating a management "vision" for Mountain Caribou, BC Environment is intending to provide support for its efforts within the provincial MCMF Committee as well as within larger land-use planning processes.

BC Environment as part of the Ministry of Environment, Lands and Parks is responsible for maintaining environmental quality through management and protection of the province's land, water, air and living resources (BC Wildlife Branch). It does this primarily in two ways: resource stewardship and regulatory action. In order to develop a provincial management strategy for mountain caribou it was necessary for BC Environment to look at mountain caribou management in the context of the mandate, goals and strategic objectives of Ministry as well as external pressures such as those exerted by the public

at large, whether locally, provincially, nationally and internationally.

A number of federal and provincial policies and strategic plans are relevant to the conservation of mountain caribou in British Columbia and have been considered: eg. A Wildlife Policy for Canada (Wildlife Ministers Council of Canada, 1990), Strategic Plan of the Ministry of Environment, Lands and Parks (BC Environment, 1993), Maintaining British Columbia's Wildlife Heritage - Provincial Wildlife Strategy to 2001 (BC Environment, 1993). To summarize these initiatives, there currently are two main thrusts to wildlife policy in British Columbia:

- a) Conservation of biodiversity - the variety of different ecosystems, species, and genetic stocks - and not just the birds and land mammals that traditionally have been termed "wildlife", and
- b) Conservation of species and ecosystems threatened by human activities.

Taken together these provide considerable impetus for a concentrated effort to conserve mountain caribou and their habitats in the province.

Mountain caribou numbers are believed to have declined in many parts of British Columbia coincident with human development and habitat alteration. (Bergerud, 1974) The British Columbia population of woodland caribou is part of a western woodland caribou population classified as rare in 1984 by the Committee on the Status of Endangered Wildlife in Canada. (COSEWIC, 1993) In addition, mountain caribou are considered a species ecotype at risk in British Columbia and are currently Blue-listed (Harper *et al.*, 1994), (the Blue List includes vulnerable taxa that could become eligible to be considered for legal designation under the BC *Wildlife Act* as Endangered or Threatened.).

In response to the declining population of mountain caribou in British Columbia, three options for mountain caribou management have been considered by British Columbia Environment, as follows:

Option 1 Manage existing habitats/populations to present habitat suitability.

The option of managing to present suitability favours caribou over forest harvesting activities and may not be economically acceptable over wide areas. Adoption of this strategy conceivably would designate currently unused but suitable habitat as requiring either protected status or intensive integrated resource management. The option would be difficult to defend on a site specific basis and was rejected.

Option 2 Identify and manage caribou habitats/populations to ensure that at least present levels are maintained.

This option is consistent with ministry goals and policies and has been accepted as BC Environment policy with regard to Mountain Caribou Management. Although the objective here would be to maintain or enhance the current levels of caribou populations, it is recognized that the strategy of total protection is not possible for all areas used by this wide-ranging species. Solutions which provide an integrated management approach to conflict resolution will be sought, where possible. Although a system of protected areas will no doubt be a part of the solution, conservation of mountain caribou over the long term will require an integrated caribou/forestry strategy over a large area of British Columbia.

Option 3 Identify and manage caribou habitats/populations within a core area of the province only.

This option represents a further erosion of mountain caribou range in British Columbia and accepts the extirpation of some local populations of mountain caribou which are not in the core area. Some of these populations such as the southern Purcell herd are unique in being at the extreme southern edge of the world distribution of *Rangifer tarandus*. (Stevenson, 1985) These localized populations represent important genetic pools which would be lost to the species at large if the populations are allowed to become extirpated.

Adoption of this management option could be expected to result in a loss of genetic variability and extirpation of isolated groups of mountain caribou throughout its current range in British Columbia, and has been rejected. Ultimately adoption of such a policy could lead to the eventual downgrading of the status of mountain caribou in British Columbia to either endangered or threatened. If this were to occur, the Ministry's Provincial Wildlife Strategy to 2001 requires that a recovery plan be completed within two years of such designation.

2. Caribou distribution and habitat mapping

In order to provide a data base on which management decisions with regard to habitat protection and integrated management can be made, BC Environment is in the process of mapping known or expected mountain caribou distribution together with existing topographic, habitat and forest capability data throughout the range of mountain caribou in the province. From this it is BC Environment's intention to delineate areas which will require either integrated solutions to caribou/forestry conflicts or, in some cases, complete protection from the adverse effects of timber harvesting.

Identification of key caribou habitats can alleviate some conflicts since many core areas are located in non-merchantable or low value forest types - however many important caribou habitats occur within the merchantable forest and integrated management may not always be possible.

3. Integrated resource management

While the reservation of some areas from human activity will no doubt be necessary to protect mountain caribou, the strategy of total protection cannot reasonably be applied to all areas used by this wide-ranging species. In the final analysis conservation of mountain caribou populations in British Columbia will likely require an integrated network of protected areas, insulating buffer areas, and linking corridors; and the application of an appropriate mix of sound land management practices on the remaining land base. As a result, solutions which meet the needs of both managing mountain caribou and managing for timber production in southeastern British Columbia are preferred where feasible. Subalpine forests and highly productive low elevation cedar/hemlock forests present a particularly difficult challenge to resource managers. Habitat management for a large, wide ranging ungulate species dependent on old forest attributes and limited disturbance adds an additional layer of complexity to the challenge.

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