Cariboo Badger Project

Roger Packham and Corinna Hoodicoff, Cariboo Region Badger Project

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The T. t. *jeffersonii* subspecies of the North American badger (*Taxidea taxus*) is considered endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and is red-listed in BC.

Recent estimates suggest that there are fewer than 300 badgers remaining in British Columbia. Factors that have contributed to the decline of badger populations include highway mortality, trapping and persecution, loss of prey species, and habitat loss and degradation. Habitat in the province that is suitable for badgers mainly occurs in the drier ecosystems including grasslands and dry forests.

Badgers are grassland carnivores that live in burrows and specialize in hunting rodents that are often viewed as pests on agricultural land, such as ground squirrels, pocket gophers, and marmots. Badger burrows play a key role in providing shelter for other grassland-dwelling species, like the burrowing owl and the gopher snake, which are also considered rare in the province.

The Cariboo represents the northern extent of badgers in North America, but until recently, badgers were thought to be at low densities in the Cariboo region because it is the periphery of their range. Surveys in 2003, however, indicated that there

were more badgers in the Cariboo region than had been originally believed. This observation helped to initiate the Cariboo Region Badger Project.

The general objectives for the Cariboo Region Badger Project are to determine the extent of badger activity and to collect ecological information about the animals living at the periphery of the range to support future recovery activities in the region. Our specific objectives for the project are to:

1. Raise local awareness of badgers and their habitats in the Cariboo region.
2. Locate burrows and describe badger habitat in the Cariboo region to protect important areas on Crown land.
3. Develop a viable method to remotely monitor badger population using genetic fingerprinting.
4. Estimate home ranges and movements of badgers across the Cariboo region.

To meet these objectives, we collected burrow locations and observations of animals reported by the public and collected hair (snagged and shed) for DNA fingerprinting. We are also working towards establishing protection for burrow concentrations and key habitats on Crown land. Using this information, we were able to identify individual badgers and to estimate their home range areas and movements for a better understanding of badger ecology in the region.

Between 2003 and 2005, we recorded a total of 680 burrow and badger sightings in the Williams Lake and south Cariboo areas. We proposed that 12 areas on Crown land be protected, for a total area of 797 hectares, and we developed best management practices to improve or maintain habitat conditions.

Using DNA fingerprinting from hair we collected, we were able to identify 37 badgers (21 males, 14 females, two undetermined) at a total of 207 burrows. In the allotted time frame, five of these badgers were killed: one accidental trapping, three highway mortalities, and one suspected road mortality. In 2006, an additional five badgers were killed on Highway 97 between 150 Mile and 100 Mile House.

In 2005, at least one family group of five badgers was documented with some certainty so it appears that badger populations are increasing in the Cariboo. We were able to calculate home range areas for 17 badgers. The largest home range calculated was 1,280 kilometers occupied by male badger M008 and the next largest was 190 kilometers occupied by male badger M005. Badgers are moving up to 65 kilometers from one burrow to another. We found that badgers are using large home ranges as in other regions of the province, and that while badgers (and their burrows) are more abundant in grassland areas, they also use openings in agricultural fields and openings in the forests such as dry knolls.

In the summer of 2007, the Ministry of Environment will be working in partnership with a graduate student from Thompson Rivers University (TRU) and several funding sources to complete more detailed studies of badgers in the Cariboo. Badgers will be outfitted with radio transmitters to better determine movement corridors, population size and to determine where badgers cross Highway 97. If we can reduce the numbers of badgers being killed on Cariboo highways then we anticipate additional increases in the badger population.

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