

SPECIES ACCOUNT

Species Data

Common Name:	Badger
Scientific Name:	<i>Taxidea taxus</i>
Species Code:	M-TATA
BC Status:	Red-listed
Identified Wildlife Status:	Not listed
COSEWIC Status:	Endangered

Project Data

Project Name:	Bella Vista / Goose Range Sensitive Ecosystems Inventory
Project Type:	Terrestrial Ecosystem Mapping
Area:	North Okanagan
Ecoprovince:	Southern Interior
Ecoregions:	Thompson-Okanagan Plateau
Ecosections:	Northern Okanagan Basin (NOB)
BGC Units:	IDFxh1
Map Scale:	1:20 000

Distribution

Provincial Range

Badgers occur in the bunchgrass grasslands and open ponderosa pine forests in valleys of the Cariboo and Thompson-Nicola areas, west as far as Lillooet and north as far as Williams Lake and Clearwater, and from the Okanagan valley through to the southern Rocky Mtn. Trench (Blood 1993, Rahme et al. 1995). Recent sightings have been concentrated in the Kamloops area, the south Okanagan and the East Kootenays (Cannings et al. 1999).

Badger distribution in BC is correlated with the occurrence of major prey species and preferred biogeoclimatic zones: Bunchgrass, Ponderosa Pine (PP), and Interior Douglas-fir (IDF) (Rahme et al. 1995). In the East Kootenays they occur in the PP, IDF, Montane Spruce, Engelmann Spruce-Subalpine Fir and Alpine Tundra biogeoclimatic zones, but are most frequently found in the IDF biogeoclimatic zone (Newhouse and Kinley 2000).

Elevation Range

In British Columbia, badgers are usually found from 400m to 1500m, and occasionally to 2400m (Rahme et al., 1995). Newhouse and Kinley (2000) recorded occurrences from 800 to 2700 m in the upper Columbia and upper Kootenay valleys.

Distribution in the Project Area

Records exist from the Vernon area, and suitable habitat exists in the study area.

Ecology and Habitat Requirements

Badgers are solitary, nocturnal carnivores of open habitats, highly specialized for digging and spending much of their time in underground burrows. Each badger occupies a permanent home range of at least 100 ha (Rahme et al. 1995). The males' larger home ranges of up to 475 ha overlap the females' ranges in the breeding season (Cannings et al. 1999). Badgers are less active and their home range sizes are much smaller in the winter, and they spend most of their time in burrows (Cannings et al. 1999). They will enter a state of mild torpor during cold spells (Blood 1995, Rahme et al. 1995). Dens are used throughout the growing season as well, during the day and for maternity sites. A new den may be dug each day in summer, but are often reused, while one den may be used for the entire winter (Sargeant and Warner 1972, Long 1973). Dens have an elliptical entrance 20-30cm wide, and maternity dens have branched main channels and side tunnels (Blood 1995). Mating occurs in July or August, but implantation is delayed until January or February, and young are born about April; this allows Badgers to mate in summer when they are the most active and likely to interact, and raise young in the spring when food is most abundant (Blood 1995). Average litter size is two or three, with a maximum of five (Rahme et al. 1995). Young disperse in their first summer, and may travel up to 110 km to locate a suitable home range (Messick and Hornocker 1981). Only yearling or older males will reproduce, but some females will mate their first summer, at an age of only four to five months (Messick and Hornocker 1981, Blood 1995).

Badgers generally hunt for fossorial or semi-fossorial prey, primarily Northern Pocket Gopher, Columbian Ground Squirrel, and Yellow-bellied Marmot (Rahme et al. 1995). Badgers are opportunistic and will also eat amphibians, snakes, hares, chipmunks, birds, eggs, insects, fish, and carrion (Rahme et al. 1995, Blood 1995; Newhouse and Kinley 2000). They will consume corn, grain, herbs and wild grasses when prey availability is low (Cannings et al. 1999).

General Living

Food and Security/Thermal Habitat

Badgers require deep, friable soils for digging and abundant prey, particularly pocket gophers, ground squirrels or marmots (Rahme et al. 1995). They occur in the dry interior valleys that support bunchgrass grassland, shrub-steppe and open stands of ponderosa pine or Douglas-fir (Blood 1995).

Habitats preferred by East Kootenay badgers were generally associated with relatively open forest or non-forest including open range, cultivated land, highway rights-of-way, alpine tundra and linear disturbances and, negatively associated with canopy closure (Apps and Newhouse 2000). Sites with 35% tree cover or less were preferred; sites with 6-15% cover were highly preferred; and sites with 0-5% were used extensively (Newhouse and Kinley 2000).

Denning can only occur in dry, and friable soils that are > 1 m deep. Badgers in the East Kootenays tended to select glaciofluvial and to a lesser extent, glaciolacustrine soils for denning (Newhouse and Kinley 2000).

Although grasslands and open forests that are overgrazed have lower carrying capacities for rodents and Badgers (Rahme et al. 1995), many ground squirrel colonies exploited by badgers were on lands that had been heavily grazed (Newhouse and Kinley 2000).

Ratings

This model employs a 4-class rating scheme because there is insufficient knowledge of habitat requirements to use a 6-class scheme yet there is sufficient knowledge to go beyond a 2-class rating scheme. This complies with the recommended rating scheme in the RIC standards manual (1999).

Provincial Benchmark

Ecosection	Unknown (OKR, SOB, NOB, SOH, THB, PAR, FRB, EKT)
Biogeoclimatic Zones	BG, PP, IDF
Habitats	Grasslands, shrub-steppe, open Py/Fd forest

Map Themes

Habitat Use	Life Requisite	Season	Rating Code	Ecosystem Attributes
General Living	Security/ Thermal, Food	All year	LIA	•open habitats with deep, friable soils

Ratings Assumptions

General Living all year – Security/Thermal, Food (LIA)	
Site Series	• Open grasslands rated up to High; shrub-steppe and open Py/Fd forest (<35% canopy cover) up to Moderate
Structural Stage	• No effect on rating
Shrub Density	• Dense rated down 1
Range Condition	• Poor condition rated down 1
Aspect	• No effect on rating
Slope	• No effect on rating
Soil Texture	• Lacustrine and well-developed soils rated up to High; very fine (clay) and very course (fluvial) rated down 1
Soil Depth	• Shallow rated up to Low; very shallow rated Nil

Map Interpretation

One map theme, general living all year (LIA), is portrayed by this model, which includes foraging, denning, and birthing (maternity dens). The dot-density method is used to display ratings, indicating the relative amount of area of all the units occurring in the polygon.

Literature Cited

- Apps, C.D. and N.J. Newhouse. 2000. Habitat modeling for badgers in the East Kootenay region of British Columbia. Columbia Basin Fish and Wildlife Compensation Program, Nelson, BC; East Kootenay Environmental Society, Kimberley, BC; Forest Renewal British Columbia, Cranbrook, BC; Parks Canada, Radium Hot Springs, BC.
- Blood, D.A. 1995. Badger: Wildlife at Risk in British Columbia brochure series. Ministry of Environment, Lands and Parks. Victoria, BC.
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- Rahme, A.H., A.S. Harestad and F.L. Bunnell. 1995. Status of the Badger in British Columbia. Ministry of Environment, Lands and Parks, Wildlife Branch. Victoria, BC. Wildl. Working Report WR 72.
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Badger Suitability Map

