

## 8. An American Badger Burrow

### 1) Definition

*An American Badger (Taxidea taxus) burrow* means an excavated hole that descends below ground that either (1) is currently occupied for denning, shelter, or foraging; or (2) is habitually occupied and still capable of providing for denning, shelter, or foraging (Figure 30).



**Figure 30. American Badger at its burrow.** (Photo: Rich Weir)

### 2) Species Description

The American Badger is a powerful carnivore, about the size of a raccoon (Figure 30). It is squat and muscular with mottled, reddish-brown colouration. Its shaggy hair is short on the back and belly, longer on the sides and gives the body a flattened, short-legged appearance. The wedge-shaped head has distinctive alternating black and white bands; a central white stripe runs from the nose to the back of the neck. Badgers have a short bottlebrush tail and long claws for digging. Badgers run with a characteristic trotting gait. They are most active at night; consequently, badgers are rarely seen during the day.

The American Badger is a *Species at Risk* under the *Forest and Range Practices Act* and is Red-listed in British Columbia. It is designated as *Endangered* by COSEWIC.

### 3) What to Look For

Optimum badger habitats are grasslands and open ponderosa pine and Douglas-fir forests along the major valleys of the southern Interior of British Columbia. Sites with fine, sandy loam soils with few large rocks that are suitable for digging are particularly important for badgers (e.g., loose soils originating from glaciofluvial and glaciolacustrine parent materials). Burrows are typically round or oval in shape and have a mound of loose, freshly dug soil mounded at their entrances that may have track marks (Figure 31).



**Figure 31. A freshly dug badger burrow.** (Photo: Luke Robertson)

Burrows are used by badgers for birthing sites, safe resting areas, food storage, and protection from the elements, particularly during winter when they may enter a state of torpor. Burrows may persist for up to a decade, depending on soil conditions, and are re-dug and re-used several times. Natal dens are burrows used for rearing young (kits). Females may move litters to new burrows throughout the rearing season (April–August). Table 32 summarizes what to look for when identifying an American Badger burrow.

The main threats to American Badger populations are mortality from vehicle collisions and habitat loss related to forest encroachment, intensive agriculture, rural development, and urban sprawl, as well as rodent (prey species) control programs. Table 33 provides information to consider when conducting primary forest and range activities adjacent to a burrow.

***Note: American Badger burrows that are excavated into a constructed road (i.e., within the road prism or grade slope) are not considered a wildlife habitat feature.***

**Table 32. American Badger burrows: what to look for.**

<b>American Badger Burrow Description</b>
<ul style="list-style-type: none"> <li>• Burrows are usually found in grassland and sparsely treed habitats.</li> <li>• Burrows generally extend several metres underground.</li> <li>• Identifying features include:               <ul style="list-style-type: none"> <li>○ large oval or elliptical-shaped entrance (20–30 cm wide and 15–25 cm high (about the size of a volleyball));</li> <li>○ often a large mound of loose dirt at the front of the entrance;</li> <li>○ horizontal claw marks (approximately 1.5 cm between claw marks) on the sides of recent burrows;</li> <li>○ sweeping marks along the main route into the burrow created by underbelly hair from moving badgers; and</li> <li>○ badger hair at the entrance.</li> </ul> </li> <li>• Coyote or fox may defecate at the entrances of badger burrows, making burrow identification challenging.</li> <li>• The presence or evidence of young (kits) is the only reliable way of differentiating a natal (maternal) den from a burrow used for foraging or shelter.</li> </ul> <p><i>Note:</i> Coyote and red fox burrows are often triangular in shape, with claw marks that run vertically downward along the sides from the peak of the entrance. Additionally, coyote and fox dens may have more feces and prey remains at their entrances than badger dens.</p>

**Table 33. Information to consider when conducting primary forest or range activities near badger burrows.**

<b>Information to Consider</b>
<ul style="list-style-type: none"> <li>• If you are unsure whether an American Badger is using a burrow, or whether use is recent, consult a qualified professional biologist to identify the species.</li> <li>• Activities conducted near a burrow that result in soil disturbance or compaction may damage the burrow (e.g., road or skid trail construction, felling/yarding, ground skidding, mechanical site preparation [mounding/trenching], and broadcast burning). To avoid damage to badger burrows:               <ul style="list-style-type: none"> <li>○ Maintain herbaceous and shrub ground cover around burrows.</li> <li>○ Avoid developing any new road access near clusters of known active burrows.</li> <li>○ Establish a no machine zone around burrows to protect them from collapse under heavy harvesting equipment (Figure 32).                   <ul style="list-style-type: none"> <li>▪ Zone size of 5–7 m around single burrows.</li> <li>▪ Establish a larger zone of at least 20 m around clusters of burrows or single natal den.</li> <li>▪ For natal dens, avoid disturbance during the breeding season (April 15–August 15).</li> <li>▪ Flag zones with brightly coloured tape to alert equipment operators.</li> <li>▪ Do not harvest trees within a zone unless a mechanical harvester can reach in to extract them.</li> <li>▪ Do not harvest trees that provide stability to a burrow or are located within 1 m of a burrow entrance.</li> <li>▪ Retain trees harvested along the periphery of a zone as “high stubs” to prevent log-skidding through the zone and also to provide some residual stand structure for other species.</li> </ul> </li> </ul> </li> <li>• Erect enclosure fencing if damage from livestock is degrading the vegetative structure or threatening the collapse of burrows.               <ul style="list-style-type: none"> <li>○ Avoid placing livestock attractants (e.g., salt licks, water troughs, feeding sites) within 250 m of the burrow.</li> </ul> </li> <li>• During the maternal period (April 15–August 15), do not construct range developments within 250 m of active burrows.</li> </ul>



**Figure 32. A no machine zone (green treed area in centre) established around an American Badger burrow (tan-coloured mound at red arrow). Note stub trees left around the perimeter of the zone. (Photo: Melissa Hogg)**

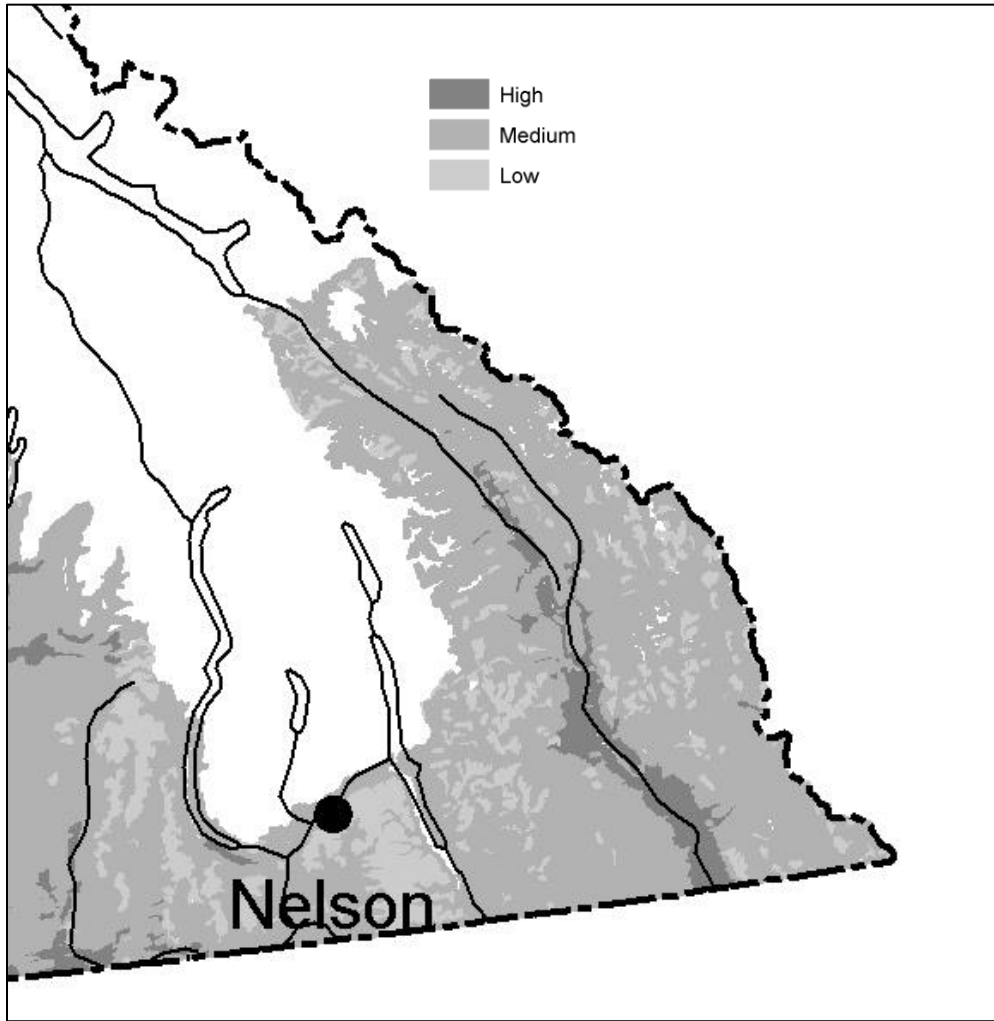
#### **4) Regional Information – Kootenay Boundary**

In this section, we provide specific timing windows and guidance on disturbance buffers for the Kootenay Boundary Region. This information may vary from provincial guidance and may not be applicable outside of the Kootenay Boundary Region because of regional specificity.

The American Badger is a wide-ranging resident species that is commonly found near valley bottoms and in open areas, such as grasslands in the East Kootenay and Boundary (Figure 33, Table 34). No specific regional guidance is available on buffers for burrows; follow the “Information to Consider” provided in Table 33.

American Badgers are most sensitive during the late July and August breeding season, with young born between March and April. This creates a potential *sensitive period of April 15–August 15*.<sup>1</sup> Based on site observations, the length of this sensitive period can be refined. The period of *least risk is August 15–April 15*.

<sup>1</sup> Adapted from the BC Species and Ecosystems Explorer – Species Summary.



**Figure 33. Distribution of potential American Badger habitat in the Kootenay Boundary Region.<sup>2</sup>**

**Table 34. Habitat and biogeoclimatic associations of American Badgers in the Kootenay Boundary Region.<sup>2,3</sup>**

Habitat	Biogeoclimatic Zone <sup>4</sup>	Biogeoclimatic Subzone/Variant
Engelmann Spruce–Subalpine Fir	ESSF	dc1, dc2, dcp, dk, dk1, dkw, dkp, mw, mwp, wc1, wc4, wcp, wm, wmp, xc, xcp, dw
Interior Cedar–Hemlock	ICH	dw, mk1, mk2, mk3, mw1, mw2, mw3, xw
Interior Douglas-fir	IDF	dk1, dk2, dk3, dm1, dm2, mw, mw1, mw2, un, xh1, xh2, xm, xw, xw2
Montane Spruce	MS	dk, dm1, dm2, un, xk
Ponderosa Pine	PP	dh1, dh2, xh1, xh2

<sup>2</sup> From Identified Wildlife Management Strategy – Species Accounts and Measures (2004).

<sup>3</sup> M. Machmer, Registered Professional Biologist, Pandion Ecological Research Ltd., pers. comm. (2018).

<sup>4</sup> A Field Guide for Site Identification and Interpretation for the Nelson Forest Region (1992).

**5) Additional Information**

A Field Guide for Site Identification and Interpretation for the Nelson Forest Region, Land Management Handbook No. 20:

<https://www.for.gov.bc.ca/hfd/pubs/docs/lmh/lmh20.htm>

American Badger COSEWIC Status Report:

[http://www.sararegistry.gc.ca/virtual\\_sara/files/cosewic/sr%5Fblaireau%5Fam%5Fbadger%5F1113%5Fe%2Epdf](http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr%5Fblaireau%5Fam%5Fbadger%5F1113%5Fe%2Epdf)

Badger Burrow Identification Field Card:

[http://badgers.bc.ca/pubs/Badger\\_burrow\\_ID.pdf](http://badgers.bc.ca/pubs/Badger_burrow_ID.pdf)

BC Species and Ecosystems Explorer – Species Summary for American Badger:

<http://a100.gov.bc.ca/pub/eswp/speciesSummary.do?id=15604>

Identified Wildlife Management Strategy – American Badger Species Account:

[http://www.env.gov.bc.ca/wld/frpa/iwms/documents/Mammals/m\\_badger.pdf](http://www.env.gov.bc.ca/wld/frpa/iwms/documents/Mammals/m_badger.pdf)