

**Notes from Badger  
Stakeholder Workshop  
12 June 2008,  
Cranbrook**



Thank you to those who attended the workshop or emailed to express interest, and to Parks Canada's ESSRAEF Fund for covering its costs. We spent the first half of the morning covering background material about the ecology, threats, status and potential recovery actions for badgers in the East Kootenay. The last hour was spent discussing recovery steps, particularly potential links to the agencies and individuals attending the workshop. The following notes summarize some of the key questions and future activities.

Status

American Badgers are on the provincial Red List, and the subspecies in BC is nationally designated as Endangered. As required under the federal Species at Risk Act (SARA), the Province has prepared a recovery plan. After some revisions, it has just been submitted to the federal government for posting on the SARA registry. After a public review period, the federal government will have the option of accepting it as the federal recovery plan. Two important considerations are that the plan is very broad (more substantive actions are intended to be driven by work done by local Recovery Implementation Groups), and no Critical Habitat has yet been designated (nor does a formal decision to do so appear to have been made). SARA restrictions on destroying badger burrows apply only to federal land, such as Indian Reserves, and may be nullified under permit from the CWS. Potential parallel prohibitions on provincial and private land are not in place, and would depend on specific regulations being written under the provincial Wildlife Act. The number of badgers in the East Kootenay is probably toward the lower end of the 100-150 range, representing about half of BC's total. Although the local badger population is small, it appears to be slowly increasing.

Roadkill Prevention

Half of known-cause deaths among badgers radiotagged through the East Kootenay Badger Project were due to vehicle collisions. Among non-tagged animals in recent years, at least 5% of the East Kootenay's badger population has been reported roadkilled annually, in addition to the unreported kills. Limiting roadkill would quickly improve population growth. Local research indicates that badger roadkills are associated with sites having fewer culverts. MOT staff have indicated a willingness to look at means of making existing culverts more passable to badgers (removing brush or debris, fixing "hanging" ends and repairing crushed ends), and possibly considering installing more culverts or installing drift fencing in select areas. There appears to be a reasonable likelihood of receiving funding this fiscal year to begin that process. This is a very high priority item for badger recovery.

### Habitat Modeling

Alan Dibb of Parks Canada is working with Trevor to create an updated badger habitat model, using the more complete telemetry and habitat databases now available, extending the model southward to the USA border, and focusing on the Trench alone rather than including the Rockies or Purcells. The model should be available later this year, and will be useful in assessing locations in relation to ecosystem restoration, roadkill risk, development planning, and badger recovery under SARA.

### Development Planning

Project biologists have periodically contributed to planning by the RDEK, developers and others, to facilitate the inclusion of badger values as the landscape becomes increasingly developed. If funding is available to do so, the intent is to continue this. One important means of minimizing effects on badgers is to consider their habitat and areas of use during the subdivision approval process. While RDEK zoning plays a key role in determining the permissibility of subdivisions in many areas, the approval authority actually lies with MOT staff from Cranbrook. Closer ties with MOT would better enable them to consider badger values. Possible actions include conducting an information session (including field tour), and providing maps of habitat, telemetry, sightings or badger activity “hot spots” to use in considering approvals. Another opportunity is to monitor Crown land applications through ILMB, to ensure that any in key badger areas receive comment.

### Wildlife Habitat Areas

Under the authority of the Forest and Range Practices Act, seven WHAs have been designated in the East Kootenay for badgers, seven others are in the planning stages, and MOFR has requested the identification of more candidates this year. Baseline monitoring of range conditions and ground squirrel and badger burrow densities has been done at all seven WHAs and two of the candidates. The benefits of designating WHAs is not always clear, because badgers are expected to benefit from timber harvesting (as opposed to most species for whom other WHAs are created), certain protections for badger habitat are not directly within the purview of FRPA (such as limiting ATV use), and General Wildlife Measures are arguably sufficient to manage badger habitat. The rationale for designating WHAs is that they do allow some additional protection in terms of the timing of certain activities, they act as an important map notation to indicate the value of special areas for resource planning processes, and their creation puts in place a monitoring process that should allow us to judge the status of badgers over time. However, the intent of WHAs is not to create unnecessary restrictions on forest or range tenure holders – current patterns of grazing and timber harvesting are viewed as neutral to positive to badgers. MOE staff have indicated that WHA guidelines are likely to be modified to ensure this.

### Private Land Conservation

Organizations that facilitate conservation by purchasing, establishing covenants on or facilitating stewardship of private land have an important role to play in badger conservation. Significant areas of badger habitat lie on land held by the Land Conservancy of BC, the Nature Trust of BC, Nature Conservancy Canada, and the

Ministry of Environment. Badgers are likely to continue to be a high-profile species when private land conservation activities are undertaken.

### Forest Harvesting

Badgers are expected to benefit from logging, and particularly from ecosystem restoration (ER) in the Trench. This is because badgers typically occur in open habitats, where their main prey is most common. We are keen to see more ER projects proceed and, to the extent possible (see Capacity section), provide input on sites where there's likely the greatest "bang for the buck" in terms of ground squirrel and badger benefit. In addition to forest licensees, the Rocky Mountain Trench Natural Resources Society can play an important role in conducting ER, providing observations of badger activity, communicating conservation messages to range tenure holders in their membership, and potentially funding some research or monitoring projects.

Some questions raised about forest harvesting in badger Wildlife Habitat Areas or other important badger-use areas are listed below, along with some commentary on them (in italics).

1. Badger burrows are often flagged as no-machine areas to prevent damage. However, some places have so many burrows (including really old ones) that this makes harvesting logistically difficult and may result in the retention of more than the optimal number of trees. Should old burrows be offered the same level of protection as recent ones? *In general, the level of concern is greatest for burrows known to be currently occupied, then for other recently used burrows, and somewhat less for older burrows. However, badgers do commonly reuse old burrows (sometimes even really old, moss-encrusted ones). If there are so many burrows that the ability to conduct ER is in jeopardy because of them, this creates a dilemma: the number of old burrows indicates the high potential for badgers so we want ER to proceed but don't want to cause excessive damage in the process nor leave so many trees behind that ER isn't fully achieved. Within WHAs, site-specific planning might be required in this situation. Outside of WHAs (and subject to government policy), our general feeling is that there is some benefit to protecting all or virtually all burrows from compaction or destruction, but we have no data that specifically addresses this and do strongly feel that ER is of long-term benefit. Therefore, we recommend protecting all burrows from damage unless doing so is likely to limit the effectiveness of (or prevent) ER; in those cases damage to older burrows is preferable to inaction.*
2. Do we know what type of damage is actually caused by machine use around or over burrows? *No. It is assumed that equipment (especially wheeled machines) will compact soil to at least some extent, thereby damaging burrows and making future burrowing more difficult. Also, debris deposited in burrows when logs are dragged over them likely increases the energy output required by ground squirrels and badgers in re-excavation. However, this has not been studied. There is potential to conduct a research trial with forest licensees in which some burrows are avoided while others are not, to determine how much of an issue this really is.*
3. Is timber harvesting in winter preferable to summer? *The advantage of winter logging is that badger burrows are somewhat protected by frozen soil, and any recent burrowing is obvious (soil on top of snow; tracks in snow). The disadvantage is that unoccupied burrows may be hidden by snow. The ideal*

*situation appears to be to identify and flag burrows during the snow-free season, then harvest during winter.*

4. *Do ground squirrels readily use areas where ER has occurred? Some local monitoring has occurred but no clear data are available. Studies in other areas show that ground squirrels can disperse far enough to theoretically allow colonization of any ER site in the Trench, but there's a big difference between expansion of colonies or movement between colonies (common) and the establishment of new colonies (rare). ER is likely to be most beneficial to badgers where it improves habitat for ground squirrel colonies already on site, or secondarily where those colonies are immediately adjacent. Careful research could indicate the effect of ER on badger prey.*

### Information Needs

In addition to items mentioned above, there is an ongoing need to collect data on badger occurrence and status. The notice in the annual hunting regulations and other publicity continue to result in reports of badger sightings. One key missed opportunity for data is that we believe many roadkills go unreported, making it more difficult to identify focal areas for roadkill mitigation work. MOT has suggested discussions with the highways maintenance contractor to ensure they report any they are aware of. Another knowledge gap is with regard to badger populations outside the Trench. We have many sightings from the Elk Valley, the McGillivray Range and some other areas, but have little idea of population status there. Such areas may support a large proportion of the East Kootenay's badger population, but this is unknown.

### Capacity

One challenge facing local recovery is funding. From 1996 to early 2008, Sylvan Consulting held flexible contracts allowing us to complete some tasks that were either not attached to specific deliverables or were not predictable in advance. For example, we collected sightings reported by the public, responded to concerns about problem animals, collected roadkills, and participated in planning by developers, RDEK, forest managers and others. However, current funding is attached to specific tasks - completing an updated model and potentially addressing roadkill issues. There is a significant risk that planning, data collection and recovery actions will be neglected because there is no funding in place for those activities. In particular, none of the items described under the previous headings are funded, with the exception of roadkill prevention, habitat modeling and the designation of more WHAs. If anyone is aware of opportunities to contribute toward these or other activities related to badger recovery, please let me know.

If you have any corrections or important additions to this summary, or simply wish to discuss badger ecology, conservation or research, please contact me. Thanks again for your interest in the recovery of this grassland carnivore!

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