

**BADGER-HUMAN CONFLICT:
RESOLUTION AND TRANSLOCATION RECOMMENDATIONS**



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Background

Populations of badgers in British Columbia are critically endangered and it is estimated that fewer than 300 animals occur in the province today. Because badgers are critical to the functioning of healthy grassland and dry forest ecosystems, ensuring the persistence of these carnivores is very important. Badgers occur at very low densities, have large space requirements, and have poor survival - all of which contribute to the current conservation crisis facing the species. This crisis has reached such a critical stage that every single badger is an important member of the population. The purpose of this document is to provide information on why conflict can occur between humans and badgers, information on possible resolutions other than translocation, a checklist for determining when it is appropriate to translocate badgers, and a methodology for capturing, transporting, and releasing animals.

Translocating badgers is very risky. Animals that are unfamiliar with their release area may be more vulnerable to predation, unable to find sufficient food, or more susceptible to additional conflict with humans. Because of this, translocation should only be considered as a last resort when all other avenues for resolution have been attempted. Badgers should only be moved when there is a direct threat to their lives (e.g., a landowner threatening to shoot it or it is found in a location with a high mortality risk). Once most landowners learn more about the ecology and behaviour of badgers, they usually understand that the risk to humans, livestock, or property from badgers is very low.

Behaviour of Badgers – *Why do badgers end up in conflict with people?*

Badgers normally reside in grassland and open forest ecosystems. However, with increasing human development in these types of habitats, human-modified habitats that support high concentrations of prey can attract badgers, especially in areas where normal badger habitat has become degraded or disappeared altogether. Thus, badgers sometimes show up in some unlikely habitats, such as in urban areas, in parks and green-spaces, and along roadsides. Unfortunately, badgers are usually more tolerant of humans than vice versa, and because of preconceived notions that badgers are pests, landowners occasionally destroy badgers.

A primary contributing factor to the conflict between badgers and humans is that many of the habitats that badgers prefer are also desirable to humans. Conflict ensues when this overlap is combined with the creation of attractive habitats, such as those with abundant prey. The effects of human settlement on badgers are then twofold: badgers are both displaced from their natural habitats by community expansion and development and drawn into human-modified areas by abundant prey resources.

The types of human-modified habitats that often attract badgers include areas with short grass or abundant green herbaceous vegetation, such as over-grazed fields and golf courses, which provide quality habitat for Columbian ground squirrels. Rodent populations within these habitats typically multiply rapidly and are often considered pests by landowners. Landowners who do not recognize the pest-control benefits of badgers often consider the badger to be another pest that has invaded their property.

It is useful to understand several facets of the ecology of badgers to better assess the likelihood of a badger causing chronic conflict with a landowner. The average size of the home range over which badgers in the Thompson region roam is about 35 km² (3,500 ha or 8,750 ac) for males and 15 km² (1,500 ha or 3,750 ac) for females. Badgers typically move from burrow to burrow throughout their home range, especially during summer months, moving an average of 2.8 km per day. Occasionally, badgers return to existing burrows and re-use them, but research in the Kamloops area showed that radio-tagged badgers were more likely to move at least 0.5 km within 1 day than to stay in the same area. Thus, because of their wide-ranging movements and wandering lifestyle, badgers are very unlikely to establish themselves permanently on a single landowner's property.

When badgers use habitats near livestock and houses they are often perceived to be a nuisance. Landowners may perceive badgers burrows to be a threat to livestock. However, the threat of livestock becoming injured by stepping in burrows appears to be overestimated and rarely occurs. Badgers are also perceived to be a risk to pets, and indeed they may sometimes prey on house-cats. Dogs may also be at risk, but large domestic dogs also kill badgers. The threat to humans appears to be low, despite their aggressive reputation. Badgers will occasionally put on aggressive displays when cornered, but they are unlikely to attack a person unless highly provoked.

Translocation criteria – *When is it appropriate to translocate a badger?*

The most appropriate action to take when a complaint is received is to provide the landowner with information about the movement patterns of badgers and to advise them to not disturb the animal. Once the movement patterns of badgers are explained to landowners, they are generally more accepting of the animal's presence and are willing to wait until the badger moves to another portion of its home range.

The needs of female badgers with young require particular sensitivity and understanding from landowners. Females with young may spend up to 2 months at their natal burrow, which they will use repeatedly. In fact, the only time that badgers spend a lot of time in the late spring/early summer at one burrow is if there is young. Capturing a female and all its young is a very risky and difficult undertaking and should be avoided, except in the most extreme cases.

Female with young may be protective of their young and act aggressively towards people that approach the natal burrow or young. It is best to leave the animals alone and allow them to move on their own.

For more information about badgers or help dealing with badger-human conflict, contact:

East Kootenay: Nancy Newhouse
(250) 342-3205

Thompson-Okanagan: Richard Weir or
Helen Davis
1 888 223 4376

or visit the "Badgers in BC" website at

www.badgers.bc.ca.

Release criteria – Which badgers are good candidates for translocation?

While the chances of having to translocate badgers (either from live-trapping a problem animal or after rearing a juvenile) are extremely low, the following criteria need to be considered before capture:

1. the animal must be in good physical health and show no signs of disease
2. sex: females are critical to the population and should always be released
3. age: very young badgers whose mother has died may not be good candidates for immediate release because they are not capable of hunting successfully or avoiding predators on their own. These animals may need to be reared at a zoo or other approved facility prior to release into the wild.

Capture procedures

If the situation cannot be resolved with the landowner and a badger has to be captured, it should be done under the supervision of one of the badger projects currently underway in the province (East Kootenay Badger project, Nancy Newhouse (250) 342-3205; Thompson-Okanagan Badger Project, Richard Weir (888) 223-4376). Most conservation officers do not have the equipment necessary for capturing badgers, and these biologists have the expertise and equipment to complete the live-capture.

The live-capture procedure is as follows. Set livetraps at burrows using “den sets”, which involves placing a trap at the mouth of an active badger burrow (Baker and Dwyer 1987). Do not attempt to immobilize free-ranging badgers using a dart gun or blowgun because the animal may disappear underground, become immobilized in an unsafe position, and possibly suffocate.

Use padded “soft-catch” foot-hold traps anchored by attaching the trap with a 3 mm diameter cable to a flared anchor pounded 45 cm into the soil. Use Victor 1½ coil spring traps - **do not use #2, #3, or #4 spring traps** because they may severely damage the badger's foot. Set each trap so that no more than 15 cm of cable is exposed above the soil surface. It may be effective to scent nearby vegetation with commercial canine lure.

Set and monitor traps so that they are operational for a maximum of 14 hours each night. Set traps between 1800 and 2100 h and close them between 0600 and 0900 h the following day. Release all non-target species immediately.

Upon capture of a badger, estimate the body weight to determine the appropriate dosage of anaesthetic. Restrain the badger using a handling pole prior to administering the anaesthetic with a jab-stick. Immobilize badgers using a 1:1 mixture of tiletamine hydrochloride and zolazepam hydrochloride (Telazol®). Attempt to administer Telazol® at <5 mg/kg to induce light anaesthesia for brief handling. Because of decreases in body temperature, place the immobilized badger in a sternal position over warm hot-water bottles.

Measure and monitor badgers while they are immobilized. Record the sex, body weight, and cranial and skeletal measurements. Collect hair and blood samples from each badger for genetic analysis. Take photographs of the head, dorsal, and ventral regions. Respiration and cardiac rate, body temperature, and capillary refill time should also be recorded at regular intervals while the

badger is immobilized. Place the immobilized badger in transport container (modified 45 gallon plastic container), secure container in vehicle, and transport to release site.

Release sites– *Where is the best area to release a translocated badger?*

Since the intent of this protocol is to ensure the survival of badgers that are in conflict with humans, it is best to translocate an animal to another point within its home range. This way, the translocated animal is familiar with its surroundings, knows the location of resources, and is thus more likely to survive. The home ranges of females are approximately 15 km², whereas males have larger home ranges of around 35 km². Thus, if females are released in suitable habitat within 2 km and males are released within 3.5 km of their capture sites, the translocated animal will likely be within its home range.

However, if the likelihood of the badger returning to the same property is relatively high, a release site outside of the home range may be warranted. There are many unoccupied areas of suitable habitat currently available for badgers in the province, partly because population densities are so low. Grasslands or dry forests with large populations of prey (i.e., Columbian ground squirrels, yellow-bellied marmots, northern pocket gophers) and little human activity are probably the best candidates. Prey species tend to live in patches, so picking an area with many patches of prey nearby is preferable. Because the main source of mortality for badgers is from collisions with vehicles while crossing roads, release sites should be far-removed from busy roads.

To increase the likelihood of successful translocation, animals should be released directly into a previously dug burrow. For animals being released within its home range, finding a suitable burrow may take some reconnaissance of suitable habitats within a prospective home range radius. In areas not occupied by a resident badger, a small burrow may need to be pre-excavated prior to release.

Biologists involved in badger conservation should be contacted when considering potential release sites. During the course of their research, they have likely identified candidate areas for translocation and may also suggest atypical habitats where badgers have been successful, such as ski hills and clearcuts.

For more information about methods to help conserve badgers, contact Nancy Newhouse (250 342-3205), Richard Weir or Helen Davis at 1 888 223 4376, or visit the “Badgers in BC” website at www.badgers.bc.ca.

Literature Cited

Baker, J. A. and P. M. Dwyer. 1987. Techniques for commercially harvesting furbearers. Pages 970-995 *in* M. Novak, J. A. Baker, M. E. Obbard, and B. Malloch, editors. Wild furbearer management and conservation in North America. Ontario Trappers Association, North Bay, Ontario, Canada.