

Prairie Notes: Badger Work

I'm standing on a westerly slope of Valley Grove Prairie, looking at a patch of weedy plants, roughly thirty feet in diameter, which appears as a discontinuity in the surrounding prairie that spreads away in all directions. It was a spot I knew was here, and it only took me a few minutes of searching to locate it. I'd looked at this particular place over a year ago, maybe two years ago, I wasn't sure as I looked at it now. When I decided to write a piece on the American badger, for the newsletter, it seemed like a good idea to walk the prairie and see if I could find fresh badger sign. Thirty minutes of prairie perambulation through the tall grass had yielded nothing, and so I headed toward this location to maybe change my luck.

The American badger, *Taxidea taxus*, is an animal whose sign I find almost every time I choose to walk on prairies of any reasonable size, but an animal I have rarely seen. A total of seven or eight sightings through the years, mostly early mornings or lounging at the entrance of temporary resting dens they use while making a circuit of their home range. On this particular day fresh sign wasn't easy to locate, but fortunately their work has a long lasting landscaping component to it. When I first viewed this site it was fresh and there were, upwards of twenty-five holes dug, some large, most small, covering the area with no discernable pattern. It was a predation site, in the vicinity of a pocket gopher tunnel system that was marked by a series of gopher mounds. I had believed it to be a successful hunt, and my evidence for that was a badger scat left on the largest "throw" of dirt on the complex of excavations. A quick examination of the scat, at the time, revealed bones and one cheek tooth that I could identify as gopher, from a previous meal. Badgers will often leave a scat on a mound when they have had hunting success. They are so moved (sorry about that), as a result of feeding, but also as a territorial scent mark to other badgers with overlapping home ranges. Badgers are weasel family members (Mustelidae), almost all¹ of which possess anal musk glands that leave a personal signature, and perhaps a social commentary, of sorts, to other badger trespassers. The other indication that the badger had made a kill was the fact that the gopher had not seen fit to plug the tunnel where, at least, at two locations, the predator had opened it up. No extant gopher would allow his tunnel to remain open to surface riff-raff, for any length of time. Occasionally, I find the incisors, lower jaws, or forward portion of the skull of the prey species, discarded on edge of the mound, but not on this occasion. Presumably, passing these extremely sharp and hard rodent incisors through the G.I. tract is somewhat maladaptive, and maybe only a once in a lifetime experience. The badger most often consumes the prey underground where it was captured, so that confirmation of a kill, while interesting, is rarely found.

The small excavations (only a few inches deep) were test, or exploratory holes, to try to discern the location of the unseen prey, and to isolate it to one end of the

¹ The exception is the sea otter, which does not come ashore to defecate. I have found their scat on many occasions, but only on ice floes or bergs, in Alaska's Prince William Sound. Scent marking on structures that melt, move, and turn over regularly, is obviously pointless; so the musk glands disappeared with the otter's embrace of a marine lifestyle.

tunnel system. Pocket gophers have vibration sensitive hairs between their toes, and on their sparsely furred tails, that may alert them to the exploratory digging and cause them to flee away from the disturbance.

Badgers may use this tactic to move the prey in a general direction, and along with their superb sense of smell to detect and corral the prey in an increasingly smaller area of tunnel system. They have been observed running back and forth to inspect openings they've made into the gopher tunnels to smell, and perhaps then plug the tunnel to block and prevent escape. Whatever tricks and clues a badger uses to hunt, in the dark of night, a prey living below ground, it is an amazing feat, and one that it must get better at in a hurry. The two to four kits, born in spring, disperse to begin their solitary nocturnal lifestyle in late summer before they are even full-grown. They must store enough body fat to sustain themselves through the long frozen winter, when digging for food is not an option. Badgers are not true hibernators, unable to lower their body temperature and heart rate, as ground squirrels and bats do, for example. They mostly sleep, and may be able to reduce their metabolic rate to some extent, so they must live on body fat and wait for the ground to thaw in order to hunt again.

Several times, in mid-March, I have found their tracks in snow, and believe they were probably in search of carrion, since the ground was still deeply frozen.

Pocket gophers are the main and most important item in the badger's diet, but ground squirrels, voles, and other burrowing small mammals are also significant additions. Like most predators, badgers are opportunistic when other choices present themselves. Eggs and nestlings of ground nesting birds, snakes, frogs, salamanders, worms, grubs and other insects, to name a few, are all occasional dietary supplements found on the ambulant circuit of its large home range. The scavenging of carrion is another providential food resource made available by their excellent sense of smell, and by covering a lot of ground.

It is not an animal built for speed. With its short legs, powerful forelimbs, and long blunt nails it is designed for hunting in the dirt. While not a large animal (25 lbs. or so), it has no real predators that consider it a worthwhile target. This solitary, no neck powerhouse, has a head like a flatiron, formidable teeth, and a stand its ground "let's see what ya got" attitude that makes other, even larger, predators go look for a rabbit. Badgers have been known to kill coyotes, but my suspicion is that the coyotes may have been defending a nearby den site, and made the mistake of attacking rather than harassing this intruder. Badgers have very loose skin on the back and neck, useful for shaking out loose soil from their labors, but which also enable them to twist inside their thick coats, when bitten, and counter attack. It's not hard to imagine, that fighting close to the ground with this pugnacious, low slung dirt worker with a short predator complex, could be fatal if it gets ahold of you.

I poked around the largest of the old badger throws to see if the hole was still open where the badger must have gone below ground in its pursuit. It had mostly eroded, collapsing the burrow a foot or so in, but as I knelt and reached into the hole, my eye caught the shine of a long yellow incisor sticking out of the dirt. When I pulled it out, it came with the right mandible of the unfortunate pocket gopher. I put it in my pocket. Not a thing of value, just a keepsake to remember the former homeowner and Valley Grove neighbor.