

# NATURE DETECTIVES

Spring 2011



## A Few Minutes in the Life of a Pocket Gopher --

*Wait. ... Is it day or night? Winter or summer?  
Who cares? It is always dark and cool underground.*

*Okay, here goes. Dig, dig, dig, dig, dig with my amazing front claws. Come to big rock. Dig around it - dig, dig, dig, dig. Come to little rock. Bite it with my four yellow front teeth and pull it out. Push the little rock and loose dirt under my body, and kick it all behind me with my back feet. Lots of dirt back there.*

### Time to Clear the Tunnel

*Somersault to turn around and use my chest and front paws to push the dirt out the tunnel to above ground. Quick, always plug the tunnel with some dirt before a weasel or rattlesnake comes along. Zip backwards to my digging spot, feeling the way with my tail. Run into a salamander. No worries, it lives in my tunnel.*

### Finding Food

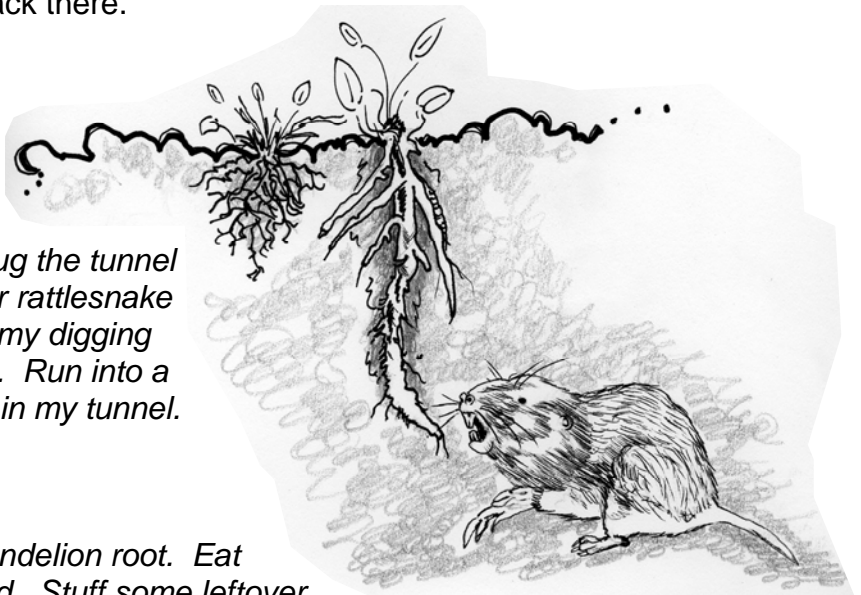
*Dig, dig, dig. Sniff out a tasty dandelion root. Eat some of it. Mmmm. Tastes good. Stuff some leftover root in my cheek pockets to take later to a food storage room. Dig, dig. Oops. Hard spot. Use teeth to dig. Gnaw, gnaw, gnaw, gnaw.*

### Lots of Work Living Underground But It's a Life

Ancient pocket gophers seem to have figured out eons ago that there isn't much competition from other animals for plant parts growing below ground.

Moles, you might remember, also live underground, but they eat insects. Underground is pretty good habitat for avoiding hordes of predators, too.

Boulder County has two different kinds of pocket gophers and spring is the perfect time to detect just where they might be living.



Pull Out and Save

## Detecting Signs of Gophers in the Spring



Pocket gophers tunnel through snow like it is just another kind of soil. As they tunnel back below ground, they push earth into the snow tunnels. The dirt in the tunnels sinks to the ground as the snow melts. Squiggly ridges of dirt above ground indicate a pocket gopher tunneled through snow at that spot. The dirt ridges are not tunnels; gophers are below ground once the snow is gone.

### Pocket Gophers are the Real Deal

Often any rodent that digs in the earth is carelessly labeled a gopher, but pocket gophers are the only animals rightly called gophers. Appearing above ground as little as possible, they live in soils from the plains grasslands to the high alpine. Our Northern Pocket Gophers accept a wide variety of soil types for tunneling compared to our Plains Pocket Gophers.

Plains gophers tend to be bigger so they like soil that is easier to dig, and they do most of their digging with their huge front claws. Northern gophers use their sharp front teeth more as they gnaw through tough places, but they also dig with their claws as they engineer their tunnels and burrows.

Pocket gophers tunnel to find food and shelter. They avoid soil that is too wet or too dry and packed or so loose the tunnels cave in. They dig side tunnels for food closets and toilets. Nest burrows are usually in the deepest tunnels.



### Tunneling for Food

In winter, gophers gobble underground roots, bulbs and tubers. Snow tunnels bring them to shrubs and trees for nibbling. In summer, they will pull plants down into their tunnel right through the ground. They make quick trips above ground for juicy green leaves and stems or seeds. Plants provide all their water.

### Tunneling for the Ecosystem

During one year, one gopher can push a couple tons of soil to the surface! (One ton is 2000 pounds.) Minerals in the dug-up dirt will nourish new plants. Pebbles will break down into new topsoil. The digging helps the earth absorb snowmelt and rainwater and brings air to plant roots. Gopher-buried plants make soil fertile. Go gophers!



## Tunnel Bodies

Built for life in a tunnel, pocket gophers look a bit like 6-to-12-inch, furry sub sandwiches with buckteeth and a short tail, hunched over powerful feet with really long claws. Their soft brownish fur readily sheds dirt and usually matches the color of their earth homes. Their fur is comfortably rubbed forward or backward in the tunnel because, unlike the fur on a dog, it doesn't lie one direction.

## Gopher Tunneling Tools

Their feet are nearly hairless, but bristles around the edges turn the feet into efficient dirt scoopers. Sparse hairs on the short tail and their facial whiskers guide gophers in the dark. Small ears help detect what's unseen, and small eyes boost senses above ground.



Like all rodents, gophers have continually growing teeth. The front incisors stick out slightly for digging, and the back molars are used for grinding and mashing plant parts. As the four incisors develop in baby gophers, they grow right through their lips. Sounds gruesome, but it means the gophers can close their mouths to keep out dirt while digging tunnels or harvesting plants.

## Pockets Are Handy

Gopher "pockets" are fur-lined, open pouches outside of their cheeks. The pockets do not open into the mouth. Gophers can handily turn them inside out to dump gathered food and nest materials. Muscles flip them back into shape.

## Teeth as Weapons

Gophers don't like company so unless they are starting a family, other gophers are unwelcome in the tunnels. Gophers show their teeth and claws and make angry clicking and panting noises to try to scare intruders. Teeth are a last resort with weasel and snake predators. Gophers first try to plug or collapse the tunnel between themselves and those hunters.



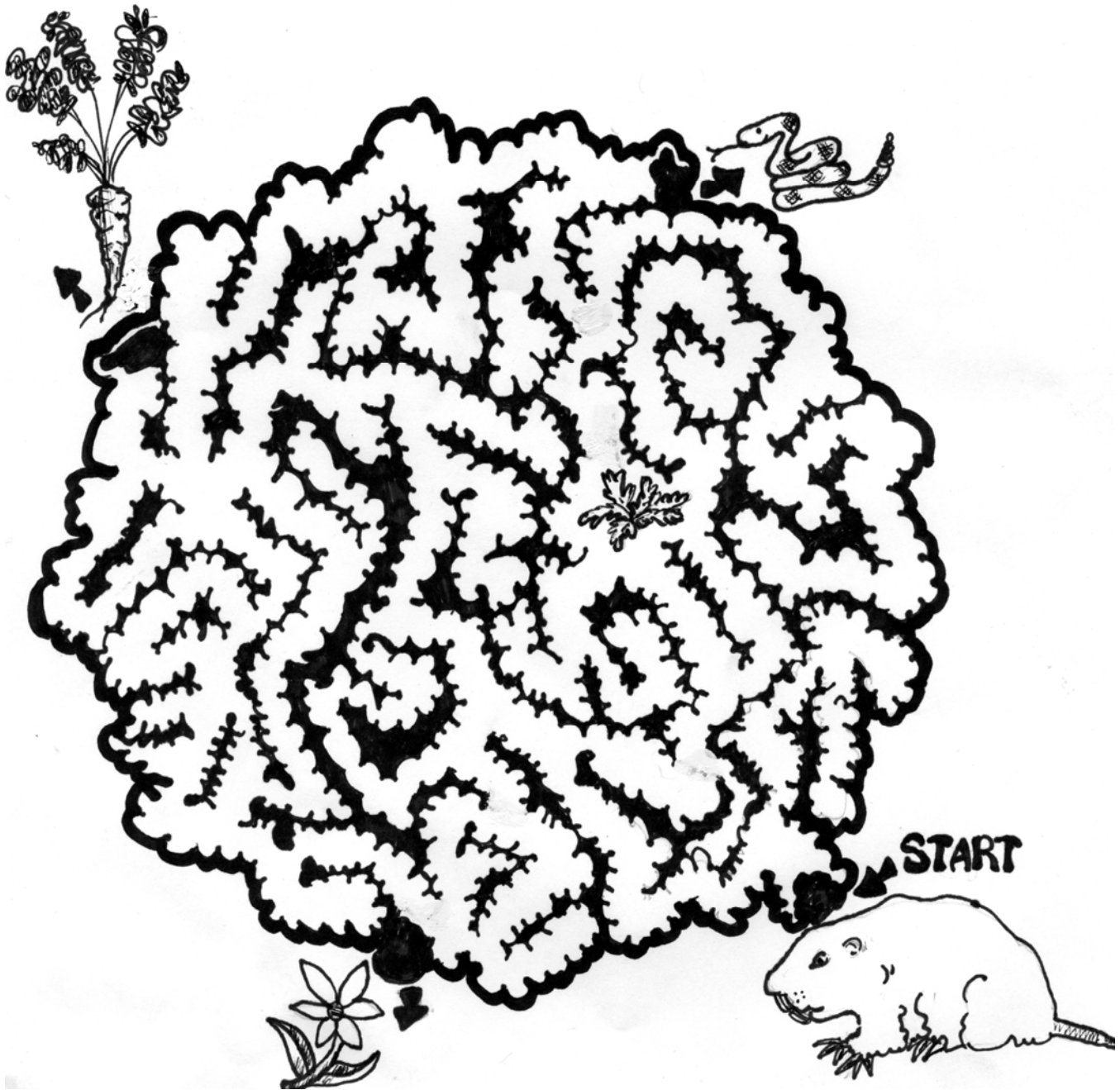
## The Digging Life

Baby gophers are typically born in the spring. In about a month, when they are a third the size of adults, they leave home, find their own territories and dig in.

If they escape weasels, snakes, badgers, foxes, coyotes, bobcats, owls, hawks and skunks, lucky gophers might live five years, but more likely, two years. Their life-long tunneling even helps other critters. Gopher tunnels are used for hiding and safe traveling by at least 22 other animals. Dig, gophers, dig!

## Amazing Pocket Gophers

Help this pocket gopher travel through its tunnels to find some plants to munch.



## Spring Signs of Pocket Gophers

Some good places in Boulder County to find squiggly pocket gopher ridges include Betasso Preserve, Hall Ranch and Heil Valley Ranch. Look in open meadow areas for the best chance of finding gopher signs.

