

**Many mammals are nocturnal or very elusive and they tend to avoid contact with humans.**

**While it is a rare opportunity to actually see most mammals and observe their behavior in person, it is not uncommon to come upon footprints or other signs that wildlife has been through the area. These signs can provide a wonderful insight as well into the behavior, distribution and ecological significance of even the shyest animals.**

**Listed below are the mammals that can be found in our area as well as a few indications that they may have passed through or be living nearby. However, true field guide to animal tracks and signs is necessary to pinpoint a certain species.**

**Recommended Further Reading and Reference:**

**Mammal Tracks & Signs: A Guide to North American Species by Mark Elbroch**

**Tracking & the Art of Seeing: How to Read Animal Tracks and Signs by Paul Rezendes**

### **Order Didelphimorphia**

#### ***Family Didelphidae: Opossums***

Possessing some of the most adaptive characteristics in all the animal kingdom, opossums have become common and often abundant even in areas heavily populated by humans. Preferring to occupy the homes of other animals rather than dig their own, opossum dens are virtually indistinguishable. At the end of a night of roaming and feeding they often curl up inside any crevice or hole they might find to sleep through the day. Look for their

tracks, displaying five fingers and including an opposable thumb, just about anywhere from a stream bank, woodland, or even a suburban yard.

### **Order Insectivora**

#### ***Family Soricidae: Shrews***

Shrews are generally not social animals, spending most of their lives alone. They feed on insects, hunting by digging networks of tunnels and burrows or using those created by other animals. Shrew tracks may also be seen occasionally on the surface, especially along water systems. It is here that they often form runs (an accumulation of footprints from repeated travels) as they are forced above ground by hard-packed soil interrupting their debris tunnels. Species may sometimes be differentiated by the presence of scat at the entrance of burrows. However, this is not always a signature of the actual tunnel creator as shrew, vole, and mole tunnels are rarely defended and often shared by many animals. Shrew habitats are varied and most species can be found throughout most of our area.

#### ***Family Talpidae: Moles***

As in shrews, Moles are generally solitary, feed on insects, and hunt by burrowing underneath the ground. They may visit the surface as evident by the occasionally found Mole footprint trails beginning and ending with burrow entrances. Here they may gather nesting materials, feed among debris, or defecate in latrines to which they often return. Mole burrows can also be distinguished by the presence of mole hills, dirt piles left over from the excavation, or by the presence of ridges, raised earth following their underground tunnels.

### **Order Lagomorpha**

#### ***Family Leporidae: Rabbits***

Rabbits always travel alone leaving behind a variety of readily distinguishable signs. Rabbit tracks can be most commonly recognized by their trail patterns. The longer hind feet always land in front of the two front feet except when the rabbit stops or pauses. Signs of browsing are characterized by a clean sharp cut thanks to their tell-tale front incisors. This can be differentiated from a deer which tends to rip and tear as it browses. Rabbit dens are usually nothing more than depressions in the

ground covered in fur and soft grasses typically in thick brush.

### **Order Rodentia**

#### ***Family Muridae: Mice, rats, and voles***

The mice and rat family is a very large family containing over a hundred varieties of mice, as well as muskrats and voles. Activity of species within the family Muridae is commonly seen as is evident by a variety signs including trails, individual tracks, nesting sites, and remains from feeding on nuts and berries. Though, alone, many signs are barely distinguishable from others in the rodent family, collectively these signs can pinpoint a specific species. Mouse tracks typically are well-spaced usually traveling by bounds unless under protected cover when they may walk to forage. Their nests are much like birds nests but covered on top with a hole in the side. Voles are similar in behavior, and trails are typically accompanied by tunnels and holes. Meadow and Prairie Voles spend a significant amount of time above ground while Woodland Voles spend most of their time beneath the surface, burrowing through leaf litter. Muskrats are found almost exclusively along riparian areas and trails may exhibit less bounding as they walk while exploring and foraging, changing to bounds only when threatened. Muskrats may nest in burrows or lodges with runs connecting them to foraging areas. Norway rats, inadvertently brought over by settlers, are distinguishable from mice and voles by their tendency to be found in groups as may be the signs associated with this.

#### ***Family Sciuridae: Squirrels***

The family Sciuridae includes a variety of small to medium sized rodents that mostly call woodlands or suburban wooded areas home. Common to our area are the Woodchuck or Groundhog, Fox Squirrel, and Southern Flying Squirrel. In our area, all but the Fox Squirrel hibernate through the winter. Many members of the family Sciuridae are social with the exception of the Groundhog, which tends to travel alone. The Groundhog's notorious network of underground tunnels provides a den for raising young, a safe place for food storage, safe passage to nuts and legumes, and a latrine. Though

having a very similar footprint as the rest of the family Sciuridae, runs at a burrow entrance are a distinct sign of this herbivore. Fox Squirrels and the Southern Flying Squirrel typically den inside abandoned woodpecker cavities and other natural cavities in trees. Gnaw marks showing evidence of their two front incisors surround the opening of the cavity enlarging it and preventing it from healing over. Southern Flying squirrels are nocturnal, seldom seen mammals, while their relative the fox squirrel are typically hard to miss. Southern Flying Squirrel runs are distinguishable from those of the Fox Squirrel by their tendency to start in the middle of an opening where they land after gliding down from a tree.

**Family Dipodidae: Jumping Mice**  
Jumping Mice form a separate family from the family Muridae. All species are found in woodland and riparian areas and hibernate through the winter. Their runs show evidence of the bounding motion that characterizes their name. These are commonly seen along streams, as jumping mice are excellent swimmers and may utilize streams as a means of escape.

**Family Castoridae: Beavers**  
Signs of beaver activity are the easiest to distinguish among the Order Rodentia. Their web feet leave obvious prints in wet soils if not disturbed by their flat trailing tail. Their trail patterns show evidence of their tendency to walk, though they spend most of the time in water. Packed runs can be found going from the ponds created by the dams built by the beavers, to their feeding grounds. Beavers may build elaborate lodges after raising the water level or dig burrows into stream banks until the level raises enough to build a lodge. Beavers eat the cambium of trees as well as their leaves, buds, and twigs, leaving teeth marks not easily confused with any other animal.

## **Order Carnivoria**

**Family Mustelidae: Weasels**  
Making up the family Mustelidae is a small collection of elusive, nimble, and playful hunters as well as larger, slower moving species such as the wolverine and badger. Most shy away from human contact, preferring a nocturnal lifestyle in any habitat near sufficient populations of humans. Though possibly home to River Otter and Mink, one's most likely to see evidence of the Long-tailed Weasel in our area. Long-

tailed Weasel trails can be very erratic, bounding quickly at right angles or even doubling back as they chase food or follow a scent. Weasels are predators and often kill more than they can eat leaving behind piles of carcasses with the most palatable parts removed. They are solitary except when mating and rearing young.

**Family Mephitidae: Skunks**  
To most, there is only one sign of skunk activity that matters, its notorious scent, a defense mechanism. Otherwise, skunks are omnivorous mammals feeding on other small mammals, as well as insects, reptiles, and plant material. They tend to explore whatever tunnels, crevices, and cavities that are already present, in addition to making their own digs which are shallow and get narrower as they get deeper. For the most part, skunks will take over the abandoned dens of other animals, though they occasionally dig their own having two or three chambers with up to five entrances.

**Family Procyonidae: Ringtails, Raccoons, and Coatis**  
Raccoons are the only member of the family Procyonidae found in our area. Their omnivorous diet makes them highly adaptable to living near and among humans and with opposable thumbs, they manage to dig or climb their way into some of the most unexpected places. Raccoon hairs may show up in a variety of cavities that become their den from holes in trees to abandoned buildings and culverts. They also make digs very similar to skunks when in search of insects or crawfish.

**Family Canidae: Dogs**  
The family Canidae includes domesticated dogs, coyotes, foxes, and wolves. As with many other mammals, coyotes and foxes are rarely seen, being mostly active at night. If they can be reasonably discerned from those of dogs, tracks showing evidence of a traveling group and bearing four-toed pawprints, are generally those of coyotes. Red and Grey foxes tend to travel and hunt alone, though they may den communally. Both coyotes and foxes tend to cache, or store, left over remains from prey in holes that they carefully dig in the ground. Fox and coyote dens are very similar with the entrance and exits of coyote dens being about twice as large. They are generally dug in the ground and

show evidence of hair and tracks near the entrance.

## **Order Artiodactyla**

**Family Cervidae: Deer and relatives members of the family Cervidae** include herbivorous hoofed animals with the males bearing antlers. Common to our area is the White-tailed deer. White-tailed deer and other members of the family Cervidae create some of the most obvious runs as they follow the same paths through forests, meadows, and farmlands. Their hoofed prints rarely leave evidence of a solitary traveler. White-tailed deer tend to bed down where a hill levels off and then continues downward and don't necessarily use the same bed twice. Deer browsing usually leaves a branch rough, torn, and chewed up in contrast to many other herbivores that have sharp incisors.