



UI Extension Forestry Information Series

Porcupines

Yvonne Carree Barkley and Chris Schnepf

Porcupines are the second largest rodent in America. They are a unique, yet common resident of the coniferous forests of the western and northern United States. Unfortunately, they feed on trees and agricultural crops, chew on wooden structures, vehicles tires and hoses, and menace animals and humans that disturb them.

The western yellow-haired porcupine varies from 10-15 pounds in weight and 25-40 inches in length. Its quills provide a very effective defense system. Contrary to popular belief, porcupines cannot "eject" or "shoot" their quills on command. Rather, the quills are loosely attached and easily dislodged when the flailing tail makes contact with the enemy. Tiny overlapping barbs on quill tips expand when moistened by contact with an enemies' tissue fluid, and are "pulled" inward by muscle-fiber contractions. Porcupines have poor eyesight, but a well-developed sense of smell and hearing, allowing them to easily detect faint sounds such as footsteps and rustling leaves.

Porcupines are generally solitary animals and are strongly attached to a territory. Territory sizes vary up to several hundred acres throughout the summer months. During winter, this territory shrinks considerably, usually down to 6 acres. The female generally has one offspring per year in May or June. Porcupine populations are limited by lack of adequate den sites (rocky crevices), severe weather, and predation.

Porcupine diet varies between seasons and habitats. Porcupines feed on herbaceous vegetation in the spring. By late August, when ground vegetation has dried up, porcupines begin their winter diet which consists mostly of the inner bark of native conifers, especially ponderosa pine. A porcupine's long claws and stout, muscular tail makes it well adapted to tree

climbing. Porcupines feed on trees of all ages, but seem to prefer those from 10-40 years of age and 4-7 inches in diameter.

Porcupines have long been a pest in the Idaho forests, causing wide-scale damage. Porcupines do not usually kill trees. However, when they girdle a tree (chew off the bark all the way around the stem), they can severely affect timber values by creating dead or forked tops and opening trees to decay. They also reduce larger trees' ability to produce seed and may kill or deform seedlings and saplings.

The State of Idaho lists porcupines as a non-protected species, so any control measure can be used at any time. Please contact your local Fish and Game agency for specific regulations and laws in other states. Control methods include:

Physical Barriers. Rigid tree shelters protect seedlings well. Aluminum flashing placed around the trunk of the tree from the surface to above the extended snowline can protect special trees. Fences are effective if a hot-wire is placed 2" above the top. Fence climbing can also be controlled with a 65 degree angle overhang.

Chemical. *No toxicants are currently registered to control of porcupines.* In the past strichnine-salt blocks have had variable results, but they presented hazards to non-target wildlife, including predators and scavengers. Some speculate that the high tannin content of a porcupine's diet neutralizes the strichnine, giving them built-in resistance to high levels of this toxicant. Animal repellents do not seem to deter porcupines.

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Trapping. Porcupines can be controlled by trapping if dens or trails can be identified, or animals can be lured to traps. Live traps allow the release of non-target animals, but a disadvantage of having to dispose of the porcupine. Body-hold traps are recommended over leg-hold traps because fewer non-target animals, (i.e. ground squirrels) will trip or be caught in traps. Porcupines are difficult to lure to traps. Common baits include sardines and a variety of smelly home brews, rather akin to catfish bait. The bait of choice in some eastern Oregon trapping programs is dead porcupines (morbid, but true). Idaho state regulations require you to purchase a trapping license and mark your traps with your name and address.

Hunting. Hunting is the most species-specific and efficient method to control porcupineS. Night hunting with spotlights during the mating season (in late June through July) is most effective. During this time, porcupines appear to use roads as the fastest method of finding mates. Be sure to check with the local Idaho Fish and Game officer to see if this is permitted and make special arrangement if necessary. Daytime, winter hunting can also be effective, especially if animals can be tracked in snow to trees in which they sun themselves. Successful hunting must be persistent and well-organized. Random or recreational shooting is not intense enough to control porcupines. To hunt

porcupines in Idaho, you need a valid hunting license.

Natural predation. Coyotes, weasels, bobcats, mountain lions, bears, and fishers are the chief predators, with the fisher being the most important. Predation is an inconsistent control because of the many fluctuating natural factors involved.

Manipulation of porcupine habitat. Eliminating winter dens located in rock crevices, hollows under logs or in live trees, or spaces under buildings, will significantly reduce porcupine populations. Silvicultural treatments vary as to the effectiveness of limiting porcupine populations, as porcupines are highly adaptable.

Do not forget to consider doing nothing. Many land owners enjoy having a unique creature like the porcupine around. Is porcupine damage on your property significant enough to justify the cost of control? If so, choose the right combinations of methods to control porcupines, yet maintain the safety and health of other wildlife species on your forested land.

This information first appeared in Woodland NOTES, Vol. 5, No. 2.

About the Authors: *Yvonne Carree Barkley* is an Extension Associate - Forestry and *Chris Schnepp* is an Area Extension Educator - Forestry and Professor at the University of Idaho.

