

Bobcats, Mites, and Mange

By Volunteer Polly Krauter

"When one tugs at a single thing in nature, he finds it attached to the rest of the world." John Muir

Can you see any difference between the two bobcats? One is robust with a beautiful coat; she is alert and actively hunting. The other is a sick bobcat that acted lethargic. It has a poor coat and bald areas on the top of its head and ears. The lethargic bobcat was found in our Sycamore Grove Park. Ranger Patti Cole told me she believed the bobcat was sick, and suggested I read publications by Dr. Laurel Serieys, an expert on bobcats and cougars, because her research may help us determine the cause of our bobcat's illness. Dr. Serieys has found a link between a common disease called mange, rodenticide use, and serious illness in bobcats and cougars. See Dr. Serieys' website at www.urbancarnivores.com.

The use of pesticides to manage pest problems has become a common practice. Pesticides are used almost everywhere — from agricultural fields to homes, parks, schools, and buildings. Rodenticides are pesticides targeting rodents such as mice, rats, and gophers. Anticoagulant rodenticides are the most common. They are effective on ground squirrels, rats, gophers, and rabbits. Anticoagulant rodenticides work by stopping normal blood-clotting ability. Rodenticides containing bromadiolone, chlorophacinone, difethialone, diphacinone, brodifacoum, and warfarin are anticoagulant rodenticides.

We now know that when non-target species (such as a bobcat, coyote, or fox) consume a poisoned animal, they also ingest the poison. The diagram (next page) shows how rodenticide can be passed up the food chain. Once a squirrel or rat has ingested a lethal dose of anticoagulant, death can take up to several days to occur. It is possible that the bobcat in our park took advantage of a sick rat, gopher, or rabbit, and later became sick himself.

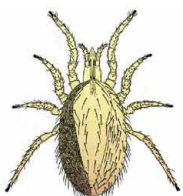
Dr. Serieys' team has performed necropsies (the animal equivalent of autopsy) on many bobcats that died of mange. What they [discovered](#) is that all the bobcats that died of mange were exposed to anticoagulant rat poisons. They determined this



by collecting liver samples from the animals and testing them for the anticoagulant compounds. Dr. Serieys stated that an incredible 92% of the dead bobcats tested in southern California between 1996-2012 during a large-scale study by National Park Service and University of California biologists were exposed to anticoagulants. In addition, the scientists have never found a bobcat that died of mange that was not exposed to anticoagulant rat poisons. In Marin County, a group called WildCare has tested injured animals that eat rats and mice for exposure to rat poisons. In [2012](#) they reported that 75% of these animals showed evidence of exposure to rodenticides.

What is mange? Mange is a fairly common skin disease caused by mites that can cause mild to severe skin infections if they proliferate. If house pets get this disease, it can be treated with medicated shampoos from your veterinarian. A mite is a small parasitic arthropod that lives on hair

Bobcats (continued)



Mite

follicles, usually without making the animal ill. The problem occurs when an animal has ingested an animal that was killed using an anticoagulant rodenticide and its immune system has weakened. Evidence implies that the poisons increase the susceptibility of the bobcats to severe, fatal mange. The good news is that Ranger Doug Sousa has seen bobcats with mange in our area recover. It is possible those bobcats did not consume prey that was exposed to rodenticides.

We know that rat poisons are bad for our environment, and elimination of anticoagulant rodenticides in our homes and workplaces is of paramount importance to protect our pets and local wildlife from secondary exposure. But how do we get rid of unwanted rats and mice around our homes? The most effective and safest ways to address rodent issues are exclusion and sanitation. This can be done by removing all food sources around your home, such as dog-, cat- or bird-feed and storing them in tightly sealed containers. Pick up outdoor dog and cat food bowls if food is not consumed. Check around your home to be sure that there are no entrance points (small holes) under your house, roof, or walls. Repair any screens, and seal around water pipes, etc. Remove woodpiles and items stacked next to your home. Consider removing vines attached to your house, since they provide easy access to roofs. Also consider the plant selection in your yard. We had blackberry bushes growing on our fence and we had to remove them because they attracted rats. The rats always beat us to the ripe berries anyway, so it was not hard to decide to remove the bushes.

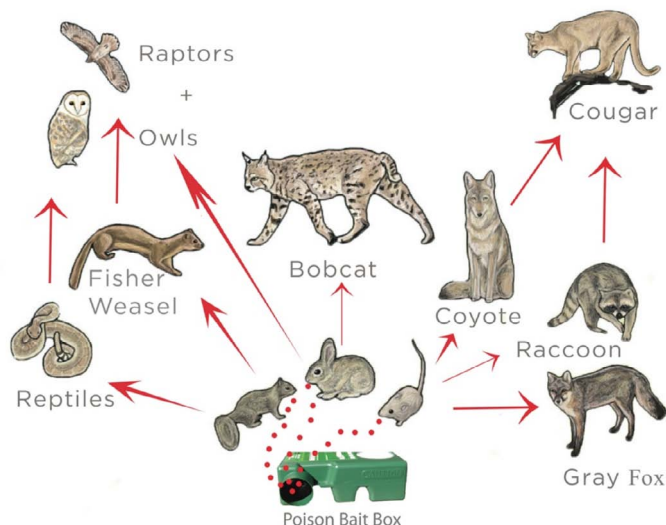
If exclusion and sanitation don't work, try using snap traps. Traps have the advantage of enabling you to locate and remove dead rodents. Traps are effective, but only use them inside and never use glue traps. Glue traps can cause a long and cruel death. If you use glue traps, you run the possibility of trapping birds and other non-target animals. Also, there are plenty of lovely cats looking for a good home that will hunt rodents. Of course, before bringing home

a cat, consider removing bird feeders from your yard to protect birds from becoming easy prey, and be sure that you are ready to care for a pet cat.

If exclusion and sanitation, traps, or cats does not eliminate the problem, you might want to look into alternative baits such as "Rat X". It's made from natural ingredients (corn gluten meal and salt). The gluten coats the rodents' gut villi, which prevents them from feeling thirst, thereby leading to dehydration, kidney damage, and death. Please study the safety of all products like this before using them in or around your home, and remember that sanitation and exclusion are the best methods to get rid of unwanted rodents.

Rachel Carson (1907-1964) was a trained marine biologist, but is remembered more today as the woman who sounded the alarm about the dangers to all natural systems from the misuse of chemical pesticides. Her book *Silent Spring* (1962) raised public awareness of the effects of pesticide use on our health and our environment, and she is credited with initiating the contemporary environmental movement. We have an opportunity to improve our local environment for ourselves, our pets, and the rich diversity of wildlife that we share our environment with by simply not using anticoagulant rodenticides.

All Things Are Connected



Rodenticides are passed up the food chain including to family pets

Adapted with permission from UrbanCarnivores.com, Dr. Laurel Serieys