Rodenticides and Raptors
A Deadly Relationship

The Hungry Owl Project
www.hungryowl.org

The Problem

Commercial rodenticides contain an anti-coagulant ingredient called **brodifacoum** (broh-dif'-a-coom) that causes accidental secondary poisoning when raptors consume rodents that have been poisoned. In studies in both California and New York, brodifacoum was found to account for 80% of the secondary poisonings by rodenticides, even though it accounted for only 20% of sales. Brodifacoum is found in the following commonly used products: **d-Con, Talon, Havoc**. It is extremely dangerous to raptors through secondary exposure (eating a poisoned rodent), and can kill pets if they consume a poisoned rodent, or eat the poison directly. Death results from the failure of blood to coagulate, causing massive internal bleeding and a painful death. The State of California is currently considering imposing restrictions on outdoor use of anti-coagulant rodenticides due to concerns about harmful effects on wildlife and the accidental poisonings of pets and children. Placing rat bait outdoors could poison the pets of your neighbors, for which you may be held liable. These poisons do not cause instant death, and by the time the animal is weakened or near death, from internal or external bleeding, it is highly toxic to any other animal it is consumed by.

Accidental or not, the death of raptors by use of rodenticides can be a federal offense under certain circumstances. More importantly, raptors are of great benefit to our natural communities and play a vital role in the natural food chain. Raptors control rodent populations more successfully than poisons or traps. The use of outdoor bait stations near open space or rural areas causes poisoning of local wildlife. Poison will never solve a rat problem if the measures below are not taken. Poison is simply a quick fix, you must address the reasons the rats are attracted to the area. **We believe that outdoor bait stations may actually *attract* rats into an area!** There are non-native rats that live outdoors, such as the black rat and Norway rat, but there are also a number of native rodent species, such as the Wood Rat, that are an integral part of the ecosystem and food chain for our local wildlife. Rats living outdoors around buildings do not pose a threat to humans and should be tolerated, unless they enter homes or buildings.

Solutions

If you have a rodent problem the best defense is *sanitation and exclusion:*

- **Remove** piles of yard debris, trash, construction waste, enclose compost piles, etc., where rats or mice could make homes. Rats love ivy and ground cover, including vine-covered trellises and arbors.
- **Eliminate** food sources. Don't leave pet food outside. Keep wild birdseed and other materials rats or mice may eat (such as some organic fertilizers) in rodent-proof containers. Clean up under bird feeders and collect and remove fallen fruit or nuts from fruit trees in the yard. Cover garbage cans, compost bins, etc. tightly. DO NOT FEED WILDLIFE EVER – it is bad for wild animals and attracts animals you don't want, like rats.
- **Exclude** rodents from your home. Rodents can squeeze through amazingly small holes - 1/4 inch for mice and 1/2 inch for rats. Go around the outside of your house looking for openings and seal them with metal, hardware cloth, mortar, concrete, or Stuf-fit Copper Wool Mesh. For local non-toxic pest control & help with exclusionary methods in Marin & Sonoma, contact "The Hit Man", Mike English, 415-456-6777; Bio-Pest, Burt Tate, www.bio-pest.com at 800-246-7231; Sieg's Abatement Service (707)762-7271; or contact WildCare at 415-453-1000 to get the phone number for "Rick the Rat Catcher." Some counties have Vector Control and will send someone out to help you find the openings where rats enter.
- Try products that use natural deterrents to keep rodents out of your yard: www.critter-repellent.com, or www.havahart.com.
- Rodetrol is a product that uses non-chemical ingredients to kill rodents by interfering with their unique metabolism. Rodetrol *does not* poison pets or wildlife whether eaten directly, or by consuming a rodent that has eaten it. Rodetrol is effective when combined with exclusion and the other precautions listed above, www.rodetrol.com.

If these methods do not help, consider using traps, such as a snap- trap baited with peanut butter & oatmeal, or the Rat Zapper. Information available at www.ratzapper.com: a humane, reusable dispatch of rodents with no harm to the environment, your pets, or your family. **NEVER** use *any* poisons or traps outdoors as other animals are likely to be harmed or killed by them. Finally, please don't use cruel glue traps! Additional rodent control information can be found on the back of this flyer.

Additional Information on Non-Toxic Rodent Control

The most successful and long lasting form of rat control in buildings is to "build them out." Seal cracks and openings in building foundations, and any openings for water pipes, electric wires, sewer pipes, drain spouts, and vents. No hole larger than ¼" should be left unsealed to exclude both rats and house mice. Make sure doors, windows and screens fit tightly. Their edges can be covered with sheet metal if gnawing is a problem. Install door sweeps at entry doors and garage doors – this will also help keep insects out. Course steel wool, wire screen, and lightweight sheet metal are excellent materials for plugging gaps and holes. Plastic sheeting, wood caulking, and other less sturdy materials are likely to be gnawed away. – Source: **Pest Notes, University of California, Agricultural and Natural Resources, Publication 74106, January 2003**

The three critical elements to keep rodents out of your home or other buildings: **sanitation, exclusion, and population control**. If the first two elements are not practiced, and an infestation occurs then population control must occur. Practicing good sanitation and the principles of exclusion potentially avoids having to deal with the difficult issues surrounding population control (traps, rodenticides, etc.).

RATS!

Roof rats are slightly smaller than Norway rats and are sometimes called black rats. They are a non-native rat prevalent in Marin County, and at times their populations are very high. Roof rats are agile climbers and nest in trees. They especially like palm trees (which are also favored by barn owls!), they live in ivy and ground cover, and can even live in trellises, greenhouses, overturned boats, woodpiles, compost bins, ivy covered fences, and in the upper parts of buildings, such as attics and walls. Their territory is 100 – 300 feet, in general. They are generally vegetarian, but will sometimes eat snails. Norway rats are the gray rats seen in sewers and in buildings. They will eat just about any type of food, but prefer meats and fresh grains. Any food left outdoors will attract rats, including pet foods, fallen fruit or nuts from trees, and fallen seeds from bird feeders. Roof rats are also commonly found around creeks and streams. Both these rats are non-native, introduced species. We also have native rats, such as the Wood Rat, which generally avoid human habitations and are an integral part of the native ecosystem. Wood Rats (also known as Pack Rats) should not be persecuted.

RAT CONTROL!

Clean up under trees and bird feeders. If the rat problem is really bad, stop bird feeding for a month or so – don't worry birds are used to their food sources changing and will move on and find food elsewhere. Trim all tree branches to at least three feet away from rooftops and decks – this is good fire control as well. Roof rats can also reach buildings along utility wires. Eliminate vines growing on the buildings as well. It may be harder to find the openings where the roof rats enter buildings because they will be high up on the building. To seal openings use a product such as Stuf-fit Copper Wool Mesh – rodents cannot chew through it. Regular wire or chicken wire will not work. Seal all openings of ½" diameter or greater (holes larger than a dime). Mice can enter holes as small as ¼". Cover garbage cans, compost, bins, etc. tightly.

Rats have a keen sense of smell and can find food anywhere. The most successful way to keep rats out of your home or other buildings is by exclusion and removing food sources. Poisons and traps are quick fixes that will have to be done continuously. Exclusion is more work but it's a **permanent** solution. Poison can also cause the rats to die in walls resulting in terrible smells. Seal any openings where pipes or wires enter the building, including garages. Use tight fitting grates on floor drains and sewer pipes. Note: All the controls outlined in this document will also help keep mice out of buildings.

Once you have sealed all openings, use lethal traps to dispatch any rats that are trapped inside the house. Or use live traps to catch the rats and release them outdoors. Recommended baits include Slim Jims, peanut butter or fish-flavored cat food. An important note about rats: they are suspicious of new things in their environment. Therefore, if traps are being used it is recommended to bait but not set the traps a few times. If traps have not caught anything after two weeks, put them away. Please do not ever use sticky glue traps, especially outdoors. They are extremely cruel and used in the wrong places can trap non-target animals such as birds and baby mammals.

In conclusion, rats can never be completely eradicated from our environment, and indeed if they were, entire populations of predators, such as birds of prey, bobcats, coyotes, etc. would be gravely affected. Without the natural predators, populations of rats, mice, gophers, and moles would explode and defeat our best efforts at control. We must strive not to inadvertently poison our beneficial predators, and our household pets, by using rat poisons, especially outdoors. Any use of poison indoors presents a grave risk to children as well. **Thank you for protecting our shared environment.**