

Installation Instructions & Quality Control

Generally, the barn owl's habitat consists of open spaces, such as fields, meadows, and marshes, although they can also be found in urban areas, if open spaces are within a few miles. Densely wooded areas are unsuitable. **Areas where rodenticides or toxic pesticides are unsuitable as the owls will be poisoned by consuming poisoned prey.**

Before installing a box do a quality check: all the pieces should be flush with no gaps; check for sharp edges or nail points sticking out of the wood & file them down flush with the wood or the owls could be injured; be sure all hinges are screwed down tight. **For owl box installation, for a fee, contact Jim Cairnes, Small World Tree Service, at 415-455-0909 or 415-717-8885.**

1. Affix box to tree, post, or side of building (e.g., barn) away from intense human activity, using three or four, 4.5" lag bolts drilled through the back of the box into a tree (this will not harm a healthy tree). **Height should be minimum 11' to a maximum of 15'**. Be sure side or front flap is accessible for yearly cleaning. **Please note:** box opening should face *away* from prevailing winds. Secure lid tightly. The side or front flap is for yearly cleaning in the late fall (October – late November, a good way to remember is to think Halloween through Thanksgiving as the time for cleaning). **DO NOT** put anything inside the box: Barn Owls create their own nesting material.
2. If in a tree, large oaks or bay trees are good sites for boxes. Put in an open area, with few branches on the tree trunk, so the entry hole is visible. Avoid placing boxes right next to roadways. To help keep the box inaccessible to predators, such as raccoons & cats, we suggest putting a 3' wide metal flashing around the base of the tree trunk.
3. If using a post, use a 4X4 that is 16 feet long. About 4 feet should be planted in the ground to keep the post stable, cement is suggested around the base of the pole. It is very important that the post is firmly secure. **DO NOT** allow the post to tilt backwards – a slight forward tilt would be acceptable. For pole mounted boxes, if the nest box is in direct sunshine, you should add a sun roof (by using a piece of plywood the same dimensions as the roof of the box). Paint sun roof white and secure 1 – 2 inches above existing roof. For use in vineyards, place boxes around the perimeter of the area where vines are planted. T-perches of approximately 12' are suggested amongst the vines to provide perches for the owls to hunt from.
4. Situate the nest box a maximum of 100 yards from another tree, so that fledglings have somewhere to fly to.
5. **DO NOT** put the box close to densely wooded areas – there should be a minimum distance of ½ mile from woods, which are the habitat of Great Horned Owls – the main predator of Barn Owls.
6. If you have a breeding pair of Barn Owls, **NEVER** disturb them, especially from January to August when they are in breeding season. If disturbed, the female might abandon the nest.
7. **If an owlet is found on the ground:** sometimes the owlets are on the ground and are able to climb back into the tree on their own – observe from a distance for a few hours, but be sure to secure all roaming pets. If the owlet does not return to the tree, or seems visibly distressed, injured or in danger from predators, you can place a cardboard box over the owl while you call your local wildlife rehabilitation center or humane society. Or, using a towel and wearing heavy gloves, pick up the owl and place it in a cardboard box, with pre-cut air holes. **DO NOT** attempt to feed or give water to the owl-this could kill it. Keep all contact to a minimum and place box in a quiet, warm place until it can be picked up, or transported to a wildlife hospital. Provide precise details about the location the owl where the owl was found – owls can be returned to the nest if they are uninjured, so it's important to know the exact location. Federal law requires you to notify a humane society or wildlife center (contact information can be found at www.hungryowl.org, or by calling the Wildlife Hotline at 415-456-SAVE.). **Keeping wildlife is illegal and harmful to the animal. An imprinted or habituated animal (comfortable around people) may not be able to be returned to its rightful home in the wild. Improper nutrition can also keep a wild animal from being healthy enough to live in the wild – do not feed or offer any water.**
8. Please notify the Hungry Owl Project if you think that your nest box is occupied. www.hungryowl.org, 415-454-4587, webmaster@hungryowl.org. **Signs of occupation** include scratch marks around the entry hole, the drainage holes in the bottom of the box appear plugged up, with debris hanging out, “whitewash” (owl droppings) on the tree or on the ground – looks like splashes of white paint, hearing screeches, squawks, screams, and clicks after dark.
9. If have a Hungry Owl box, and you move, please notify us so that we can contact the new occupants of the property.

Responsibilities of Having an Owl Box

Thank you for your interest in owl boxes. Barn owls and Western screech owls will use artificial cavities in the form of nest boxes. There are many owl nest boxes available for purchase, however we feel our design is the most beneficial for the protection of the owls. The decision to put up an owl box should not be made lightly. There are responsibilities involved. These include:

- Annual cleaning out of the box within a narrow window of time (October through late November, Halloween through Thanksgiving), see cleaning instructions below.
- Commitment to *not* disturb nesting owls. All native birds are protected by Federal Law, especially when nesting. Any disturbance is a Federal offense. So, if you decide that your tree needs cutting down, or trimming, and there are owls using your box, you will have to wait until at least late October to make any changes to the tree.
- Protecting the owls from poisoning by not using rodenticides (rat & gopher poisons) and pesticides on your property, and confirming that they are not in use on adjacent properties.
- Notifying the Hungry Owl Project if you plan to move and whether you are taking the box or leaving it behind. **Note:** box cannot be moved during nesting season.
- Contacting a licensed wildlife hospital, the Hungry Owl Project, or your local humane society if you find an injured or orphaned owl.

If you feel comfortable with these responsibilities, and have the right habitat for barn or screech owls, we encourage you to install an owl box to help provide homes and protection for these beautiful, and beneficial, predators. Please note that the best way to benefit from the amazing hunting prowess of barn owls on your local rodent and gopher populations is to install more than one box, as the owl will not hunt directly beneath its nest because this could attract the attention of predators.

Cleaning Your Owl Box – (October – November)

Tools needed: rubber gloves, face mask, trowel or other scrapping tool or crow bar, trash bag or box, drill or other tool to open screws or eye hooks on clean out flap.

Always have a helper to hold the ladder steady, and to stand by while you are at the box. An owl may be roosting (sleeping) in your box, so try to peek into the box through the front entrance hole. If you see an owl, retreat and remove the ladder. Call HOP for advice.

Wear a mask and gloves. Owls create pellets of bones and fur that they regurgitate daily into the owl box. It might sound gross, but the pellets actually create a dry "carpet" that is soft and warm for the eggs to be laid on.

Once the clean-out flap and the top of the box are open, use your scraper or crow bar to loosen up the tightly compacted "carpet" inside. Scrape the carpet and all other debris into the trash bag, or box, or onto the ground (it's biodegradable!). You will get a good look at the remains of what your owls have been eating! You will likely find loose bones and possibly the desiccated remains of prey. You may possibly find the remains of deceased baby owls – sometimes not all of the babies survive. There may be some live insects in the box, usually beetles and the occasional maggot. Sometimes wasps nest in the boxes, these can be removed without the use of poisons, please call us for advice. Song birds or squirrels sometimes use the boxes during the summer, so some nesting material might be found. This can be removed. If the box is very wet inside, try to determine why – wetness can create bacteria and is unhealthy for the owls. After getting as much debris as possible out of the box, close and secure the flap. Do not leave any material inside the box—the owls will take care of creating a new "carpet." Close the trash bag or box and place in a trash receptacle. Repair any damage or wear that has occurred – check to see if any screws are coming loose and tighten them. Now your box is ready and waiting for a new owl family! Thank you for completing this messy, but important, task!



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 Men**”, 415-456-6777; **Bio-Pest**: Burt Tate, www.bio-pest.com at 800-246-7231; 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.
- Rodentrol is a product that uses non-chemical ingredients to kill rodents by interfering with their unique metabolism. Rodentrol *does not* poison pets or wildlife whether eaten directly, or by consuming a rodent that has eaten it. Rodentrol is effective when combined with exclusion and the other precautions listed above, www.rodentrol.com.

If these methods do not help, consider using traps, such as a snap-trap baited with peanut butter & oatmeal or Slim Jim's, 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.**