

## **SOME TIPS FOR TARGETING DESERT PACKRATS WITHOUT HARMING OTHER SPECIES**

**Mary C. Stiner (July 2015)**

One of the joys of living in the Oracle Foothills (OF) neighborhood is the richness of wildlife and vegetation. And course there are all the great neighbors too!

We (Steve Kuhn and I) have lived in OF for more than 20 years and over this time have learned a lot about enjoying and co-existing with native species. Nearly all of us have struggled, however, with packrats (the desert packrat or woodrat), which may severely damage our homes, yards, and motor vehicles. Packrats can even impact our health because their nests are havens for kissing bugs, ticks and fleas. Property damage from packrats can be very costly, and so naturally many of us have felt the desperate need to get rid of them. A wide variety of methods are discussed on the web and elsewhere, but many of these are ineffective, and others do tremendous damage to other kinds of animals.

In this short essay, I share my experiences in controlling packrats effectively and without harming other species in our environment. Like many people who might read this essay, my time for these kinds of activities is limited, and so I have steam-lined my methods over the years to those that (a) really work and (b) are do-able over the long term. I hope that the information will be helpful to others—it has worked very well for me.

### **Some background packrat ecology and behavior**

Packrats rely heavily on prickly pear cactus for food, along with seeds, leaves and fruits of other plants. The main predators of packrats in our area are coyotes, snakes, large owls, foxes and ground-hunting hawks. I have watched coyotes raid packrat nests with great skill and, as a large predators, they can put away quite a few rats per month. Raptors (predatory birds) and snakes also do their part.



A nice big packrat nest.

The rats are good climbers, and they are active mainly at night. They are also very industrious in their search for and construction of nesting sites. Each nest has a thick protective “shell” of sticks and spines and a soft core of finely shredded plant fibers. Normally there is one rat per nest, though some rats may move among multiple nests. This means that removing one nest on your property is the equivalent of displacing approximately one rat, or one rat and her infants. In our area, packrats will reproduce in spring and may have another litter later in the year. The OF neighborhood has a high density of packrats relative to many other areas around Tucson.



Desert packrats and some of their favorite nesting sites.

### **Packrat removal**

Because packrats are abundant in the Tucson area and not classified as a protected species, homeowners are free to remove them if they become pests. Be aware that packrats are clever and curious. They navigate by scent trails, and they have powerful homing skills.

One potential impediment to controlling them is the fact that they are rather cute and fuzzy. This becomes a problem when the neophyte trapper first peers into their sprung Have-A-Heart trap. What to do with the little prisoner? Well, my husband and I used to be among the ranks of folks who drove each live-trapped rat several miles away and then set them free. It is nice to think that this is the kindest approach, but actually re-location just passes the problem on to someone else and/or exposes to animal to horrific stresses, from which it often dies. In desperation the displaced animal may travel miles in order to return to the place where you trapped it, rather than die from exposure or conflict in the new place. So I have reached the conclusion that re-locating rats is a feel-good measure for people but not a kindness to the rats. Most biologists seem to agree.

On the other hand, I do understand that not everyone can stomach killing them. But for those of you who have reached the point of willingness to “do-in” ratty pests, here is a method that will take care of the rats but not hurt other wildlife. In a word, we drown our live-trapped rats in water and give the bodies to the garbage man.

Materials: One or more live traps; I strongly recommend a Have-a-Heart traps with a vertical sliding door (shown below), which is very efficient and lasts a long time (mine are 15 years old and still work great). Other animals rarely enter them, whereas rats find them almost irresistible. You will also need one sturdy watertight container with a tight-fitting snap-on lid (very cheap at local hardware stores). I like a container that is large enough to accommodate two live traps. Make sure that the container is deep enough to fully submerge each trap. Place the plastic container on a level surface in a shady area

and fill it with water. The water will stay reasonably clean for quite some time if you keep the lid on. For bait, fruit slices work very well and don't foul the trap (other people swear by peanut butter). That's it!



My packrat trapping kit—long-lasting and very affordable.

Method: Place the bait toward the inside end of the trip pedal, so the rat must fully enter the trap and disturb the trigger. Place traps where you see fresh droppings, in runways leading to a nest, near walls, or where you have seen a rat moving about recently. Importantly, it is best set traps on the evening, and *preferably on the night before garbage day (!)*.

Check your trap(s) in the early morning. Transport full traps to your water tank. Do not spend time looking at the rats or talking to them. Remove lid of the container and drop the traps into the water, making sure that they are fully submerged. Leave the area for about 15 minutes.

Return to the water bin and remove the trap by its handle. Open the trap door and drop the drowned rat into a plastic bag. Dispose of immediately. Doing this on garbage day eliminates the problem of a very smelly trash can.



The second part of the process.

A good routine is to do this once a month even if you haven't spotted a problem, or more frequently if you do see rats. This strategy continuously reduces the density of packrats around your home and

suppresses nest building. Your problems will only get worse as nests become more common around your home.

There are other kinds of traps on the market that also allow you kill packrats. I have used snap traps in the past, but these traps attract and kill other mammals and birds indiscriminately, so I stopped using them. Sticky traps may be ok but they are not re-usable and seem to guarantee a slow and miserable death. The nice thing about Have-a-Heart traps is that you can release non-targeted animals.

### **What to do about rat nests?**

It may be a fool's errand to try to remove all packrat nests from a large property, especially without also undertaking a total change of the vegetation. It is very worthwhile, however, to remove nests near your house or other buildings on your property, as these just attract new rats and concentrate kissing bugs, ticks, and other biting invertebrates.

Removing nests is no one's idea of a good time, but it is not as horrible a job as it first appears. Of course one option is to pay for their removal, and this may be well worth the money for some neighbors. Because this kind of service can be expensive over the long-term, you may decide to remove the nest yourself. To do this, you need some sturdy garden tools, namely a shovel and a rake or hoe, and a bin or wheelbarrow (bags tend to be awkward because of all the thorns) to collect the material from the dismantled nest. Wear gloves and avoid handling the material directly because it will be full of sharp thorns and spines. Be sure to completely remove the nest, including the interior bedding area. Then rake the ground as a final cleaning of the area. If you are concerned about insects dispersing from the nest, you can finish by spraying the area with an insecticidal soap or thuricide bacteria mix (this is what the professionals so). Both sprays are very effective and ecologically friendly (I use them in my greenhouse and they really work).

### **Long term control strategies**

Many neighbors in OF have gradually changed some of the vegetation on their property as a way to discourage packrats. In fact, some of the plants on OF properties that are most attractive to packrats either are not native to our area (most agaves and prickly pear species) or they presently exist at much higher densities than is natural (this is especially so for the native prickly pear). Their dominance in local vegetation may be due to earlier landscaping choices, overgrazing in the deeper past, and other factors.

The rats love to nest under prickly pear and untrimmed agaves, and these plants are also important sources of food and moisture for them. Major sections of our property, for example, were choked with prickly pear and monster agaves when we moved here, and we suffered *major* packrat problems for several years, until we undertook a *combination* of regular trapping and a gradual removal of inappropriate plants. We leave some native prickly pear on our property as food for other wild animals, but we have taken most of these out. The barren ground left behind is quickly recolonized by much more attractive and manageable native shrubs that are also good for wildlife. What a difference these measures have made with respect to packrat control! We still have rats around the property, but now trapping is more than enough to keep them at bay.

Other important and possibly more obvious things one should do include sealing openings in buildings (pipes, vents, etc.) to keep the rats from invading. Also, because rats are disturbed by light as they move about at night, many neighbors use lights to discourage rats from entering under the hood of their

motor vehicles. If you have a secluded spot near your house that seems to attract rats again and again, try installing a small solar light there. This has been very helpful in our case, such as behind a dense palm tree in a corner. Other methods of repelling rats such as odorous chemicals or electric sound generators do not work well, if at all, and are a great way to waste your money.

### **Why not just use poison?**

Most or all poisons do collateral damage to wildlife. Following the directions on the package does not amount to safe practices, because the animals and plants around us are bound into a complex, highly inter-connected food chain. And then there are the hazards to pets and children to consider. Hardware and other supply stores regale us with a whole spectrum of poisons to use, but there is no truly safe way to use them if the chemicals persist in the environment (and most of them do). Rats that are poisoned with anti-coagulants, for example, may take 4-5 days to die a miserable death, and all the while they are available to hunting predators, and to scavengers thereafter. Cached baiting (leaving multiple baits for future rats) raises the likelihood of down-the-line poisoning of other animals even higher. There *really are* better alternatives to poisoning rats and other pests.