Praying Mantids: Garden Carnivores

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A praying mantis is a truly remarkable creature with a striking appearance and interesting habits. Mantids are active throughout the summer, but become more obvious by late summer when they become larger.

Mantids found in Nebraska include the Carolina mantid (*Stigmomantis carolina*), a native species and the Chinese mantid (*Tenodera aridifolia sinensis*). The larger Chinese mantid has been in North America since 1869 when it was introduced to control insect pests. The Chinese mantid is the species often sold through nurseries and garden catalogs.

The praying mantis is named for its prominent forelegs, which are bent and held together at an angle that looks like it is praying. But, these forelegs are dangerously equipped with sharp spines for grasping their prey. Typically brown or green, mantids are well camouflaged on the plants among which they live. They sit motionless, patiently waiting for their prey to wander close enough to be snared. The mantid strikes quickly — about 1/20th of a second — you may not be able to see it happen. Watching the mantis feed is not for the faint-hearted...the mantis usually eats its prey while it's still alive and it starts eating the head first!

Mantids do not discriminate in their choice of food. They feed on moths, crickets, grasshoppers, flies and other insects. They may even eat other mantids. The most famous example of this is the notorious mating behavior of the adult female, who sometimes eats her mate after mating. This cannibalistic behavior is not common and occurs only if the female is starved.

After mating, the female will lay eggs on branches, siding or rocks. The eggs are laid inside a "foamy" liquid called an *ootheca*, that hardens and looks a little like a "packing peanut." Inside this protective egg case, eggs are insulated and survive freezing temperatures.

In the springtime, eggs hatch and nymphs emerge, looking like tiny, wingless versions of their parents. Often, their first meal is a sibling. Nymphs will molt six to nine times, before becoming an adult. Most mantid species produce winged adults. Males are more likely to fly than females.

Some insect enthusiasts suggest keeping mantids as pets, which can be an interesting thing to do. It can also be a lot of work, especially obtaining large numbers of tiny insects for the tiniest mantids to eat. Because of their predatory behavior, mantids must be housed individually. Information about rearing mantids is readily found by searching the Internet.

Did You Know?

- There are about 1,800 praying mantid species worldwide. Only 20 species are found in North America.
- Mantids are some of the largest insects. One Asian species is 10-inches long.
- Praying mantids have excellent eyesight. Their large compound eyes can see movement up to 60 feet (18 meters) away and helps them estimate distances accurately.
- Mantids are the only insects able to turn their triangular-shaped heads 180 degrees (from side to side).
- Like most other insects, female mantids are larger than males.

Photos by Vicki Jedlicka, UNL Extension in Lancaster County

Adult Chinese mantid (above) and egg case known as an *ootheca* (at right) shown approximate size.

(Left) Carolina mantid nymphs emerging from the ootheca (highly magnified).

Adult Carolina mantid (above) and egg case known as an *ootheca* (at right) shown approximate size.

Problem Squirrels in Buildings

In a building, damage by squirrels is usually easy to identify. Signs include droppings, gnawed holes, leaves, twigs, shells, hulls, pits, shredded insulation or nesting materials inside an attic.

Property owners frequently hear scurrying in the ceiling shortly after dark and before dawn. Acorns that are crushed, as opposed to being opened at one end, also are a clue to the presence of fox and gray squirrels.

Squirrels can squeeze through holes 1.5 inches in diameter and will enlarge smaller holes by gnawing. Squirrels can climb vertical brick or masonry walls with a roughened surface. They can enter through vents, chimneys, broken windows, knotholes and gaps in construction under eaves or gables. Tree squirrels most often enter attics and spaces along the gutter line or through vents.

If damage on a building is noticed, see if there is any squirrel activity before attempting repairs. You never want to trap a wild animal in a building because they may cause even more damage. Plug the suspected entry holes with newspaper. If the newspaper isn't moved by a squirrel for five consecutive days during good weather, then it's reasonably safe to secure the opening.

To reduce future problems with squirrels in buildings, prevent their access by inspecting and repairing small holes before they become large enough for squirrels to enter. Never secure an opening unless you are certain it is no longer being used by an animal. Prevent air movement by filling gaps with caulk or expanding foam before covering openings with metal flashing, weave hail screen or other permanent material. From the outside of the building, secure air vents with quarter-inch hardware cloth. Paint the mesh to match the color of the vent to reduce its visibility. Secure roof vents with professionally manufactured stainless-steel screens. Consult with a roofer on proper installation techniques to prevent leaks. Ask a professional for assistance installing a chimney cap to prevent animal access to the chimney.

If a squirrel has been trapped in a building, never try to capture a squirrel by hand. They are evasive and have a powerful bite. Try darkening rooms to encourage squirrels to move towards the light coming from the opening where they entered the building. If needed, create barricades to keep the squirrel moving towards the opening.

Stephen M. Vantassel, UNL Internet Center for Wildlife Damage Management

Squirrel hole is a classic sign.

If you can't guide the squirrel safely back outdoors, live traps and lethal traps are available for capturing squirrels. You may decide it is best to work with a pest management professional (PMP). An experienced PMP has the necessary permits, experience setting the traps, removing the animals and help you make decisions on repairs.

If you want to try to trap the squirrel(s) yourself, farm supply stores, lawn and garden centers may carry traps. You must follow Nebraska laws carefully if you plan to trap squirrels and always check for necessary permits. Avoid trapping in April and May to reduce the risk of orphaning young. In Nebraska, you can not translocate squirrels. Any squirrels caught in a live trap, must be released within 100 yards of the site where they were captured.

In rural areas, problem squirrels can also be safely removed by shooting. In urban areas, ordinances prevent the discharging of firearms because of the obvious dangers to property, people and other animals.

Nebraska Laws Related to Tree Squirrels

- Fox and gray squirrels are classified as small game animals and can be taken by individuals with a small game hunting permit during hunting season. Letters of authorization to shoot or trap tree squirrels out of season can be issued for damage situations by the Nebraska Game and Parks Commission. Tree squirrels also may be shot or trapped within municipalities by people who possess a valid permit.
- Municipal laws usually are more restrictive than state laws regarding the control of tree squirrels. Some communities forbid the use of lethal traps within their jurisdictions. Find out the laws of your community before attempting any controls or work with a pest control professional.
- Southern flying squirrels are fully protected as a threatened species in Nebraska because of their limited range and low numbers.
- Squirrels must be released within 100 yards of the capture site or they can be euthanized if taken under the authority of Wildlife Damage Control Permit. The permits may be obtained from a local representative of the Nebraska Game and Parks Commission or by calling 471-0641.

Source: Prevent Squirrels from Coming into a Habitat by Stephen Vantassel, UNL Wildlife Damage Project Coordinator; Scott Hygnstrom, UNL Wildlife Damage Extension Specialist; Dennis Ferraro, UNL Extension Educator. Acreage eNews acreage.unl.edu