



Newsletter

Landscaping and Trails Committee

High Desert Gardening

September 2021

Snakes in New Mexico

Since we have been receiving many questions about snakes, particularly rattlesnakes, from Mirehaven residents, we are including an article about snakes in our newsletter. If you encounter a snake on your property and are uncomfortable with it, or suspect it may be venomous (rattlesnakes), the City of Albuquerque should be contacted for assistance with removal by calling 311. If you are bitten by a snake, immediately call 911.

The following article is reprinted with permission from the Petroglyph National Monument website. The original article can be found at:

<https://www.nps.gov/petr/learn/nature/snakes.htm>.

Many of the snakes found at Petroglyph National Monument are harmless and nocturnal. However, venomous rattlesnakes are present and the most common rattlesnake found here at the park will be the Western Diamondback, along with the Prairie Rattlesnake. Rattlesnakes have a built in warning system - they will let you know when you become too close when you hear their rattle button. They can be identified by

the triangular shaped head and the rattle at the end of their tails. The following is some advice if encountering a rattlesnake at the park.



NPS Photo

Snake Safety

The most important thing to remember about snakes is to give them plenty of room to leave an area if encountered. Rattlesnakes will rarely attack humans unless provoked. *Stay on the trail and keep an eye out at all times.* Avoid reaching into areas that you cannot see behind that could be potential rattlesnake hiding spots. *Do not wear sandals or any other open toe shoe that exposes flesh.* Snake season typically will be the most likely time to encounter any snake, which is spring through summer. Be extra vigilant during these times.

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In the rare event of a snake bite, especially a rattlesnake bite, prompt action is essential. Start by calling 911 immediately. The following is advice from the National Medical Association and American Journal of Nursing in the event you are bitten by a snake:

What You Should Do

- Move the victim to safety and try to safely identify the species of snake.
- Keep the victim calm. Minimize any movement to slow the body's circulation.
- Remove jewelry or clothing that may become tight if swelling occurs.
- Apply a pad or sterile dressing to the wound. Immobilize the limb below heart level.
- Wrap a flat band (such as an elastic bandage or sock) a few inches above the bite and between the bite and the heart). Be sure you can slip a finger under the band. Do not cut off the victim's circulation, but keep the band in place until you get to a medical facility.
- Seek immediate medical attention.

What You Should *Not* Do

- Do not wash the wound. Medical professionals can use venom at the wound site to identify the type of venom.
- Do not bleed the wound. This may lead to further complications such as blood poisoning or severe bleeding.
- Do not try to suck out the venom with your mouth. Some snakebite kits include a vacuum-pump device for removing venom. These devices can help if they are used correctly within 5 minutes of the bite.
- Do not use a constrictive bandage or tourniquet. The idea is to stop the spread of venom through the lymphatic system, not to stop the blood flow.
- Do not try to catch or kill the snake. You will waste time and can receive another bite.

Save the Date: Park rangers from the Petroglyph National Monument will present a 20-minute video about the park and a Q&A session focused on educating residents about snakes and other common wildlife. It will be held at the Sandia Amenity Center on Sunday, 19 Sept 2021, 4-5:00 pm.

Helpful links:

https://aces.nmsu.edu/pubs/_circulars/CR541/
https://nmpoisoncenter.unm.edu/education/pub-ed/pp_tip_pages/venom_things.html

Powdery Mildew

Sharon M. Douglas



Figure 1. Powdery mildew of torenia.

Have you seen a white, powdery growth on your “Knock Out®” roses, lilacs, or various perennials? If so, this is likely a plant disease called Powdery Mildew. Powdery mildew is considered one of the most common, easily recognized, and widely distributed diseases of herbaceous and woody plants worldwide. This disease is primarily of cosmetic concern, since it usually results in disfigured and unsightly plants rather than plant death. However, in some cases, such as powdery mildew of tomato, infections can significantly reduce fruit production and can also result in plant death. Powdery mildew tends to be more problematic in mid to late summer when day-night temperatures favor a higher relative humidity (RH) than we are

used to in the high desert of New Mexico. However, the disease can develop at any time during the growing season.

Powdery mildews are easily recognized by the white, powdery growth of the fungus on infected portions of the plant host (Figures 1, 3-6). The powdery appearance results from the superficial growth of the fungus as thread-like strands (hyphae) over the plant surface and the production of chains of spores (conidia) (Figure 2). Colonies vary in appearance from fluffy and white to sparse and gray.



Figure 2. Chains of powdery mildew conidia on conidiophores growing the surface of a leaf (arrow).

Powdery mildew fungi usually attack young developing shoots, foliage, stems, and flowers, but can also colonize mature tissues. Symptoms often first appear on the upper leaf surface, but can also develop on lower leaf surfaces. Early symptoms vary and can appear as irregular, chlorotic (yellow), or purple areas, or as necrotic lesions (dead areas), all of which are followed by the typical white, powdery appearance. Some infected leaves may shrivel, brown, and drop prematurely. Other symptoms include atypical scab-like lesions, witches'-brooms, twisting and distortion of newly emerging shoots, premature leaf coloration and drop, slowed or stunted growth, and leaf rolling. In

rare but extreme situations, heavy infections cause plant death.

Although diagnosis of powdery mildew is not difficult, symptoms often escape early detection—if plants are not periodically monitored, symptoms might first develop on lower or middle leaves. The time delay from when infections truly begin and when disease is first detected explains why there are reports of sudden “explosions” of disease. This “explosion” occurs when the percentage of infected leaves increases from 10% to 70% in one week.



Figure 3. Powdery mildew of tomato.



Figure 4. Powdery mildew of verbena.

The powdery mildew fungi are all obligate parasites—that is, they cannot complete their life cycles without a living host plant. As a result, they readily infect healthy, vigorous plants. Some powdery mildew fungi have broad host ranges, whereas others are fairly host-specific. For example, the powdery

mildew fungus that infects lilac is not capable of infecting cosmos and *vice versa*. In contrast, the powdery mildew fungus that infects oak can also infect rhododendron and dogwood.



Photo by Dr Parthasarathy Seethapathy, Tamil Nadu Agricultural University, Bugwood.org

Figure 5. Powdery mildew of rose.

Development of powdery mildew is influenced by many environmental factors including temperature, RH, light, and air circulation. Because these optimum conditions usually occur in mid to late summer, powdery mildew outbreaks are most common at that time. Because of this timing and the general cosmetic nature of the disease, powdery mildews usually don't have long-term health implications for herbaceous or woody plants.

Managing Powdery Mildew

Managing powdery mildew can be achieved using an integrated approach. This disease can be effectively managed by following good sanitary and cultural practices and is usually not serious enough to warrant chemical control.

1. *Culture*- Maintain plant vigor by following sound cultural practices such as proper watering, fertilizing, and pruning. It is also helpful to maintain adequate spacing between plants to increase air circulation.



Figure 6. Powdery mildew of lilac. Note sparse colonies on the leaf.

2. *Sanitation*- Rake and remove plant debris in the fall to eliminate overwintering inoculum. During the growing season, remove symptomatic leaves as soon as they are detected and immediately place these leaves in a plastic bag to avoid spread of the powdery spores to other nearby plants.
3. *Scouting*- Scout for disease on a regular schedule to identify outbreaks before they become widespread.
4. *Chemical*- While not usually necessary, there are a number of compounds that are registered for homeowner use—it is important to thoroughly read the pesticide label. Spraying usually begins as soon as symptoms are detected and continues until conditions are no longer favorable for disease development. The label will contain information on host plant, dosage rates, application intervals, days-to-harvest interval (for edible crops), and safety precautions. Some of the compounds registered for use include:

- “Biorational” compounds (products that are relatively non-toxic to people with few environmental side effects): neem oil, insecticidal soap, horticultural oil, and potassium bicarbonate.
- Biological agent: *Bacillus subtilis* (a naturally occurring soil bacterium).
- Organic options (products accepted for organic production): OMRI-approved formulations of potassium bicarbonate, neem oil, horticultural oil, copper, and sulfur.

Helpful links:

https://aces.nmsu.edu/ces/plantclinic/documents/powdery-mildew-od-4_final.pdf
<http://ipm.ucanr.edu/PMG/PESTNOTES/pn7493.html>

Bagworms

Sharon M. Douglas

Do you have what appear to be “Christmas tree ornaments” on a tree or shrub in your landscape? If so, you are not alone—we’ve had numerous reports of these structures from properties throughout Mirehaven, which are indicative of an infestation of bagworms (Figures 1 & 2). Bagworms are caterpillars, insects in the Order Lepidoptera, Family Psychidae. There are several species of bagworms in New Mexico, including *Thyridopteryx ephemeraeformis* (commonly called the Evergreen Bagworm or North American Bagworm).

Bagworms are insects that undergo complete metamorphosis (egg, larva, pupa, and adult), and have only one generation per year. The larval (caterpillar) stage is what causes the damage. They have a wide host range that includes evergreens (e.g., arborvitae, cedar, cypress, juniper, pine) and broadleaved

plants (e.g., crabapple, elm, honey locust, maple, various oaks).

Bagworm larvae hatch from eggs (Figure 3) in spring and crawl to foliage to begin feeding or spin silk-like threads that are easily blown in the wind. This process, called “ballooning,” helps disperse the young larvae to new host plants. When they land on a suitable host, the larvae begin to spin a tiny bag of silk. They live and feed in these silken bags, and begin to incorporate plant debris into the bag so that it begins to look like an upside down ice cream cone, Christmas decoration, “pinecone,” or other type of plant structure. These bags enlarge as the larvae feed and grow, and can be anywhere from 1.5 to 2 inches long for females, and 1.5-1.75 inches long for males.



Photo by Pennsylvania Department of Conservation and Natural Resources - Forestry, Bugwood.org

Figure 1. Bagworm “bag” on needled evergreen host.



Photo by Rebekah D. Wallace, University of Georgia, Bugwood.org
 Figure 2. Bagworm “bag” on deciduous host.



Photo by Lacy L. Hyché, Auburn University, Bugwood.org
 Figure 3. Overwintering bagworm eggs inside a “bag.”

In late summer, mature larvae seal the ends of their bags and molt into pupae. Adult males emerge in early fall as “hairy,” brownish-black moths about 1 inch long—they are rarely seen since they are nocturnal. The female moths cannot fly so they never leave their bags. However, the adult male moths fly to seek females to mate with. Mating occurs through an opening at the bottom of the female’s bag. After mating, females lay their eggs inside their cast pupal skins and die. Female bagworms can lay 500 to 1,000 eggs in their bag. The eggs overwinter in the bags and hatch in mid- to late spring – and the cycle begins again.

Bagworm caterpillars feed for about six weeks, and strip needled evergreens of their needles, and can “skeletonize” leaves of susceptible deciduous hosts, leaving only the larger veins. One of the problems with these insect pests is that new infestations often go unnoticed until late in the summer when caterpillars are large and have already consumed considerable amounts of plant material. When present in high numbers, they can defoliate plants. While usually not a life-threatening problem, heavy infestations over several consecutive years, especially when combined with other stress factors, can kill young trees or shrubs.

Managing Bagworms

Bagworms can be effectively managed by following good cultural and sanitary practices and infestations are usually not serious enough to warrant chemical control.

1. *Culture-* Maintain plant vigor by following sound cultural practices such as proper watering, fertilizing, and pruning.
2. *Scouting-* Scout for bags in fall or winter. Bagworms on evergreens may be camouflaged throughout the winter, but bags on broadleaf hosts will be easier to see when leaves drop in fall.
3. *Sanitation-* Physically remove bags by pruning infested branches or hand picking/cutting off bags. It is helpful to remember that each bag could contain from 500 to 1,000 eggs, so removing them in fall and winter should substantially reduce the population of larvae that emerge in spring. Make certain you put the bags in the trash—don’t just throw them aside or somewhere in the yard because in doing so, the eggs can survive in the bag and emerge in the spring.
4. *Chemical-* Although not usually necessary, there are some compounds that are registered for homeowner use—it is important to thoroughly read the

pesticide label, since it contains information on host plant, dosage rates, application intervals, and safety precautions. Among the products registered for use are biological insecticides such as *Bacillus thuringiensis* (Bt) (a naturally occurring soil bacterium) and Spinosad. They need to be applied shortly after the larvae emerge, before the bags exceed ½ inch long, since small, young larvae are most vulnerable.

common wildlife. It will be held at the Sandia Amenity Center.

Helpful links:

<https://aces.nmsu.edu/ces/plantclinic/documents/o-02-bagworms.pdf>

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5347210.pdf

<http://agriflife.org/landscapeipm/files/2012/09/BagwormsPub.pdf>

<https://entnemdept.ufl.edu/creatures/MISC/MOTHS/bagworm.htm>

<https://ag.umass.edu/print/9511>

Upcoming Educational Opportunities

Saturday, 11 September 2021, 10-11:30 am:

The Xeric Garden Club of Albuquerque is hosting a presentation by Dr. Marisa Thompson of NMSU on “Taking Care of the Winter Landscape.” It will be presented in the Piñon Room at the Albuquerque Garden Center located at 10120 Lomas Blvd, NE. The presentation is free and open to the public.

<http://xericgardenclub.org/calendar.html>

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