POTENTIALLY HARMFUL ANIMALS AND PLANTS

Summer is here and with that comes barbecues, swimming, gardening, summer picnics and many other outdoor activities. Summer also brings mosquitoes, snakes, poison ivy and other unwanted guests. If you have a rain barrel, be sure it is covered with a lid. All mosquitoes must have water to complete their life cycle. Only the adult female mosquitoes bite people and animals. They must have a blood meal in order to lay eggs. Male mosquitoes will feed on plant juices. To repel mosquitoes try growing the following herbs and flowers.

**Mint**—this perennial herb can become invasive, so grow it in a container. Mosquitoes don’t like the oils in mint.

**Wormwood**—this perennial has silver foliage and can be used as a border plant. The pungent odor will keep mosquitoes away.

**Catnip**—this perennial sometimes acts as an annual and is a member of the mint family, so it is best to grow it in a container. Catnip is good for repelling mosquitoes. Some cats love it. I grew a catnip plant a few years ago and my cats weren’t phased a bit by it. They walked right past it.

**Lemongrass**—this is a tropical plant that prefers full sun and will not tolerate freezing temperatures. It has a lemon scent that mosquitoes do not like.

**Rosemary**—a great herb to use for cooking. Rosemary tends to have an annual life cycle in our climate, but will grow as a perennial in a protected location or warmer climates. Mosquitoes do not like the smell of rosemary, making it a good plant to have around.

**Marigold**—this annual flower is good for repelling many insects including mosquitoes. I use it as a companion plant in the garden to help keep squash bugs and cucumber beetles away. It also repels aphids.

During the summer you may take a hike through the woods, or just out in the fields to check cows or other livestock. Be aware of snakes, ticks and chiggers. Use an insect repellent when hiking through the woods or tall grass. Watch out for snakes hiding in the grass or under or around fallen logs or rocks. Missouri’s venomous snakes include the copperhead, cottonmouth, western pygmy rattlesnake, massasauga rattlesnake, and timber rattlesnake. The western diamond-backed rattlesnake and coral snake are not found in Missouri. The most common venomous snake in Missouri is the copperhead. To our knowledge, there have only been two human deaths attributed to venomous snakes in Missouri: a 1933 timber rattle-
snake bite and a 1965 copperhead bite. (source-Missouri Department of Conservation).

You may also encounter poison ivy while participating in outdoor activities like gardening, landscaping or hiking. Poison ivy can be found as a low-growing shrub, can grow as a trailing vine along the ground, or can occur as a vine that climbs to the top of the tallest tree. Aerial rootlets enable the vine to attach itself to other plants or objects nearby. The leaves are compound, with three leaflets that occur alternately along the stem. Leaflets may have smooth, scalloped or irregularly toothed margins, but typically the lateral two leaflets have irregularly toothed outer leaf margins and smooth, untoothed inner leaf margins. The leaf surface may or may not have a waxy or oily appearance. Leaves can occur in a variety of colors on the same plant, but leaflets typically have a greenish-red cast when they first emerge in the spring, then turn dark green throughout the summer, and eventually turn red, orange or yellow in the fall.

Poison ivy usually grows along fencerows, in roadside areas, and at the edge of wooded tracts. However, it may also be found around the home in shrubs or flowerbeds and along lot boundaries. All parts of the plant, including stem and roots, contain and secrete a nonvolatile oil, called urushiol, which affects the skin. For more information on poison ivy or control of it, see MU Guide 4880 at http://extension.missouri.edu/p/G4880 or call your county extension center to request a copy.

(Continued from page 1)

**HORTICULTURE UPDATE**

With all of the rain we’ve had this spring and early summer, it’s no wonder a lot of plants have diseases. I am starting to see Early Blight on tomatoes. If the leaves on your tomato plants are curling or rolling, do not worry. Some varieties are prone to doing this. It is thought to be in response to heat or the environment. I have seen several samples of herbicide damage on ornamentals and tomatoes. If you are spraying herbicides, be very cautious. Only apply herbicides on calm days. The slightest breeze can drift the herbicide onto other plants, or worse, your neighbor’s plants. If you are spraying for weeds in your yard, maybe it’s time to do a soil test. A weedy yard usually indicates a low pH. If you correct your soil pH, you will make it less desirable for weeds to grow. Also, mow your grass high, about 2.5 to 3 inches. This will shade out weeds and create a more dense lawn. In your garden, use straw mulch around your tomatoes and other plants to help with disease control and weeds. You can apply a layer of newspaper first, then, apply straw on top.

I’ve had some rhubarb questions recently. Rhubarb does best in full sun and well-drained soil. It also likes organic matter. If your plants are not doing well, incorporate some organic matter around them. Peach and cherry trees do not like wet soil. If they are not doing well, it could be because they are in a poorly drained area. Due to the rains this spring, the ground is saturated in places. Clay soil holds water quite well. The tame gooseberries did well this year. If you have grapevines, be sure you are checking them regularly. Black Rot is a serious fungal disease of grapes and will develop in wet, humid weather. Treat it with a product containing the active ingredient ‘myclobutanil.’ With all the rain we have had, nutrients have been leached out of the soil. So, if your plants look pale or yellow in color, they may need an application of fertilizer.

Oak trees have galls again this year. There are many different kinds and sizes of galls that affect trees. Leaf galls can be found on the undersides as well as the top of the leaf. I have had samples of Jumping Oak Gall brought in. These galls look a little different than the galls most of you are used to seeing. For information on this gall check out the Missouri Botanical Garden and the Missouri Department of Conservation websites. Type “jumping oak gall” in the search box. Treatment for galls is usually not effective. Be aware of Oak Wilt. There are some oak trees suffering from this fatal disease. Oak trees will lose leaves starting in the top of the canopy. They can lose more than half of their leaves and this occurs quickly, usually in a matter of weeks. No treatment is effective in controlling oak wilt. Spireas have suffered dieback. If the shrub is showing signs of life, cut out dead growth to stimulate new growth if you haven’t done so yet.

This should be a productive year for fruits and vegetables. Already, I have harvested snow peas, broccoli, lettuce, spinach, asparagus, strawberries, and new red potatoes. If you do not have a garden, check out your local farmers’ market. They usually have a variety of vegetables and fruits grown by local producers. You can often find farm fresh eggs, honey, meat and baked goods. June 7 was our local foods tour. We had about 50 people in attendance. We saw many interesting things on both farms. Thank-you to Brent and Lucinda Coursey and John and Holly Arbuckle for hosting us.
HONEY BEES

Honey bees are essential to modern agriculture. These industrious social insects produce over $100 million worth of honey and beeswax each year in the United States. Their service as pollinators of agricultural crops adds another $10 billion to their overall value. Due to the destruction of native habitat, native pollinators such as bumblebees and leaf-cutter bees are in short supply, further magnifying the impact of the honey bee and the work of our beekeeping industry.

Millions of acres U.S. fruit, vegetable, oilseed and legume crops depend on insect pollination, including honeybees. The USDA estimates that 80 percent of insect crop pollination is accomplished by honeybees. Approximately one-third of the total human diet is derived directly or indirectly from insect pollinated crops. The almond crop is entirely dependent on honey bee pollination. Without honey bees, there would be no almonds. Numerous other crops are 90 percent dependent on honey bee pollination, including apples, avocados, blueberries, cherries, cranberries and sunflowers. Other crops such as alfalfa, cucumbers, kiwi fruit, melons and vegetables are also pollinated by honey bees.

Another benefit of honey bees is the honey they produce. Honey bees live in colonies that are often maintained, fed, and transported by beekeepers. Centuries of selective breeding by humans have created honey bees that produce far more honey than the colony needs. Beekeepers harvest the honey. Beekeepers provide a place for the colony to live and to store honey in. The modern beehive is made up of a series of square or rectangular boxes without tops or bottoms placed one on top of another. Inside the boxes, frames are hung in parallel, in which bees build up the wax honeycomb in which they both raise brood and store honey. Modern hives enable beekeepers to transport bees, moving from field to field as the crop needs pollinating and allowing the beekeeper to charge for the pollination services they provide. The color and flavor of honey differ depending on the bees’ nectar source (the blossoms). In fact, there are more than 300 unique kinds of honey in the United States, originating from such diverse floral sources as Clover, Eucalyptus and Orange Blossoms. In general, lighter colored honeys are mild in flavor, while darker honeys are usually more robust in flavor.

"Pesticide" is a general term used for a chemical designed to kill target pests such as insects (insecticide), mites (miticide), weeds (herbicide) and organisms which cause plant diseases such as bacteria (bactericide) and fungi (fungicide). Unfortunately, many agricultural pesticides may be toxic to bees. Each year many honey bee colonies are damaged or destroyed by pesticides, primarily insecticides. Such losses have a devastating impact on the beekeeper, who may have to relocate damaged hives or perhaps even be forced out of business. Growers of most insect-pollinated crops (apples, raspberries, cucurbits, alfalfa seed and many others) experience lower yields, and ultimately the consumer must pay higher food prices.

Reducing pesticide injury to honey bees requires communication and cooperation between beekeepers, farmers, and applicators. It is important that beekeepers understand cropping practices and pest management practices used by farmers in the vicinity of their apiaries. Likewise, insecticide applicators should be sensitive to locations of apiaries, obtain a basic understanding of honey bee behavior, and learn which materials and application practices are the most hazardous to bees. While it is unlikely that all poisonings can be avoided, a balance must be struck between the effective use of insecticides, the preservation of pollinators and the rights of all—the beekeeper, farmer and applicator.

Source: Information for this article is from the National Honey Board and University of Rhode Island Greenshare Factsheet on Honey bees.
**JULY GARDENING TIPS**

**Ornamentals**
- Continue to pinch mums until mid-July. Pinching after this may delay flowering.
- Deadhead perennials (remove dead flowers) that have finished blooming.
- Prune climbing roses and rambler roses after bloom.
- Spider mites may be a problem during hot, dry weather. Leaves will become speckled above and yellowed below. Evergreen needles appear dull gray-green to yellow or brown.
- Water newly planted trees and shrubs thoroughly at least once a week.
- Fertilize trees and shrubs by July 4. Late fertilizing may cause lush growth that is more prone to winter kill.
- Black Spot may be a problem on roses. Remove and pick up infected leaves and spray fungicides as needed.
- Powdery mildew may be found on lilacs. It is rarely harmful and shrubs grown in full sun are less susceptible.
- Divide irises now.

**Vegetables**
- Blossom end rot of tomatoes and peppers may become a problem. Maintain soil moisture and do not let soils dry out. Place a layer of mulch 2-3 inches thick around plants.
- Keep weeding! Prevent weeds from going to seed.
- Dig potatoes when the tops die. Plant fall potatoes by 7/15.
- Harvest onion and garlic when the tops turn brown.
- Keep cucumbers well watered. Drought condition will cause bitter fruit.
- Sow seeds of carrots, beets, turnips, and winter radish for fall harvest the last week of July. Set out broccoli, cabbage, and cauliflower transplants for the fall garden at this time.

**Fruit**
- Protect grapes from birds!
- Prune out old fruiting canes of raspberries after harvest is complete.
- Apply second spray to peach tree trunks for peach borers.
- Early peach varieties ripen now.
- Blackberries will begin to ripen soon.

**Turf**
- Water lawn frequently enough to prevent wilting. Early morning irrigation allows turf to dry before nightfall and will reduce the chance of disease.
- Monitor lawns for newly hatched white grubs. If damage is occurring, apply appropriate controls, following product label directions.

(Continued from page 3)

**UPCOMING EVENTS**

**July 15-20:** NEMO Fair, Kirksville, MO.

**August 22-2013:** Missouri State Master Gardener Conference, Springfield, MO.

**September 20-22, 2013:** Missouri State Master Gardener Conference, Springfield, MO.

**December 6 & 7:** Missouri Livestock Symposium, Kirksville.

(Continued from page 3)

Fahrenheit or above 90 degrees. Too much nitrogen will reduce fruit set.

**My snap beans look healthy but aren’t forming bean pods. Why?** Bean blossoms will abort (drop) from the plants in hot, dry weather. Also, too much nitrogen fertilizer or manure will prevent pods from setting. Beans do not need a lot of nitrogen. Bean pods will not set if the soil is waterlogged.

**My squash had formed small fruits, but they fell off the plant. Why?** Fruit drop of squash will occur if the flowers have not been pollinated. Also, if the fruits develop a rot on the end, it could be the disease blossom blight.

**Will my zucchini cross-pollinate with my yellow, straightneck squash?** Yes. However, you will not see the effect of this cross until the following year if you plant the seeds. Summer squash can cross with each other and with acorn squash and pumpkins.