

**All articles are from the *Olbrich Garden News*,
the newsletter of Olbrich Botanical Gardens**

Beneficial Insects

by Samantha Egan, Olbrich Horticulturist

If you're tired of the "bad bugs" killing your tomato plants or turning your roses into an eyesore, there's an environmentally-friendly way to control those bugs: encourage beneficial insects to visit your garden! A beneficial insect is an insect that performs a valued service such as pest control or pollination. When you use beneficial insects to control garden pests, the goal is to keep pest populations to a tolerable level.

Beneficial insects can be broken down into three groups: predators, pollinators, and parasites. Predators feed on other insects, pollinators carry pollen between plants while they're feeding on nectar, and parasites live inside another insect while they're maturing. Predators, such as ladybugs and lacewings, feast on aphids on your roses. Pollinators, such as honeybees, help pollinate the plants in your garden. Lots of small colorful blooms will attract syrphid flies, whose larvae will parasitize and kill the caterpillars in your vegetable garden.

Chances are you already have many beneficial insects in your yard and never noticed! The key to attracting beneficial insects is diverse planting. Combining many different plants will provide a broad spectrum of food and shelter. A mixture of native plants (perennials, trees, and shrubs) is one of the best lures for beneficial insects.

Also, provide a continuous food source. Make sure to provide your beneficial insects with plants that bloom from early spring right through fall to keep the insects in your garden all season long. Lastly, not all blooms are equal – large, nectar-filled blooms can drown small pollinators. Small flowers, produced in large quantities, are much more valuable than a few large blooms.

Finally, minimize or eliminate the use of pesticides because they destroy the beneficial insects along with the harmful ones. Enjoy your garden and look for the beneficial insects this summer!

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Insecticidal soaps

by Christian Harper, Olbrich Horticulturist

Are you troubled by the idea of using strong chemical insecticides in your garden, but not willing to throw in the towel when hordes of insects are destroying your prized roses? Insecticidal soaps, which are classified as biorational or “reduced-risk” insecticides, may help you bridge the gap between environmental responsibility and saving desirable plants.

Chemically speaking, soaps are salts of fatty acids, and the insecticidal versions are really not that different from products like liquid dishwashing detergents. They come in concentrated liquid form and are generally diluted to a 2 or 3% solution. They kill by contact, but leave minimal residues, have almost no toxicity to humans and other warm-blooded animals, and degrade rapidly in the environment.

Insecticidal soaps are effective against most soft-bodied insect pests, including aphids, sawflies, whiteflies, mealybugs, thrips, mites, and the crawler stage of scales. Olbrich Gardens has even used them on Japanese beetles with some success. Bees, adult lady beetles, lacewings, and other “good” bugs are generally not harmed by soap sprays.

Books and the internet abound with recipes for homemade soap sprays, but use caution. The dyes, fragrances, and special ingredients found in many soaps can damage plants worse than the insect pests you’re trying to control. The commercial versions are your best bet, but always read and follow the label carefully. You may find that insecticidal soap is the only pesticide you need in your earth-friendly garden.

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More garden, less lawn

by Wendy Gasch, Horticulturist

Late winter is an excellent time to prepare for the upcoming gardening season and to get excited about changes for the year to come.

If, when you're reflecting on your garden, you begin to remember the hours spent mowing, fertilizing, weeding, and watering your lawn, and wish that was time spent elsewhere, it's time to create more bed space by eliminating parts of the lawn.

This will not only provide a more interesting garden to show off to friends and neighbors, it's also an excellent way to save money and reduce the use of some of the earth's natural resources: water and fuel. Also, by creating a lower maintenance garden space you're reducing the need for herbicides and fertilizers, since most perennials and shrubs don't require either.

So, get out the shovels and sod cutters and start removing that unwanted lawn. Once the sod is removed, backfill the area with soil and compost, then top it off with leaf mulch, which will not only add to the soil's rich composition, but also keep the weeds down until you're ready to plant.

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Fall garden clean-up

by Jeff Epping, Olbrich Director of Horticulture

Many gardening professionals encourage gardeners to let as many perennials, and sometimes even annuals, stand in the garden over winter. The reason is that many plants offer great structural interest during the winter – a rather long, flat season here in the Midwest. However, some plants are best cut to the ground and tossed in the compost pile for their own good.

At Olbrich Botanical Gardens we remove plants in the fall that are prone to harboring insect or disease vectors. These “bad guys” can over-winter on dead plant material and re-infect healthy plants the following growing season. The cut material is buried in our large compost pile where temperatures elevate high enough to kill the bad organisms and turn them into rich compost.

A few perennials we commonly treat this way are: beebalm (*Monarda*), border phlox (*Phlox paniculata*), and Bethlehem sage (*Pulmonaria saccharata*). A few shrubs and trees also benefit from a thorough leaf clean-up in fall as well such as: lilacs (*Syringa*), apples and crabapples (*Malus*), and especially roses (*Rosa*).

This IPM (integrated pest management) method of sanitation is one important environmentally conscious way to maintain healthy plants in our gardens and avoid the need to treat diseases and pests next season.

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Winterizing your vegetable garden

by Carrie Holladay, Olbrich Children's Garden Intern

Properly winterizing your vegetable garden will save you time and energy next spring while also enriching your soil.

The first step is to remove dead vegetables and plants from the garden. If any of your plants showed signs of disease, be cautious and throw them in the garbage. This reduces the chances of infestation next year since some diseases can survive even the coldest winters. It's also important not to add diseased plants to your compost pile.

The second step is to prepare the soil for the harsh winter conditions to come. Put down a layer of shredded leaves, grass clippings, well-chopped kitchen waste, or anything else you would put into your compost pile. Then, add a thin layer of soil or finished compost to top it all off.

At this point, you have some choices. You can leave the garden "as is," add a layer of mulch, or you can plant a cover crop like annual rye grass, which will add even more nutrients to your soil. Be sure to till cover crops under in the spring.

Now that the hard work is done, just sit back and relax. Your winterized vegetable garden will be nourished and ready for spring planting.

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Pesticide alternatives for houseplants

by John Wirth, Olbrich Conservatory Curator

As we all strive to provide the best growing conditions for our houseplants, we often create a comfortable home in which plant-damaging insects can also thrive. We give those bugs not only a cozy environment in which to reproduce, but a tasty food source as well. At some point in your plant growing pursuits, you may find yourself with a need to control these pests.

To eradicate these unwanted houseguests you don't necessarily need to expose yourself or other unintended targets to toxic chemicals. In the Bolz Conservatory we're always looking for the least toxic method to reduce the insect population on our tropical plant collection. One control used quite often is a simple but thorough washing of the plant foliage.

In the home situation, placing your plants in the bathtub and giving the foliage a gentle rinsing can help in controlling spider mites, aphids, and mealy bugs. Using slightly warm water is best, especially if your water is softened. This softened water is good for giving the leaves a clean and healthy sparkle but should not be used for routine watering of the soil as it contains too many harmful salts.

Make sure your water spray covers both the tops and bottoms of the leaves and wash the plants several times every few days. This method of insect control won't work for all insects, but it will reduce populations of some bugs down to a tolerable level while remaining an environmentally friendly alternative to pesticides.

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The benefits of leaf mulch

by Jeff Epping, Olbrich Director of Horticulture

Here at Olbrich, we're often asked, "How do you do it? How do you keep your plants looking so good through the entire gardening season?" The quick answer is, "Leaf mulch." It seems like a rather simple answer and everyone knows that gardening isn't quite that simple, but beyond proper plant selection, our mulch is one of the biggest contributors to our success in growing most groups of plants.

The mulch not only looks good, creating a chocolate brown background for the plants to be seen against, but it also creates growing conditions that plants thrive on. Mulches moderate soil temperatures, conserve precious moisture, improve soil tilth and fertility, and reduce weed growth and competition. In the gardens, we spread a three to four inch layer of mulch in the spring, summer, and fall, depending on which beds we're mulching. The majority of our mulching is done in the spring just after perennial dividing or annual planting, but we also touch up beds during the summer as needed.

In addition, we apply leaf mulch to beds in the fall which contain new or established bulb plantings, so the bulbs emerge through a fresh layer of mulch in the spring, setting the bright flower colors off against a uniform dark background for maximum floral impact.

Visit Olbrich's website at www.olbrich.org for more information about Olbrich's Leaf Mulch Sale so you can spread the same kind of organic gold in your own garden in the spring. It will pay dividends the entire growing season!

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Recycle your holiday trees

by Mark Shimasaki, Olbrich Horticulturist

Pines and spruces, the favored centerpiece of Yuletide decorating, are a beautiful tradition for the holiday season. However, once the presents are unwrapped and the New Year has commenced, it's time to take off the lights and decorations and dispose of the tree. Instead of immediately putting your tree out at the curb to be picked up, there are ways we can extend the usefulness of these cut conifers.

In the dead of winter, small birds use evergreen trees for protection from the elements. Prop your tree up in a corner of the yard and you've created instant cover for wildlife. Better yet, take a couple of your neighbors' trees and lash them to your own to make an even larger sanctuary. Pack some pinecones with suet and birdseed, hang them from the branches, and make an even more hospitable oasis for small birds. It's important to remember to thoroughly remove all decorations, especially tinsel, so there's nothing these small birds can get tangled in or swallow.

Evergreen perennials, such as hellebores or evergreen ferns, benefit from cover to protect them from the drying effects of the winter sun. Cut the branches off your tree and loosely pile them on top of the plants. The added insulation will also protect the plants from the freeze-thaw cycle that can damage them.

If you've used the tree as a bird refuge, cut the ends of the branches in the spring to eliminate most of the needles and stake the trees in your vegetable garden to use as a trellis. Vining plants, such as peas and beans, will scramble up the naked branches and harvesting will be a snap!

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Bring Birds to the Garden

by Wendy Gasch, Olbrich Horticulturist

Looking back over the past season, do you wish you had more avian friends visiting your garden? It may be easier than you think to encourage these feathered friends into your backyard. There are three key elements needed to create a bird-friendly garden: food, water, and shelter.

Adding bird feeders around the garden is a great way to give birds the initial invitation. Selecting plants that provide berries, seeds, and nuts during different seasons can encourage them to be year-round visitors. Crabapples, viburnums and cotoneasters are great berry-bearing plants. The Asteraceae family of perennials, including coneflower, black-eyed Susan, and globe thistle, also provides tasty treats for birds that enjoy seeds. Remember that insects are food too – refrain from using insecticides and let the bird population do the work for you.

Water can easily be added to the garden with a pond or birdbath. During Wisconsin winters, heated birdbaths are a great option for a year-round water source.

Evergreens are great plants to provide sheltered nesting and roosting sites. Leave a brush pile over the winter to provide additional shelter from local predators.

By providing a few key elements it's easy to transform the backyard into a fantastic habitat for birds.

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Soaker Hoses

by Horticulturist Wendy Gasch

Water is an essential part of gardening. Whether it falls from the sky or flows out of a hose, plants cannot live without water. In order to help conserve this precious resource and enjoy our gardens at the same time, it's important to water more efficiently.

One way to improve your watering efficiency is to use soaker hoses. Soaker hoses, available at most garden centers, work by slowly releasing small amounts of water over a longer period of time. By releasing water slowly, more water can soak deeper into the soil and less is wasted through evaporation and run off.

Soaker hoses look like black gardening hoses, the difference being they're permeated with tiny holes. They come in a variety of sizes so they're easily adapted to most garden spaces. Once they're set up in the garden, they can be left in place for a number of years with some simple annual maintenance.

Soaker hoses can be used on trees and shrubs, in perennial and annual beds, even in vegetable gardens. They can be connected directly to the hose bib on the side of the house or fitted with a piece of plastic tubing or gardening hose to reduce the amount of water wasted between the house and flower beds. Once placed in the garden, cover the soaker hoses with mulch to hide them from view and protect them from damaging sunlight.

Make sure to flush your soaker hoses at the beginning and end of every season to remove any sediment that may have accumulated. Used correctly, soaker hoses can promote deep, healthy root systems. By using water more efficiently and effectively, both plants and people benefit.

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Rain Gardens

by Mark Shimasaki, Olbrich Horticulturist

Here in Wisconsin, we're fortunate to live in a water-rich part of the country. However, we've probably all heard news reports of declining levels of underground fresh water aquifers around the state. Besides conserving water, we can help by directing rainwater from hard surfaces, such as house roofs, into areas where it can infiltrate the ground and recharge these aquifers. As homeowners and gardeners, rain gardens can be our contribution to preserving this valuable natural resource.

A rain garden is simply a shallow depression in the yard planted with hardy perennials. The run-off from roof down spouts is channeled into the depression, where it slowly filters into the ground rather than running off into the storm sewer system. The depressions are generally less than six inches deep and easy to dig, especially since the removed soil can be used to form a low berm around the perimeter of the depression.

Depending on the soil type and sun exposure of the site, a diverse mixture of native perennial wildflowers and grasses is then planted and should flourish with minimal care.

Information on determining the size and placement of the rain garden as well as appropriate plants for the site can be found in books and on the web.

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Earth-friendly lawn mowers

by Samantha Egan, Olbrich Horticulturist

If it's time to get a new lawn mower, there are now some environmentally-friendly alternatives to the gas-powered mower. You can buy either corded or cordless electric lawn mowers or an old-fashioned reel-type push mower. Currently, the reel-type mowers make up the fastest growing sector of the lawn mower market!

Many of us don't realize how much pollution the small engines of our lawn mowers and other gas-powered landscape equipment produce. In fact, mowing your lawn for one hour with a gas-powered lawn mower can produce more air pollution than driving a new car from Madison to Chicago!

One of the most noticeable features of the electric mowers is how quiet they are. With one of these new electric mowers you can mow your lawn on a Sunday morning and not disturb any of your neighbors!

As well as being quiet, these mowers are inexpensive to operate and maintain. On average, they cost about \$5 to \$10 per year for electricity and require no expensive oil changes or engine tune-ups. They also start with the push of a button instead of yanking a stubborn starter cord.

There are a few drawbacks to electric mowers. They're best for small lawns less than 15,000 square feet. These mowers can also be slightly more expensive up front than your typical gas-powered mower. However, the decrease in operation and maintenance costs will quickly make up for the difference in the initial cost.

So, trade in your old gas-powered mower for a new manual or electric lawn mower. You'll be helping the environment as well as saving your time and money!

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