

# Plant Wise

IOWA STATE UNIVERSITY  
University Extension

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## Choosing the Perfect Christmas Tree

By Richard Jauron  
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The Christmas tree is a holiday tradition which began in Germany in the seventeenth century. German immigrants and Hessian soldiers hired by the British to fight the colonists during the American Revolution brought the tradition to the United States. Today, most Americans decorate their home with an artificial, live, or cut tree for the holiday season. Good quality artificial trees are time-saving, clean, safe, and attractive. Yet, for many individuals (myself included) even the best quality artificial tree lacks the beauty, charm, and romance of a live or cut tree.

Container grown or balled and burlapped live trees can be used as Christmas trees during the holiday season and are then planted outdoors in the home landscape. Unfortunately, planting evergreen trees in mid-winter is often difficult because of our harsh winter weather. Many winter-planted evergreens die. Good site preparation, plant selection and care of the live tree can dramatically improve its chances for survival. Small, healthy evergreens are the best choice for live Christmas trees. Small trees are less expensive, easier to handle, and are more likely to survive. Prepare the planting site for the tree before the ground freezes in the fall. Store the soil in a warm place and then spread straw and a tarp over the planting area

to keep the soil from freezing. Once purchased, store the tree in a sheltered, cool location, such as a garage, shed, or porch. Make sure the soil ball is kept moist but does not freeze. The maximum stay indoors for an evergreen should be 7 to 10 days. Indoors, place the tree in a cool location and keep the soil ball moist. Shortly after Christmas, remove the tree from the house and place it in a cool, protected location. (Don't place the tree directly outdoors. A sudden, large drop in temperatures could injure the tree.) Plant the tree outdoors on a mild winter day.

A few decisions should be made before going out to buy a cut tree. Decide where you are going to place the tree. Also, decide on the type (Scotch pine, white pine, Fraser fir, Douglas fir, white spruce, etc.) and the size (height and width) of the tree you want.

Cut Christmas trees may be purchased from cut-your-own tree farms or as cut trees in a commercial lot. Trees cut and purchased at cut-your-own tree farms are obviously fresh. Carefully check trees at a commercial tree lot to insure the freshness of previously cut trees. Freshness can be determined with a few simple tests. Gently run your hand over a branch. The needles on a fresh tree will be pliable. Those on a dry tree will be brittle. Another test is to lift the tree by the trunk and lightly bounce the butt on the ground. Heavy needle drop indicates a dry tree. A fresh tree will drop only a few needles.

When looking for a tree, select one that has a straight trunk. It will be much easier to set it upright in the stand. Check the diameter of the trunk to make sure it will fit in your stand. A tree with a bare side may be fine if you intend to place it in a corner or against a wall.

Once you get the tree home, place it in a cool, sheltered location. The storage site should protect the tree from sun and wind. Put the butt of the tree in a bucket of water. Saw off 1 inch of wood at the bottom of the trunk before bringing the tree indoors. A fresh cut helps facilitate water uptake. Place and secure the tree in its stand and fill the reservoir with water. Check the water supply at least twice a day and add water as needed. Promptly remove the tree when it begins to dry and drop needles.

## Mistletoe: a Kiss of Death?

By Christine Engelbrecht  
Plant and Insect Diagnostic Clinic  
Iowa State University



Many plants help usher in the good cheer of the holiday season. Christmas trees, holly, poinsettias. But one plant, mistletoe, is not as harmless as it appears. Although people view mistletoe as a symbol of romance and peace, to a tree, mistletoe is a serious threat.

Mistletoe is a parasitic plant, which means that it gets its water and/or nutrients from another living organism. Most mistletoes have green leaves and stems and are able to make food with the power of sunlight, but they do not have roots to take up water and mineral nutrients. Instead, mistletoes have root-like projections called haustoria. Rather than living in the soil, the haustoria penetrate the water-conducting tissues of a living tree, and then the mistletoe is able to steal water and minerals from the host tree. Because of this, mistletoe is sometimes called "vampire plant".

Mistletoe can grow on hundreds of kinds of trees, both deciduous and evergreen. An infected tree may be significantly weakened, and may even die if many mistletoes infect it simultaneously. During dry conditions, most trees adjust so that they use less water; but mistletoes make no such adjustments, so they are especially stressful to trees during droughts.

Luckily, only one species of mistletoe grows in Iowa, and only in the southern counties, on walnut trees. Many more species of mistletoe live in the southern US, where it is a serious problem for foresters. There are about 1500 species of mistletoe worldwide, but the one we usually buy for a holiday decoration is *Phoradendron flavescens*, a leafy mistletoe with waxy, white berries. Because those berries are poisonous, they are often replaced with fake berries before sale. Most holiday mistletoe is harvested in Oklahoma and Texas, where they are naturally abundant on a variety of trees. The next time you steal a kiss under the mistletoe remember

that the harmless-looking plant is not as friendly as it may appear.

## Brown, Marmorated Stinkbug – A New Invasive Species

By Laura Jesse  
Plant / Insect Diagnostic Clinic  
Iowa State University



The brown marmorated stink bug (BMSB), *Halyomorpha halys* is an introduced, invasive insect new to North America. It was first identified in fall 2001 in Allentown, PA; though unconfirmed reports go back as far as 1996. The accidental introduction was possibly via shipping containers from Asia. The BMSB has been reported in several mid-Atlantic states, Oregon and California. To date, no one has reported this insect in Iowa. The closest documented infestations are in Chicago and Kentucky.

We are anxious to know when this insect arrives in Iowa. If you find a stink bug that emits a bad odor or is unfamiliar to you in your home, please contact the [ISU Plant and Insect Diagnostic Clinic](#) or your [local Extension office](#).

BMSB feeds on sap from a long list of host plants including many fruits, vegetables, field crops, shade trees and other woody ornamentals. In addition to the considerable damage done to crops, gardens and landscapes, the adults have the disturbing habit of migrating to house and other buildings in the fall to overwinter. Homeowners on the east coast describe the stink bug invasion as worse than boxelder bugs and lady beetles, combined!

Description (from [Rutgers University](#)): The brown marmorated stink bug has a "shield" shaped body that is characteristic of all stink bugs. The adults are approximately 17 mm (5/8 inch) long with a mottled brownish grey color. ["Marmorated" means marbled, a description of the mottled color on the back.] The next to last (4th) antennal segment has a white band and several of the abdominal segments protrude from beneath the wings and are alternatively banded with black and white. The underside is white, sometimes with grey or black markings, and the legs are brown with faint white banding.

Please stay in touch and let us know of any suspicious specimens.

## Terrariums are Tops

By Aaron Steil  
Reiman Gardens  
Iowa State University



With cool weather setting in and Old Man Winter coming upon us, a tropical paradise will help brighten an indoor room and combat the winter blues. One way to create a tropical oasis in the middle of winter is to build a terrarium. Terrariums are closed glass or transparent plastic containers used to create a 'mini environment' for plants. The principle behind a terrarium is simple. The water from the soil is taken up into the plant as it grows. The water is then released through the leaves via transpiration. This water condenses on the glass and runs back to the soil where it can be used again. Because this mini water cycle occurs inside the sealed terrarium, the plants can go for months without watering. It also creates a jungle-like atmosphere of high humidity, warm temperatures and no drafts, which are perfect conditions for many of the tropic-native houseplants common today.

### Rooted in the Victorian Age

The history of terrariums is rooted in the Victorian age. They were used in parlors to house many delicate and exotic plants. Despite the fact terrariums have been around for many years, they have never returned to the popularity of 1850's. Constructing a terrarium is easy, inexpensive and can be accomplished in a snowy afternoon. Suitable containers can be found in most homes. Their care is minimal since they can go for months without water under the proper conditions. In addition, a wide variety of plants can be grown that would normally fail miserably in the dry, drafty environment of the average home.

### Getting Started

Assembling and planting a terrarium is easy. Start with a clean, dry container. Terrariums or glass cases can be purchased at many stores, but an old 10-gallon fish tank, a large glass jar, or a large glass bowl with a beveled glass lid could work just as well. Since terrariums don't have drainage holes, place a 2-inch layer of gravel, pebbles or perlite on the bottom of the container to insure good drainage. Next add a one-fourth inch

layer of charcoal. The charcoal aids drainage and helps control soil odors. Finally, add one to four inches of light, well-drained potting soil. As you are adding the soil, create hills and valleys to add interest.

### Choosing the Perfect Plants

The next step is selecting your plants. Plants with slow growth rates, tolerance of high humidity and small leaves make good candidates for terrariums. A general rule of thumb when designing a terrarium is to choose an upright growing plant, a trailing plant and a plant of intermediate size. A terrarium is not the place for philodendron and spider plant. Instead, use this special environment to grow plants that are exotic and could not live on your windowsill, such as net plant, creeping moss and ferns. Flowering plants such as miniature African violets and carnivorous plants such as pitcher plants and venus fly traps make beautiful and fun additions to terrariums. In fact, the humid environment is good for any houseplant except cacti and succulents, which suffer in a humid environment.

### Planting and Finishing Touches

To plant a terrarium, simply remove the plant from the pot, gently shake off excess soil and place in the soil inside the terrarium. Rocks and stones make good additions to your miniature landscape. Small shells, small figures, toy dinosaurs or other similar items can also be added for a touch of fun. The options are limited only by your imagination; just remember not to incorporate wood. Sometimes, driftwood or similar wood products could introduce unwanted insects and fungi, which will thrive in a terrarium's humid environment.

### Watering and Care

To finish your terrarium, moisten the soil by misting heavily or using a rubber bulb sprinkler. Soil stuck to the glass from planting can be rinsed off by lightly running water down the glass. After watering, cover with a piece of beveled glass or saran wrap. Place the terrarium in medium to bright, indirect sunlight. An east or north window would be a good choice. Fertilizer should not be used, because it will encourage growth and earlier crowding of the plants. If excessive condensation builds up on the glass, uncover the terrarium until some of the condensation evaporates; then replace the cover. Enjoy!

## Plants for Terrariums

### Upright / Tall Plants

Sweet Flag	<i>Acorus gramineus</i>	Bird's Nest Fern	<i>Asplenium nidus</i>
Holly Fern	<i>Cyrtomium falcatum</i>	Peacock Plant	<i>Calathea</i> sp.
Dracaena	<i>Dracaena</i> sp.		

### Mid-size Plants

Net Plant	<i>Fittonia</i> sp.	Peperomia	<i>Peperomia</i> sp.
Flame Violet	<i>Episcia</i> sp.	Begonia	<i>Begonia</i> sp.
Cloak Fern	<i>Didymochlaena truncatula</i>	Maidenhair Fern	<i>Adiantum raddianum</i>
Table Fern	<i>Pteris cretica</i>	Rabbit's Foot Fern	<i>Davallia canariensis</i>
Pitcher Plant	<i>Sarracenia</i> sp.	Mini African Violet	<i>Saintpaulia</i> sp.
Sundew	<i>Drosera</i> sp.	Venus Fly Trap	<i>Dionaea</i> sp.

Prayer Plant	<i>Maranta</i> sp.
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### Low / Trailing Plants

Earth Star	<i>Cryptanthus</i> sp.	Strawberry Vine	<i>Saxifraga sarmantosa</i>
Creeping Moss	<i>Saleginella</i> sp.	Creeping Fig	<i>Ficus pumila</i>
Baby's Tears	<i>Helxine soleirolii</i>	Aluminum Plant	<i>Pilea</i> sp.

## Upcoming Horticulture Events of Interest:

### **55<sup>th</sup> Annual ISU Shade Tree Short Course and Iowa Nursery & Landscape Assoc. Conference and Trade Show**

**Date:** February 23-25, 2011

**Location:** Scheman Building-ISU Campus

Iowa State's annual Shade Tree Short Course has teamed up with the INLA again in 2011! The program highlights the best of both worlds incorporating INLA's long-standing trade show into the traditional Shade Tree Short Course educational sessions.

*Dates set for the following 2011 shows!*

### **Siouxland Garden Show**

**Date:** March 18-19, 2011

### **Atlantic Gardening Seminar**

**Date:** March 19, 2011

### **West Pottawattamie Gardening Conference**

**Date:** March 26, 2011

## Tiny Spider Mites Can Hurt Big Plants

By Donald Lewis  
Extension Entomologist  
Iowa State University

*Tiny spider mites often afflict houseplants during winter.*



Tropical plants that are forced to survive through a long, dim and dry winter inside the typical Iowa home or office have two strikes against them from the start. Insects and mites then become another challenge for indoor plants, and if left unchecked, may even kill heavily-infested plants. The big three pest problems on indoor houseplants are scale insects, mealybugs and spider mites. All feed on plant sap, causing a gradual weakening or decline in the plant health.

Spider mites are tiny eight-legged arthropods related to the spiders and ticks. Like the spiders and the ticks, mites have no antennae and no wings. They get from place to place by crawling rather than flying.

Spider mites feed externally on the foliage of nearly all houseplants, though some, such as ivy and Norfolk Island pine seem particularly susceptible. Spider mites use a short, sharp beak to puncture the plant tissue and feed on the liquid within the cells. The piercing-sucking action and sap loss cause unique symptoms. In light infestations the foliage will appear to be speckled with very tiny tan spots. Heavy mite infestations can turn the foliage to greenish-yellow and eventually tan or brown. Heavily infested plants often drop their leaves. Examination of infested foliage may reveal very fine webbing produced by the mites.

The first step in spider mite control on houseplants is to inspect regularly, frequently and thoroughly for pests. Spider mites are tiny and may be difficult to see with the naked eye on the plant. A convenient detection technique is to hold a sheet of white paper under a stem and then shake or tap the stem against the paper. The mites, if present, will show up as tiny, slow-moving specks on the paper. Examine leaf undersides for crawling mites or their eggs that will look like small shiny spheres. The common houseplant spider mite is the twospotted spider mite, a yellowish green mite named for the two large dark spots, one on each side of the abdomen.

If mites are present, the next step is to determine the extent of the damage and the value of the plant. It is usually easier, quicker and more convenient to discard a small plant that is heavily infested than it is to return it to good health and appearance. If possible, prune heavily infested portions of larger plants before attempting mite control. Washing or syringing infested plant foliage may reduce light mite populations. Move plants outdoors or

into the bathtub or shower and then use a forceful spray of water to dislodge mites from an infested plant.

Several miticides (pesticides that control mites) are available for houseplants. Check with your local nursery or garden center. Sprays available to homeowners usually contain insecticidal soap, horticulture oil, or pyrethrin. Read and follow all the label instructions. Thorough spraying, especially to the undersides of leaves is important for control. These sprays have no residual activity and only control mites and insects that are contacted directly and repeated applications will be needed. Keep plants watered and fertilized to promote health and vigor and to reduce the impact of mite feeding.

In years past we suggested a homemade dishwashing detergent spray for plant pest control. No more. Newer detergents that boast of grease cutters, higher concentration, or other ingredients for better cleaning action may be harmful to plants. In fact some detergent products are sold as herbicides because certain components of the detergent can kill or disrupt plant tissue. Soaps and detergents can be effective miticides, but to be safe use insecticidal soap products only according to label directions.

## Ask the ISU Extension Gardening Expert

### **I still haven't gotten my tulip bulbs planted. Should I plant them now or wait until spring?**

The tulip bulbs should be planted as soon as possible. Tulips and other spring-flowering bulbs can be planted as late as December if the soil is not frozen. After planting, cover the area with several inches of straw, pine needles or leaves. Mulching will give the bulbs additional time to root before the ground freezes.

Tulips and other spring-flowering bulbs can be stored for several weeks. However, long term storage of spring-flowering bulbs is difficult. By early spring, the tulip bulbs are likely to have rotted or shriveled and died.

### **How do I prevent rabbits from damaging trees and shrubs in winter?**

The most effective way to prevent rabbit damage to trees and shrubs in the home landscape is to place chicken wire fencing or hardware cloth around vulnerable plants. To adequately protect plants, the fencing material needs to be high enough that rabbits won't be able to climb or reach over the fence after a heavy snow. In most cases, a fence that stands 24 to 36 inches tall should be sufficient. To prevent rabbits from crawling underneath the fencing, bury the bottom two or three inches below the ground or pin the fencing to the soil with u-shaped anchor pins. Young trees also can be protected by placing white spiral tree guards around their

trunks. Since the weather in late fall in Iowa is unpredictable, it's best to have the protective materials in place by early to mid-November.

After a heavy snow, check protected plants to make sure rabbits aren't able to reach or climb over the fencing or tree guards. If necessary, remove some of the snow to keep rabbits from reaching the trees or shrubs.

### **A recently purchased schefflera has begun to drop leaves. Why?**

Most houseplants, including the schefflera, experience stress when moved from one location to another. The dramatic changes to a houseplant's environment as it is transported from the greenhouse to the home can be quite stressful. Leaf drop occurs in response to this stress. Leaf drop may continue for several weeks, as it often takes houseplants four to eight weeks to adjust to their new environment.

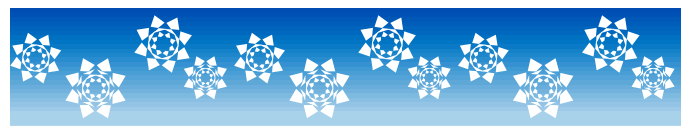
The best way to keep leaf loss to a minimum is to place the houseplant in a favorable location in the home and give the plant good, consistent care. The schefflera should be placed in a location that receives bright, indirect light. (Do not place the plant in direct sun.) Average indoor temperatures and humidity levels are fine. Allow the soil to dry moderately between waterings.

### **Why doesn't a pile of leaves decompose quickly?**

It's best to have a mix of various organic materials in a compost pile. Dry leaves are high in carbon. The microbes that do the decomposing require a certain amount of nitrogen for their own metabolism and growth. Without a nitrogen source, decomposition will be slow. To hasten decomposition, mix grass clippings in with the leaves. Grass clippings are high in nitrogen. Shredding the leaves will also speed up the composting process.

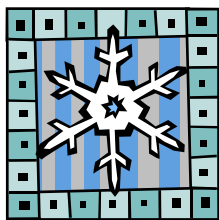
### **What would be a good location for African violets in the home?**

Place African violets in a location that receives bright, indirect light. A site near an east or north window is often a good location. Do not place African violets in direct sun. If a suitable window isn't available, place African violets under a fluorescent light fixture containing two 40-watt fluorescent tubes. Suspend the fixture 12 inches above the plants and leave the lights on for 12 to 15 hours per day. The ideal temperature range for African violets is 60 to 80 degrees Fahrenheit. In winter, keep African violets away from cold drafts and heat sources.



*Extension programs are available to all without regard to race, color, national origin, religion, sex, or disability.*

# DECEMBER/JANUARY GARDENING TO DO LIST



- Finish winter protection chores that did not get done last month.
- Do not use softened water on houseplants as the salts are damaging to them.
- Store leftover garden chemicals where they will stay dry, unfrozen, and out of reach of children and pets.
- Prune off a few branches of Red Twig Dogwood, Juniper, Winterberry, Arborvitae, Yew, or Boxwood. Add these to your indoor or outdoor holiday décor.
- Place poinsettias in a bright location away from drafts.
- Check any holiday plants you purchase or receive for pests to prevent infestation of your other houseplants.
- Wipe dust off glossy leaves of houseplants with a damp sponge or cloth. Use a soft cosmetic brush to dust off hairy leaves. A build-up of dust reduces the plant's ability to take up light and carbon dioxide.
- Keep monitoring stored fruits and vegetables. Remove any that have rotted.
- Check stored bulbs for sign of rot and disease. Discard infested bulbs immediately.
- Keep bird feeders filled. Remember to periodically clean feeders and water containers.
- Cut branches from your discarded Christmas tree and lay over perennials that are susceptible to winter injury.
- Perennials can be started indoors much like annuals. Some seeds need to be stratified (a cold treatment) for weeks, soaked in tepid water overnight, or scarified (the seed coat scratched) prior to planting. Check label directions for seed treatment, timing, and planting directions.

- Do not shake or brush *frozen* snow off shrubs. This can cause more damage than if the snow is left in place.
- Rotate houseplants to prevent one-sided growth.
- Inspect young trees and shrubs for rabbit damage. Replace or repair protective coverings.
- Gather and organize seed starting equipment and supplies. Find an area where you can place flats near a window or under artificial lights. It won't be long until the "Garden Catalog Season" is upon us!

## Resources for Horticulture information

ISU's Hortline at (515) 294-3108

(Monday-Friday, 10 a.m.-noon, 1-4:30 p.m)

## Iowa State University Publications

RG 316	Poinsettia Care (free)
RG 320	Growing and Over-wintering Garden Geraniums(free))
RG 401	Ornamental Grasses with Winter Interest
RG 328	Growing Amaryllis
RG 308	Growing Holiday Cacti
RG 322	African Violets
PM 713	Indoor Plants (\$5.00)

### Horticulture Publications on-line

<https://www.extension.iastate.edu/store/ListCategories>

*May you have the gladness of Christmas  
which is hope; The spirit of Christmas which  
is peace; The heart of Christmas which is love.*

~Ada V. Hendricks

Merry Christmas from your county Extension Staff:

*Sherry Ford*, Program Director

*Stephanie Bowden*, Youth Coordinator

*Susan Perkins*, Office Assistant

*Denise Fikes*, Horticulture Assistant