

Plant Wise

IOWA STATE UNIVERSITY
Extension and Outreach

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Staying Alive 'til Spring: How Insects Do It

By Donald Lewis
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We were lucky in southwest Iowa this year to have had a decently-long autumn to enjoy. My measure of the length of the season is how long the katydids continue to sing in the treetops at night in my neighborhood. This year I heard the last katydid of the year on Nov. 2. He was a lonely, cold, and pathetically-slow old guy, but there he was, in a tall tree on the golf course, rasping out his zit-zit-zit song one last time hoping there was still a female within hearing distance. I don't know if she answered his call or not, but I do know I admired his tenacity and his effort.

But where is he now that the trees are bare of leaves and temperatures have fallen below freezing? What has become of the millions of millipedes, the gazillions of Japanese beetles and the thousands of tiger swallowtails that were here just a little while ago?

No doubt about it. Winter can be a tough time to be alive in Iowa. Animals and plants that live and prosper here do so by having some "trick" to escape periods of inhospitable weather, and winter can certainly be inhospitable, especially for cold-blooded animals such as insects, snakes, frogs and turtles. For these animals the body temperature varies with the environmental temperature. When it is hot, insects are hot. When it is cold, insects are cold. And when it is very cold, insects are dormant.

Dormancy is an inactive state when insects stop moving, stop eating and stop growing until better weather returns. As a broad, general rule, insects are dormant at temperatures lower than 45 degrees F.

But not all stages of all insects are capable of dormancy, or have the ability to survive the long, freezing-cold Iowa winter. Different insects spend the winter in different life stages. Most insects have four life stages, egg, larva, pupa and adult. Some, like the katydids and their relatives the crickets and grasshoppers, have only three stages, egg, nymph and adult.

Some insects hibernate through the winter in the adult stage. Certain butterflies and moths, the baldfaced hornets and the squash bugs hunker down in a protected location and wait for warm temperatures to return before they fulfill their biological destiny and produce the next generation of their species. Some insects get the reproducing done in late summer and leave the eggs to survive the winter to hatch next year and start the life cycle over. The eastern tent caterpillars that build silken webs in crabapple and plum trees will be here bright and early next spring because the female moths have already laid their eggs on the caterpillar host trees. And the eggs of the bagworm common on conifer trees in the southern half of the state are in the pods of the previous generation left hanging on the trees.



Those Japanese beetles that were eating the foliage and flowers from numerous plants in your garden in July have all died. But their offspring, the white grubs, are now several inches deep in the soil where they will survive the winter and finish development to the adult stage next June.

Finally, some insects make it to the pupal stage in the fall and then wait till spring to complete the metamorphosis to the adult stage. The cecropia moth, the black swallowtail and other lepidopterans are in the garden, in the cocoon or chrysalis, withstanding below freezing temperatures, waiting for spring.

As you might guess, insects that survive the winter need a mechanism to protect against freezing. Those that make it are protected by antifreeze-like compounds that keep ice from forming in the body. Iowa insects are better equipped for this frigid time of year than are we!

So what about the lonely katydid? By now he has succumbed to freezing or old age, whichever came first, but before he and his mates died the female had glued her eggs to tree stems where they will survive until next summer. After they hatch it will take another six to eight weeks for the nymphs to grow and for the adult males to start singing in the tree tops again. I can't wait.



Pick Your Houseplants

By Cindy Haynes
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Most ferns, including this foxtail fern, prefer a moist environment and indirect light.

Winter is the best time to appreciate houseplants. As the snow is falling outside, gardeners live indoors nurturing their houseplants. New gardeners, however, often find houseplants overwhelming. Since there are thousands of different types of houseplants to choose from – how do you choose which ones work best for you? Follow the same process used for selecting outdoor plants.

Site selection

The key to plant success is placement in an appropriate site. Outside, hostas perform best in some shade and daylilies prefer mostly sun. Houseplants are the same. The key difference is that the indoor “site” often refers to a particular window or exposure. Plants like ferns, begonias and African violets prefer indirect light, while cacti and succulents (aloe, jade, Old-man cactus, etc.) prefer direct light. Indirect light can be found in north-facing and some east-facing windows, whereas south-facing and west-facing windows have more direct light.

Other site characteristics to consider are temperature and humidity. Is the site cold during the winter or hot because it is near a heating register? How humid is the area during the winter or summer? Most houseplants are native to the tropics, so they prefer to be away from drafty windows or doors. In fact, many houseplants can be easily damaged by temperatures below 45-50 F. Most houseplants also prefer moderate to high levels of humidity. Since Iowa homes are not typically humid in the winter, some special houseplants benefit from placement on humidity trays (pebble trays) or near a humidifier.

Maintenance

Another important consideration when selecting a houseplant is knowing how much maintenance it will take to keep the plant thriving. For example, in my home the cacti and succulents are performing the best. This is because they are placed in a southern window with plenty of direct light daily. These plants also work best in my home, because I tend to forget to water them regularly. Knowing that I have a tendency to underwater my plants, I have selected plants that will tolerate – even thrive with these site and maintenance conditions.

Making the Match

Which plants match your home and maintenance conditions – you might ask? This is where you get to do a little research. There are several wonderful books available that will tell you which houseplants like which conditions. Gardening books are filled with beautiful, colorful pictures. So even if you don't know (or couldn't begin to pronounce) the scientific name, you can find a few plants that you like that meet the conditions of your home.

Show these pictures to someone at a local garden center or florist and you are well on your way to filling your home with plants. If they don't have or can't get what you are looking for – they can easily suggest some alternatives. If this is still too overwhelming to start, check out the list of some of the most commonly available indoor plants. Many of these are easy to find at garden centers or florists.

Name	Light	Moisture	Comments
Aloe	Direct	dry	Do not over water
Snake Plant	Direct to Indirect	dry	Tolerant of many conditions
Airplane Plant	Indirect	moderate	Will produce off-shoots when established
African Violet	Indirect	moderate	Will flower when given enough light
Jade	Direct	dry	Do not over water
Ferns (many species)	Indirect	moist	Place on pebble tray in winter to raise humidity
Begonias	Indirect	moist	Many different foliage types
Croton	Direct	moderate	Brightly colored leaves
Moth Orchid	Indirect	moist	Place on pebble tray in winter to raise humidity
Ponytail Palm	Direct	dry	Bulbous base stores water
Rubber Tree	Indirect	moderate	Can become a small indoor tree
Weeping Fig	Direct or Indirect	moderate	Can become a small indoor tree
Philodendron	Indirect	moderate	Durable ivy or vining type plant
Peace Lily	Indirect	moderate	Will flower when given enough light
Schefflera	Indirect	moderate	Both dwarf and large types available
Corn Plant	Indirect	moderate to dry	Can become a small indoor tree
Cactus (many species)	Direct	dry	Many have beautiful and colorful flowers
Dumb cane	Indirect	moderate	Potentially poisonous plant – keep away from children and pets

Direct light usually means at least some bright light – often from a west or south-facing window. Plants that prefer indirect light will be more successful in a north or east window. For moisture, plants that like it dry will need to dry out considerably before watering again. For plants that like it moist, letting the top of the soil dry out too much could result in wilting or death. Always check the top of the soil to determine when a plant needs water.

Farming After the Flood Webinar



“Farming after the Flood – Farmer Perspectives and Agency Resources” will be the focus of a Dec. 14, multi-state webinar for those affected by the 2011 Missouri River flood.

The webinar will feature two producers in the process of repairing their farmland and representatives from key USDA agencies and the U.S. Corps of Engineers who are working with producers whose farmland sustained flood damage.

“Many farmers and landowners may be facing several inches of sediment and sand, scour holes and ponds, and wondering what resources are available to help them proactively address these problems and prepare for the 2012 crop season,” said Craig Derickson, Nebraska State Conservationist with the USDA Natural Resources and Conservation Service. “We have assembled a lot of important information to help farmers affected by the 2011 flood move forward.”

The webinar will be from 1:30 to 4:00 Wednesday, Dec. 14, at more than 20 sites in Iowa, Kansas, Missouri, Nebraska and South Dakota. Second in a series, it is being sponsored by University of Nebraska-Lincoln Extension and Iowa State University Extension and Outreach in cooperation with the USDA Natural Resources Conservation Service (NRCS), Farm Service Agency (FSA), Risk Management Agency (RMA) and the U.S. Army Corps of Engineers.

Presentations will include a farmer panel and information from speakers on government resources and programs, points to consider when planning for the 2012 cropping

season, and how to remain in compliance with farm bill programs while bringing flooded acres back to productivity. The sessions will be followed by a question and answer period. In addition, fact sheets and resources for further information will be distributed to participants at each site.

For farmers with crop insurance and risk management questions, two representatives from the USDA RMA will discuss current programs.

The webinar will include:

- A farmer panel with Scott Olson of Tekamah, Neb., and Lyle McIntosh of Missouri Valley, Iowa, on how they are repairing fields physically and biologically
- An overview of flood recovery programs, including levee repair, land clearing and soil restoration assistance available from NRCS, FSA and the U.S. Army Corps of Engineers
- Long-term land retirement programs available from NRCS, FSA and the U.S. Army Corps of Engineers
- Flooding impacts on crop insurance
- How to remain in compliance with Farm Bill programs
- Additional resources

“This information should help producers make the best choices for their land,” said John Wilson, extension educator with the University of Nebraska–Lincoln working on flood recovery.

Iowa Flood Recovery Webinar Sites:

- **Council Bluffs** at the West Pottawattamie Extension Office, 3501 Harry Langdon Blvd., Ste. 100, contact Cheri Boyer, 712-366-7070, cmboyer@iastate.edu
- **Malvern** at the Mills County Extension Office, 415 Main St., contact Sherry Ford, 712-624-8616, slford@iastate.edu

For more information on this webinar and additional host sites as they become available, as well as links to archived segments and fact sheets from the first webinar, visit: flood.unl.edu/crops, a University of Nebraska-Lincoln Extension website, and www.extension.iastate.edu/topic/recovering-disasters, an Iowa State University Extension and Outreach website.



Upcoming Horticulture Events of Interest:

56th Annual ISU Shade Tree Short Course and Iowa Nursery & Landscape Assoc. Conference and Trade Show

Date: February 21-23, 2012

Location: Scheman Building-ISU Campus

Dates set for the following 2012 shows!

Siouxland Garden Show

Date: March 16-17, 2012

West Pottawattamie Gardening Conference

Date: March 31, 2012

Location: Senior Center, 714 S. Main St., Co. Bluffs

Time: 8:30 am - 4:00 pm

Cost: \$30 (includes lunch)

Kelly Norris will be the keynote speaker!

Ask the ISU Extension Gardening Expert

Can hollies be successfully grown in Iowa?



American holly (*Ilex opaca*) and English holly (*Ilex aquifolium*) are prized for their glossy, green leaves and brightly colored fruit. Sprigs of both hollies are often used in wreaths, centerpieces and other Christmas decorations. Unfortunately, American and English hollies are not reliably hardy in Iowa. However, winterberry (*Ilex verticillata*) and Meserve

hybrid hollies (*Ilex x meserveae*) can be successfully grown in the state.

Hollies are dioecious. Dioecious plant species produce male and female flowers on separate plants. Only female holly plants produce the red, berry-like fruit. However, a male plant is required for pollination and fruit set.

While most hollies are evergreen, winterberry is deciduous (loses all of its leaves in fall). Winterberry grows 6 to 10 feet tall. The fruit on female plants turn

bright red in fall and persist into winter. (Birds usually devour the fruit by mid-winter.) Excellent fruiting varieties include 'Sparkleberry,' 'Winter Red,' 'Afterglow' and 'Red Sprite.' 'Jim Dandy' is a good pollinator for 'Afterglow' and 'Red Sprite.' 'Southern Gentleman' pollinates 'Winter Red' and 'Sparkleberry.' Winterberry performs best in moist, acidic soils. Plants can be grown in partial shade to full sun. Best fruiting occurs in those areas that receive at least six hours of sun.

Meserve hybrid hollies are evergreens. 'Blue Prince,' 'Blue Princess,' 'Blue Boy' and 'Blue Girl' have dark, bluish green foliage and are often referred to as blue hollies. The female varieties have colorful red fruit. Other attractive Meserve hybrids include China Boy® and China Girl®. Meserve hollies are variable in height. Most varieties grow 5 to 10 feet tall. They are hardy to -20 F (USDA Hardiness Zone 5). In Iowa, Meserve hollies perform best in the southern half of the state. Meserve hollies are susceptible to desiccation injury from the sun and dry winds in winter. When selecting a planting site, choose a protected location, such as on the east side of a building.

What is mistletoe?

Mistletoe is a semi-parasitic plant with leathery, evergreen leaves and small, white berries. Mistletoe plants manufacture their own food, but obtain water and mineral nutrients from a host plant. Host plants include numerous deciduous and evergreen trees. Mistletoe obtains water and nutrients via root-like haustoria that grow into the host plant's water conducting tissue. Mistletoe berries are readily eaten by birds. The birds digest the pulp of the berries and excrete the seeds. The sticky seeds stick to the branches of trees. At germination, the mistletoe seedling develops haustoria that grow through the bark of the tree and into its water conducting tissue.

American mistletoe (*Phoradendron leucarpum*) can be found growing in deciduous trees from New Jersey and southern Indiana southward to Florida and Texas. (*Phoradendron* is derived from Greek and literally means "thief of the tree.") It is the state floral emblem of Oklahoma. Mistletoe sold during the holiday season is gathered in the wild. Most mistletoe is harvested in Oklahoma and Texas.

Traditions involving mistletoe date back to ancient times. Druids believed that mistletoe could bestow health and good luck. Welsh farmers associated mistletoe with fertility. A good mistletoe crop foretold a good crop the following season. Mistletoe was also thought to influence human fertility and was prescribed to individuals who had problems bearing children. It has been used in medicine, as treatment for pleurisy, gout, epilepsy, rabies and poisoning. In addition, mistletoe played a role in a superstition concerning marriage. It was believed that kissing under the mistletoe increased the possibility

of marriage in the upcoming year. Today, kissing under the mistletoe is a sign of goodwill, friendship or love.

Mistletoe should be kept out of the reach of small children and family pets, as the berries are poisonous.

Can you give me a brief history of the poinsettia?

The poinsettia (*Euphorbia pulcherrima*) is native to Mexico. In Mexico, the poinsettia is a large shrub or small tree that may reach a height of 10 to 15 feet.

Poinsettias were cultivated by the Aztecs, who called the plant Cuetlaxochitl. They used the colorful bracts to make a reddish purple dye. The poinsettia's milky sap was used to treat fevers.

After the Spanish conquest and the introduction of Christianity, poinsettias began to be used in Christian ceremonies. Franciscan priests used the poinsettia in their nativity processions.

Poinsettias were first introduced into the United States by Joel Roberts Poinsett, the United States Minister (ambassador) to Mexico from 1825 to 1829. Poinsett had plants sent to his home in Greenville, S.C. He then distributed plants to botanical gardens and horticultural friends, including John Bartram of Philadelphia.

The popularity of the poinsettia as a holiday plant grew rapidly in the latter half of the 20th century with the development of shorter, free-branching, longer-lived cultivars. Plant breeders also expanded the color range of the poinsettia. Poinsettias are now available in red, pink, white and gold. Variegated and marbled poinsettias also are available. Today, the poinsettia is the number one flowering potted plant in the United States.

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.

Several houseplants that were brought indoors in fall are dropping leaves. Why?

When plants are brought indoors in fall they often drop leaves. Environmental conditions indoors are less

favorable than those outdoors. The less favorable growing conditions are stressful to plants. Plants respond to this stress by dropping leaves. It usually takes plants one to two months to adjust to the indoor environment when brought indoors in fall. Leaf drop may occur during this one to two month period.

Plants will be able to adjust to their indoor environment fairly quickly if they receive good, consistent care. Poor or inconsistent care will prolong the adjustment period.

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. Shriveling indicates insufficient relative humidity. 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>

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'Twas The Night Before Christmas "A Gardeners Version"

'Twas the night before Christmas
and all through the yard
the branches were bare and the ground frozen hard;
The roses were dormant and mulched all around
to protect them from damage
if frost heaves the ground.
The perennials were nestled all snug in their beds
while visions of 5-10-5 danced in their heads.
The new-planted shrubs, had been soaked by the hose
to settle their roots for the long winter's doze;
And out on the lawn, the new fallen snow
protected the roots of the grasses below.
When what to my wondering eyes should appear
but a truck full of gifts of gardening gear.
Saint Nick was the driver – the jolly old elf
And he winked as he said, "I'm a gardener myself.
I've brought wilt-pruf, rootone, and gibberellin, too.
Please try them and see what they do.
To start new plants, a propagating kit.
Sparkling new shears, for the old apple tree.
To seed your new lawn, I've a patented sower;
in case it should grow, here's a new power mower.
For seed-planting days, I've a trowel and a dibble,
and a roll of wire mesh if the rabbits should nibble.
For the feminine gardener, some gadgets she loves;
plant stakes, a sprinkler, and waterproof gloves;
A chemical agent for the compost pit,
and for pH detecting, a soil testing kit.
With these colorful flagstones, lay a new garden path,
for the kids to enjoy, and bird feeder and bath.
And last but not least, some well-rotted manure.
A green Christmas year round, these gifts will ensure."
Then jolly Saint Nick, having emptied his load,
started his truck and took to the road.
And I heard him exclaim through the motor's loud hum
"Merry Christmas to all, and to all a green thumb!"

From your Mills County Extension staff,
a very Merry Christmas and Happy New Year!

Sherry Ford, Program Director

Stephanie Bowden, Youth Coordinator

Denise Fikes, Horticulture Assistant