

Plant Wise

IOWA STATE UNIVERSITY
Extension and Outreach

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Forget the Flamingos, Try a Moth Orchid

By Cynthia Haynes
Horticulture Department
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Are you looking for something tropical to brighten the inside of your home this winter? Still searching for an unusual gift that "keeps on giving"? While plastic flamingos

certainly would be unique and would add a tropical feel indoors, they cannot compete with the grace and beauty of a tropical orchid. But the similarities between the flamingo and the orchid do not end with warm, tropical habitats. Both have stunning pink plumage on long stalked stems or legs. Yet many people consider growing orchids a daunting task. Don't be intimidated by orchids; some are almost as easy to care for as those plastic flamingos.



Orchids are one of the largest groups of flowering plants, with up to 30,000 species identified and more than 300,000 cultivars registered to date. Orchids are native to most regions of the world. Several orchids are native to Iowa's prairies and woodlands.

There are two types of orchids: terrestrial and epiphytic. Terrestrial orchids, like most plants, grow on the surface of the soil. They originate from underground bulbs or rhizomatous roots. Epiphytic orchids grow on other plants. Their roots cling to the trunks and branches of trees and collect water and nutrients from the air. The damp, humid rainforests in southeastern Asia are home to the largest number of epiphytic orchids. Epiphytic

orchids make great houseplants because they grow and bloom well in low to medium light conditions.

Moth orchids (*Phalaenopsis* spp.) are one of the easiest and most popular epiphytic orchids to grow indoors. *Phalaena* means "moth" and *opsis* means "appearance." The common and scientific names come from the fact that the brightly colored flowers resemble moths hovering over sparse, dark green foliage. While the foliage is minimal and rather boring, the flowers are not. The elegant, arching flower stems usually hold 6 to 15 red, pink, purple, white, pale yellow or speckled blossoms that last for a month or more. Similar to the great flamingo, the moth orchid is native to Southeast Asia, with greatest concentration in the Philippines, Indonesia and Malaysia.

Most epiphytes require a coarse, well-drained media. Coarse bark chips work well for most orchids. Typical houseplant soil mixes, like peat moss, retain too much moisture. Depending on the amount of growth, moth orchids can be repotted in fresh bark chips every year or two.

Moth orchids grow best in bright, indirect light. Direct sun actually may burn the foliage turning the leaves yellow and brown. Ideal sites are east- and north-facing windows. Plants in a south window will need to be shaded with a sheer curtain. *Phalaenopsis* orchids in poorly lit areas will not grow or flower well. Fluorescent lighting can be used to supplement natural lighting in poorly lit areas. Hang the fluorescent fixture 6 to 8 inches above the plants. The lights should be on for 12 to 16 hours each day.

In their native habitat, moth orchids experience little seasonal change in temperature. Temperatures between 65 F - 80 F are considered ideal. The slightly cooler temperatures can help initiate blooms, but temperatures below 60 F may be damaging.

An evenly moist bark medium is needed for moth orchids. Plants should be watered well and then allowed to dry slightly between waterings. Plants should be watered more frequently when they are actively growing and during bloom. Watering frequency will vary with the location of the plant, type of medium, temperature and the season. Epiphytes will rot quickly in wet conditions, so the media should be very well drained.

Phalaenopsis orchids require a relative humidity of 40 to 60 percent. Humidity levels indoors can be increased with a room humidifier or by placing the plant on a tray or saucer filled with pebbles and water. The bottom of the pot should be kept above the water line. The evaporation of water from the tray will increase the relative humidity in the vicinity of the plant.

Fertilization is beneficial when plants are actively growing, but otherwise not needed. Over fertilization can lead to damaged foliage and few blooms.

If you can't travel to a tropical location this winter to watch the flamingos, bring something a little tropical home to you. Growing a moth orchid indoors is relatively easy and very rewarding.

Planning a Vegetable Garden

By Greg Stack
Extension Horticulturist
Cook County
University of Illinois

A well-planned garden is easier to care for. It saves time in the garden and is more productive than an unplanned garden. Start planning your garden well in advance so you will be ready to get to work when planting time arrives. If the soil was not tilled in the fall, that must be done early in the spring.



Pick a Spot

The success of your garden depends greatly on the location. Although you may be limited in the choice of locations, consider the following:

- **Good Soil** - A loose, level, fertile, well-drained soil is best. If possible, avoid clays and very sandy soils unless you are able to add adequate organic matter.
- **Sunlight** – 6 hours or more of direct sunlight is necessary to produce healthy high-quality vegetables.
- **Avoid Trees or Shrubs** - Trees and shrubs compete with garden crops for sunlight, plant food and moisture. Especially avoid walnut trees

as the roots produce a toxin that prevents vegetables' growth.

- **Water Supply** - When possible have a supply of water near your garden site. Watering is particularly important when starting seeds or transplanting crops.
- **Close to Your Home** - If possible, your garden should be near your home for convenience, especially during harvest time.

Consider the following points when planning your garden:

- **Garden Size** - The size of your garden plot depends on how much land is available, how much time you intend to spend in your garden, and how much garden produce you can use. Don't overplant.
- **Types of Vegetables** - Choose vegetables that you and your family enjoy. Make sure they can be grown successfully in your garden considering space and sunlight conditions.

For shady gardens use this rule of thumb. The sunniest spot goes to vegetables grown for their fruits or seeds such as corn, tomato, squash, cucumber, eggplant, peppers, beans, and peas.

Plants grown from their leaves or roots like beets, cabbage, lettuce, mustard, chard, spinach and turnips can be grown in partial shade.

For small gardens plant vegetables with a high yield per plant space such as bush snap beans, bush lima beans, leafy greens, tomatoes, bell peppers, and bush squash.

Vegetables that take a lot of garden space for a long time and produce less are vining melons, squash, pumpkins and sweet corn.

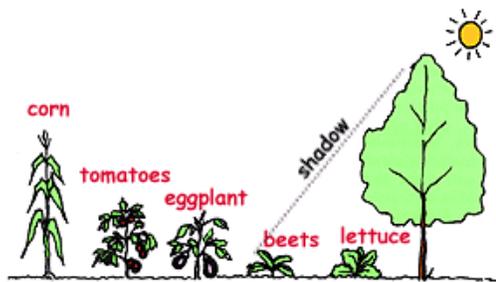
Selecting hybrid varieties often gives you better disease resistant and more productive plants. A hybrid results from crossing (breeding) two parental lines that differ in one or more important characters. Hybrids combine disease resistance and improved quality.

How Will Your Garden Grow?

Locate vegetables according to their growing seasons. Separate the early plantings from the quick growing vegetables so that after harvesting, this space can be used for later plantings.

Perennial crops such as asparagus, rhubarb and berries should be planted toward the side of your garden since they will remain in the same location from year to year.

To avoid shading plants, the taller crops should be to the north or east of shorter crops.



Rotating Crops - Do not grow the same vegetable or related vegetables in or near the same location more often than once every three years. Rotating crops every year helps to control diseases that survive in the soil over the winter.

Successive Planting - This provides a continuous supply of vegetables. Don't plant too much of a crop at one time. Two or three small plantings of leaf lettuce and radishes may be made one week apart in early spring with additional ones made in the fall. Onion sets for green onions may be planted every two weeks until they are used up.

If space is available, there can be at least two plantings of beans, beets, broccoli, cabbage and carrots - one early in the spring for summer use, another in the summer for fall use and storage. Make several plantings of sweet corn.

Later crops can be planted on the same spot where earlier plants were harvested. Early harvested crops such as leaf lettuce, spinach, radishes, green onions, and peas can be followed by plantings of beans, beets, carrots, cabbage, sweet corn, late spinach, late leaf lettuce and turnips.

Spacing Between Rows - Proper spacing is important for plant growth, cultivation and efficient use of space. Check for individual requirements.

Seeds and Plants

Purchase seeds in advance in case you need to order them from a seed catalog. Seeds left over from last year may not be as viable if they have not been stored properly.

Most vegetable seeds except onion, parsley and parsnip can be stored. They should be kept in jars or in cans that are tightly sealed against moisture, insects, and rodents. Store in a cool place such as an unheated room or refrigerator.

Some plants such as broccoli, cabbage, cauliflower, peppers, and tomatoes do best when they are transplanted into the garden. These plants may be grown at home or purchased from a store. When buying transplants, avoid plants that are yellow, spindly or too large.

Sketch A Plan

Put your garden plan on paper. This will give you a guide for planting. The sketch should include:

- Location of each vegetable
- Length of row for each vegetable
- Spacing between rows and between plants in rows
- Planting dates
- What plant is to follow when each vegetable is harvested

Emerald Ash Borer Confirmed in Union County Iowa

By
Iowa State University
Extension and Outreach

Emerald Ash Borer (EAB) has been positively identified in a residential tree in the city of Creston, the county seat of Union County, making this the fifth location where the invasive beetle has been found in Iowa. EAB kills all ash tree species and is



Adult Emerald Ash Borer in Larval Tunnel

considered to be one of the most destructive tree pests ever seen in North America.

The current EAB infestation was found as a result of an arborist contacting state officials about a suspect ash tree. Investigation by the Iowa EAB Team members revealed characteristic galleries and D-shaped exit holes in dead branches, and a partial adult beetle was positively identified by federal identifiers.

The Iowa EAB Team provides EAB diagnostic assistance to landowners and includes officials from Iowa Department of Agriculture and Land Stewardship (IDALS), Iowa State University Extension and Outreach, the Iowa Department of Natural Resources (DNR), USDA Animal Plant Health Inspection Service and the USDA Forest Service.

EAB infestations had previously been discovered in Allamakee County in May 2010, Des Moines County in July 2013, Jefferson County in August 2013 and Cedar County in October 2013.

"I think we're seeing the culmination of an EAB population that is finally large enough to detect, coupled with trees readily showing symptoms because of multiple stresses in recent years, including EAB, drought and floods," said State Entomologist Robin Pruisner of the Iowa Department of Agriculture and Land Stewardship.

A quarantine covering 25 counties in Eastern Iowa was issued on November 1, 2013 intended to slow the accidental movement of EAB by humans. An additional quarantine in response to this new confirmed infestation is being developed. Quarantine restricts movement of hardwood firewood, ash logs, wood chips and ash tree nursery stock out of the quarantined counties.

The Iowa EAB Team strongly cautions Iowans not to transport firewood across county or state lines, since the movement of firewood throughout Iowa or to other states poses the greatest threat to quickly spread EAB even further. Most EAB infestations in the United States have been started by people unknowingly moving infested firewood, nursery plants or sawmill logs. The adult beetle also can fly short distances, approximately 2 to 5 miles.

ISU experts encourage Iowa homeowners to evaluate their ash tree's health and value in the landscape, and their commitment to years of preventive treatments. If an ash tree is within 15 miles of a known EAB infestation, preventive treatments are suggested for individual trees.

For more information about EAB visit the ISU information site at the following link:
<https://www.extension.iastate.edu/pme/emeraldashborer.html>

Bald Eagles in Iowa

Iowa Department of
Natural Resources

The population of Bald Eagles in North America is on the rise. The Bald and Golden Eagle Protection Act

was passed in 1940 in an attempt to reverse the eagle's decline. In 1978, Congress protected the Bald Eagle under the Endangered Species Act. These protective laws and an increased awareness of and concern for bald eagles are leading to its recovery.

The number of nesting pairs counted in the lower 48 states has gone from 417 in 1963 to over 9,000 in 2006! Iowa had its first bald eagle nest in over 70 years in 1977, and since then eagle nests have been reported in 86 of Iowa's 99 counties.

There are currently 262 bald eagle territories classified as 'active' by the Iowa DNR. In order for a territory to be considered active, there has to be nesting activity reported within the last three years.

Bald eagles have a life span of 20-30 years in the wild. Pairs tend to mate for life, returning to the same nest site year after year. The nest is usually built in an isolated, dominant tree with strong branches that is near water.



The pair will defend the square mile surrounding it against any nesting competitors or predators. If their nest from the previous year is still there, the pair will simply add to it. As a result, nests can be seven feet wide, ten feet deep, and weigh as much as two tons.

The female lays two to three eggs at 4-day intervals. Both parents incubate, and after 35-40 days the eggs hatch. The chicks are called eaglets. The first two weeks of the eaglets' life are when the parents are most sensitive to disruption. No human disturbance can be tolerated at this critical stage. If the parents are alarmed and fly off, they may not come back.

When an eaglet is three weeks old, it weighs 5 pounds and stands about 12" high. At week five, the eaglet enters the "ravage" stage, when feathers begin to replace the down. Wing exercising to prepare for flight begins in week 8, and during the 9th week young eagles are often seen perching on the branches around the nest. The young eagles fly for the first time when they are about 75 days old. Young stay near the nest site (eyrie) up to 5 more weeks, and the parents continue to feed them. By late summer, immature eagles learn to hunt and forage for themselves. The belly, head, and tail will go through various mottled stages before obtaining the characteristic white head and tail of the adult at 4 or 5 years old.

Winter is the best time to observe bald eagles in Iowa. During the winter, numerous eagles from northern states and Canada migrate south to find food. The birds begin arriving in Iowa during September and become more numerous through January. The highest concentration of eagles in the Midwest is along the Mississippi River. Each year 4,000 to 7,000 bald eagles winter along the Mississippi, from Minneapolis-St. Paul to 50 miles south of St. Louis. The river is a popular wintering area because of abundant food and open water, particularly at locks and dams and power plants that keep the river from freezing. This provides the eagles with an area to hunt their primary food source—fish.

In addition to food, bald eagles need places to roost during the night and perch during the day. Bald eagles generally roost together in large mature trees surrounded by a buffer of smaller trees. Roosts are chosen by the eagles to provide protection from the weather and avoid disturbances. Roosts are also generally close to a source of food. Daytime perches are usually within 60 yards of the water's edge.

If you find a dead or injured eagle, call the local conservation officer, biologist, or the DNR Wildlife Diversity Program. Bald eagles are protected by several federal laws, with fines of over \$20,000 for harassing, killing or wounding an eagle. Contact: Iowa Department of Natural Resources, Wildlife Diversity Program, (515) 432-2823. 2014 Eagle watch events:
<http://www.iowadnr.gov/Education/lowasWildlife/BaldEagles/EagleWatchEvents.aspx>

Upcoming Horticulture Events of Interest:

Spring Into Spring! 2014 Seminar Series

Presented by the
Mills County Master Gardeners

Details for all Seminars:

Place: Glenwood Resource Center, Visitors Center,
2nd Floor Conference Room

Time: 7:00-8:00 PM

Cost: \$2.00

“Starting Plants from Seed” by Rick Lehman

Date: Tuesday, February 11

Rick Lehman has over two decades of experience starting plants from seed, and is the proprietor of Lehman’s Greenhouse in Glenwood. This long-time grower will share his best practices for starting garden plants from seed including seed selection, containers, growing medium, early starts under lights and growing plants in the greenhouse.

“Pruning 101” by Dr. Jesse Randall, ISU

Date: Tuesday, February 25

Dr. Jesse Randall is an expert on trees. This presentation will cover the good, the bad, and the truly ugly side of tree pruning. Participants will learn when pruning should occur, how to identify branches that need removing, and what to look for when making pruning cuts. Attendees will see the results of poor pruning cuts and learn tips and tricks to ensure that trees remain healthy. He will cover the most used tools and how to sanitize equipment to reduce disease transmission. Participants are encouraged to bring photos of trees that they have concerns with.

“Drought Tolerant Trees and Shrubs” by Sheila Godfrey

Date: Tuesday, March 11

Sheila Godfrey is the nursery manager at Trees, Shrubs and More in Bellevue, NE. Sheila has many years of experience working in the nursery business and recommending the right plants for the right garden setting. Join her to learn about her favorite drought tolerant selections with blooms, fall color and berries for attracting birds and other wildlife to your property.

“Best Practices for Pollinator Habitats” by Dr. Thelma Heidel-Baker and Joe Wheelock, ISU

Date: Tuesday, March 25

Want to learn more about pollinator conservation and why bees and other pollinators are important to our economy and food supply? How can you help declining pollinator populations? Dr. Thelma Heidel-Baker and Joe Wheelock from Iowa State University will answer these questions and discuss their research. Participants will learn about native pollinators and best plant selections for pollinator gardens.

“Little Prairie by the House” by Jan Riggensch

Date: Tuesday, April 8

Jan Riggensch, syndicated garden columnist and author, has been providing garden advice for nearly four decades. Participants will learn about how native plants are the secret to attracting more of this region’s birds and butterflies to your garden. Jan will talk about selecting native plant varieties and planning for a succession of blooms from spring through fall. She will also be signing her new book, “Your Midwest Garden, An Owner’s Manual”.

“Bee Keeping Basics” by Clarence Seale

Date: Tuesday, April 15

Clarence Seale is local bee keeper and Master Gardener that is passionate about bees. After retiring from the Air Force, he started beekeeping as a hobby. His fascination with bees grew, and so did his Apiary that now includes an operation with over 30 hives. He is one of our local experts and not only teaches beekeeping but is also called upon to rescue bees that have swarmed from their hives. Attendees will be introduced to the basics of bee keeping.

2014 Garden Shows in Our Area!

What: [Siouxland Garden Show](#)

When: March 28-30

Where: Sioux City Convention Center, 801 4th Street, Sioux City, NE

Who: ISU and NE Extension

Price: \$5 for one day, \$9 for two, \$12 for three

What: West Pottawattamie MG Spring Conference

When: Saturday, March 29th from 8:30am-4pm

Where: Council Bluffs Senior Center, 714 S. Main Street

Who: West Pottawattamie County Master Gardeners

Price: pre-registration: \$30; at the door: \$40

Contact: Rachel Summy, 712-366-7070,

rsummy@iastate.edu

Ask the ISU Extension Gardening Expert

Selecting seeds is one of the first steps in planting a home garden – along with preparing the seedbed and deciding when to plant. Iowa State University Extension and Outreach horticulturists share information that will guide gardeners as they select vegetable seeds. To have additional plant and garden questions answered, contact the ISU Hortline at 515-294-3108 or hortline@iastate.edu.

I have some leftover vegetable seeds from last year. Will they germinate and grow this spring?

Most vegetable seeds will remain viable for several years when stored in a cool, dry location. If properly stored, cabbage, broccoli, cucumber, squash, watermelon, eggplant and radish seeds will remain viable for five years. Snap bean, carrot, pea, pepper, tomato, cauliflower and pumpkin seeds can be stored for three to four years. Seeds of sweet corn and onion remain viable for only one to two years.

What are the differences between open-pollinated and hybrid vegetable seeds?

A hybrid variety is generally the result of a controlled pollination. Hybrids are produced by crossing two different parent varieties of the same species. Plants grown from hybrid seeds are genetically identical and possess desirable traits, such as high yields, disease resistance or wider adaptability. However, hybrids do not remain true in later generations. As a result, saving seeds from hybrids grown in the vegetable garden are not worthwhile. Open-pollinated varieties are those varieties that have become stabilized in their growth characteristics from one generation to the next. Open pollinated seeds are produced by allowing wind or insects to transfer pollen between different plants of the same variety. If no cross-pollination occurs, home gardeners can save the seeds from open-pollinated vegetables year after year.

Some vegetable seeds are pink or green in color. Why?

Many seed companies treat their seeds with a fungicide to prevent the seeds from rotting in cold, wet soils. Seeds that have been treated with a fungicide are labeled as such and are often pink or green in color. Be sure to wash your hands thoroughly after handling treated seeds.

What are some good sources of flower and vegetable seeds?

Flower and vegetable seeds can be purchased at local garden centers. They're also available from mail-order companies. Mail-order sources include Stokes Seeds, Box 548, Buffalo, NY 14240 (www.stokeseeds.com); Park Seed Company, One Parkton Avenue, Greenwood, SC 29647 (www.parkseed.com); W. Atlee Burpee, 300 Park Avenue, Warminster, PA 18974 (www.burpee.com); Johnny's Selected Seeds, 955 Benton Avenue, Winslow, ME 04901 (www.johnnyseeds.com); Harris Seeds, Box 24966, Rochester, NY 14624 (www.harriseseeds.com); Seed Savers Exchange, 3094 North Winn Road, Decorah, IA 52101 (www.seedsavers.org); and many others.

FEBRUARY GARDENING TO DO LIST



- Repair and prepare lawn and garden tools for the upcoming season.
- February is one of the best months to prune woody plants. Fruit trees, shade trees, raspberries, grapevines, and many shrubs can be pruned successfully while they are dormant.
- Late this month start seeds of broccoli, cauliflower, and cabbage for planting outdoors in April. Some of the flowers to start include geranium, petunia, snapdragon, pansy, impatiens, and salvia.
- Keep monitoring stored fruits and vegetables. Remove any that have rotted.
- Keep bird feeders filled. Remember to periodically clean feeders and water containers.

Resources for Horticulture information

ISU's Hortline at (515) 294-3108
(Monday-Friday, 10 a.m.-noon, 1-4:30 p.m)

ISU/Mills County Extension: 712-624-8616
www.extension.iastate.edu/mills/yardgarden.htm

Iowa State University Publications

PM 874 Starting Garden Transplants at Home (free)
PM 814 Where to Put Your Vegetable Garden (free)
RG 214 Choosing an Arborist
SUL 5 Pruning Trees and Shrubs

Horticulture Publications on-line
<https://www.extension.iastate.edu/store/ListCategories>