

Helping Carolinians Increase Their Knowledge of Gardening, Manage Their Landscape Investment & Protect the Environment

JC Raulston Arboretum Plant Focus

## Japanese Iris – A Popular Perennial for Boggy Sites

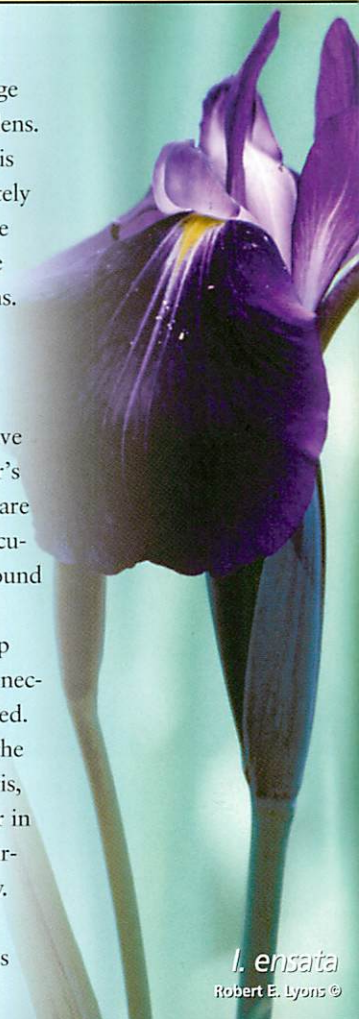
A popular perennial for wet and boggy sites is the Japanese iris, *Iris ensata*. This beauty with spectacular flowers and sword-shaped foliage provides the exclamation point in late spring and early summer gardens. *Iris ensata*, formerly known as *I. kaempferi*, blooms later than the bearded iris hybrids, with huge 8- to 10-inch-wide flat blossoms, often mottled or delicately patterned in shades of white, violet, blue or purple. The flowers are exquisite but fragile and easily damaged by hot sun, dry wind or heavy rains. Japanese irises are excellent for the damp banks of a pond or stream or in rain gardens. They also grow well in a rich, moist, fertile bed that has been generously amended with organic matter, particularly when acidic in nature. Combined with masses of Japanese primroses, they make any garden site quite lovely.

Hundreds of cultivars are available in many color combinations. Most have very small standards (the small projecting petal-like structure near the flower's center) and wide, flat falls (the three very colorful droopy structures); some are double with a soft mass of petals. *I. laevigata*, a close cousin, also has spectacular large flowers in shades of white or purple. It needs constant moisture around the roots and does best in shallow water.

Plant Japanese irises in early fall, setting the rhizomes about 2 inches deep and 12 to 18 inches apart. Divide every 3 to 4 years, if desired, but it is not necessary to the overall good health of the plant. Remove faded flowers if desired.

Another desirable feature of Japanese irises is their relative resistance to the iris borer, a damaging pest that can lead to soft, dead rhizomes in bearded iris, *Iris x germanica*. They do not grow as fast as related species that are popular in home gardens, and they may respond adversely to minor changes in their surrounding growing conditions, like reduced sun, drier soils and loss of acidity.

Japanese irises are not found extensively throughout the JC Raulston Arboretum (JCRA) but they contribute to the overall palette of all Iris species that can be enjoyed through the year at the JCRA. **Willie Earl Wilson**



*I. ensata*  
Robert E. Lyons ©



*I. ensata*  
Robert E. Lyons ©



*I. ensata*  
Robert E. Lyons ©



*I. ensata* 'Variegata'  
Robert E. Lyons ©

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Mitch Woodward ©

*Runoff during recent rains flows into Sally Comer's backyard.*



Mitch Woodward ©

*Comer's rain garden site after excavation. The original drain was retained to help handle larger rains.*



Mitch Woodward ©

*Among the plants Comer added to her rain garden are the pitcher plant (above) and the Carolina marsh pink (below).*



Mitch Woodward ©

## Dealing With Wet Areas Is A Backyard Rain Garden For You?

Sally Comer of Raleigh found herself in a situation that many homeowners can relate to very well. "We had a wet spot in the backyard that just would never seem to go away after a rain. The area always seemed wet and I could not get anything to grow there." Comer had a drain installed that piped the water runoff directly to a nearby stream, but the problem persisted. "I was concerned about fertilizers and soil washing directly into the stream from my landscape," she said.

Last spring, Comer attended a Cooperative Extension Master Gardener class organized by Carl Matyac, Extension horticulture agent, in Wake County. The topic was water quality.

"I learned about stormwater and the water quality problems it can cause. I also learned that there were these things called 'rain gardens' that could help solve my water problem and not pollute the stream," said Comer. "I wanted to see if I could have one in my backyard."

### Rain Gardens Help the Environment

Rain gardens are depressions created in the landscape that work by capturing water runoff and holding it several days, allowing it to slowly drain into the soil. They are usually sized to capture the first inch or "first flush" of runoff from a storm. This runoff contains most of the pollutants.

Rain gardens are a relatively new concept and designed to be small yet effective. The retained water percolates down through the soil, trapping sediment and allowing nutrients to be used by plants in the rain garden. During larger rains more runoff can come into the garden than it can hold, so it is important to give the excess water a place to go. It's best not to place a rain garden near a well or septic system.

Comer's yard provided the ideal situation for a rain garden. When it rained, runoff from the road washed fertilizer and soil across the front lawn, down the sloped driveway and then pooled in the low spot in the backyard by the stream. During larger storms the runoff would wash directly into the stream, not the best for the landscape or for water quality.

### Getting Started

The first steps to installing a rain garden are to watch where the water flows during a rain and to prepare the site properly. Low areas where water pools often are the best locations for a rain garden, but there are exceptions to this rule. Remember, the

purpose of the rain garden is to treat water runoff during storms. Comer's location was ideal. Located in a grassy area at the bottom end of a long driveway, there was both sufficient water and room to help make the rain garden a success. If there is enough water but the low area is not a suitable site, landscape drainage pipes can be installed to carry water to the rain garden.

Once the location was chosen it was time to remove the sod and dig out the area. But before the first shovelful of earth was removed, a simple, yet effective test of soil permeability was performed. To check drainage, Comer dug a small hole about the width of a shovel and 1 foot deep and then filled it with water. She noted how quickly the water drained. The water drained from the hole within 24 hours. A good sign. Had water remained longer than 3 to 4 days sub-surface drainage likely would have been required. For the rain garden to work it needs to be moist but not waterlogged. Standing water (more than 4 to 5 days under normal conditions) indicates a drainage problem that will likely turn your rain garden into a wetland and can possibly create mosquito problems.

Having passed the drainage tests, the 10 x 10 area (100 sq. feet) for the rain garden was excavated to a depth of about 1 foot. To properly size a rain garden, a good rule of thumb is that the garden area should be about 5 to 7 percent of the size of the area draining to it. This calculation should take into account driveways, rooftops, patios and any other area where rainfall does not absorb directly into the soil. Comer had a driveway as well as a concrete patio that added up to a 2,000-square-foot area providing water to the rain garden.

With the digging complete, it was time to install the plants. Rain gardens open up new opportunities for gardeners to select plants they may have admired but didn't have the proper growing conditions for. In Comer's case, she chose some ferns, irises and pitcher plants. The last step was to top off the area with 3 to 4 inches of shredded hardwood mulch.

Don't overlook the choice of mulch for your rain garden. Use coarsely shredded hardwood mulch if available. Double-shredded is OK, but some may float away during rains. Pine bark mulch and pine straw are not recommended because of floating.

**Rain Garden**  
Plant List available at  
[www.successfulgardener.org](http://www.successfulgardener.org)

see Rain Garden on page 3



## Why can't I reuse wash water in my garden?

Although it may be ecologically sound to use non-toilet water, classified as "greywater," in the home landscape, it may not be prudent. Greywater can make people ill and kill off plants due to contaminants in the water, including salts, grease, bacteria and disease-causing microbes.

The Environmental Protection Agency (EPA) recommends that all household wastes go to a municipal sewer treatment

facility in public service areas to avoid public hazard. Some states allow untreated wastewater for irrigation but not in beds of edible plants such as vegetable and herb gardens. Water used in showering and that captured from rinsing produce are examples of potential water sources for lawns and flowerbeds. It is important to check with your local environmental health department before using greywater for gardening activities.

*Toby Bost*

## Rain Garden

*continued from page 2*

### Rain Gardens Growing More Popular

With the implementation of increasingly stringent rules from federal and state governments governing stormwater, more rain gardens are being installed in municipalities across the state, and NC State University is a leader in helping both homeowners and municipalities address environmental issues through such methods as rain gardens. The Department of Biological and Agricultural Engineering conducts research on rain gardens and other environmental practices to handle stormwater runoff. The department also works with North Carolina Cooperative Extension to sponsor workshops to educate engineers and landscape architects in rain garden design.

More gardeners across North Carolina are installing rain gardens since they offer a chance to creatively use some different plants in the landscape and they help protect North Carolina's streams and rivers.

Sally Comer is pleased with the difference a rain garden makes in her yard. "The rain garden is working great. I have new plants that I am working with and no longer have a soggy backyard. I feel good about doing something positive for the environment."

**Craven Hudson & Mitch Woodward**

Hudson and Woodward are Extension environmental agents in Gaston and Wake counties respectively.

## ENVIRO-TIP

### Proper Irrigation Techniques

An irrigation system can be a great asset to a homeowner if it's used properly. Irrigation for lawns has become common in some areas. In general, you want to water deeply but not too frequently. Applying too much water can contribute to disease problems, runoff issues and leaching of nutrients. Obviously, it's also a big waste of water. Set systems to water only the desired area and not the street in front of your house.

Irrigating your landscape plants will be most efficient if you plan distinct water-use zones. High water-use zones are those that are small, highly visible areas where plants need water regularly. The flowerbeds around an entrance, deck or patio would fall into this category. In the moderate water-use areas, water plants only when they show signs of drought stress. In the low water-use areas, let

natural rainfall water the plants. Water ornamental plantings with efficient, low-volume irrigation systems such as those that use spray stakes or drip irrigation.

Drip irrigation is ideal for vegetable and fruit gardens. Commercial producers of these crops use drip irrigation extensively. For vegetables, the water comes out of holes in flat tubing known as drip tape. For fruit trees and grapevines, the water supply line has individual emitters that are located in the immediate vicinity of the plants. With drip irrigation, it's important to water regularly in the absence of rainfall so that plants don't get into a serious drought stress situation.

Regardless of what you're irrigating and what type of system you're using, there are certain things you need to remember. You have to manage the system. Factor in what type of plant you are watering, how well it's established and the nature of your soil to determine when and how much to water. There's no substitute for checking the soil itself when making irrigation decisions. Timers are helpful, but you have to manage the timer. Finally, when using overhead irrigation, always try to water so that plant foliage will have a chance to dry before nightfall to reduce the chance of promoting leaf diseases.

*Kevin Starr*



Robert E. Lyons ©

### gardentalk

*"Water is the driver of Nature."*

Leonardo da Vinci





'Aureola' Hakone Grass  
Robert E. Lyons ©

## Gardening in August

### Lawns

- Plant cool-season grasses this month. Warm soils along with cooler night temperatures and increased rainfall make fall turfgrass plantings more successful.
- Prepare to apply fertilizer to cool-season lawns next month. Slow-release lawn fertilizers are best.
- Treat lawn for grubs if needed. Look for irregular browned out areas. If six or more grubs are found in a square foot area, treatment is needed.
- Continue to mow lawn to a height of 3 to 3 1/2 inches.
- Apply selective herbicides to the lawn to control broadleaf weeds.

### Ornamentals

- Watch for spider mites which can become a problem during hot, dry conditions.
  - Sow perennials such as hollyhock, delphinium and stokesia to produce flowers next spring.
  - Control woody weeds such as kudzu, trumpet creeper and wisteria with recommended herbicides.
    - Continue to spray rose bushes for black spot and crape myrtles for powdery mildew.
    - Deadhead annuals and perennials to encourage continuing blooms.
    - Continue to weed flower beds and vegetable gardens. Many insects hide in surrounding weeds. Weeds also take valuable fertilizer from desirable plants.

### Edibles

- Plant fall vegetables such as cabbage, broccoli and lettuce.
- Apply borer sprays to nectarine and peach trees.
- Fertilize strawberries and keep well irrigated during fruit bud formation.
- Start curing Irish potatoes this month.
- Watch for pickle worms that can damage squash, watermelons and pumpkins.

Donna Teasley

### The Waterwise

#### Gardens in Wake County

were planted and are maintained by Extension Master Gardeners to teach the public about water quality and conservation. The Waterwise Gardens help keep this important issue in the foreground during droughts, floods and even years with average weather.

These gardens feature an outstanding combination of ornamental grasses, perennials and woody ornamentals that are drought hardy, sometimes native and can be found in the local nursery or garden center. The goal was to feature plants that any homeowner can find for a waterwise landscape. Signage at the gardens helps visitors understand the importance of the four steps in waterwise gardens. (Visit [www.successfulgardener.org](http://www.successfulgardener.org) for details on the four steps.)

Waterwise Gardens in Raleigh are located at the Lake Crabtree County Park, 1400 Aviation Parkway in Morrisville, and adjacent to the Flower Show displays at the North Carolina State Fairgrounds.

Carl Matyac

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Garden Spot

