

JC Raulston Arboretum Plant Focus

Water Lilies Add Sparkle to Water Gardens

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

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Water lilies are the crown jewels of water gardens and ponds. The image of these floating gems often inspires water garden design. Water lilies not only add beauty to the pool, they are necessary for a healthy pond. When properly spaced, they perform a valuable function by limiting the amount of light that reaches the depth of the pool, keeping excessive algal growth in check.

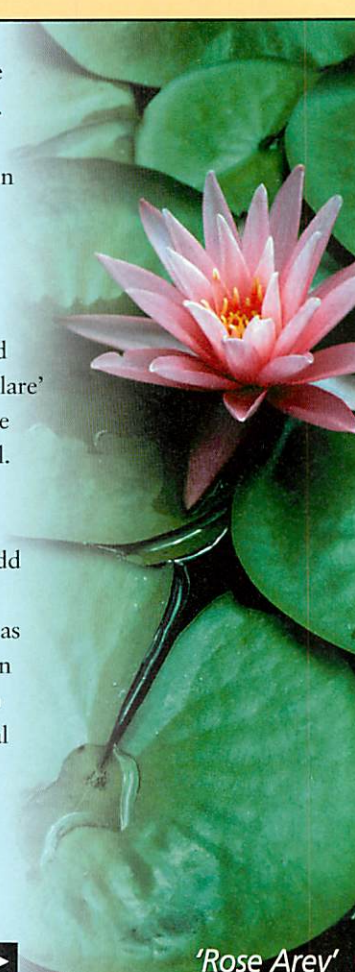
Water lilies (*Nymphaea*) are categorized as tropical and hardy. Tropical water lilies are divided into day- and night-blooming species. Tropical day bloomers include 'Blue Beauty', 'St. Louis', 'Director George T. Moore' and 'Marian Strawn'. For beautiful blooms at night, consider 'Red Cup', 'Red Flare' or 'Texas Shell Pink'. Plant tropical water lily crowns in deep pots. Place the crown near the top and cover with very little media with one inch of gravel. The growing point should be above the soil and gravel.

Hardy water lilies such as 'Rose Arey', 'Comanche', 'Red Spider' and 'Charlene Strawn' are all day bloomers. Some of the hardy day bloomers add a bit of interest in that the flowers change color shades over the life of the bloom, adding a bit of character to the garden. These are often referred to as the "changeables." Hardy lilies grow from rhizomes and should be placed in wide, shallow tubs. Plant them at a 45-degree angle and cover with an inch of gravel, making sure the growing tip is above the soil. Cover both tropical and hardy water lilies with six to 18 inches of water.

Dwarf varieties are available for small or miniature ponds. Look for 'Red Laydeker', 'Aurora', 'Helvola' and 'James Brydon'.

Water lilies should cover 50 to 75 percent of the surface area of the pond or approximately one plant for every 10 square feet of surface area.

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'Rose Arey'
Robert E. Lyons ©



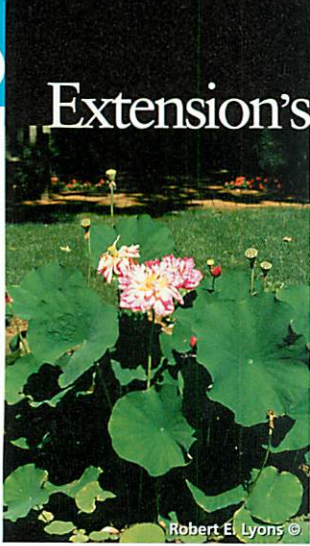
'Director Geo. T. Moore'
Robert E. Lyons ©



'Comanche'
Robert E. Lyons ©



'Red Flare'
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Add Splash to Your Landscape with a Water Garden

Water features in the landscape provide refreshing coolness on the hottest summer day, while satisfying our senses with sights and sounds that only water can make. Water gardens delight our eyes with the unsurpassed beauty of colorful water lilies, lotuses and other water-loving plants. They also offer the glimmering iridescence of fish and invite other beneficial wildlife, such as frogs and birds, to visit the garden.

For centuries, people have enjoyed the beauty of fountains and water gardens in their public squares and private estates. Only recently have home gardeners taken advantage of water to create natural focal points. Water gardens are now one of the most popular do-it-yourself landscape projects. Water gardens can be designed to fit virtually any landscape, no matter how large or small, and provide years of enjoyment. Prices start around \$150 and can go into the thousands.

Before you start digging, develop a plan. While you can move tubs and half-whiskey barrels relatively easily, an underground water feature is another story. Try to site the water garden close to the home, within your view for greater enjoyment. This also will make it easier to monitor in case an uninvited guest, such as the neighbors' dog, drops by for a swim! Avoid locations with overhanging deciduous trees; cleaning out fallen leaves every fall is a nuisance.

Also avoid low-lying areas that are prone to flooding. And keep in mind that most aquatic plants require at least 6 hours of sunlight a day.

When deciding on pond depth, remember that shallow ponds are quicker to cloud with excess algae. Submerged plants, floating plants and fish do better in deeper pools. A good average depth is 18 to 24 inches.

You can create pools for your water garden using a variety of materials. Flexible liners made of plastic, vinyl or rubber enable you to create any shape or size pool. When choosing a liner, the adage "you get what you pay for" is true! Plastic is the least expensive and also least durable liner. Vinyl is intermediate, and rubber is the most durable and expensive liner. Rigid preformed liners made of fiberglass or plastic also are available. However, your creativity will be limited by the variety of shapes available. Concrete pools also can be constructed but are probably best left to professionals.

Proper installation of pond liners and preformed pools is essential to ensure maximum life expectancy. There are a number of excellent books available on water gardening that provide detailed procedures on installation. Gardeners should also refer to manufacturers' guidelines and consult water garden professionals for guidance.

Fred Miller

Aquatic Plants to Consider



Robert E. Lyons ©

'Black Gamecock' Iris



Robert E. Lyons ©

Golden Club

Aquatic plants play an important role in maintaining the natural environmental balance of a pond. When selecting plants, it is important to know the types of plants, their growth habits and how to incorporate them into the landscape most effectively. The time of year a plant flowers and its color isn't the only criteria for purchase. Making the right plant choices for the best overall effect will enable you to create the most natural and beautiful environment.

Most plants, including aquatics, fall into five basic categories. Here are a few aquatic plants to consider:

- **Strong verticals** – create a background for flowering varieties
Hardy Umbrella Palm (*Cyperus alternifolius*)
Common Cattail (*Typha latifolia*)
Rushes (*Juncus* species)
- **Intermediate** – broadleaf plants that add texture and color
Water Iris
Golden Club (*Orontium aquaticum*)
Cardinal Flower (*Lobelia cardinalis*)
- **Groundcovers** – sprawling growth habits
Water Pennywort (*Hydrocotyle verticillata*)
Water Forget-Me-Not (*Myosotis scorpioides*)
Variegated Chameleon Plant (*Houttuynia cordata* 'Variegata')
- **Specimen plants** – preferred favorites
Water Lilies
Hardy Water Canna (*Thalia dealbata*)
Water Hyacinth (*Eichhornia crassipes*)
- **Shade-tolerant plants** – perform well in shade-density areas
Variegated Dwarf Japanese Sweet Flag (*Acorus gramineus* 'Variegatus')

A well-planted pond will give its best effect if plants are grouped, rather than individually placed. The pond should have 30 to 40 percent open water surface to capture reflections of the plants and sky.

Willie Earl Wilson

Q&A How do I deal with mosquito problems?

You can control most mosquito problems by targeting the larval stage. Larvae need at least four days of standing water to mature. Canoes, gutters, tire swings, hanging basket saucers, wheelbarrows, buckets, jars, tire ruts, dripping outdoor faucets and other sites will collect water. Drain them, remove them or turn them over. Change water in birdbaths and pet bowls at least every four days. Improve drainage or fill in places where water stands. Improve larger bodies of water so they will support fish. Fill

water-holding tree cavities with sand. Screen the top of rain barrels or use a surface film like mineral oil. Sometimes you may have to use a *Bacillus thuringiensis* strain that will kill mosquitoes. Mosquito Dunks is one brand name. When these control measures fail, use repellents or barriers to keep adult mosquitoes at bay. Broad spectrum insecticides like Dursban, Diazinon or pyrethrins will kill adult mosquitoes if you get it on them, but killing adults will not solve a mosquito problem.

David Goforth

Water Lilies

continued from cover

To learn more, go to your favorite garden center and look at the stock. Garden magazines also list mail-order growers that may be good sources. The International Waterlily and Water Gardening Society contains a wealth of information available at <http://iwgs.org>.

If you would like to pursue your research on the “real life” level, apart from the pages of catalogs and the Internet, then combine your quest for the right plant with a lovely respite at the JC Raulston Arboretum at NC State University in Raleigh (www.ncsu.edu/jcraulstonarboretum). Check out the garden of strictly North Carolina native aquatics, the pond with “floating stones” and the cleanly geometric water garden in the Klein-Pringle White Garden. By the way, the frogs will change not upon any osculating endeavor; do not entertain kidnapping!

Darrell Blackwelder

ENVIRO-TIP

Managing Aquatic Weeds

Aquatic plants are an important part of pond ecology, and provide food and shelter for wildlife. They become known as weeds, however, once they interfere with pond uses, such as irrigation, or when they decrease the aesthetic value.

Common aquatic weeds include filamentous algae, duckweed and parrot's feather. For some, cattails are a desired aquatic plant, but for others it's a weed. Even water lilies can be a problem if their growth becomes out of control.

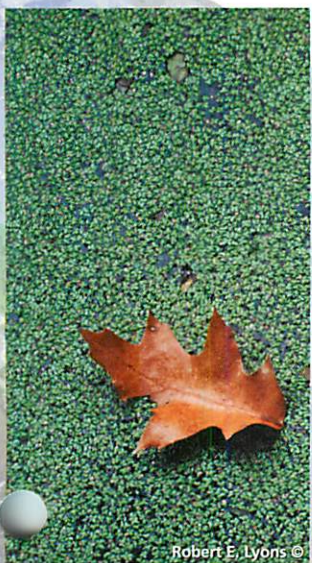
Many aquatic weed problems are caused by incorrect pond construction or from too many fertilizer nutrients washing into ponds. This is true for either farm ponds or backyard water gardens. An effective weed management program must correct these design and nutrient problems for long-term control. The time to implement control measures is during the spring before plants resume rapid growth. The first step

is to correctly identify the weed by taking a sample to your county Cooperative Extension Center. An Extension agent can provide you with control recommendations such as applying herbicides or adding grass carp to the water garden.

When applied correctly, aquatic herbicides are not harmful to fish. Over-applying the herbicide or killing too much vegetation at one time is harmful and can kill fish. Aquatic herbicides are expensive and require proper application equipment. Always follow water-use restrictions on the pesticide label before fishing, swimming or irrigating.

The triploid grass carp are an excellent biological control and, when stocked in proper numbers, provide long-term control for many problem weeds. The initial cost for fish is high so be sure they are recommended for your weed problem.

Jim Monroe



Robert E. Lyons ©

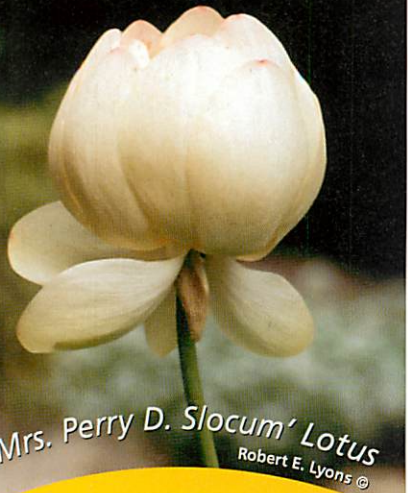
Duckweed

gardentalk

“Everywhere water is a thing of beauty gleaming in the dewdrop, singing in the summer rain.”

– John Ballantine Gough





'Mrs. Perry D. Slocum' Lotus
Robert E. Lyons ©

Garden Spot

Greensboro's Bog Garden

is a natural place to see aquatic plants and those that like moist areas. Swamp roses and bald cypress trees surround a four-acre lake. The Bog Bottom shows off cattails, cardinal flowers, pitcher plants, water lilies, water irises and other plants. This 21-acre property is a haven for native and migrating waterfowl as well as trees, ferns and wild roses that can be enjoyed from the raised boardwalk. Plants are plentiful, thanks to a volunteer organization that planted more than 16,000 plants which were rescued from construction sites.

Spring is the best time for a visit, when the native wildflowers are in bloom. The more adventurous visitors will enjoy the experience offered by the nature trail, and don't forget to bring along some stale bread for the kids to feed the turtles, catfish and geese.

The garden is located on Hobbs Road, off Friendly Avenue, and is open from sunrise to sunset. For more information, call (336) 373-2199.

Karen Neill

Gardening in May

Lawns

- Eradicate weeds before they spread.
- Warm-season grasses such as Bermuda, centipede, zoysia and St. Augustine need attention now. Seed, sprig, plug or plant rolls of sod now and throughout the summer in the Piedmont and Coastal regions. Fertilize, water, mow low and let it grow.
- Do not seed or fertilize cool-season lawns such as tall fescue. Wait until the fall. Mow cool-season grasses at 2 1/2- to 3-inches high.

Ornamentals

- The best time to prune azaleas is after flowering and before bud initiation in mid-summer.
 - Water newly planted or transplanted ornamentals during dry periods. Water raised bed plantings two to three times a week during the summer. Consider a soaker hose for water efficiency.
 - Leaf gall attacks azaleas and camellias at this time of year. At this late stage of development, hand-pick and remove the infected leaves from the area; it's too late to spray.
 - Powdery mildew may be a problem on crape myrtle and euonymus if wet conditions persist at night. Control this fungal disease by spraying Banner or Bayleton according to label directions.
 - Plant annuals and summer bulbs such as caladiums, cannas, dahlias and gladiolus.

Edibles

- Inspect vegetables and fruits for the following insect problems: aphids, caterpillars, lace bugs, leaf miners, mites, scales, stem borers, weevils and whiteflies. Call your local Cooperative Extension agent for best control method.
- Plant warm-season vegetables such as melons, peppers, squash, cucumbers, snap beans and okra.

David Barkley



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Successful GardenerSM Editor
Mecklenburg County Extension Center
700 N. Tryon St. • Charlotte, NC 28202
Editor and Project Coordinator: **Leah Chester-Davis**
Extension Communication Specialist – Urban Programs

Project Coordinator: **Emily Revels**
Consumer Horticulture Agent, Mecklenburg County

Assistant Editor: **Karen Neill**
Consumer Horticulture Agent, Guilford County

Compilations Editor: **Ben Dungan**
Consumer Horticulture Agent, Gaston County

Contributors:

County	Name	Phone
Buncombe	Linda Blue	(828)255-5522
Cabarrus	David Goforth	(704)792-0430
Catawba	Fred Miller	(828)465-8240
Currituck	Tim Clune	(252)232-2261
Durham	Paul McKenzie	(919)560-0525
Forsyth	Craig Mauney	(336)767-8213
Gaston	Ben Dungan	(704)922-0777
Guilford	Karen Neill	(336)375-4891
Henderson	Bill Skelton	(828)697-4891
Lincoln	Kevin Starr	(704)736-8452
Mecklenburg	John MacNair	(704)336-2561
	Emily Revels	(704)336-2561
Nash	Mike Wilder	(252)459-9810
New Hanover	David Barkley	(910)452-6393
Northampton	Heather Lifsey	(252)534-2711
Orange	Royce Hardin	(919)732-8181
Pitt	Danny Lauderdale	(252)757-2801
Polk	John Vining	(828)894-8218
Randolph		(336)318-6005
Rowan	Darrell Blackwelder	(704)633-0571
Union	Willie Earl Wilson	(704)283-3741
Wake	Carl Mayac	(919)250-1100
Wilson	Cyndi Lauderdale	(252)237-0113

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For a list of garden centers where you can find *Successful Gardener*SM, please call (704)336-2561 or visit Cooperative Extension on the web at <http://www.ces.ncsu.edu>

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