

Rock Gardening in the Southeast

by Bobby J. Ward

Southern garden writer, Elizabeth Lawrence, wrote that sooner or later all serious gardeners eventually become rock gardeners—even if they don't mean to. Rock gardening is an art requiring certain skills, but its rewards are numerous. In the Southeast it is not impossible.

The idea of a rock garden in the Southeast may seem alien to those gardeners who envision cold rocky ridges covered with diminutive flowers popping up among snow-covered rocks and boulders. The South's red clay soils and summer heat and humidity are far removed from such a landscape, which can present major difficulties for gardeners, particularly in growing plants not native to the region. Yet, undaunted southern gardeners who understand these limitations can grow a respectable palette of rock garden-type plants.

What are rock garden plants?

Rock garden plants are short, dwarf or slowly growing. For a rock garden, a rule of thumb is that the plants should be no more than twelve inches tall, allowing the plants to look natural in a garden setting and be in scale with nearby rocks and other plants. Scores of rock garden plants, even from mountain locales, can grow successfully in the artifice of a rock garden.



Photo by Bobby Ward

Trough collection of rock garden plants (Bobby Ward)

In the garden, rock gardeners use a variety of settings to grow plants: a raised bed, a ridge or mound of soil (berm), or an area landscaped with rocks and boulders (generally referred to as a rockery). Rock gardens can also consist of collections of dwarf and low-growing plants even in the absence of rocks.

There is considerable variation in how to grow rock garden plants. Perhaps the easiest and simplest is growing small plants in troughs, planters or pots, which can be raised to near eye level onto a wall, deck, porch, or garden bench and the small plants can be appreciated. Rock garden plants also can be tucked in crevices of stonewalls or at the front of a border, where they won't get swallowed up by larger annuals or perennials.



Photo by Bobby Ward

Norman Beal's (Raleigh) raised berm.



Caring for a Rock Garden

Regardless of how you attempt to grow rock garden plants, there are some obstacles that need to be kept in mind, especially for plants not well adapted to the region.

The Southeast experiences its highest rainfall in the late summer. Soil and air-borne pathogens that thrive in the summer heat, high humidity, and rainfall can kill a plant, frequently from root rot, in a day's time. Another problem is the high nighttime temperatures that cause some plants to respire at a higher rate, burning up the carbohydrates, manufactured during daylight hours, which the plants need for growth and development.

The region's moisture-retentive clay soils impede drainage and require amending with a mixture of sand and scree (rocky debris or fines). Depending on what plants you plan to grow, some leaf mold or compost should be used. Fungi and soil microbes break down the leaves into a material that is rich and humus-like, which is a source of nutrients in the soil mix.

Despite these impediments, it is possible to grow heat-tolerate rock garden plants successfully in a variety of garden habitats in the Southeast. The possibilities include native and non-native plants in sunny and shady parts of the garden. And none of these has to require high maintenance.

No matter what rock garden plants you decide to grow under whatever conditions, the key is drainage. Amended soil in the garden or well drained pots and planters allows water to drain away from the crowns of small plants that might be damaged by fungus during humid, rainy summers or damaged by freezing in the winter.

If you are growing plants from arid regions, soil for a rock garden in the Southeast should generally be "lean," that is, with little humus or organic material, and it should be amended with a mixture of sand, rock chips, and pea-sized gravel. Currently many gardeners add Permatill® (lightweight, porous, fired slate), available commercially at many plant nurseries. These amendments will provide aeration and allow better drainage. Shady rock gardens can take more humus and organic material in the soil.

A good starting mixture for experimentation is one part each of clay (or native top soil), sand, Permatill® (or pea-sized gravel) and leaf mold (or compost or humus). As you gain more experience, you can vary the proportions to manage the plants in different parts of the garden.

How much water to provide a rock garden can be trial and error. Over watering in the summer can cause problems for dry land plants (those from the U.S. West or the Mediterranean) but too little water and the plants will die from desiccation.

Plants for the shady rock garden

Starting a rock garden with regional native plants in a shady area is highly recommended for the beginner rock gardener. There are many worthy candidates including, bloodroot, trilliums, hepaticas; dwarf irises such as *Iris cristata* (both blue and white forms) and *Iris verna* (a bit difficult); and *Phlox stolonifera*. In their native habitat, these plants bloom in the springtime underneath deciduous trees before canopy leaves fully emerge. The birdsfoot violet, wild ginger (*Asarum*), green-and-gold (*Chrysogonum virginianum*), and heucheras, also native



Photo by Bobby Ward

Iris Cristata



Raised bed of rock garden plants (Bobby Ward)

Photo by Bobby Ward

to the Southeast, are other good beginning choices, as are small ferns. Best of all, these plants are adapted to the region, saving you the guesswork.

With a bit of experience and confidence, you can graduate to non-native plants such as hardy cyclamen (*Cyclamen hederifolium* and *C. coum*), epimediums, dwarf hostas (*Hosta venusta*), and my favorites, several species of hellebores (*Helleborus*). All are relatively easy. More difficult are anemones, twinleaf (*Jeffersonia diphylla*), and primulas (hybrid forms of *Primula vulgaris* ssp. *sibthorpii* are recommended).



Photo by Bobby Ward

Primula



Photo by Bobby Ward

Delosperma

Plants for the sunny rock garden

There are many possibilities for a sunny rock garden. Small bulbs, such as crocus (*Crocus*), snowdrops (*Galanthus*), daffodils (*Narcissus*), and scillas, seem to thrive in a rock garden as most go dormant in the South's summer heat. One of my spring favorites is *Ipheion uniflorum* 'Wisley Blue'. Rain lilies (*Zephyranthes*), native to Mexico, are excellent summer bloomers in a range of colors. Don't overlook the fall-blooming bulbs such as *Crocus speciosus* and *Crocus kotchyanus*. Other than bulbs, plants that can take full summer sun are *Dianthus*, *Oreganum libanoticum*, *Phlox subulata*, *Iberis sempervirens*, and ice plants (*Delosperma*), the latter currently the favorite of many rock gardeners. In my raised rock garden bed, I also easily grow scutellarias and little betony (*Stachys minor*). I have troughs in which I grow the tiny-leaved *Draba imbricata*, the small shrub *Helianthemum oelandicum*, several forms of *Silene* and species of *Sedum* and hen-and-chicks (*Sempervivum*). Most rock gardeners would not be without the mat-forming thyme (*Thymus*) or the fragrant Corsican mint (*Mentha requienii*), a low creeping plant particularly good for the rock garden border. Some rock gardeners grow cactus and other succulent plants, even dwarf yuccas and agaves.

Woody plants for the rock garden

Most rock gardeners want a "backbone" in the garden, often relying on dwarf conifers and evergreen woody plants to provide a distinctive shape and outline. In my rock garden, I grow the dwarf holly, *Ilex* 'Rock Garden', dwarf *Cryptomeria*, and several forms of *Chamaecyparis* (usually forms with 'Nana', meaning small or pygmy). I also like *Rhododendron* 'Pink Pancake', a prostrate plant that grows a few inches tall. These woody plants grow equally well in a pot or trough. *Cunninghamia* 'Coolwyn Compact', a Chinese conifer, has survived three summers so far for me in a hypertufa trough. If you search out specialty nurseries, you can also find dwarf ginkgo, pomegranate, gardenia, and maple.

Growing from Seed

As you gain experience as a southern rock gardener, you will doubtlessly want to graduate to growing plants from seed and to the possibilities of obtaining plants not locally available. Many plant societies (the North American Rock Garden Society is one example) annually hold members' seed exchanges, offering a few thousand choices for as little as fifty cents a packet. Our Piedmont Chapter annually receives left-over seed from the NARGS seed exchange and seed are usually available at the April meeting. With seed, you can endlessly experiment to find what grows best in your conditions without spending a lot of money.



Photo by Bobby Ward

Rooftop at J.C. Raulston Arboretum

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Want to see some rock gardens?

1. The JC Raulston Arboretum (Raleigh) has a newly installed (fall 2006) rock and scree and rooftop garden consisting of about 200 plants growing in full, afternoon sun. www.ncsu.edu/jcraulstonarboretum/

2. Tony Avent's Juniper Level Botanic Garden (Raleigh) has two 105-foot long berms (each 15 feet wide) with hundreds of native and non-native plants. www.plantdelights.com

3. The Atlanta Botanical Garden (Atlanta) has a rock garden constructed in 1989. It has an east-facing slope with large granite boulders and a variety of rock garden plants with a few small trees. The ABG also has a woodland rockery displaying primarily native, spring blooming plants growing under tall oaks. www.atlantabotanicalgarden.org.



[This article originally appeared in a slightly different form in Carolina Gardener, May/June 2007. Copyright Bobby J. Ward]



Photo by Bobby Ward

A view of one of Tony Avent's 105-foot long berm at Juniper Level Botanic Garden, Raleigh.

To learn more about rock gardening:

- Jane McGary, ed. 2003. *Rock Garden Design and Construction*. Portland, Ore.: Timber Press.
- Jack Ferreri, ed. 1999. *A Rock Garden Handbook for Beginners*. North American Rock Garden Society: Manhattan, Kan.
- Web site source: North American Rock Garden Society (NARGS), an organization with 5,000 members worldwide: www.nargs.org.
- Information on Permatill®: www.permatill.com

2009 Eastern Winter Study Weekend

NARGS Potomac Valley Chapter Presents

Some *Like it Hot!*

Coping with Climate Change, Beautifully

Sheraton Reston Hotel, Reston, Virginia

January 30-February 1, 2009

Tony Avent, proprietor of Plant Delights Nursery, North Carolina, and well-known to NARGS members, is a pre-eminent introducer of wonderful plants. He shares his experiences with the many hardy Aroids.

Mark Bridgen, Cornell University, New York, is the 2008 winner of the International Bulb Society's Herbert Medal. A longtime breeder and introducer of South American bulbs, most recently *Alstroemeria* 'Mauve Majesty', he will speak on his experiences collecting and breeding Chilean geophytes.

Richard Critz, former editor of the *Primrose Journal* and longtime primrose guru, presents a program on maintaining primulas in warmer gardens.

Bill McLaughlin, curator, United States Botanic Garden, Washington, D.C., will talk about mid-Atlantic and other natives for rock and dry gardens.

Peggy Olwell, Bureau of Land Management and Plant Conservation Alliance, Washington, D.C., will give an overview of global climate changes and how they may affect the gardener.

Richard Olsen, researcher at the U.S. National Arboretum, Washington, D.C., will discuss the ins and outs of new plant introductions, particularly woodies.

J.P. (Koos) Roux, Curator of the Compton Herbarium, South African National Biodiversity Institute, Cape Town, South Africa, will give an overview of several elements of the South African Flora in his talks.

Nick Turland, Missouri Botanical Garden, Saint Louis, MO, currently co-directs the Flora of China project. His long-time interest is in the flora of Crete, and he will introduce us to some of his favorite plants from the Mediterranean.

Judith and Dick Tyler, Pine Knot Farms, Clarksville, Virginia, share their experiences with collecting, propagating and growing hellebores. ❧

From Fall to Christmas with the Smaller Narcissus

...a long season of flowers

by Nancy Goodwin

Just about the time I think I can no longer bear waiting for the cool nights of fall, buds of *Narcissus serotinus* break through the soil and I know another summer in the South is nearing its end. It is late September and the sight of this flower is more exciting than a field of them in spring for its appearance marks the beginning of a long season of narcissus "events." Although "serotinus" means late flowering, it is, for me, the earliest flowered one and the signal that another narcissus year has begun. This is when new roots begin to grow on other species in the garden and greenhouse. One year I



Narcissus serotinus

Scottish Rock Garden Club www.titli.com/flower_info

potted on as many *N. serotinus* as I thought I might sell through the nursery and left the remaining bulbs in a sack on the potting bench. When the temperature dropped, they grew just as the potted ones did, proving that it is temperature rather than moisture that stimulates growth.

The cup or corona is extremely short and bright orange. I have to turn the flower sideways to see it at all. The petals (perianth segments) are brilliant white. By mid-day when the temperature has risen, the flowers perfume the entire greenhouse with a delicious fragrance. Its leaves are slender and dark green with longitudinal white stripes on some forms. It is happy in hot, dry areas around the Mediterranean where it is native. I keep it happy here by drying it off completely in summer and keeping it in a cool, but frost-free greenhouse in winter. The week before Christmas I still have a few perfect flowers.

I have grown *N. viridiflorus* for years hoping for a flower but thus far have not produced one on my plants. The first year I had the nursery, I received a package of *Iris unguicularis*

from a satisfied customer. Tucked in with the iris was a vial containing flowers of this narcissus. They were small and green (as the name implies). This was one of the nicest things that happened during the life of Montrose Nursery and I will never forget it. I have plants grown from seed and am treating them just as I do the previous species.



Narcissus viridiflorus

Scottish Rock Garden Club www.srgc.org.uk

They are dried off completely in summer and given abundant water when in growth. Every fall I wait with optimism for a flower and some year I will have one.

The first of the hoop petticoat narcissus is *N. romieuxii* with pale yellow flowers. Because they are native to Morocco, I haven't tested them outside. Even if the bulbs survive I fear a loss of flowers for they bloom from fall through early winter. *N. romieuxii* ssp. *albidus* var. *zaianicus* is easier to enjoy than to spell! Mine are grown from seed and have considerable variation in



N. romieuxii* ssp. *albidus* var. *zaianicus

Photo by "John T Lonsdale - www.edgewoodgardens.net/"

color and form. I have never found a pure white one but they go from creamy white to pale yellow sometimes with a green tinge. The corona may be widely flared like a hoop petticoat or a narrow cone. The yellower ones are known as *forma lutescens*. I have selected a form with a relatively large, flared corona and isolated it in order to increase it. It is a simple matter to prick out special bulbs when in flower and plant them in isolation in another pot. This narcissus begins blooming in November and makes a fine show throughout December. Often you can find these plants listed as *N. albidus* in seed lists. The ones with this species or subspecies name should be whitish yellow. I am also growing *N. romieuxii albidus tananicus*. But *N. romieuxii albidus kesticus* has nearly

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white flowers that are larger and more widely flaring than most *N. romieuxii* forms. They bloom in mid-December. I have also seen them listed as a variety of *N. cantabrigus*. I have two excellent cultivars: *Narcissus* ‘Atlas Gold,’ with golden yellow flowers and ‘Treble Chance,’ with pale cream, flared flowers. Both of these are selections from stock originally collected by Jim Archibald and both are listed as *N. bulbocodium romieuxii*.

Narcissus mesatlanticus is something of a mystery to me and to others. I believe it to be a variety of *N. romieuxii* bearing the current name of *N. romieuxii* var. *mesatlanticus*. You will find it in seedlists under several headings and it is worth requesting. Expect a pale yellow flower in very late fall and early winter. The flowers vary tremendously in size. I have selected several distinctive ones to increase vegetatively. I haven’t grown this outside but suspect it may prove hardy in protected places in Zones 7-9.

Narcissus cantabrigus also blooms at this time with white to pale yellow, fragrant flowers. Many of our plants are descendants of the variety *foliosus* and are creamy white with frilled cups. These are very satisfactory garden plants beginning to bloom in Hillsborough in late October and continuing into December. I always keep a few pots in the greenhouse for insurance and for seed production.

Many years ago I grew seeds from *Narcissus* x ‘Nylon’ and *Narcissus* x ‘Taffeta.’ The original plants properly



Photo from Brent and Becky's Bulbs

Narcissus cantabrigus

called ‘Taffeta’ were selections of crosses between *N. romieuxii* and *N. cantabrigus*. After many generations of seedlings I have plants that flower very early and are most

like *N. cantabrigus* with pale yellow, fragrant flowers. *N. x* ‘Nylon’ never was a clonal name but was given to a batch of seedlings from this cross. Among my seedlings I have a wonderful plant that blooms much earlier than either of the species parents. As always, with the first bloom of any species, I have forgiven its lack of real beauty because it anticipates a long season of flowers from its cousins.

N. bulbocodium is another of the hoop petticoat types with great variation in form and blooming time. A year ago I would not have included it in a discussion of fall-blooming narcissus for their main display is in late winter and early spring. The primary distinction between *N. bulbocodium* and *N. cantabrigus* is the color of the flowers. *Narcissus bulbocodium* is yellow and *Narcissus cantabrigus*, white. *N. bulbocodium* also prefers growing in a more open situation while *N. cantabrigus* wants more shade. And finally, the flowers of *N. bulbocodium* aren’t as fragrant as those of *N. cantabrigus*. This fall I had my first *N. bulbocodium* open in November. It is clear yellow with a widely flaring corona distinct from any other I have grown in both its size and time of flowering. I grew it from seed collected in Morocco and since I have only one bulb I have it in the greenhouse where it will stay until I have a pot full and some seedlings coming along. *N. bulbocodium* grows easily and increases rapidly in the garden or greenhouse where it often blooms as late as March or even April. It naturalized in my Durham garden at the top of my sunny rock garden. *N. bulbocodium* var. *graellsii* has paler, greenish yellow flowers and it is about the latest member of this species to bloom. The smallest variety of *N. bulbocodium* is *nivalis*. *Narcissus obesus* is my favorite of the later blooming forms. It is sometimes listed as a subspecies but has now been given separate species status. As one might expect, it has a fat, relatively showy flower and prostrate foliage. There are many other varietal forms.

Before Thanksgiving I can find the first trumpet nar-

cissus blooming in the rock garden — *N. minor* ‘Cedric Morris.’ I spent years in search of it. It is clear yellow, visible at a distance, and is a



Photo by Paul Tyerman Scottish Rock Garden Club

***N. Minor* ‘Cedric Morris’**

great treasure. I have grown hundreds of seedlings of *N. minor* hoping to find another early flowering one but all of the others bloom in late winter and early spring. They are extremely desirable and suitable for the rock garden or a woodland garden. A double form of *N. minor* formerly known as variety *pumilus plenus* is more correctly known as 'Rip Van Winkle' and is a bright, clear yellow. It is readily available. It looks a bit frazzled to me.

I have grown almost all of my species plants from seed. It is easy, requiring only patience. I sow the seeds in a gritty mix just as soon as I can, which is as soon as the seed ripens on my plants. When I receive seeds from a seed exchange, I sow them immediately. Pots of seeds sown in spring are then placed on the seed bench outside, where most will germinate the following fall or early winter. Winter sown seeds are given about 6 weeks of warmth in the basement before they are put outside. I leave the plants growing through the summer waiting to transplant the tiny bulbs until they are in growth the following fall. It takes eyes younger than mine to tell the difference between a bit of perlite or grit and a tiny dormant bulb! They require two to three years to bloom but it is a thrill when they do. I dry off most potted bulbs for the summer by placing them under the benches in the greenhouse and then during those hot, humid days in July I revel in the discovery of their increase in size and number. I pot them in fresh, rapidly draining soil, water them again and watch for the emerging leaves. I fertilize them throughout their growing season with a good, well-balanced water-soluble fertilizer.

By Christmas I can find the tips of many narcissus species in the garden. Winter has arrived but the excitement of another season to study this genus is just beginning; I begin to remember the names once again and there are always new bulbs to flower. The greenhouses are filled with pots of green leaves with fat flower buds just emerging.

Beware. Books on narcissus species--- as well as the plants themselves---can become an addiction! ☞

This article originally occurred in
The Trillium, January 1994

Plant Profile

Mark Weathington

Local Grower: Unique Plant Nursery, Chapel Hill
Common name: Variegated Hybrid Camellia
Botanical name: *Camellia x williamsii* 'Golden Spangles'
Family: Tea (Theaceae)

Category: Evergreen shrub

Primary uses: Specimen, hedge, shade garden

Dimensions: 9 to 12 feet tall by 6 to 9 feet wide

Culture: Part to full shade, will tolerate full sun in good soil; prefers a moist, well-drained soil. Prune as necessary in spring after flowering to control height. Spray with a dormant oil in winter to control tea scale and other insects if needed.

Bloom time: Late winter to early spring

Color: Medium pink

General attributes: Camellias are one of the iconic flowers of the south. This hybrid species results from a cross between the apple blossom camellia, *C.*



Camellia x williamsii 'Golden Spangles'

saluensis and the more common Japanese camellia. It has a finer texture than the somewhat coarse Japanese camellia with the added advantage of a pale gold blotch down the center of each leaf. The variegation, while not garish, adds year round interest and is especially beautiful when paired with the single to semi-double phlox pink flowers with their central mass of gold stamens.

☞



Camellia x williamsii 'Golden Spangles'



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Photp by Mark Weathington

Photp by Mark Weathington



Piedmont Chapter Meeting

Totten Center, NC Botanical Garden

9:30 a.m. January 17, 2009

Bobby J. Ward

Raleigh, N.C.

“Rock Gardening in the South”

The Trillium, Newsletter of the Piedmont Chapter
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OTHER SIGNIFICANT POSITIONS:

Sept. Plant Sale Manager: Kirtley Cox

Refreshments: Gwen and Maurice Farrier

February 21, 2009

Scott McMahan

Clermont, Ga.

“Plant Hunting in the Himalaya & Vietnam”

March 21, 2009

Pam Beck

Wake Forest, NC

“Small Space Garden Design”

April 18, 2009

Lisa Bartlett

Atlanta, Ga.

“Container Gardening: Tricks of the Trade”

Refreshments at the Meetings

You are encouraged to bring goodies to share to the meetings. Beverages are available.

Last name begins with:

January K-O

March P-T

April U-Z

But feel free to bring goodies anytime!

2009 Eastern Winter Weekend

January 30—February 1

Reston, Virginia

The Potomac Valley Chapter of NARGS hosts the 2009 Eastern Winter Study Weekend January 30-February 1 in Reston, Virginia (near Dulles Airport).

See *The Trillium* page 4 for speaker information.

Information available at www.ewsw09.org/EWSW09index.htm
This meeting is a week after the Inauguration of Barack Obama, so Potomac members expect a residue of excitement around town.

Though unable to arrange for on-line charging, the chapter CAN accept credit cards if you wish to mail in your application. Otherwise register online but mail or telephone your credit card info to Registrar Sue Hodapp, 703-758-8422.