



The Trillium

Piedmont Chapter
North American Rock Garden Society
Chapel Hill, Durham, Raleigh, NC

Exploring the Flora of the Blue Ridge

by Tim Alderton

In mid August, I had the opportunity to visit the University of British Columbia Botanic Garden with a group from the JC Raulston Arboretum. Associate Director and Curator of Collections, Douglas Justice, toured our group around the garden highlighting many of the cool plants from all over the world. An excited Douglas brought us to a relatively new part of the garden that highlighted the flora of the deciduous hardwood forest of eastern North America, often called Carolinian forest for the most diverse section that occurs in our own mountains of western North Carolina and South Carolina. Their collection, inspired by visits Douglas and others from UBC earlier took to Virginia, South Carolina, and our own North Carolina forest, now contains countless specimens with provenance traced back to North Carolina. Douglas remarked at the diversity of the Carolinian forest in comparison to the relative desert of diversity that is seen in the ancient coniferous forest of the Pacific coastal climates of British Columbia. Their small groves of Carolinian Forest in infancy lack the myriad of herbaceous flora we see in our own forest in the mountains, but having seen a small sampling of the understory flora while “Exploring the Flora of the Blue Ridge” in early May, I knew exactly what inspired their Carolinian Forest at UBC Botanic Garden. My trip to the Blue Ridge was part of the NARGS annual meeting, held in Asheville.

Rain, mist, and fog hindered our first day of “Exploring the Flora of the Blue Ridge”, but the second day a change in the scheduled hike to a lower elevation and more northerly stop made for a cool, breezy, changeable, but dry day for the group I was with. Alpine Ericaceae, our intended hike, merged with a group headed to Graveyard Fields. Both hikes to these locations experienced miserable weather with few blooming plants the prior day so our new location became Rattlesnake Lodge Trail, a section of the Mountains to Sea trail.

The Rattlesnake Lodge trailhead greeted our group with the flora that Douglas Justice would later remark about as the catalyst for the idea of a Carolinian Forest. Only a few feet into the trail tufts of *Galearis spectabilis* with their spikes of pink and white blossoms held above two wide leaves dotted the slope protected by the ever present *Toxicodendron radicans*. Foliage of countless wildflowers emerged in preparation for later flowering. *Aplectrum hyemale* hugging the ground with its one or two pleated almost metallic blue green leaves, *Medeola virginiana* forming patches of umbrella spoke like whorls, along with *Maianthemum racemosum* and *Polygonatum* appearing as ladders leaning out over their neighbors.



Photo by Tim Alderton

Galearis Spectabilis

A short distance ahead a moist seep gave habitat for *Packera aurea*, with 18” tall stalks topped in deep orange/yellow daisies surrounded by their clusters of scallop edged leaves. Seedlings of *Impatiens capensis* mingled with the foliage soon to take over the area in the coming summer months. The first few plants of the pinatifid, silver splotched leafed *Hydrophyllum macrophyllum* though not yet flowering joined in the collection, only to become dense patches just a short walk further down the path. A diminutive pale blue to white flower cousin of *Hydrophyllum*, *Phacelia dubia*, already blossoming; crept among the larger plants, and formed dense tangled patches in other places.

Further along the trail the soils became drier creating a habitat for a totally different flora. Within inches of each other *Uvularia perfoliata* and *Uvularia sessilifolia* grew. A small pale yellow flower still hung from the *U. sessilifolia*, but the *U. perfoliata* had none. At their base, succulent sprigs of the white flowered *Sedum ternatum* peaked up through the leaf litter from the *Quercus alba* growing overhead. Beneath the *Quercus*, the corn cob- like flower stalks of the parasitic *Conopholis americana* mingled with a loose colony of the umbrella leaved *Podophyllum peltatum*.

A northern exposure brought us back to moister soils; large patches of *Hydrophyllum* again dominated the understory. The first glimpse of a large white tri-petal *Trillium grandiflorum* standing like a deer in the dense growth on the down slope side of the path only hinted of the numbers to come. Lining the trail, a strip of pale lavender daisies with yellow eyes, *Erigeron pulchellus*, flaunted their blossoms trying to be noticed before being distracted by the display they knew grew just around the next turn. Up the slope and around a curve in the trail, what seemed like a crowd of line dancers, white to pink blushed *Trillium grandiflorum* twisted to and fro by the gusty wind that rounded the ridge. Here and there among the dancers stood the rigid 10" stalks of cobalt colored *Delphinium tricorne*. Nearby partially unfurled stalks of *Maianthemum racemosum* joined in the dance arching out over a large colony of *D. tricorne* ranging in color from the cobalt seen earlier, blue and white bicolor, and even a few pale pink.



Photo by Tim Alderton

Trillium grandiflorum

Climbing a ridge, more large colonies of *Delphinium* with diverse colors could be seen from along the paths edge. As in most places, *Toxicodendron* protected the most beautiful of these. (Somehow I managed to not come back



Photo by Tim Alderton

Delphinium tricorne

from this trip covered in poison ivy blisters.) Adding to the blues and pinks of the *Delphinium*, a few clumps of *Phacelia bipinnatifida* with purple and white 5 petal blossoms grew to one side of the trail ringed by *Impatiens capensis* hinting to the moisture of the soil in that location. Reaching the top of a ridge, a monolith formed the edge of the trail on the leeward side of the path. Guessing that there may be some cool plants hidden by the boulder, I went off the trail and rounded the protected side. To my delight, pristine white and aged pink *Trillium grandiflorum*, larger branched clumps of *Delphinium tricorne*, and *Hydrophyllum* all grew safe from the battering winds. Just out of the wind, a large patch of the parsley-like leaves of *Cystopteris*

fragilis mixed with a scattering of unfurling umbrella like leaves of creeping *Parthenocissus quinquefolia*. Looking closer, I found aging flower stalks and the forked leaves of *Cardamine dissecta*. A lone, pristine white-flowered *Delphinium tricorne* pushed up through the leaf litter down the slope from the *Cystopteris*.



Photo by Tim Alderton

Trillium rugelii

Descending into a cut in the ridge, a few spots harbored the yellow flowers of *Viola pubescens* along with a couple clumps of *Trillium rugelii* hiding nodding antique-white petal blossoms with chocolate brown to nearly black stamens and pistil. Reaching the bottom of the cut, a glimpse up the steep slope ahead brought into view more spots of blue, white, and purple as the *Delphinium tricorne* continued to display their spikes of blossoms. Dense clumps of the white-flowered *Viola canadensis* bridged the trail along with what would be the last few *D. tricorne*. The environment was now transitioning into a much drier rocky environment, as we ascended the twisting trail.

We paused to look out over the valley through an opening in the forest, and turned around to find a rock outcrop along the path providing habitat for a thicket of *Philadelphus inodorus* that only showed buds, but soon fragrant white blossoms would grace the partially leafed canes. Just down the trail, a clump of *Thalictrum dioicum* blossomed with hundreds of purplish miniature wind chime like florets held above the delicate maidenhair fern like leaves. Close by, another few stalks of *Uvularia perfoliata* flowered over the carpet of crisp brown *Quercus rubra* and *Q. prinus* leaves joined by the just emerging foliage of *Arisaema triphyllum*. Around another curve, a boulder en-

crusted in lichens and moss provided a home to *Philadelphus inodorus* hanging from the top, with pockets of white-flowered *Stellaria*, waxy white with pink-pinstriped *Claytonia virginica*, and a budding *Silene virginica* growing from crevices in the stone. Hidden at the base of the boulder, the first of several blooming scarlet-flowered *Silene virginica* poked up saying, "Here I am!"

The meandering trail twisted up the side of the ridge taking us through an area of rock and old fallen trees. Among the chaos of wood and stone, a small population of resilient *Rhododendron calendulaceum* held buds only hinting the vibrant yellows and oranges they would open to in weeks to come. Other less disturbed rock outcrops provided homes to the fall flowering *Hamamelis virginiana* intermingling with the contorted cinnamon trunks of *Kalmia latifolia* which would flower in June. Ahead smack in the middle of the trail, a diminutive tuft of *Hypoxis hirsuta* blossomed. Hairy grass like leaves stood watch, protecting the vibrant yellow blossoms as it grew between the stones in the path.

A large rock outcrop, sloping about 40 degrees came down the slope and reformed on the lower side of the trail. On



Photo by Tim Alderton

Hypoxis hirsuta

the upslope, the lichen-crusting stone provided homes to more *Silene virginiana* erupting out of a thin crack. Just above, a *Dryopteris* and *Heuchera* made their residence in an imperceptible pocket of soil. On the down slope, even more treasures grew on the dry nearly soilless pan of stone. Crawling out onto the megalith, I found a 5-6' wide carpet of hairy worm-like *Selaginella tortipila* clung to the rock. Just a few feet away where millennia ago an 18" thick layer had slid off the rock's surface, a film of water seeped from a minute crack providing perfect habitat for *Saxifraga virginiana*. The clusters of tiny white flowers grew on long scape stretching from the rosettes placed in the moist shaded crevice. Further down the "tipping plate" of stone, larger *Saxifraga virginiana* grew in the open alongside *Krigia montana* with closed buds, more *Selaginella tortipila*, and tangles of *Phacelia dubia* in full flower. The dry side of the plate of rock provided a home for a lone clump of *Opuntia humifusa*.

The forest closed in on the trail again changing the habitat and flora. Tall *Trillium erectum* made its first appearance in a dark burgundy form guarding the edge of the path while growing next to *Lindera* and *Maianthemum racemosum*. Ahead a large patch of *Trillium grandiflorum* once again lined the trail with white and pink blossoms. The herbaceous layer grew much sparser in this area, but the understory still contained species of interest. A few trees of *Acer pensylvanicum* unfurled their leaves as they stood next to the rocky trail as well as *Tsuga caroliniana*, snowy looking with an infection of hemlock woolly adelgid. A lone purple-bloomed *Viola pedata* perched along the path like a bold little wren hunting insects. More *Kalmia latifolia* with contorted stems reached out from yet another group of rocks. A thick layer of moss covered some of the boulders in the group with three budded *Cypripedium acaule* almost looking like two male waterfowl trying to catch the eye of a lone female nearby.



Photo by Tim Alderton

***Trillium erectum* black**

Part of the group arrived at the ruins of the Rattlesnake Lodge where we paused to eat our lunch. Terraces and old walls gave an idea of structures that once stood in the location during the first part of the 1900's. After finishing my own lunch, I began to explore the surrounding woods. Up the slope from the lodge, I found small clumps of *Viola* with blue flowers freckled and striped with white. Growing in the same location *Galearis specabilis* greeted me like at the trailhead joined by *Anemone quinquefolia* with digit-like leaves and nodding white flowers mingled with the bicolor violets. Wandering a bit further I located a spot where *Allium tricoccum* formed a large patch of strappy garlic-scented leaves, the unseen umbels of white blossoms would not flower until later during early summer as the foliage melts away. Close to the *Allium* the similar leafed *Clintonia borealis* formed a dense colony. The glossy leaves reflected light upon the umbel of flower buds held in a tight ball atop a scape rising from each rosette.

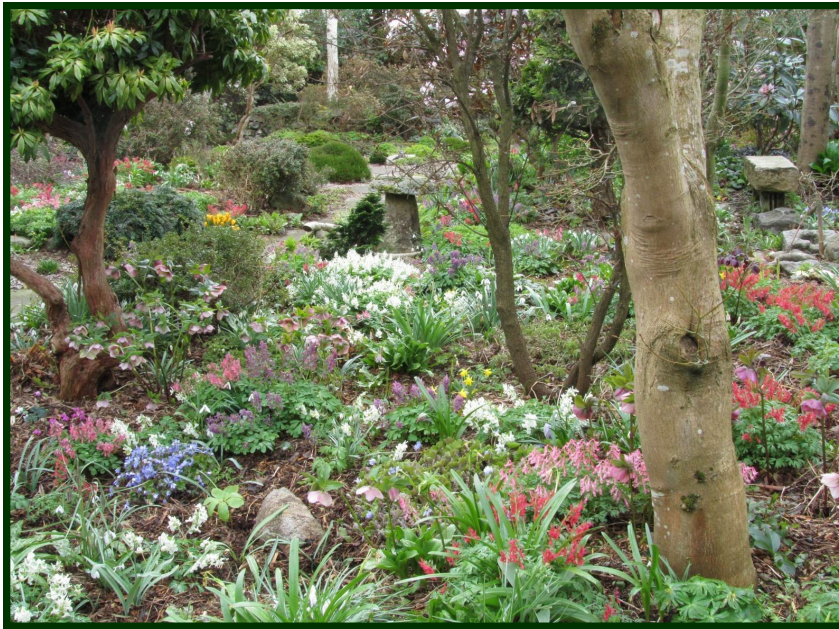
Reuniting with the group, we began to descend the trail that led to the rendezvous site near the Tanbark Ridge Tunnel on the Blue Ridge Parkway. Paralleling a stream, a diverse selection of species found their home in the rich moist soils. On stream edge and sometimes on miniature islands, a wide selection of *Trillium erectum* grew. The flower colors varied greatly. Burgundy, yellow, creamy white, bicolor, and speckled forms; thin petal and wide petal forms; and both yellow and black pollen forms added to the variation seen in the population. A few *Trillium grandiflorum* even joined the mix of colors.



Bulbs in the garden

by Ian Young

While I can admire the layout of a formal garden and all the work that goes into maintaining it in good order, it is not a style that I could ever adopt. My style of gardening is perhaps the very opposite of formality as I try and mimic the chaos of nature – making environments, introducing plants, then watching what happens. Layout and design are just as important to our naturalistic style as they are in formal gardens. Most of us start out with a rectangular plot of whatever size to work with but I do not see it as a rectangle but a cube. To me the most critical dimension in any garden that literally lifts it above the average design of many gardens is when you fully utilise the height of plants. Planting trees and shrubs immediately adds this extra dimension giving you the feeling of being in



Bulbs in the Garden

Photograph by Ian Young

a garden not just on it – hugged to the ground by an overhead canopy. In addition to the design aspect trees and shrubs help us to create a number of very different habitats such as light and shade within a relatively small garden. Having established this structure we can then look to the under planting which just like in a natural woodland can be very rich, diverse and seasonal. This is where we use bulbs trying to achieve as many weeks of flower colour in the garden as our climate allows.

Starting in February with the late winter flowering bulbs the very popular *Galanthus*, the snowdrops, can be in flower from early to late winter but do not overlook the Snowflakes, *Leucojum*, which are equally deserving of our close attention.

The blooming of *Eranthis hyemalis* in the

late winter is a real joy to me as it is the first flower of the year to hold its face up towards the sky. Both *Galanthus* and *Leucojum* hold their flowers in a drooping manner to help protect the reproductive parts from the weather but the *Eranthis* is bold with bright yellow flowers that stare skywards. If left to self-seed all of these bulbs will naturalise, forming spreading colonies of seedlings and you will find that these seedlings, each a different clone, will become more fertile than clonal plantings that you increase only by division of the clumps of bulbs. We encourage this naturalisation by seed within in the garden for a number of reasons - first it gives us plenty healthy offspring with all the vigour of youth, second we get to enjoy the variations found within the species and of course hybrids also occur. Third and in keeping with a natural habitat, it gives us plants of all ages from seedlings to maturity – formal gardens tend to only have mature specimen plants.

The reticulate *Iris* species also flower early and look so delicate with their flamboyant flower structure but this belies just how tough they are - able to withstand all the frost and snow our weather throws at them.

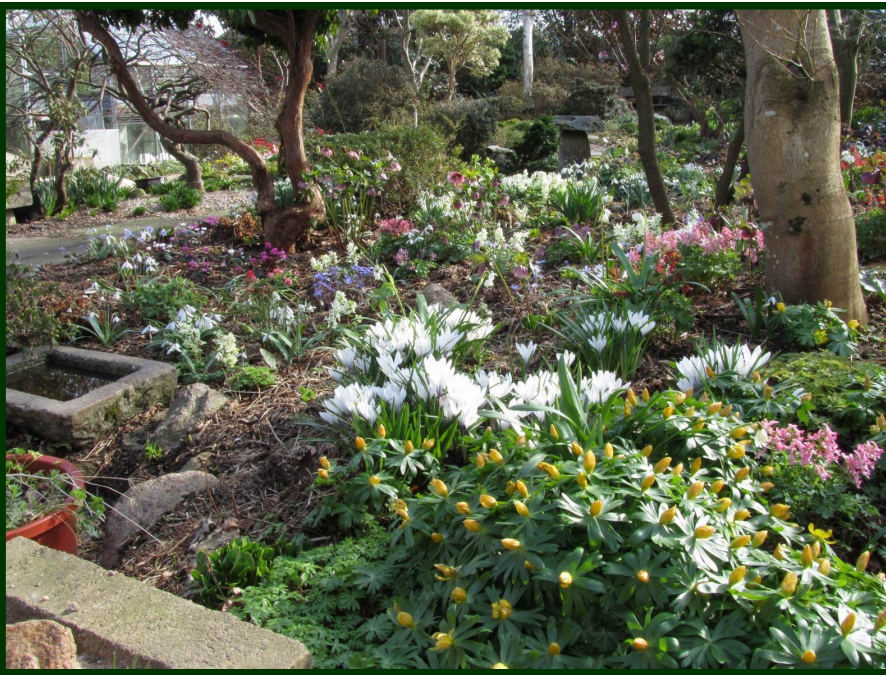
As the season advances the next wave of bulbous plants come into flower, *Crocus* in all their great variety and *Corydalis solida* bring the hot colours from



Galanthus

Photograph by Ian Young

purples through pinks to red filling the garden with colour as early as mid-March some years. We can grow these plants side by side with the Galanthus etc as they enjoy similar growing conditions and as they tend to come into flower as these earlier blooms are just going over extend the flowering season of a bed. By carefully selecting bulbs and other plants you can have several phases of flowering in the same bed.



Photograph by Ian Young

Bulbs in the Garden

Erythronium, Fritillaria and Anemone are in the third phase of flowering in the very same beds and depending on the weather of any particular year these three phases can merge or be separated as the different plants respond to the ever changing temperatures. Our Spring is not clearly defined and depending on which way the wind is blowing we can drift from winter to spring and back to winter again several times in any year – these stop-start conditions give each year a unique flowering pattern .

No spring garden can be complete without some Narcissus and our preference is for the smaller species such as *Narcissus cyclamineus*, *N. asturiensis* and their hybrids whose scale fits in well with our mixed plantings.

The first Erythronium to flower is always *Erythronium caucasicum* followed some weeks later by its close relative *Erythronium dens-canis* then *E. sibiricum* and *E. japonicum* come later still. Around the time that Erythronium is flowering we can expect to see the first of the North American species to flower *Erythronium hendersonii* is nearly always the first followed by *E. revolutum* with the peak flowering of Erythronium in our garden coming in mid to late April. The Erythroniums grow happily in exactly the same beds as all the other bulbs I have mentioned above as they all enjoy the woody type soil and the cool moist conditions our garden has to offer.

Fritillaria pallida in particular is a wonderful garden plant gracing the beds with its multiple large hanging bells of straw yellow with deep purple spots in the centre growing side by side with *Fritillaria pyrenaica*, *F. tubiformis*, *F. acmopetala* and many others. Over the years we try more of the *Fritillaria* that we have grown under glass in the open garden and to date have always been pleased to watch how well they grow when released – embarrassingly they sometimes grow better in the garden where they do not have to rely on our attention. For a number of years now we have been trialling growing bulbs in beds just sharp sand with amazing success –



Bulbs in the Garden

all the bulbs we have tried in this medium have thrived and we are encouraged to try more of the so called 'difficult' species.

While our cool moist climate suits many bulbs, we do not do so well with those that come from hot dry habitats, but we have succeeded with some in a narrow bed at the base of a south facing wall, which offers the hottest driest conditions you are going to get in our open garden. We have to grow the species that require a proper dry summer rest in one of our glass bulb houses.

Back in the general garden another woodland genus the Trilliums love growing up through an carpet of Dicentra and Corydalis and when you look at the structure of the plant with a long stem at the top of which you will see the leaves and flowers, they have evolved in exactly this kind of situation and like so many bulbs do better when growing in communities than they do when grown as an isolated specimen plant.

I spoke earlier of using all three dimensions when planting your garden and now I remind you that gardens are four dimensional – one bed can and should be used fully to deliver as much interest for as many weeks of the year as possible. We continue to develop our mixed beds by observing them during the year; watching for gaps that appear, both in space and time, that could be filled by adding another plant to the community. There is no reason why you need different beds for different seasons as the correct choice of plants will give you almost perpetual interest. The beds that had so much colour in the spring do not look empty as they start to die back with the approach of summer because their retreating leaves are replaced by the emerging shoots of summer flowering bulbous plants such as Dactylorhiza orchids, forests of Arisaema and beautiful Roscoea species.

Nomocharis with their stunningly spotted flowers are a must for any early summer garden and Lilies of all types can give us flowers from spring through until early autumn.

By August we can often detect the first signs of autumn – humans follow the year by the calendar months and often discuss how some flowers are later or earlier than normal but it is important that we understand the plants do not follow this calendar - they respond to seasonal conditions - changes in temperature, moisture and light levels.

The passing of summer is celebrated by the blooming of *Cyclamen purpurascens* followed closely by *C. hederifolium* and these can flower right up until the heavy frosts and snow arrive in November. Colchicums are another classic of the autumn flowering bulbs in our garden and we make full use of them - always planting them carefully to take into account that their leaves will appear in the



Photograph by Ian Young

Bulbs in the Garden

spring. Please do not refer to these beautiful flowers as they are all too often called 'autumn crocus' – it is one of my pet hates as they are nothing at all to do with Crocus and if you do call Colchicums 'autumn crocus' then what are we to call the genuine autumn crocus of which there are many such as *Crocus nudiflorus*, *C. speciosus*, *C. kotschyanus*, *C. vallicola* etc.- all of which grow well in our garden. By now we are entering the winter months and most bulbous plants retreat underground completely but Cyclamen and a few species of Corydalis have leaves throughout the winter reminding us that they are there as well as giving the garden some winter decoration before the whole cycle starts off again in a little over a month's time. ❧

Plant Profile... by Mark Weathington

Botanical name: *Eucomis autumnalis*
Common name: Pineapple Lily
Family: Hyacinth (Hyacinthaceae)
Category: Bulb
Primary uses: Perennial border
Dimensions: 24 inches tall
Culture: Sun to light shade; best in a moist, well-drained location, but will tolerate very dry spots. Plant the bulbs about 6 to 8 inches deep in the spring. Cut off flower stalks when they are no longer ornamental and cut back the foliage when the top third has turned yellow.
Bloom time: Late summer to fall
Bloom color: White
General attributes: Pineapple lily is a hardy bulb from South Africa. In the spring, broad, strap-like foliage with wavy margins emerges. In late summer, white flower spikes reminiscent of pineapples grow above the foliage. The flowers followed by the fruits are ornamental for many weeks and add a tropical touch to the fall landscape. ♪



Photograph by Tom Alderton

SPECIAL TWO PART PROGRAM NOVEMBER 2, 2013

JC Raulston Arboretum, Ruby McSwain Education Building
NARGS Piedmont Chapter Meeting - times noted below.

Ian Young, Traveling Speaker Sponsored by NARGS
63 Craighton Rd., Aberdeen City, Scotland AB15 7UL, United Kingdom

9:30 a.m. “Bulbs in the Garden”

How we use bulbs in the garden to create interest and colour for as many months as possible - concentrates on the use of bulbs rather than their botany.

12:30 p.m. “Inspired to Rock Garden”

The gardens and places that inspired me to grow rock garden plants and how I interpreted them into our garden.

Following the first talk and the plant auction, there will be a break for lunch around 11:30. Because of the short break, we are encouraging people to bring a bag lunch. Or you may prefer to take advantage of box lunches that can be ordered ahead of time. More details on the price and selection will be provided at the October meeting and by email to our membership.

About our speaker: Ian Young has been interested in wild flowers since the age of 11 and with his wife Margaret has been gardening since 1972. He has been actively involved in the Scottish Rock Garden Club for many years, serving on Council since 1988 and was President from 2000 to 2003. For ten years he has written a weekly Bulb Log that appears on www.srgc.org.uk. He is a very popular speaker and has lectured widely in the UK as well as USA, Canada, NZ, Sweden, Norway, Denmark, Holland and Belgium. ♪



NARGS Piedmont Chapter

Meeting —9:30 a.m.

JC Raulston Arboretum
Ruby McSwain Education Building

“Spring Wildflowers of the Blue Ridge”

October 19, 2013

Tim Alderton

JC Raulston Arboretum
Raleigh, N.C.

Double Header Talk Coming Up

See page 9.

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

Food Goodies to Share

If your last name begins with the letter below,
please consider bringing something to share.

Oct E-H	Feb Q-T
Nov I-L	March U-W
Jan M-P	April Any & all

LASTING IMPRESSIONS' 6TH FALL GARAGE GALLERY ART & PLANT SALE

**Saturday, October 19, 2013,
10 am—2pm**

4904 Hermitage Dr, Raleigh

Hand cast concrete leaf sculptures, garden stakes,
birdbaths, leaf tables,
concrete balls and "eggs",
hypertufa troughs for your garden.

...or perhaps a gift for a friend.

Also lots of plants that are well adapted for our area.

20% off all concrete art items
(except our new flower garden stakes)

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