



Liquid Sunshine

Newsletter of the Marsh Botanical Garden

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Garden Notes

Since our last newsletter, the season has turned from summer to fall, and today, it feels much like winter. The light snow we had yesterday, along with the wintry mix today, makes it feel 'seasonal' if nothing else. Despite the cold, damp weather, some processes continue in the garden. Some plants are even blooming outside now. The lowly Dandelion, the ultimate survivor, will bloom anytime the sun comes out and the temperatures are above thirty-nine degrees. In some ways, one could argue that the Dandelion would be an excellent signature plant for a public garden. It is tough, being a pioneer in a succession of plant communities after a site is disturbed. It is a member of the Composite family, a large grouping of plants that includes Sunflowers, Marigolds, Jerusalem Artichoke, the Asters, Goldenrods, and many more. The very name of the family has a note of cosmopolitan community, a botanical nod to diversity. As well, the Dandelion is extremely useful, having culinary, healing herbal, oenological and industrial uses, as well as being an excellent source for a yellow dye.

There are more than a few plants that are bearing interesting fruit in the 'off-season.' The Beauty-berries (*Callicarpa* species) are an excellent fall and winter plant, bearing shiny purple fruits. The American Holly is probably the best-known berry producer here in New England, being native to the area. Just remember that Hollies are dioecious, which means you must have a male within a quarter mile of your female for it to produce fruit. Hardy-Orange, *Poncirus*, is another example of a plant with interesting fruit, but it also has sharp green thorns that add a bit

of subtle winter interest.

Among plants with interesting flower or seed structures, one would have to add the grasses, with their tall seed scapes that catch snow on a calm day. Even the brown leaves of the larger species of grass blow in the wind, adding movement and sound, two often overlooked attributes of garden design. The large leaf Hydrangeas with their clusters of flowers and seeds provide subtle architectural interest in the colder months.

Other winter attributes of plants include the interesting bark of some trees and shrubs. In some cases, where the outer bark seems to be shredding away from the tree, we call this exfoliating bark. Those of you who have undergone the facial treatment of the same name will understand this in a way those of the rest of us can only guess at. It is not known if this attribute in trees has an evolutionary purpose, but I hardly need one as I look at a River Birch, a *Stewartia* or even a Sycamore with the sun full on the trunk this time of year.

There are design considerations that come out as well during the winter months. It is at this time of year when the structure, the skeleton if you will, of the garden becomes most evident. With no flower color to distract, with all the deciduous leaves blown away, it is much easier to view the bones of the garden, to better understand the way in which the design aids in creating or blocking views, moving one through the garden, creating surprises and even entertaining the visitor. This is why I start in winter in designing a space, and also why I often use evergreens to provide the trunk and scaffold branches of the tree of the design.

Liquid Sunshine is a publication of the Marsh Botanical Garden at Yale University. The title comes from a common nickname for rain, because we only have time to write on rainy days.

Marsh Garden extends from Prospect Street to our office on the corner of Hillside Place and Mansfield Street. The Garden is open to the public and we welcome you to visit anytime.

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Evergreen plants are instructive in several of the aspects of design that catch the eye of the knowledgeable gardener, and yet for those who have not honed their design sense, a well-designed garden imparts a nonetheless palpable aura or feeling. Not always is this a calm, contemplative sort of effect. But evergreens first of all instruct as to the nature of green. Using one fairly narrow part of the color wheel, it is amazing the varieties of green there are in the natural world. From glaucous and blue, as in the Colorado Blue Spruce, to the chartreuse of the *Chamaecyparis pisifera* 'aurea,' there is a universe of green tints, shades and combinations.

Evergreens also help us to design with form. There are weeping forms, as in the Weeping Hemlock, to the stiffly upright, as in many of the Cypress genus. Using contrasting forms can add a dynamic touch to any landscape. A word to the wise on this and many other design integers: Don't overdo it. A landscape with totally contrasting forms, jumbled together into one space would be dynamic in the extreme. This would probably be a very uncomfortable landscape to be in or view. Perhaps one could approach a screen planting using this formula of mixing anything and everything, but I'm not even sure of that.

Using repetition when using forms is an excellent idea, to move the eye through the landscape. The eye easily follows repeating elements, be it form, size, color or what have you.

There are needled evergreens, broad-leaved evergreens and scaled-leaf evergreens. The needled evergreens are the Pines, the Spruces, the Firs and a few others. Broad-leaved evergreens would include the Rhododendrons, Pieris, Camellia, even Pachysandra. The scaled-leaf evergreens are the Arborvitae, the False-Cypress and a few other genera. We are planning a scaled-leaf evergreen planting here at the Garden, for which we have already bought some plants. We will keep you posted.

As I mentioned earlier, the growth processes of plants stop for most of the deciduous plants, although one shouldn't be fooled by the lack of leaves: processes slow down and then stop in the coldest weather, then start back up long before any buds have swollen for the spring. Hence the gathering of maple sap in late winter. But for evergreens, the process of transpiration continues through the winter, although it is much slower. This means that evergreens can be susceptible to certain winter problems that you can guard against in the home landscape.

Especially broad-leaved evergreens have a problem that begins with cold weather without snow. This situation results in the water at the soil surface freezing, making it unavailable to the plant. Although the plant may be hardy as to temperature, what it can't take is being without water, and perhaps being exposed to drying winter winds. Evapo-transpiration is what they call having wind suck the water from leaf cells, and also needing

water for photosynthesis. Most evergreens have some sort of protection, usually in the form of a waxy cuticle on the leaves and stems, but this only helps for a while.

So to avoid these problems, there are several important cultural steps that one can take to protect these wonderful 'bones of the garden.' First, proper selection of plants, ensuring they are hardy in our zone. If they are marginally hardy, then one must site them more carefully. That is the next step, is planting in the right place. To protect broad-leaved evergreens from drying winter winds, plant next to a south-facing wall, or at least protected from the north and west, which is the prevailing wind direction in most locales.

Next it is important to mulch these plants very well, with a triple-shredded mulch. I usually advocate using chips, but in this case, you are protecting those roots from the elements and trying to hold water in the soil at above-freezing temperatures if possible.

Some people build little enclosures out of bamboo or lath and burlap, to help in this. They work, but they are time-consuming to build and take down, and they add a certain quality to the winter landscape that may not suit everyone's taste. In the little garden where Whitney Ave. divides as you enter town, using the burlap not only protects the roots from the temperature/water problem, but it also helps to avoid the worst of the road-salt spray. So there are times to use that application.

Come visit our expanding evergreen collection. Our Rhododendrons and other well-established plantings are being pruned, weeded and cleaned out as the winter progresses, and the new plantings should be going in this coming spring.



Stewartia pseudocamellia showing off its exfoliating bark, with tan, grey and cinnamon hues.

Garden Visitors

We had a visit from the class, Biology of Plants, which Ian Sussex and Nancy Kerk teach for MCDB. As usual, we served tea and some light refreshments, and gave them a tour of the facilities. Although it was a bit inclement of weather, we managed views of the outside gardens as well. It's always a great opportunity for us to strut our stuff, especially Dave Garinger, our staff horticulturist. He was able to highlight a few of our latest additions to the collections, including a few aroid plants that he very cleverly mounted on a piece of wood above the bench, to save bench space and also to approximate the living conditions of these interesting plants. We encourage professors to schedule visits with their classes, if for no other reason than to view our version of a research greenhouse, not to mention our modest but impressive collection of diverse tropical and sub-tropical plants.

We also had a visit from the Yale University Women's Organization, who stopped by for tea and cream puffs, and a tour in October. This group was very welcome because of their general enthusiasm and the gardening moxie that showed as we discussed indoor plants and some outdoor gardening issues. We are open for tours from the Yale community and beyond. Although we must limit any group size to fifteen or so people, for larger groups, we will bifurcate into two smaller units which Dave and I will take through the area. I am not being overly modest when I say that my knowledge of indoor plants lags far behind Dave's, but I am learning every day.



Dave Garinger created this display of aroid plants, mostly Tillandsia and Spanish Moss.



Dave Garinger and Ian Sussex in teaching mode for the visit of the Biology of Plants class.



The charming and knowledgeable Yale University Women's Organization came for a tour and taught us a thing or two, having a great time all the while.

A report about the garden would not be complete without mentioning the sad state of affairs as regards the wildflower garden, which I reported to you in volume 2, number 4. The original work that was done, to clean out a storm sewer line, apparently was not done properly, and the contractor came back this fall to finish the job. Unfortunately, this resulted in many of the perennial plantings being completely demolished, and the ground left torn up and exposed to erosion on the steep hillside. After the heavy rains of early November, this area has taken on the look of a canyon. I was dismayed to learn that the work still was not done properly, and indeed in trying to complete the task, a steam line to the Greeley greenhouse was hit. Ouch. So, we will try to hold the soil, and hope for the best. More on this as developments occur.

We would like to extend a warm season's greetings to all of our readers. Be safe, and good health to you and yours.