

## Chicago's Ancient Ecosystem and Local Insight into the Use of Several Ground Cover Plant Materials<sup>®</sup>

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Welcome to the 50th Annual Meeting of the I.P.P.S. Eastern Region, North America. I am pleased to be taking part in this program, since this marks my 10th year as a member of the I.P.P.S. I have had the distinction to serve on various committees as well as having been the local area secretary for several years. It is my pleasure today to give you an over view of the Chicago that once was.

This area was once a true ecological treasure house. It was here that the deciduous forests that at one time, covered the Eastern part of this the continent, began to give way to the expansive grassland ecosystems of the middle continent. The western coast of Lake Michigan has had many unique and irreplaceable habitats occupy its shore line and adjacent boundary lands. Prairies once ran nearly unbroken from Lake Michigan nearly all the way to the great Mississippi River, and beyond. These various types of prairies — dry, mesic, wet, savanna, mixed woodland, and others — all combined to form a distinct type of habitat.

Trees, shrubs, and endless forbs and grasses, all adapted and flourished here. Along with the plants, countless insects have made the prairie their home, becoming specialized grassland inhabitants. Likewise, birds and mammals as well have adapted to living in a mostly treeless ecosystem. These diverse grasslands, as well as the wetlands that surrounded them, formed what has been called swell and swale. Today, many migrating forest birds and waterfowl take refuge here in the Chicago area for days or even weeks every spring and fall.

During the winter, if one knows where to look, arctic birds such as snowy owls, hunt up and down the coast of the lake, as well as the adjacent marsh complexes around this area.

As with most natural habitats, this area has undergone dramatic change during the last 100 years. Many of the original environments have changed or disappeared altogether. Yet, there are remnants here and there that today have special status, and collectively are known as the Chicago Wilderness Region. What we have left, is land and life forms which are our link to a unique ecological heritage, which without a doubt needs to be protected and preserved for future generations.

The purpose of this presentation is to give some local insight into several already known plant materials. Indeed, the groundcover plants listed below have been around the horticultural industry for some time. What I have endeavored to do, is to share with you how these plants fare here in the greater Chicago area. Our weather here is USDA Zone 5 (A&B), with summer temperatures (°F) ranging from the 70s, into the 90s and higher. Winter weather can bring temperatures below zero, many times below -10 to -15°F.

Soil types, exposure, and drainage conditions can all lead to success or failure of landscape plants. You must also factor in disease, insect, and animal damage into the equation. The results and the plants materials are discussed below.

I have been using, as well as propagating, the following plants for many years now. These will not work in all situations, but I feel have merit to be used here in local gardens and landscape situations.

***Pachysandra procumbens***. This plant is getting increased recognition now, but still plays second fiddle to Japanese pachysandra. This plant does not appear to have general problems. There are no leaf diseases to speak of, and in areas of deer and rabbit predation, this plant does not suffer any browsing damage. It does not spread as quickly as *P. terminalis*, however it works well with shrubs like *Rhododendron* and *Fothergilla*, and interacts with spring and summer bulbs. I have noticed that the leaf mottling comes and goes in both shade and sun and I have not seen any effects with fertilizer or soil additives in this case either. The early spring blooms work with dwarf bulbs, like *Crocus* and *Eranthis*, and in general it is a good groundcover to use in most situations. Propagates from division.

***Arctostaphylos uva-ursi* 'Massachusetts'**. We have several variations of this plant around this area in use. 'Vancouver Jade' is another cultivar that finds its way into garden centers and wholesale nurseries. *Arctostaphylos* works well in basic soils and does not need much fertilizing. It will flower well enough, in some cases the fruit set can be underwhelming. However, where you will need a groundcover that just has to grow and fill in, this one will do the job. I have planted 2- or 3-inch potted plants on 8- to 12-inch centers, and in 2 years they have filled the area between plugs, and spread outwards from their original plantings. Cutting propagation is best.

In some cases I have seen vole damage over the winter, and deer winter browse in spring on new growth. Mothballs or spray repellent will work here. There can be occasional leaf spotting, but this is not really a major problem. Since this plant stays evergreen throughout the winter, care must be taken along walks and driveways where certain types of icemelt products could cause chemical damage.

***Gaultheria procumbens***. This plant has always performed well for me. Of course I prepare the bed areas where it will grow and allow for drainage. Where *Gaultheria* gets morning sun the flower and berry set will be excellent. It is not a plant that will cover a football field, but is useful as an accent planting, works well for an entrance bed, or surrounding specimen plants. No special problems to speak of, and I have never had trouble from deer or rodents with this plant. Propagates from either division or seed.

***Hypericum calycinum***. This plant can spread quickly, and usually by the second year it begins to flower well and provide great display. The winters here can cause problems with die back — I have in the past had partial to total colony death with this plant. Mulching with bark helps, as well as using conifer boughs to cover the crowns of the plant. The draw backs for gardeners is the single blooms, and potential winter plant damage, yet when the planting matures, people get to appreciate the plant's habit and flowering. Obviously this is one of my personal favorites. Propagates from softwood cuttings.

**Some General Notes on Growing and the Like.** I generally use soilless mixes to root cuttings or divisions. I use a mix with 2 parts bark, 1 part peat or compost, perlite, and pumice. Where applicable, I use Terrasorb<sup>®</sup> or another plastic jello product to hold moisture. fertilizing is usually applied by liquid feeding, and the

nitrogen is kept low. Plants are either grown in Anderson band pots, or Anderson 2-, 3-, or 4-inch square side-draining pots, which are recycled back into the growing operation after planting or selling the plants directly to clients. During the second season in the ground, top dressing with low nitrogen fertilizer takes place. Generally little or no chemical treatments are needed with these plants. Occasional top dressing of beds with mulches is needed, and only applied when necessary.

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## Successful Techniques for Overwintering Rooted Cuttings<sup>®</sup>

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One of the most challenging tasks facing any nurseryperson is to successfully overwinter newly propagated plants. Prides Comer Farms propagates and grows a very large selection of woody ornamentals, as well as many perennials and grasses. Today I would like to give you a brief overview of how we overwinter woody ornamentals. Cuttings are stuck throughout the year but there are three primary times during which most of our propagation is done. The largest volume is done as softwood cuttings taken from liners or container-grown plants during the months of June and July. These cuttings include taxa of deciduous shrubs, such as, *Viburnum*, *Cotoneaster*, *Daphne*, *Clethra*, and *Forsythia*, and many others, and all are rooted under intermittent mist. They are stuck in a peat and Styrofoam medium and standard talc hormones used. A second major propagation period is in October, at which time propagation of broadleaf *Rhododendron*, *Pieris* cultivars, and *Euonymus fortunei* cultivars are done. The third major period for propagation occurs from early January until mid February and this includes evergreens such as *Chamaecyparis*, *Microbiota*, and *Ilex* as well as small leaf *Rhododendron* and more *Pieris* if needed. All cuttings are treated with talc hormones and stuck into flats of the peat and Styrofoam medium. As rooting occurs and plants are weaned from the mist they are fertilized with 200 ppm nitrogen at least every other watering. As these cuttings grow they are sheared in the propagation trays if needed until being potted.

The potting of the previous year's liners begins in the spring, about 15 May. Space in the liner houses becomes available to start potting the rooted cuttings that were stuck in January. Most cuttings are potted into trays holding 18 plants in 3-inch cells, using a peat, bark, and Styrofoam medium. Plants of genera and similar growing requirements are grouped together and placed in the same liner houses as much as possible. I will go into more details on this later.

Presently at Prides Comer there are 45 liner houses holding an average of 25,000 plants each. All of these houses have the capability of being heated and ventilated as needed. Many of the larger houses have rollup sides and cuttings potted in May and June are placed in these houses to be grown over the summer. However, most of the cuttings are from the softwood propagation in June and July and they are potted beginning in early August. The following is a very general listing of the plant groups that we try to pot together.