

## Washington Conservation District Plant of the Week – Winter 2009-10

By Jyneen Thatcher

### **Bitternut Hickory – Feb. 22, 2010**



A recent presentation by forestry researchers from the U of M mentioned that one result of climate change may be a shift in tree species and plant communities in Minnesota. In particular, species that are now found only in the southern part of Minnesota may extend their range and thrive farther north. One example is bitternut hickory (*Carya cordiformis*). Bitternut hickory is found on loamy soils, often as part of the Big Woods complex. It is not tolerant of fire, so has

not been a major component of our oak forests.

This species can be identified by the leaves (odd number, with the terminal leaflet larger than others, smallest leaflets at the base of the leaf), but most easily from the nuts. The shell on the nuts has four ridges which will split open to reveal the nuts. The shagbark hickory (*C. ovata*, not pictured) has similar leaf, but the nuts have a smoother husk without the prominent ridges, which split into four pieces along depressed sutures. You could also taste the nuts; shagbark is sweet but bitternut is bitter. The bark of the shagbark is "shaggy", somewhat like a silver maple or black cherry.



In Washington County, I have found a few patches of bitternut hickory - near the Bone Lake access and nearby, in Big Marine Park Reserve, and in William O'Brien State Park. The photos shown here were taken at O'Brien in September 2009. The colony in Big Marine Park are smaller, understory trees, indicating their ability to survive in semi-shaded areas.

If you have a moist, loamy woods area (maybe with maples and basswood already established) and want to diversify your forest, the WCD is selling bitternut hickory as part of our 2010 tree seedling sales.

## Burdock and Mullein - Feb. 1, 2010

Keeping to the theme of winter botany, here are two plants whose seed stalks persist into winter, for easy identification.



Burdock (*Arctium minus*) is recognizable by its tangle of burs, tall enough to snag onto your fleece jacket sleeve. The burs are 1/2-1 inch across, and are made up of individual hooked wires. It's the hooks that snag



our clothes or animal fur, and stay imbedded when the bur is broken apart during the removal process. Some say these burdock hooks were the idea behind Velcro. During the growing season, the plant is recognized by the large, flat leaves. Burdock is a biennial, setting a rosette of leaves the first year, the next. The flowering leaves, and a somewhat



removal process. Some say were the idea behind growing season, the plant large, flat leaves. setting a rosette of with a flowering stalk stalk includes smaller attractive purple flower.



Common mullein (*Verbascum thapsus*) is also a biennial, with a tall seed stalk visible in the winter landscape. The leaves in the first-year rosette are fuzzy, and the flowering stalk has scattered small yellow flowers. My husband refers to this as the "ear-

of-corn plant", comparing it to the appearance of a gnawed-on summer treat. In the winter photo attached, you'll see it to the left of the oak tree. Sorry, can't find my July photo.



Both of these species are introduced to North America, way back in history. Both are biennials, setting large numbers of seeds. Both are considered aggressive or invasive, based on the amount of seed set. Both species are also terrific pioneers, requiring disturbed soils in open areas. They are both relatively resistant to herbicides, so mechanical removal early in their lifetime is recommended. Both have a long taproot, so pulling them up can disturb more soil and the next generation of seeds. One of the control methods is to slice the root below the ground surface, then leave the rosette in place. This stops the flow of nutrients, and prevents sunlight from stimulating regrowth.

Of course, there are a few good things about the plants. Birds like the seeds. The large leaves dissipate rainfall before it hits the ground. Herbalists use the plants for medicinal purposes. Burdock is used for treatment of scrapes and rashes, including poison ivy. Never tried it myself, but it's been offered to me. And mullein has been used to kill off mosquito larvae and rough fish in ponds. Again, never tried it, nor am I recommending such trials.



### Plant of the Week (January 25, 2009) Phragmites

This week, I'm revisiting a previous subject - *Phragmites australis/communis*, or the giant reed grass. Why did I select this species? Because a co-worker gave me a bouquet of *Phragmites* plumes last week. See- you can give the gift of flowers all year round. Actually, they just wanted me to confirm identification.

*Phragmites* is a cane-like grass, reaching 6-10 feet in height and 1/4 inch in width. The identifying feature this time of year is the persistent plume-like inflorescence, which is often 6 x 12 inches in size. *Phragmites* grows in wet conditions, often in the zone between reed canarygrass and cattails. It is a native species, but some strains appear to be more aggressive, and can become invasive. Other sources say they are just more tolerant of pollution and other stressors, and therefore outcompete other natives. Some sources even report poor seed development and germination, but describe the dense, tough mat of spreading rhizomes as the way it forms monotypic colonies. Sounds like the hybrid cattail, which is why ecologists are watching the species to see if it will be a problem in the future.

The dense plant colonies do make for good wildlife shelter in the winter, especially for deer and pheasants, because of the tough stems which act as a windbreak. Humans have used the stems for mats, nets, rope, roof thatching and screens. Historically, they were used as shafts for arrows and alternative to goose feathers for writing implements.



Also visible in the second photo is the red-osier dogwood (*Cornus stolonifera*). Everyone should know that one. Can't miss it in the winter, but the red bark fades in summer to a reddish brown.

One other point about these two species is that the names are great descriptions of the plants. I'm referring to the latin binomial- the Genus species names. Often those names are just mumbo-jumbo, but once you start to translate (especially the species) it makes a lot more sense.

*Phragmites* comes from the Greek base word "phragma" which means fence. That makes sense when you see the colony along a shoreline. The term "stolonifera" refers to the stolons that spread along the soil surface. One of my professors told me the native species is usually called *stolonifera*, while the variety grown for the nursery trade was selected for a non-suckering habit and is called *C. sericea*. Haven't heard that anywhere else, but it sure makes sense to me.

An excellent source of information about Latin nomenclature is the Fall 2009 newsletter of the Minnesota Native Plant Society. The writers have pulled together some of the more common names, so you will undoubtedly be able to recognize the plants and apply some of the terms. The Native Plant Society's web-site is [www.mnnp.org](http://www.mnnp.org), and you can find the newsletter there, along with lots of other good information. They have

fabulous monthly forums, terrific field trips, and stimulating annual symposiums. And the membership fee is extraordinarily reasonable.

### Colorado Spruce and White Fir - Dec. 16, 2009

The featured plants this week are two evergreens, not native to Minnesota.



Colorado spruce (*Picea pungens*) is from the dry Rocky Mountains, and while tolerant of our cold weather, it is susceptible to fungal diseases in our humid summers. We occasionally get asked why we don't sell Colorado/blue spruce as part of our seedling program; our response is that there are other evergreens better suited to our conditions. The needles are typical form as other spruces (4-sided and sprouting from all around the twig) but are extraordinarily sharp. Just ask anyone who has been decorating one for the season. The characteristic that

people like is the bluish color that many of the varieties have. There is a general range of color variation, with the popular color now coming from selected cultivation. The limited genetic variation sets them up for disease susceptibility. Here in east central Minnesota, we see the Colorado spruce start to lose their needles and great form when they are about 30 years old, from a combination of shading, and fungal stress.



So what to plant if you really want color variation in your evergreen shelterbelt?



Try the white fir (*Abies concolor*), which has a similar blue color. The species name refers to both sides of the needles having the same color (most other evergreens have darker tops of the needles). The white fir is considered the most tolerant of the fir trees, considering site conditions of humidity, soil characteristics and sunlight. They are rated by the



Wisconsin DNR as being hardy into zone 4a. The needles are like other firs - flattened, and project from the sides of the twigs - but the needles of the white fir are nearly twice as long as the balsam. Firs (including white and balsam fir) make great Christmas trees as their branches are soft and easy to decorate. And as you can see in the "snow" photo attached, the branches of the white fir are horizontal, but flexible enough to tolerate snow load. The white fir doesn't smell like balsam, it smells like tangerine. Really!



**Club Moss and Ground Pine - Dec. 9, 2009**



Snow has arrived, so I can feature some evergreens, but not the trees just yet. Instead, you may have noticed short plants growing through the leaf duff, looking kind of like a moss, but also like a cedar. These are members of the club-moss family (Lycopodiaceae), which along with horsetails (Equisetum) are considered "fern allies." Clubmosses are so-called from the moss-like appearance and the club-shape of the

sporangia. Between the many Lycopodium found in Minnesota, identifying features require than I have, or at least more plants having those diagnostic So if you are an expert on I'd welcome any correction to that follows:



species of the ultimate more skills luck in finding features. club-mosses, the information



Round-ground-pine (Lycopodium dendroideum) looks like a little cedar tree. The stem stands erect, and the form of the branches looks tree-like. Thus the species name. The growth points look similar to the candles on spruce or fir trees.



Running club-moss (Lycopodium clavatum) has a long horizontal stem, usually lying within the duff layer in forests, with occasional rooting nodes reaching down into the soil. But it also grows in downed woody debris, such as



dead logs and mossy hummocks.

These plants are often found in association with other semi-evergreen plants such as mosses, (Gaultheria species) or including sphagnum. Their small size makes them good choices for terrariums or miniature gardens, or as filler around the base of other flower arrangements. Such as seasonal decorations. Just remember to keep them cool and moist, and don't over-harvest an area.

**Tansy - Dec. 3, 2009**

This week's plant is still recognizable in the field, even though the color has faded. Tansy (Tanacetum vulgare) is a non-native plant, which blooms with a cluster of yellow disc-shaped flower heads and a fern-like leaf. The plant is commonly seen along roadsides, like other aggressive species. The plant is frequently mentioned in herbal-remedy books, so is considered valuable to some people. Most ecologists consider it an invasive plant needing to be





controlled. Tansy spreads by seed, and once established, the roots can be difficult to pull out. The plants frequently grow 3-4 feet tall, and when the wind blows, the very fine seeds are flung when the plants are whipped around by the wind. Many of the seeds fall onto the snow, and are scattered even farther by the wind and spring snow-melt.

This plant has been named by Ramsey County and Ramsey Conservation District as one of the newest invasive weeds to threaten that county. More information is

available at <http://www.co.ramsey.mn.us/cd/cwma.htm>.



Tansy can be recognized now by the same shape of flower clusters, although the seed heads are a dark brown. The leaves are probably dry and curled, but still resemble ferns.

If you see this plant, please cut the seedheads, collect them in a sealed paper bag, and dispose of them by incineration. Try to not scatter any of the seeds while doing the collection. You could seal the seedheads with an acrylic finish, and use them in model villages as trees. Or seal them and paint for use in dried arrangements. Better yet- cut them when they first bloom, before setting seed, and dry them naturally. But the main concern is to prevent the next generation of seeds from traveling. Then next summer, hit the plants with either an herbicide like glyphosate, or a well placed shovel.

