

Washington Conservation District Plant of the Week – Winter 2010-11

By Jyneen Thatcher



February 1, 2011 – Lichens

This year the snow is so deep that my prairie has been flattened, with very few identifiable stems still visible. Instead of looking to the ground, I've been noticing the plant growth on the vertical surfaces, primarily lichens.

Lichens are a weird plant group, being a composite of fungi and algae. The fungus is considered the host or base, but the algae (or sometimes cyanobacteria) provides the photosynthesis needed for life. Lichens can be categorized by their form (crustose, foliose, fruticose) or the substrate

where they are found (ground, rocks, trees). Within those categories are subcategories, such as the mineral composition of the rock or the species of trees. Noting the microhabitat will help with the identification of the lichen. Like other plants, some species have a tight set of requirements, and others are found in a broad range of conditions. To make it even tougher, some species have multiple forms, and others have associations with other species, so you might be looking at a sample with multiple species.



I am not an expert on lichens, but I have found some terrific guides. My favorite is "Lichens of the North Woods" by Joe Walewski which covers a good portion of the Minnesota north woods and Lake Superior



shore. What I've learned is to check the back side of the lichen "leaf" for color difference and stem-like growths attaching to the substrate. Lichen may look different if it has dried out. Don't assume



that it's dead if it is crispy; some species dry out regularly if they don't have continued air-moisture. Lichens are usually viewed as an indicator of air quality, as they don't tolerate air pollution very well.

On the attached images, you can see at least three species on the conifer - a light green foliose species (probably a *Flavoparmelia* sp, possibly common greenshield), a gray-blue-green foliose that I'm not going to guess at identifying, and a dark green foliose or possibly fruticose that's a lot smaller in individual size. On another photo you can see a fourth species - the little yellow spot that looks like egg

yolk. When conditions are favorable, lichens can become established throughout a forest. In many forests, you'll find fruticose species, such as reindeer/antler lichens or bristly beard lichens, which is what I think is in this photo from Pine Point Park in Stillwater Township.



Lichens that grow on rocks have to be able to withstand the temperature changes that are accentuated on that medium. On rock surfaces, like the granite boulder, they tend towards the crustose form, which is more tolerant of wind and feet. On vertical surfaces, rock tripe (*Umbilicaria* sp?) can provide enough support that other species of plants can find suitable substrate to germinate and thrive, like this polypody fern.



Lichen bits are often used in songbird nests, or eaten by small mammals. People don't often try it, although some explorers or native tribes have used them for healing or in near-starvation emergencies.

January 5, 2011 - Wild Clematis

I thought about renaming this Plant of the MONTH through the winter, but decided on consistent naming instead.



Today's plant is the wild clematis, also known as Virgin's bower (*Clematis virginiana* or *C. occidentalis*). The more common species (*C. virginiana*), which is shown in these photos, has clusters of white flowers blooming in August. The less common species has a single red-purple flower, but not as showy as the horticultural variety of clematis.

These plants are short-lived vines, which lack tendrils but wrap their leaf petiole around other branches or structures, to support its climbing habit.

After the leaves fall off, the petiole dries hard, in the twisted form, and is visible in the winter. The seeds persist into the winter too, and both species have similar clusters of long-bearded seeds. The beards allow for wind dispersal, but they also snag in the adjacent shrubs. The seeds detach from the beard and fall to the ground, starting the next generation. In the clematis vine image, you can see





the dried tendrils wrapped around the Monarda plant, and the remnant disc remaining after the seeds have fallen.

The plant prefers sunlight, and is often found on the woodland edges especially in loamy soil. As to the common name of Virgin's bower- I've seen references to this vine being grown on arbors in gardens, providing privacy for young ladies. When it's in

bloom, there are so many bees hanging around that I can't imagine sitting there for any length of time.



November 16, 2010 - Weeping Willow

With winter solidly here now, I'm shifting to off-season mode meaning these e-mails will be at two week intervals. But we all know that plants are still present, obvious, and people ask us what "those things" are.



Yesterday I noticed that the weeping willows (*Salix babylonica*) are still holding their leaves. The weeping willow is not native to America, but was one of the species brought here from Asia for the landscape nursery trade. The leaves are slender/lanceolate, like many other willows, so the most common identification feature is the branching form. It is in the "crack" group of *Salix*, so named from the

brittleness of the branches. You might feel that's not possible, considering the way the terminal branches whip around in the wind. But ask the neighbors of the trees and they usually share stories of cleaning up after every storm. The branches are long, slender, and yellow in color, and break off at the node with the previous years branch. The larger branches also break easily under our snow loads, so it is common for road and utility crews to trim them severely, for safety reasons. And no, the terminal branches don't work well for basket weaving for the same reason, according to my sources.



Weeping willow has not become invasive in Minnesota, like other introduced species [such as *Salix fragilis* and *Salix x rubens*]

(whitecrack willow)]. Those species were planted in moist areas, especially along riparian corridors as part of earlier conservation programs, and the broken branches would re-root downstream.

Weeping willow also tolerates moist conditions, and is commonly planted along pond edges. Placement should be considered carefully, as the roots could cause problems with underground drain pipes, although they will help with transpiration of soil moisture. Like the native willows do.



And if planted around livestock, the tender shoots may entice the critters to prune them, especially the lower branches. [Yes, that is a tamarack in front of the willow, which also has been bottom-pruned]

For more information about the other species of willows, see DNR/Welby Smith's "Trees and Shrubs of Minnesota". He doesn't offer much information about weeping willow, since it's neither native

nor widely escaped into native habitats, but this source is the best for the other Salix species.