

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

By Jyneen Thatcher

April 27, 2011 - Animal damage

Related to last week's coverage of white cedar, is the damage that was sustained through this snowy winter. Not only did many plants get beaten down and broken by the heavy snow loads, but the animal damage was even greater.

To plan a defense in future years, it helps to identify the predator.



Small rodents (and I admit to being more of a plant identifier than a mammal expert) such as mice and voles spend the winter under the snow, in the layer of old grass or mulch. When they find a nice juicy shrub, they eat the tasty bark. Leisurely, with no fears of being spotted from above until they make a trail to another shrub. On close look at the cleared bark, you can see individual teeth marks, and that gives you a clue to the size of the rodent. The teeth marks are usually paired, and work in all directions, criss-crossing each other. To protect your other plants next year, wrap the lower stem with a protective covering before the snow falls, but after it has gotten cold enough to trigger dormancy. How high to wrap? How high do you expect the snow to fall and the rabbits to reach. And be sure to pull the mulch a few inches away from the stem so the critters don't get breakfast in bed, year-round. Bigger tooth marks, more than a foot above ground? Think: beaver.

Rabbits will also girdle trees, as they are just rodents who are larger than mice. But they also clip the branches of shrubs. The identifiable feature is a clean, sharp, diagonal cut. They don't seem to mind thorns, and I have lost several rose bushes to the wascally cwitterers. They seem to particularly like Nearly Wild cultivars, at least in my yard. To protect these plants, cylinder/cages made of chicken wire seem to work fairly well, as long as they are more than two feet taller than the plant. But remember, as the snowpack deepens, the rabbit can reach higher. Rabbits don't seem to burrow under the snow, so their damage is mostly above the snowpack line.



In contrast, deer will also chew off the branch tips, but they use their molars instead of incisors so the result is a shattering of the tip, not a clean cut. They will chew on just about any plant they can find, but find some more tasty than others. Like the white cedar. In the photo, you can see where the snow pack has protected the lower 15-20 inches of

the (previously) 4-foot tall shrub, but the deer have eaten the rest of the needles. Some folks will replace a damage like this; I'll probably leave it to see how it recovers. This winter in my yard, the deer inflicted serious damage on buckeye, oaks, white cedar, yew, and dogwood. They seemed to let alone the spruce, wild plum, and anything surrounded by a chicken wire cage. Again, it helped if the cage is taller than the plant, and completely surrounded it. The branch tips that extended through the webbing got eaten, but the deer rarely reached down into the tube.



I didn't seem to have much damage to my white pines, but mostly they are tall enough to be past the deer predation. When they were smaller, I stapled paper bud-caps on the tips, which seemed to deter the deer enough to survive the younger days. Maybe the deer remember that association.

April 22, 2011 - White Cedar



It's spring again, and the plants are starting to grow. I even heard that pasque flowers are blooming in some of our prairie plantings. To keep a broad appeal, today's feature is white cedar, also know in the nursery trade as arbor-vitae (*Thuja occidentalis*).



The northern white cedar is found growing naturally in swamps, and is a conifer. In a natural setting, it can grow into a large tree. More commonly, we see it around Washington County as a landscape planting, with cultivars selected for form and tolerance of drier, more alkaline soils. Either way, the branches are a soft spray of twigs, with leaves being flat and scale-like. They undergo some color changes throughout their life cycle, some seasonally and some leaves die off from site conditions or age.



The bark of the main stem separates into long strands, providing nest material for songbirds and hiding places for insects. In a healthy stand, the branches cross each other and provide a stable site for bird nests.

According to *Trees and Shrubs of Minnesota*, the oldest tree in Minnesota is probably a northern white cedar. One of the ways this species survives

to old age is by sprouting a new tree from a fallen tree. This photo was taken at Bubolz Nature Preserve in Wisconsin, where many trees were uprooted during a large windstorm a few years ago.



Around here, a major threat to the species is predation by deer. Be prepared to protect them, if you want to keep the perfect form. It is also a relatively brittle tree, so I prefer to prepare myself for changes over time, and think of those "imperfections" as merely quirks and funkiness. All part of their charm.



March 24, 2011 - Winter Ferns

Since winter is lingering, here's a few more winter botany hints, which can also be useful in wetland delineation.

Several of our local ferns have separate fronds bearing the spores, rather than on the backs of the leaves or along the leaf stalks. In two of the common species these fronds are persistent, and survive through the winter into the following summer.



Sensitive fern (*Onoclea sensibilis*) thrives in sunny areas, as long as it has plenty of water. It can be found in roadside ditches or streams, shallower areas of emergent marshes, or low areas in pastures and old fields. The fertile leaves have multiple pinnae (think leaflets), which look like chains of little brown beads fused to the central vein. Each cluster wraps upward against the central stem. When fresh, the spherical pods are tightly closed, but over the winter months the casing dries and splits, revealing a lighter brown coloring inside.

Because of their persistence, they can be used for vegetation assessment outside of the normal growing season.





Ostrich fern (*Matteuccia struthiopteris*) likes shadier areas, and tolerates somewhat more drier soils like the ephemeral basins within woodlands. Its fertile frond is less persistent than the sensitive fern, and often deteriorates before spring. The pinnae are narrow, and vary in size from short at the bottom of the stem, to long midway up the stalk, then shortening again at the tip. The pinnae have two rows of narrow bead-like pods. As they mature the pinnae curl, and give a general image of an ostrich tail feather.

