Silver Lake Bog

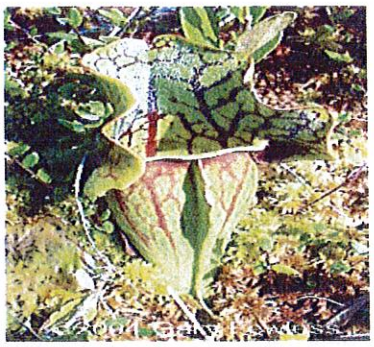
Silver Lake Bog contains one of the least disturbed bogs in southeastern Wisconsin and a northern wet forest. Surrounding the open bog lake is a mat that varies in width from 50 to 120 feet, composed of bulrush, spike-rushes, sedges, and cattails. The outer periphery is dominated by tamarack on a grounded mat. Sphagnum is the primary ground cover along with pitcher plant, sundew, bog bean, and Canada mayflower. The shrub layer has abundant poison sumac, bog birch, and winterberry. Silver Lake Bog is owned by the Silver Lake Sportsman's Club and was designated a State Natural Area in 1968.

The Silver Lake Bog represents about 8000 years of succession. A kettle lake formed when a chunk of glacier melted in a depression created by the glacier. The lake was part of a tundra-like ecosystem for many years and at that time *Sphagnum* moss began growing near the lakeshore. The moss eventually began to grow on the shore and into the water; wind and wave action didn't clear it away. Over time, the moss continued to grow as a thick mat, further encroaching into the water. The old dead moss in the water is like a giant sponge that decomposes and alters the water chemistry, releasing acid that shifts the pH down and acts as positive feedback for moss – it promotes the growth of more *Sphagnum* moss.

Today, a thick floating mat of moss – several meters thick near the edge, less than a meter in the center – completely covers the lake, making this a floating or quaking bog. The acidic conditions slow decomposition by bacteria and fungi, and nutrients like Nitrogen are therefore limited. This unique environment has a specially-adapted native plant community including "carnivorous" Purple Pitcher plant, Yellow Pitcher Plant, and the tiny Sundew which utilize the bodies of insects as a source of N. The bog also has abundant bog cranberry, cotton grass, ferns, poison sumac, and tamarack (larch) trees. The variation in the distribution and abundance of these plants is ecologically important and is the focus of this lab experience. As we hike towards the center of the bog ecosystem, recognize the changes in the plant community that reflect the passage of time in succession.

Bog Plants to look for at Silver Lake Bog:

1. Purple pitcher plant



2. Yellow pitcher plant

3. Round-leaf sundew

4. Bog cranberry

5. Cotton grass

Carthage

Stephen J Vorderbruggen

Sportman's Club

Silver Lake, WI

Oct. 24, 2014

Thank you very much for allowing our Carthage College class access to your bog habitat. We had a wonderful visit and hike in the bog, with 2 faculty members and 20 students on the trip. The highlights of the field lab were seeing pitcher plants (students love carnivorous plants), tamarack (in yellow splendor preparing to drop their needles), bog cranberry with berries, cotton grass with cotton seeds dispersing, and deep sphagnum moss. The experience of walking on a lake on top of bouncy moss will stick with them for a long time.

We have attached some photos to this email, along with the lab handout we created for the visit. I am also happy to send a hardcopy of this letter on Carthage letterhead if you would like an official copy.

Thank you all again for allowing access to your very unique habitat. It was indeed like traveling to northern Wisconsin while staying in Kenosha County. A very memorable field trip for all.

Sincerely,

Joy

Joy N. Mast

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Carthage