

Newport Forest

Monday April 18 2011

3:45 - 6:25 pm

Weather: prec.25 mm; RH 93%; BP 101.6 kPa; calm; ovcst; T +3° C

Purpose: Bring in trees for spring planting

Participants: Kee, Brian

Brian and I drove to the Van Den Nest Tree Nursery in E. Elgin Co to pick up my order of trees. This part of Elgin is dominated by names like Corinth, Eden, Mount Salem, New Sarum, and Sparta (Quaker Country). We drove the trees back to Newport Forest in extreme W. Elgin Co., a good hour-and-a-half drive.

Here are the species and numbers purchased:

Species	Number	Type	Size
Bitternut Hickory	5	pots	1.5'
Shagbark Hickory	5	pots	1.5'
Swamp White Oak	5	pots	1.5'
Red Oak	10	bare root	3.0'
White Oak	10	bare root	3.0'
White Ash	10	bare root	3.0'

Once again I had to park in the Upper Meadow. The 15 pots were heavy, so we left them up by the gravel pile and walked in with the 30 whips bundled in burlap and covered with plastic bagging. We might plant them this weekend.

We walked down to the creek on a very greasy trail, running with seepage from the creek bluffs. I took a large sample bottle of creek water in the hopes of concentrating it enough (by centrifuge?) to assess the algae that produce the annual "bloom". Water levels in the creek are now near normal, with both rapids now running vigorously. We also walked to the river, noting continuing high water levels. Mussel Beach is immersed in about a metre of water and the current is still fast.

We had a brief lunch in the trailer while I watched from the "dining room" window for birds at the Hickory tray. It was taken over by a black (Eastern Gray) Squirrel. Outside, a little later, I noticed that the Maple tray had been taken over by a young Red Squirrel. After a spot of birdwatching, we left the property.

Birds: (13)

American Crow (EW); American Robin (BCF); Black-capped Chickadee (GF); Blue Jay (FCF); Brown-headed Cowbird (GF); Canada Goose (TR); Downy Woodpecker (Tr); Hairy Woodpecker (GF); Mourning Dove (LM); Song Sparrow (LM); Turkey Vulture (LM); White-breasted Nuthatch (Tr); Wild Turkey (TR);

Trail Cam:

One Raccoon foraging by day, two Wild Turkey hens, a male Wild Turkey with tail fanned (displaying), and a nocturnal deer visit (doe?)

Report on Vernal Pond Surface Microbial Community

The April 2 surface sample collected for me by Erin Carroll from the surface of a vernal pond near the shoulder of the Hogsback has proved to be both poor and rich. In terms of the Vernal Ponds total protist communities, it is rather depauperate, yielding over the space of five or six microscopic examinations a mere two new species (reported in previous bulletins).

One species, over the same period, defied all my attempts to ID it. Appearing in every slide, it was characterized by short trichomes (filaments) of five to eight bacillus-shaped cells attached end to end with minimal contact. Cell contents consisted of an irregular mass of an oddly coloured greenish chlorophyll and a clear boundary between the mass and the cell wall. At first I thought it was a Chlorophyte, but it would key out to either nothing or a chlorophyte that it clearly wasn't. I tried Chrysophytes. No luck. I tried Xanthophytes. No luck. I even tried filamentous diatoms and desmids. No luck. Reluctantly I resorted to the last possibility, the Cyanophytes. I tried these last because they usually have a blue-green colour rather unlike what I was seeing in this case. Voila! I found it on one of my favorite protist websites conducted by Hosei University in Japan.

Anabaena!

I had always thought of this well-known cyanobacterium as strictly blue-green, but among the 30-odd species of *Anabaena*, there are a few with exactly the shade of chlorophyll described above, two of them resembling strongly the species at hand and one of them matching it. I also checked my specimens against Prescott's Algae of the Western Great Lakes.

Finally, just as I was about to discard the last slide in my series, I noticed a rather tiny filament with the characteristics of *Microspora*, (See IMAGES below.) another great find, at least for me.

Generic List:

Ostracods or Seed Shrimps plentiful, but all one species .(49 known in Ontario)
Aspidisca, a small hypotrich, the most abundant ciliate
Stylonychia, a medium-sized hypotrich species, not plentiful
Mougeotia, a filamentous Chlorophyte, with at least three species represented.
Microspora and a few smaller filamentous forms that I did not try to identify
Coccal algae: lots, but I'm not good at these: fraught with lookalikes
Diatoms: Cymbella, Fragilaria, Navicula, along with the usual suspects.
Amoeboids: No Arcella, just Mayorella and Vahlkampfia (new last week)

New species:

'Green Anabaena'	<i>Anabaena torulosa</i>	VP/HB KD Mr02/11
'Mini-microspora'	<i>Microspora*</i> [<i>stagnorum</i>]	VP/HB KD Mr02/11

*This distinctive alga is so unusual that it has its own family (Microsporaceae) and Order (Microsporales)! About ten species are known worldwide.

Acknowledgments:

The following volunteers for the April 2 Newport Forest Work Bee were not properly thanked for their wonderful contributions to the Upper Meadow thorn-tree cleanup operation:

Jane Bowles, Erin Carrol, Ron Casier, Kate Clarke, Terry Grawey, Andre Lachance, Linda MacDougall, Mhairi McFarlane, Ron Martin, Bruce Parker, Joel Parker, Brent Sinclair

Thanks to everyone!

IMAGES:



River drift from a recent flood festoons bank and branches. Contents include corn stalks, corn cobs, branches, logs, plastic bottles, etc. Among the exotica brought in by the flood over the last decade, we have recorded: a set of child's plastic golf clubs, three tires on rims, a TV set, whiskey bottles, pop bottles, plastic bottles for transmission fluid and engine oil, a child's rubber doll, a railroad tie, and a dead mouse still clinging to a branch with its teeth.



The Blind Creek Forest, as seen from the Hogsback trail, looks like open park-land at this time of year. [taken April 12] Vernal ponds can be seen on the right and in the distance.



Source: Hosei University, Japan

At least two species of *Microspora* inhabit this composite photo. Note that each cell is composed of two “halves”, each like a pair of half gel-caps attached end-to-end.. At either end of a filament there is always a cell with a missing neighbour and here one sees the structural unit -- or half of it -- quite clearly.

I have been trying to find out how this organism builds such odd half-cells, but very little information is available on the web. Will I have to dig out the original description from the literature or will some knowledgeable reader send me a reference?!