

**Newport Forest**

Monday November 14 2011

1:55 - 5:35 pm

**Weather:** prec. 16mm; RH 82%; BP 100.6 pa; overcast/rain; calm; T 11° C

**Purpose:** maintenance and microorganisms

**Participants:** Kee

By assiduous storm-tracking on Google Earth, I had convinced myself that there would be little or no rain on the morrow. How could the Weather Network predict 10 mm of rain on site (Wardsville, Ont.) when any idiot could look at the weather radar and see no storms were on track for the local area? That was yesterday. Today my windshield wipers made a rhythmic swish-swash as I drove up to the main gate and got out to open it. A light rain fell and the ground was spongy, albeit no match for my new B. F. Goodrich all-terrain tires.

I heard a flock of Wild Turkeys gobbling out by the river as I surveyed the misty surround. Except for a few patches of lowly plants, all vegetation has died back, presenting a gloomy palette of greys, browns and blacks.

At first I worked in the trailer, cleaning up and stowing various articles. During breaks in the rain I would foray outside. In the first of these, I made my way gingerly down the slippery trail to the creek to retrieve a folding chair from the bank of the Lower Rapids. In the next break, I went down the same trail to bring up the newly-heavy mud-caked canoe to the camp. Struggling up the trail with the awkward burden, my breath came in short gasps and I had to pause. "Look, son," I said. "What is a 70-year old guy doing knocking himself out like this? Are you nuts?" Finally I got it all the way up to the camp and safely stowed on its stand.

I had intended to patrol the Fleming Line for illegal hunters, but none were out in this weather. Knowing that it wouldn't rain today, I didn't bother bringing a rain jacket. My clothes were already soaking, but I went to the river anyway to check the level and Mussel Beach. The latter was mostly submerged except for a few gravel bars in the distance. (See IMAGES.) On the way back I gathered a few bladdernuts to try eating at home.

Birds were scarce, both at the river and elsewhere. Crows called in the distance between rumbles of thunder and a lone Junco came for seed, waiting until a chipmunk had done.

## New Species:

‘Lobed *Acnanthes*’

*Acnanthes inflata*

VP/BCT KD

**ID Note:** I had only a few minutes to note the morphology of an empty frustule of this diatom before an accident with the slide made it impossible to re-find. The shape, however, is quite unusual in that the frustule (or “valve”, as with mussels) is inflated in the middle and at both poles. No other “common” diatom has quite this morphology. And none of the other 29 species of *Acnanthes* are inflated in this manner. I have yet to rule out *all* species in other genera but, having been through a few hundred mug shots, I am increasingly confident that the ID above is correct. Normally, a careful study of frustule details under high power is required. Only the highly unusual morphology saved this particular effort.

**Culturing Note:** A hay infusion is a simple and very old culturing method for amplifying the species of protists in a water sample. Take one package of timothy hay (e.g. hamster food), sterilize it in boiling water to kill any microorganisms present in the hay, decant the resulting yellow liquor, and place the hay together with the water sample in a large jar. Add some of the liquor and allow the infusion to “run” for about three days. Each subsequent examination of the infusion will show steadily increasing populations of just about everything that was in the original sample, especially the bacteria that feed on nutrients from the hay: Morphospecies include *very* long filamentous bacteria, rods, bacilli, short coccal filaments, vibrios, and so on. Milling about among the bacteria are bacterivorous ciliates, especially hypotrichs, “goosenecked” forms like *Litonotus* and *Lacrymaria*\*, numerous smaller ciliates, and countless flagellates of which only a few distinctive species can be readily identified. The technique was especially common in the early days of microbiology in the 19th Century. The creatures that appeared in these infusions were called “Infusoria”. (See IMAGES.)

**Bladdernuts:** I must now cast some doubt on the information on bladdernut edibility that appeared in the previous Bulletin. The seed coat takes up the bulk of the seed volume and is extraordinarily hard. The endosperm portion is hardly more than a millimetre in diameter and virtually tasteless.

**Precipitation note:** We are clearly heading for a “record” precipitation year, with 1043 mm accumulated so far. Over the last 12 years, only 2008 came close with 1003 mm by November’s end. The regional average precipitation is 973 mm.

**IMAGES:**



FinePix

Novacraft Ultralite canoe is back on its stand awaiting the move off site for winter storage. Although of limited use on the creek, it's been great on the river for trips upstream to the mussel beds at Clam Island or downstream to Moraviantown First Nation.

Thunderbird logo on bow is taken from a pictograph I spotted on the cliff of an unnamed lake in Quetico Park in the summer of 1957. It was dad's first pictograph expedition and I went along as field assistant. He rewarded me for the find by (puckishly) filing a name for the lake with the Ministry. "Keewatin" (North Wind) is not the name of the Thunderbird, but one of my given names. Who will ever know that the lake is named after me?



FinePix

Only a few gravel bars at the far end of Mussel Beach show above the river's surface in this view of the Thames. The beach continues to erode and the bluffs continue to lose mass, as witness the hummocks sliding down the bluffs above. Although the property is steadily losing land in the bluffs area, it is steadily gaining it on the other side of the point bar (top of image) in the form of huge accumulations of sand and silt.



Nikon 990

*Oxytricha* is a common ciliate in virtually all freshwater habitats. It is called a “hypotrich” because it has cirri or hairs (trichos) on its ventral surface (hypo). It scuttles about on these, frequently darting forward and jerking backward. In the image above one can see several filamentous and rod bacteria, as well as shorter forms. The fact that some five of these guys can show up in one field of view hints at the very high population densities that can develop in an infusion. (400 X objective)

The “ancestors” of these individuals all lived in one of the vernal pond areas a mere two weeks ago.