

GEOLOGY OF A SEASONAL POOL OF WATER IN THE 707

The results of an auger test made on August 1, 2009 were as follows:

Site: A well-known dip (Randy's Hollow) in the landscape on the main north-south path.
Flooded in winter.
Tall (2m) canary grass reeds (*Phalaris arundinacea*), rushes (*Juncus effusus*), sedges (*Scirpus americanus*), and mint (*Mentha arvensis*).

49° 9.74' N 123° 48.50' W

Surface soil condition: dry, no surface moisture anywhere.

0-60 mm	roots
60-400 mm	mainly coarse and very-coarse sand, no stones rich-brown near surface, becoming progressively lighter and sandier in colour with depth
400-1040 mm	montmorillonitic clay, greenish yellow with orange oxidation streaks, commonly called "gley soil" (picture below). Turns white-ish on drying.
1040 mm (41-inches)	bedrock, sandstone.

600-mm clay horizon had no interleavings of any kind, particularly not of peat or diatomaceous earth. Also no coarse gravel (stones). Its origin is still being researched. Is it early-Holocene, or was it accumulated slowly over the whole of the Holocene? The presence of what appear to be drop stones suggests early-Holocene, but there's not enough evidence to be sure.

Although the clay was cool and moist, there was no free water at any depth.
Montmorillonite is from weathering of feldspathic sandstone/wacke regolith.

