

Carnivorous Plant Water Samples - Collection, Testing and Results

Presented To
**The New England Carnivorous Plant
Society**

By
Donald P. Gallant
August, 8, 2015

CP WATER SAMPLES - COLLECTION

In the calendar year 2014, members of NECPS were asked to collect a small quantity of water from locations where carnivorous plants grow naturally.

The purpose of this request was to obtain samples of this natural environment that could be tested to find out if there was anything significant about the water that sustains carnivorous plants.

The water samples collected were kept in their original containers, away from natural light and extreme temperatures. Numbers were assigned and data, (location, date, member's name, etc.), was noted.

CP WATER SAMPLES - INSTRUMENTS

HM DIGITAL Aquapro Digital Water Tester Specifications

TDS Range:	0-5000 ppm (mg/L)
Temperature:	0 - 80 Deg C, 32 -176 Deg F
Resolution:	1 ppm; Temp. resolution is 0.1 Deg C/F
Accuracy:	+/- 2% (of reading)
Calibration:	Factory calibrated to 342 ppm; adjustable by digital calibration by push button

Automatic Temperature Compensation (ATC): Yes

HM DIGITAL pH Hydrotester Specifications

Range:	0.0 - 14.0 pH
Temperature:	1 - 80 Deg C; 33 - 176 Deg F
Resolution:	0.1 pH; 0.1 Deg C/F
Accuracy:	+/- 2% (of reading)
Calibration:	Digital to 4.0, 7.0 or 10.0, calibrated to 7.0

Automatic Temperature Compensation (ATC): Yes

CP WATER SAMPLES - TESTING NOTES

Water samples were tested in the order they were received.

The pH and TDS meters were calibrated the day before the testing was conducted.

All samples were tested on 10/24/2014.

Each sample was filtered through an unbleached coffee filter to remove sediment then collected in a one ounce shot glass

pH and TDS readings were recorded after the meter readings stabilized.

After recording the meters' results, the samples were discarded and the shot glass was rinsed with RO water and dried before testing the next sample.

Table 1

CP WATER SAMPLES - RESULTS						
SAMPLE No.	LOCATION	DATE	SUBMITTED BY	pH	TDS	NOTES
	DG 1/22/2015					H=55%, T=70F
1	Mt. Watatic, Ashburnham, MA	5/11/2014	Natch Greyes	6.1	696	
2	Ponemah Bog, Amherst, NH	5/25/2014	Natch Greyes	4.5	422	
3	Philbrick-Cricenti Bog, New London, NH	5/26/2014	Natch Greyes	4.7	286	
4	Lonesome Lake, Franconia State Park, NH	6/8/2014	Natch Greyes	4.6	324	
5	Ruby Road Bog, Wilmington, CT	6/14/2014	Alan Winn	4.6	523	
7	Hawley Bog, Hawley, MA	8/2/2014	Shaun Montminy	5.1	158	
8	Davis Mine Road, Rowe, MA	8/2/2014	Emi Kurosawa	5.1	269	
9A	Ponkapog Pond, Canton, MA	8/5/2014	Nancy Savickas	4.9	247	Near purple pitcher plants
9B	Ponkapog Pond, Canton, MA	8/5/2014	Nancy Savickas	5.2	354	Near bladderwort
10	Ponkapog Pond, Canton, MA	8/4/2014	Emi Kurosawa	5.5	399	
Reference	Resident tap water	10/24/2014	Don Gallant	7.6	265	Town well
Reference	Tap water - RO	10/24/2014	Don Gallant	6.2	16	Faucet connection
6	N. E. Wildflower Society, Framingham, MA					Not collected - lack of sufficient water

CP WATER - REMARKS

The samples did show that CP water was slightly on the acidic side as expected.

The high levels of TDS in the samples was an eye opener. My expectation was that there would be far less nutrients, minerals, etc., in the CP water.

Variables in the sample collections, (time of year/ day, local weather conditions, etc.), could have had a bearing on the testing results.

I believe this sample size was too small to reflect any reliable, conclusive data for CP water.

A continued collection of samples from a wide range of locations would be beneficial in gaining more reliable data on the water that supports the growth of carnivorous plants.