

Ponds & Pools of Drumlin Farm

The Untold Story of Drumlin's
Pond & Vernal Pool Data

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MAS Drumlin Farm & Wildlife Sanctuary

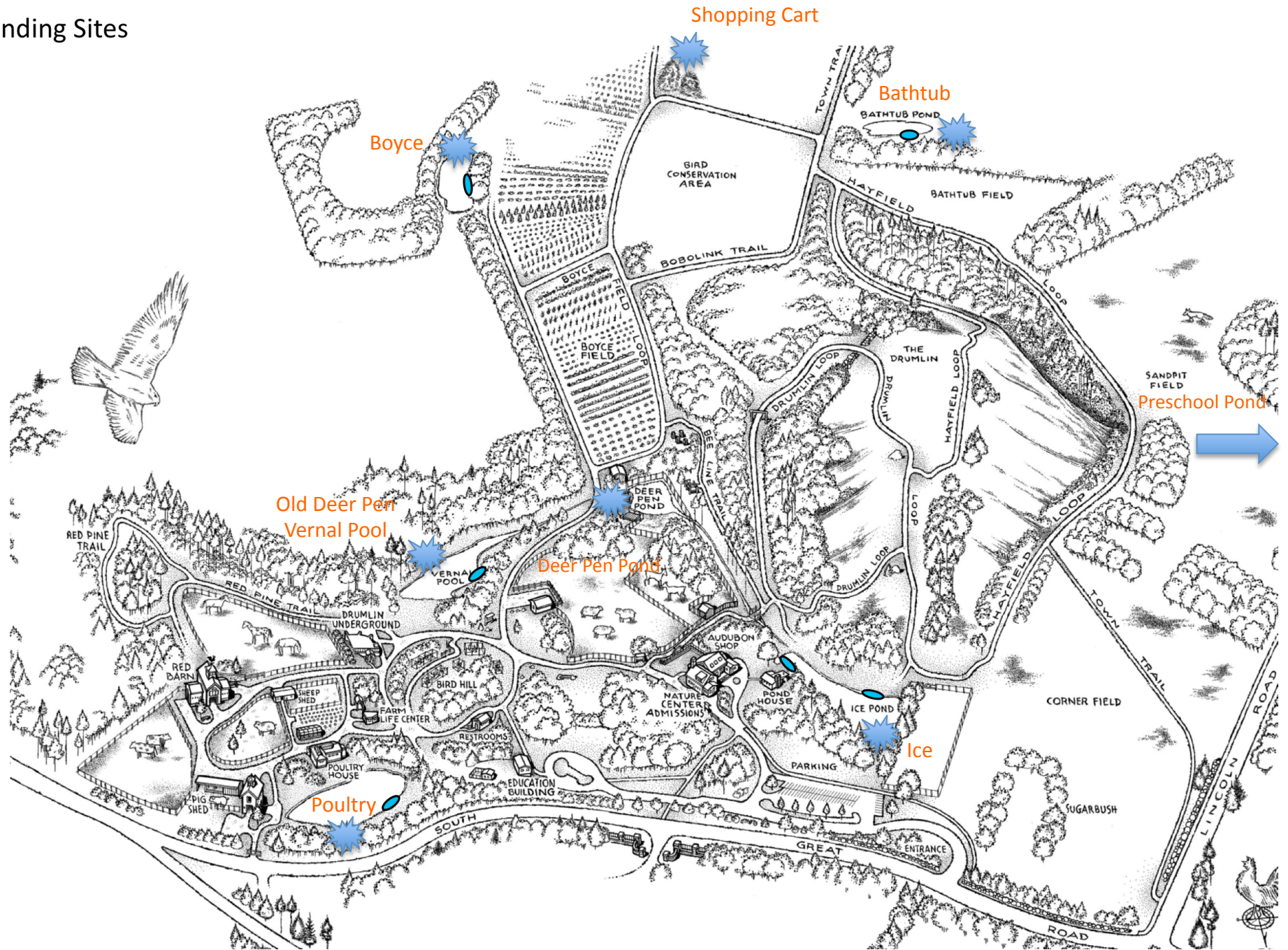
Harvard Forest Workshop

April 11, 2013

Topics

1. Ponds and Vernal Pools at Drumlin
2. Overview of Ponding Program at Drumlin
3. Drumlin Pond & Vernal Pool Data

Ponding Sites



Drumlin's Ponding Ponds



Ice Pond



Poultry Pond

More Drumlin Ponds

Bathtub Pond



Preschool Pond



Drumlin's Vernal Pools



Old Deer Pen Vernal Pool



Boyce "Pond" (a true vernal pool)

Drumlin's Vernal Pools



Shopping Cart Vernal Pool

Harvard Forest Long Term Ecological Research Project



Old Deer Pen Vernal Pool

Measuring pond diameter

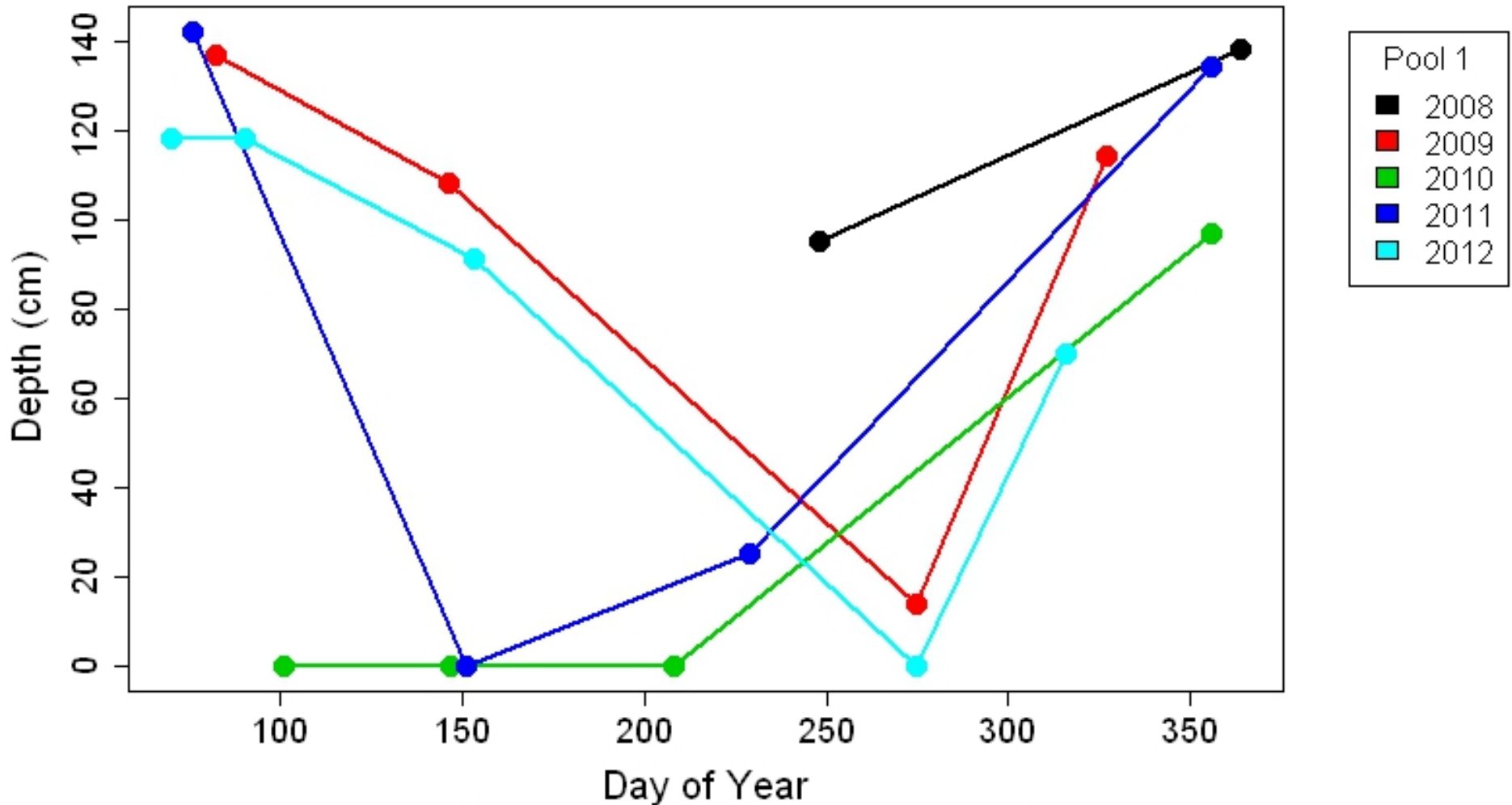


Measuring pool depth



Old Deer Pen Vernal Pool

Drumlin Farm Mass. Audubon



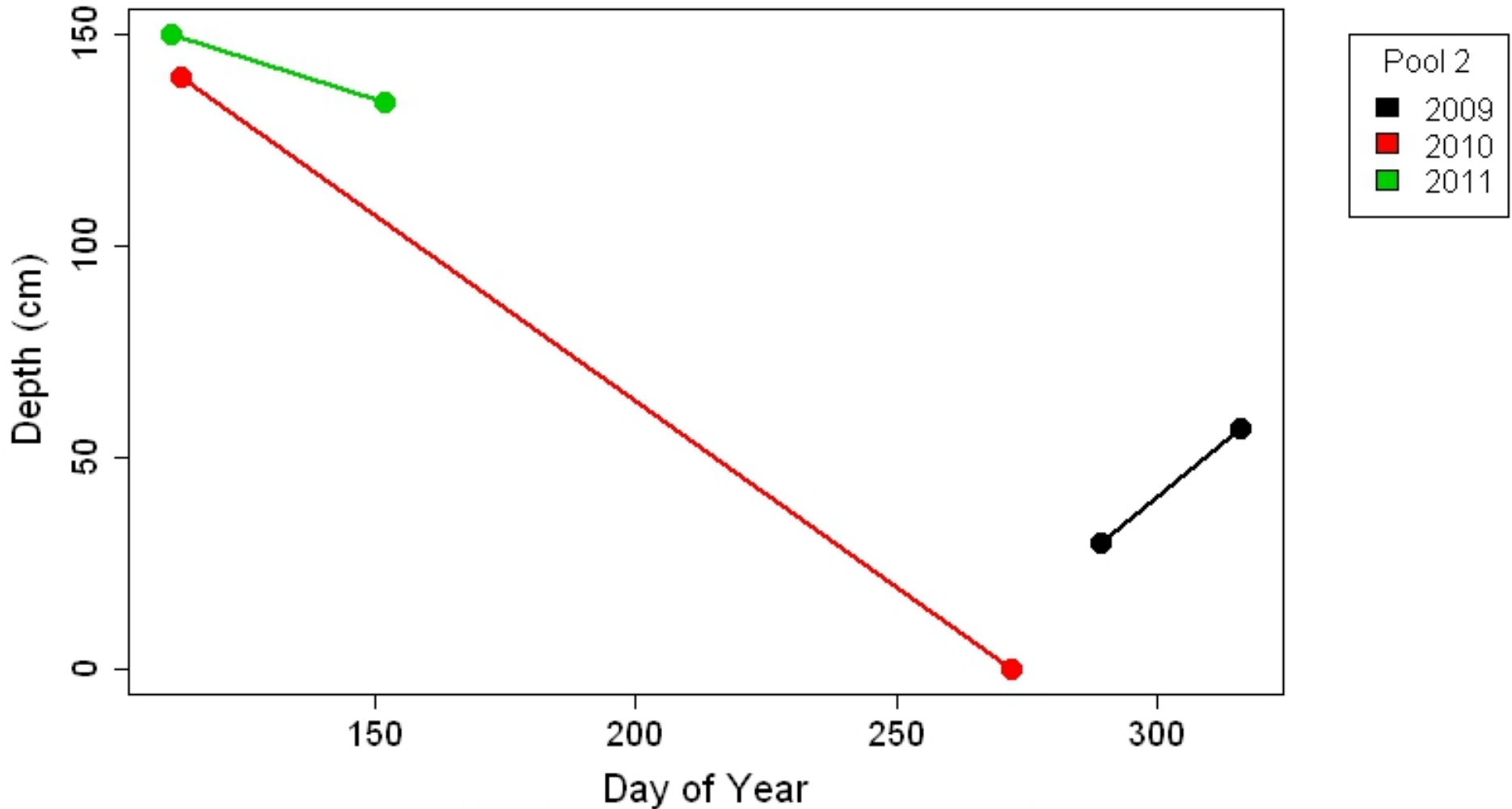
Harvard Forest Schoolyard LTER / Vernal Pool Project

Boyce Vernal Pool



Boyce Pond (Vernal Pool)

Drumlin Farm Mass.Audubon



Harvard Forest Schoolyard LTER / Vernal Pool Project

Collection of pond data at Drumlin Farm

Students observe, measure and record:

- air and water temperatures
- weather and leaf cover
- pond depth using marked poles
- name & number of macroinvertebrates

Pond _____ Date _____ TN _____

Air Temp _____ Water Temp _____ Pole Depth _____

School / Class _____

Circle appropriate responses below.

Cloud cover:

Sunny / Partly sunny / Cloudy / Scattered showers / Raining

Tree Canopy:

Open (no trees near pond) / Partial coverage (some trees near pond) / Completely covered (trees overhang completely)

Leaf Cover:

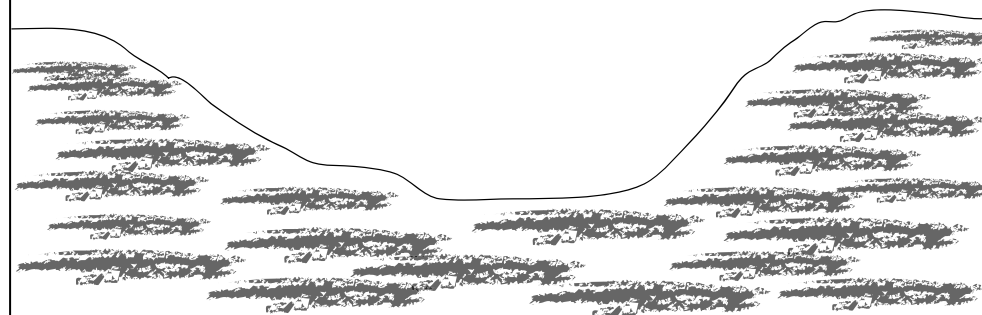
Closed buds / Open buds / Open flowers / Partial leaf out / Full Leaves open

Bottom Substrate (can circle more than one):














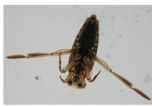




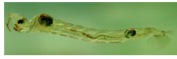
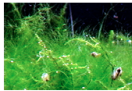




Sand or gravel / Whole leaves / Decayed leaf bits / Mud / Silt

Notes / Questions

Pond Profile



Data key: 1-4 = few, 5-15 = some, >15 = many

Organism	Comments	Organism	Comments	Organism	Comments	Organism	Comments
Leech - up to 2"		Dragonfly nymph - up to 2"		Caddisfly larva - 0.5-1.5"		Polliwog	
							
Snails - 0.5-1"		Damselfly nymph - up to 1.5"		Predaceous diving beetle		Salamander - 3-8"	
				 0.5-1.5" 0.5-1"			
Daphnia - 0.1"		Water boatman - <1"		Mosquito larva - 0.5"		Salamander polliwog	
							
Copepod - 0.1"		Backswimmer - <1"		Bloodworm - <0.5"		Turtle - varies; 3-20"	
							
Water pill bug - Isopod up to 1"		Water strider - 1"		Phantom midge - 0.5"		Algae	
							
Scud - Amphipod 0.5"		Water scorpion - 3"		Frog - varies; 1-8"		Duckweed	
							

Comment suggestions: unusual numbers - high or low; size; where found in the pond; unusual color or structure; life stage, etc



Cotting School student & teacher at Poultry Pond



CCHS Pathways Students at Deer Pen Pond

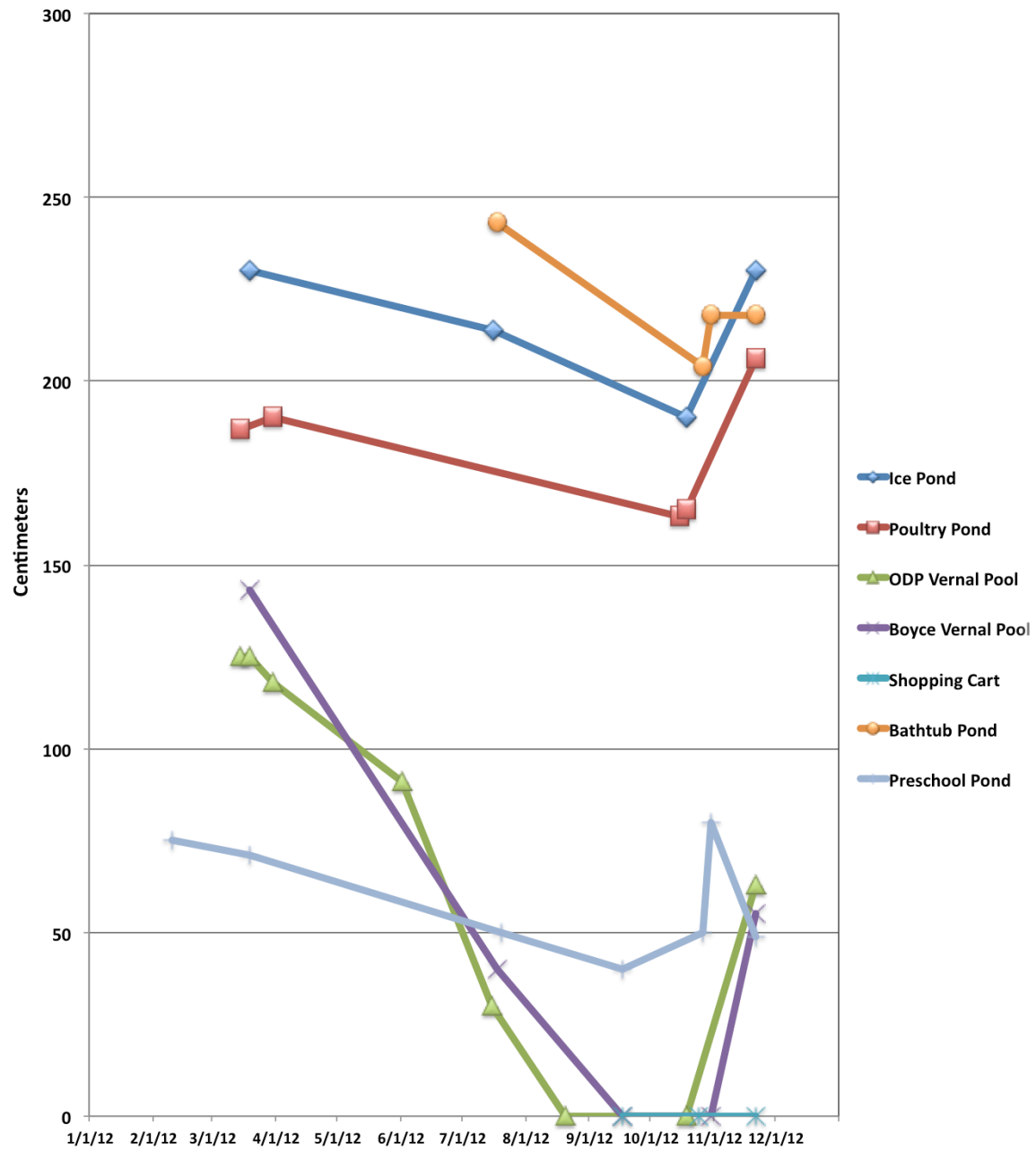


Commonwealth School student with Sally at ODP Vernal Pool

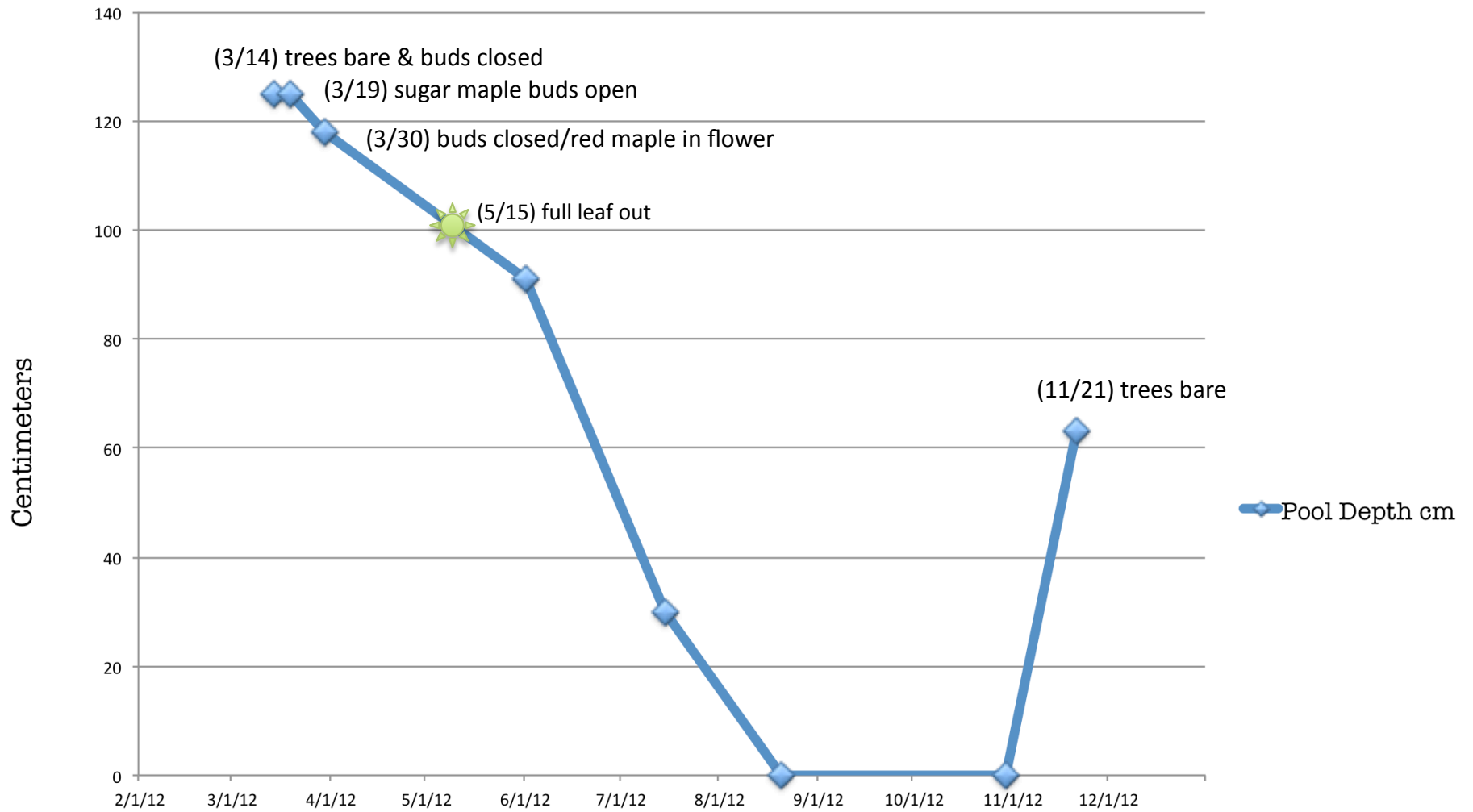


Some Graphs & Data Analysis

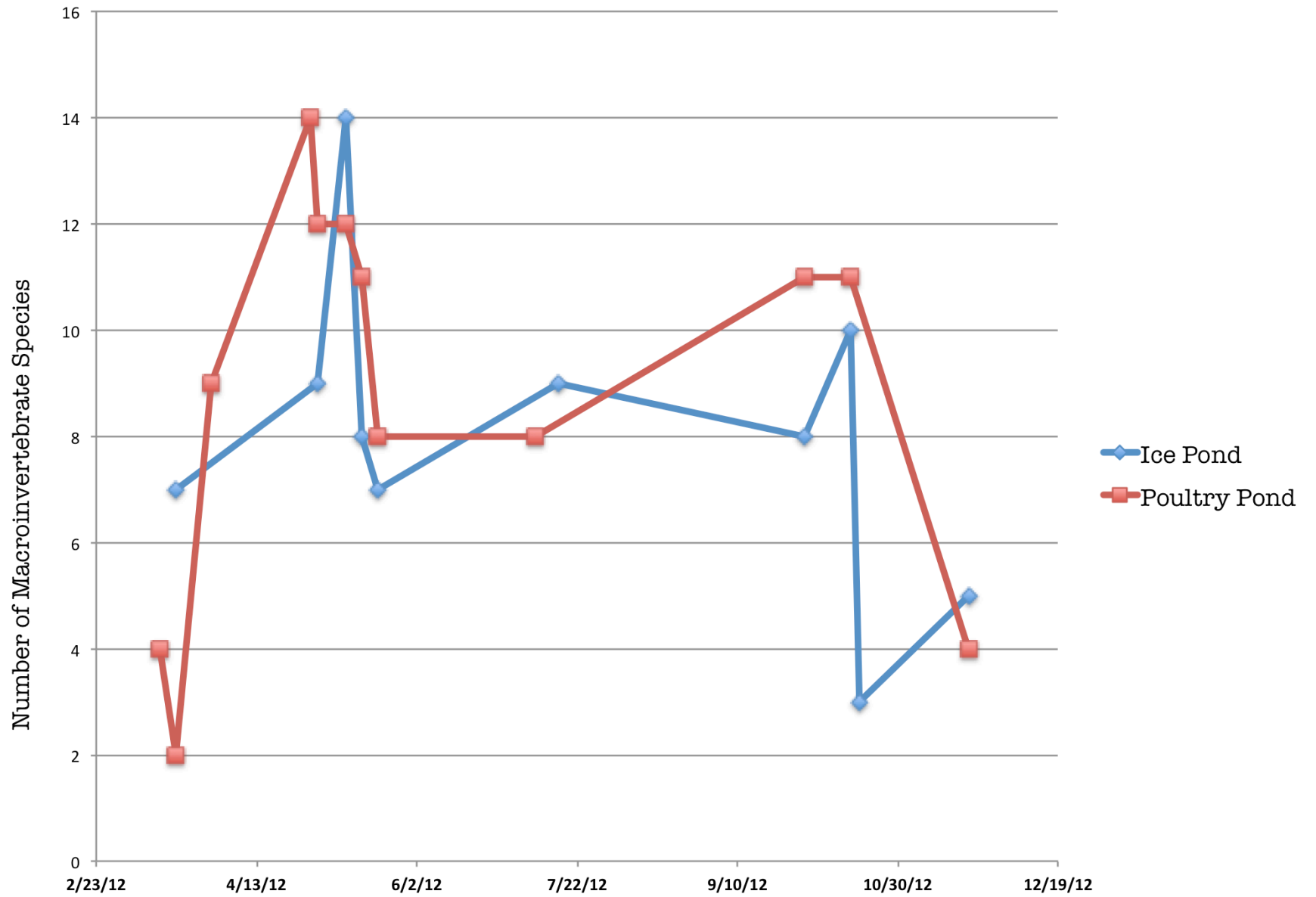
Depth of Ponds & Vernal Pools - 2012



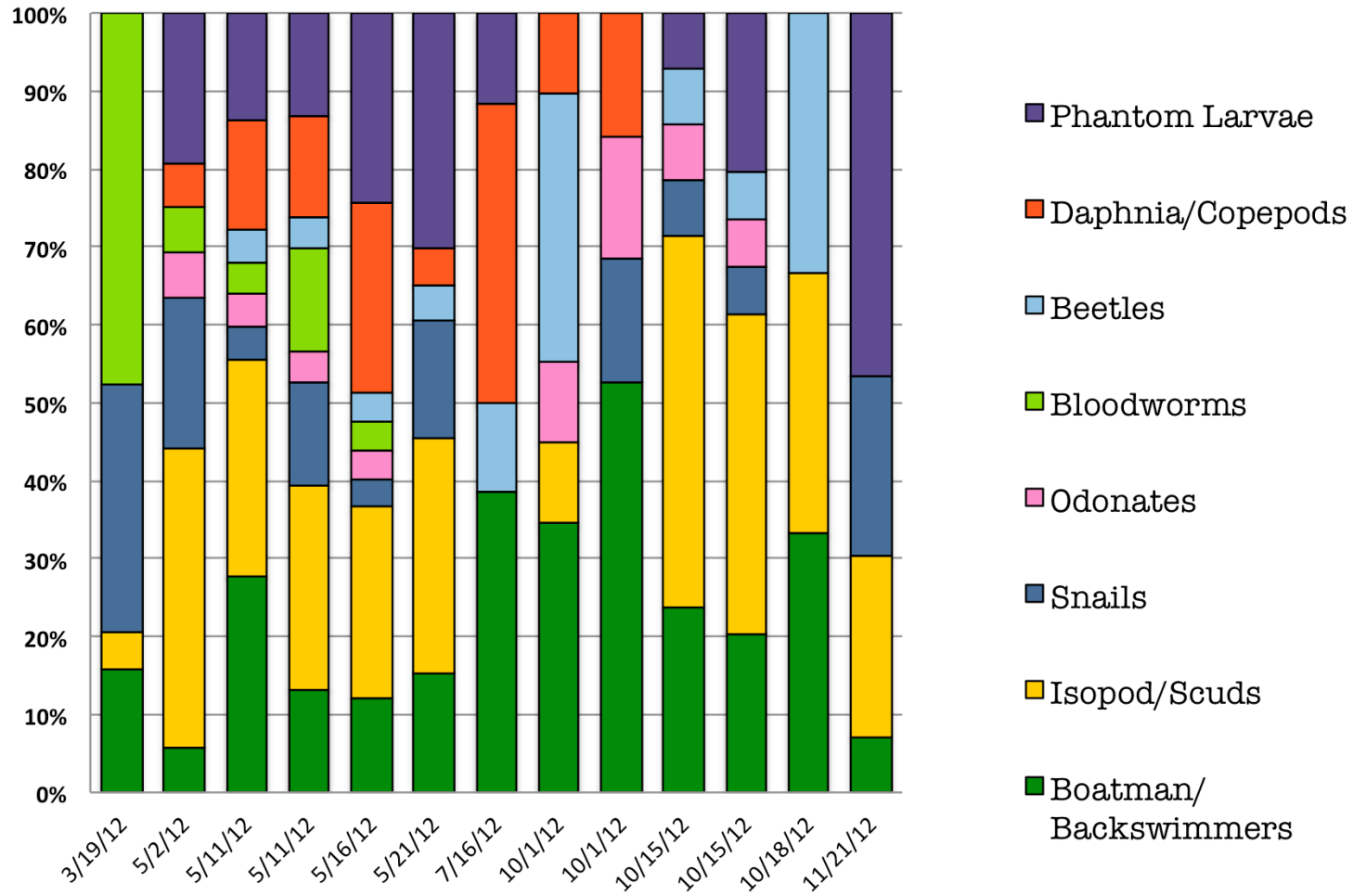
Old Deer Pen Vernal Pool Depth - 2012



Macroinvertebrate Biodiversity in Ice and Poultry Ponds - 2012



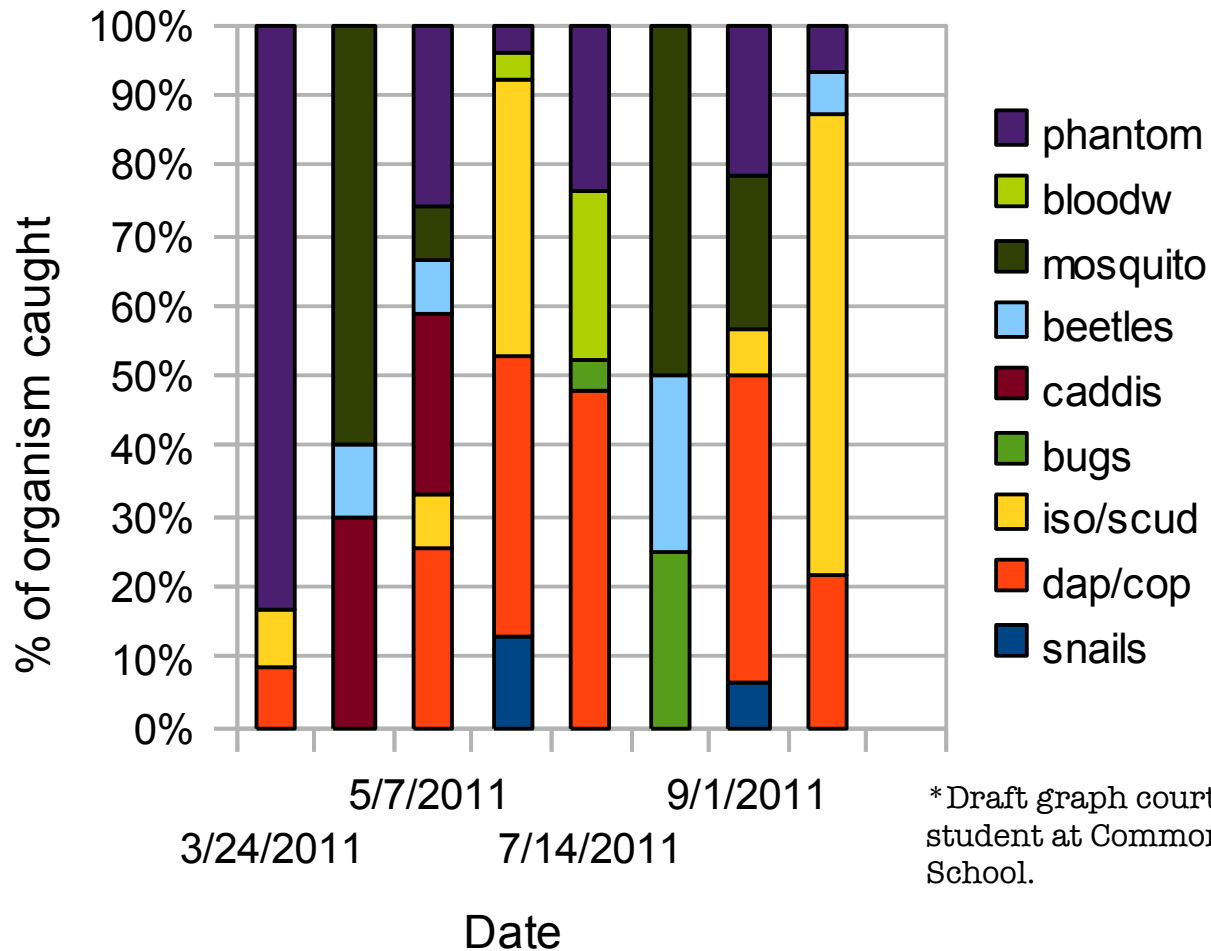
Relative Species Abundance - Ice Pond 2012



Old Deer Pen Vernal Pool 2011

Relative Species Abundance

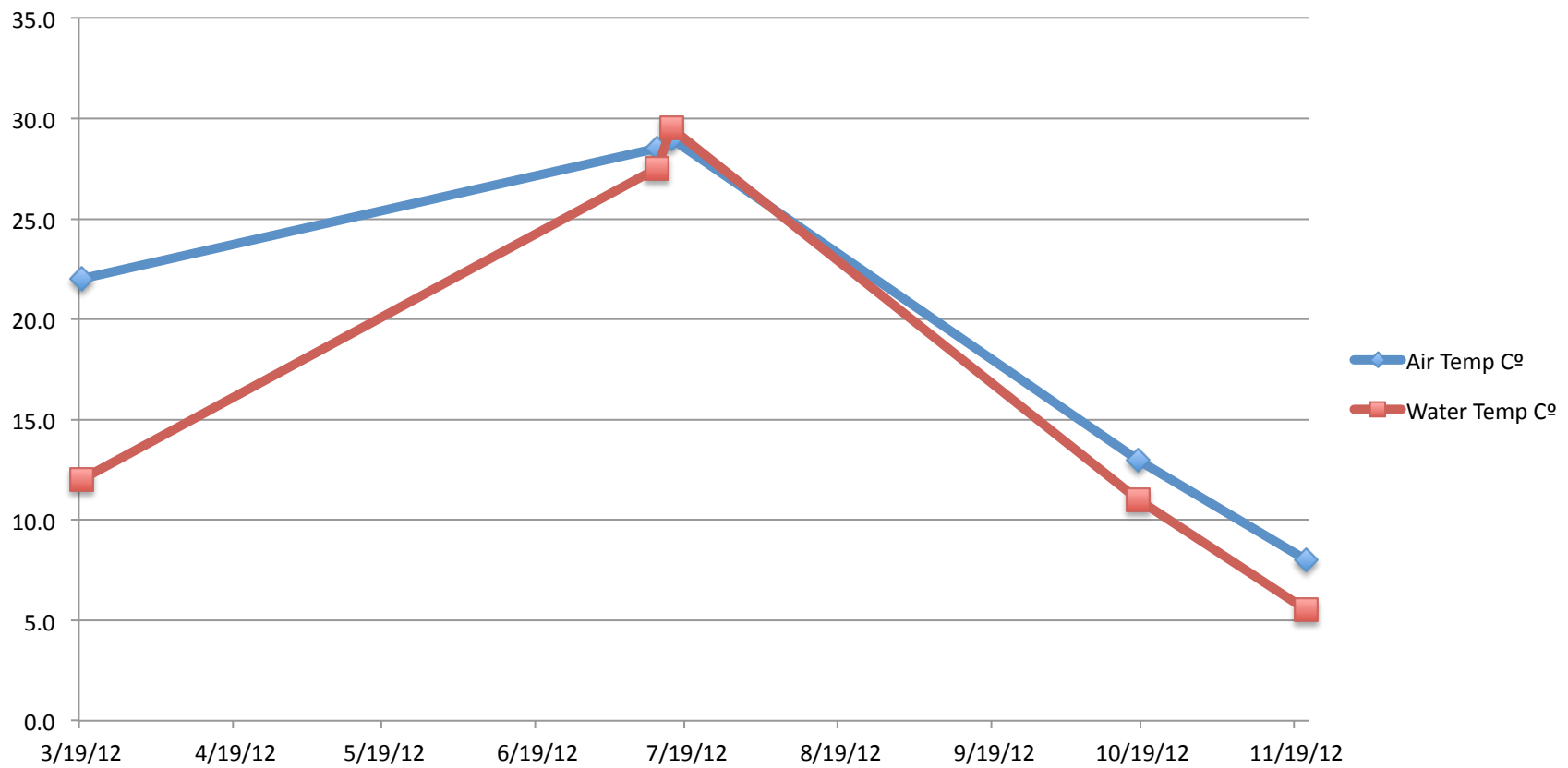
ODP 2011



*Draft graph courtesy of student at Commonwealth School.

Ice Pond water & air temperature - 2012

Ice Pond Air and Water Temperature 2012



The End