* **Biodiversity survey at Whole Systems Design Research Farm**
* *Drs. Laura Hill Bermingham and Lucas Bernacki, University of Vermont*
* *August 2012*
* **Rice paddies:**
	+ 3 new paddies = soil too compacted and neet trowel to dig
	+ 2 larger paddies = took some handfuls of soil no life
		- amphibians probably use paddies in spring
* **Age of ponds:**
	+ Lower pond = 4 years old
	+ Upper pond by shop = 3 years old
	+ Upper upper pond= 7 years old
* **Lower Pond:**
	+ Initial sampling deep in center
	+ Sampled side slope: no veg/ very clayey, with little substrate, deep 5-6’
	+ No inverts
	+ Sampled rocky beach area
		- Little veg
		- Crayfish
		- Many isopods
	+ Sily clay/rocky, more sun exposure, aquatic veg, good mixed habitat
		- Frog
		- Odonata larvae
		- Dragon flies (not just breeding there)
		- isopods
* **Large upper pond species list:**
	+ many green frogs 5+
	+ most other amphibians
		- green frog call
	+ Dipteral larvae
	+ Odonate larvae
	+ Red worms
	+ Isopod larvae are abundant
	+ Huge crayfish

Note: on pond substrate: rockier/sandier base in center, more detritus

* + Center pond bottom sample: deep low light
		- No inverts
	+ Sandy, rocky, small, gravelly
		- True flies, dipertans
		- Isopoda
		- Hemiptera
		- Cray fish
	+ Large amount of detritus at bottom can sustain large crayfish population
	+ This pond is fenced from ducks; may explain higher abundance on inverts
* **Upper upper pond species list**
	+ Eastern newt
	+ Water boatman
	+ Green frog tadpoles
	+ Isopods
	+ Dipterans
	+ Odonate larvae

***Additional notes on upper-upper pond:***

* + - Largely vegetated, older pond with no pond liner, water turbid
		- Sediment sample
			* Boatman
			* Tadpoles
			* Odonate larvae
		- Vegetation sample with very fine clay sediment
			* No inverts
		- Up/up pond is most diverse in terms of substrate
			* Silty bottom
			* Rocky sandy