

Cal-Wood Weather: A 2-day Study



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What did we ask?

- How does land surface type affect meteorological variables?
 - wind speed
 - temperature
 - relative humidity
 - dew point temperature
 - barometric pressure
 - cloud cover

What did we think?

- Comparing Forest and Burned Forest
 - The burned forest will have higher wind speed and air temperature and lower dew point temperature and relative humidity
- Comparing Pond and Field
 - The pond will have a higher relative humidity, wind speed, and dew point temperature and a lower air temperature

What did we do? and How did we do it?

- Sampled at 4 different sites
- Collected meteorological data with a Kestrel 4000, a compass, and cloud charts

Burned Ponderosa Pine Forest



Unburned Ponderosa Pine Forest



Pond and Field Sites



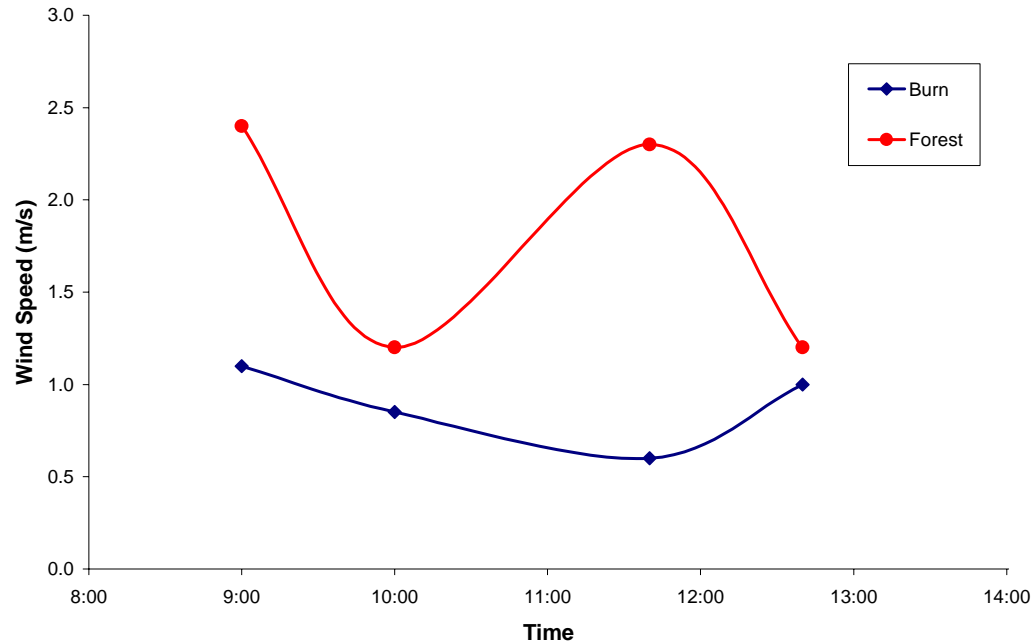
Equipment



What did we learn?

- Weather is unpredictable...
- It can get pretty hot in Colorado
- Our hypotheses were accurate
- ... with one minor, easily explainable correction

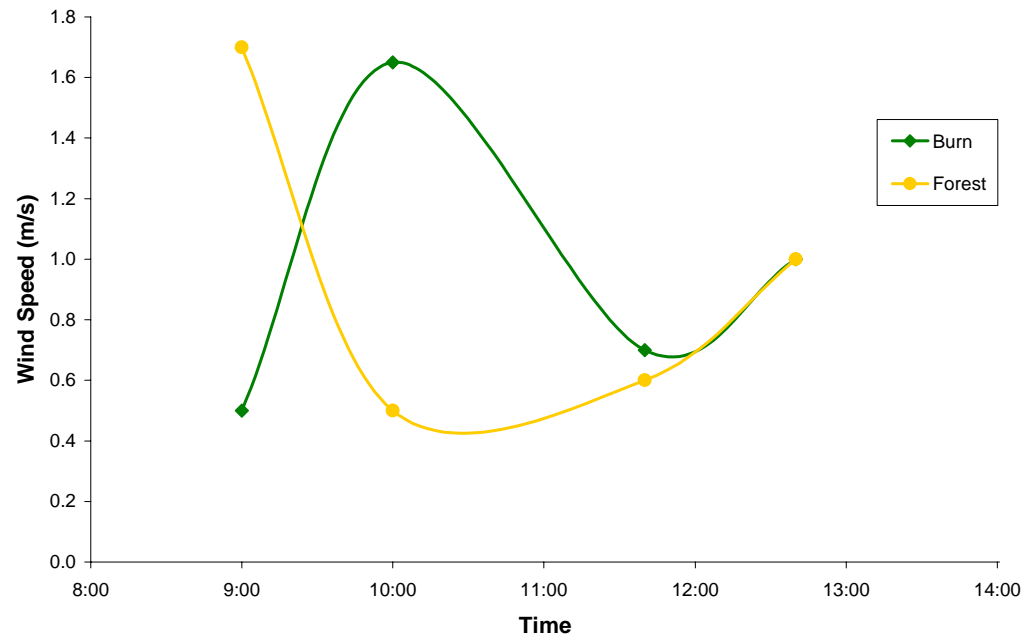
Wind Speed, Day 1



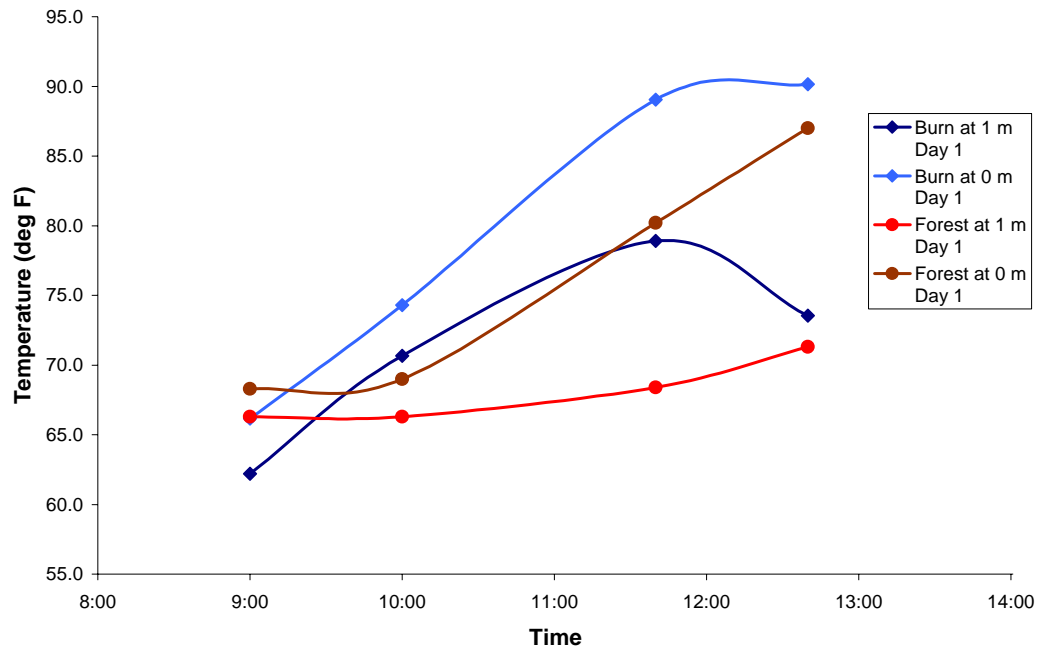
Wind Speed

Burn vs. Forest

Wind Speed, Day 2



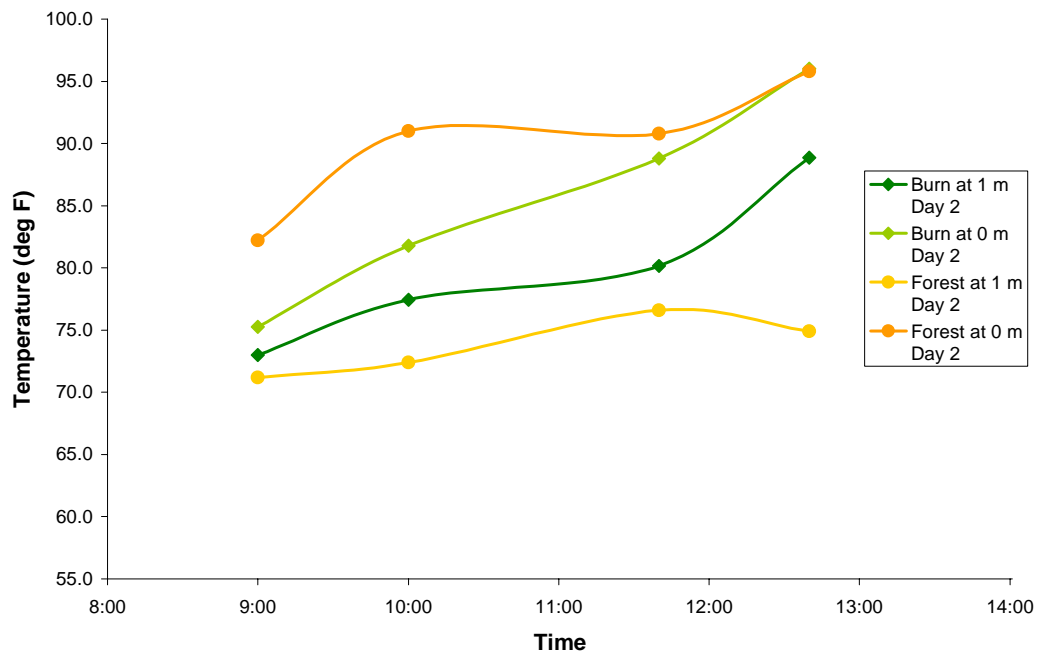
Air Temperature, Day 1



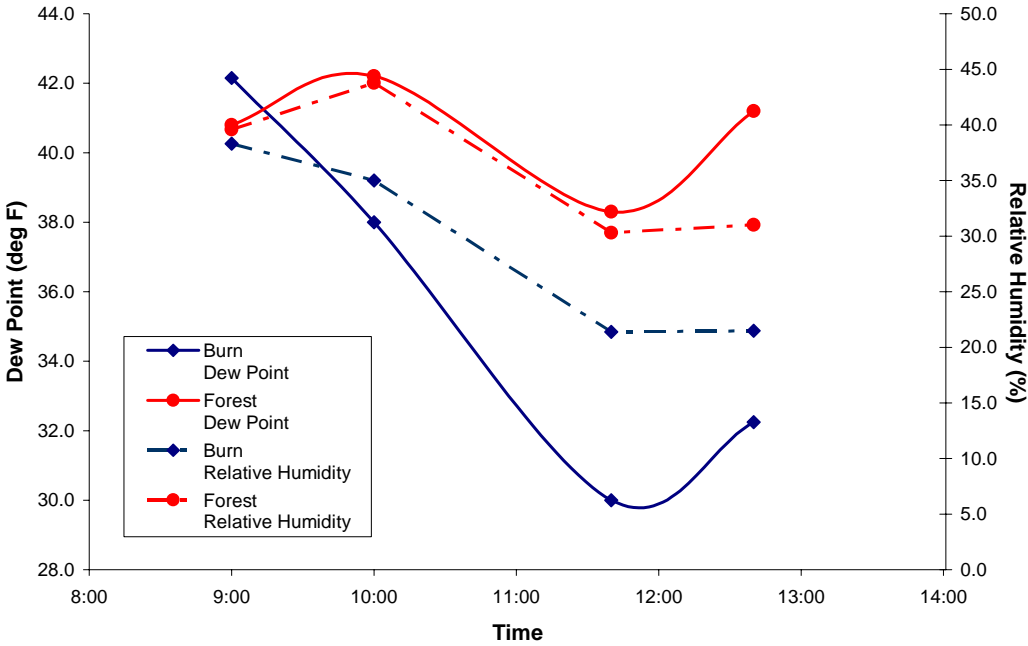
Burn vs. Forest

Air Temperature

Air Temperature, Day 2



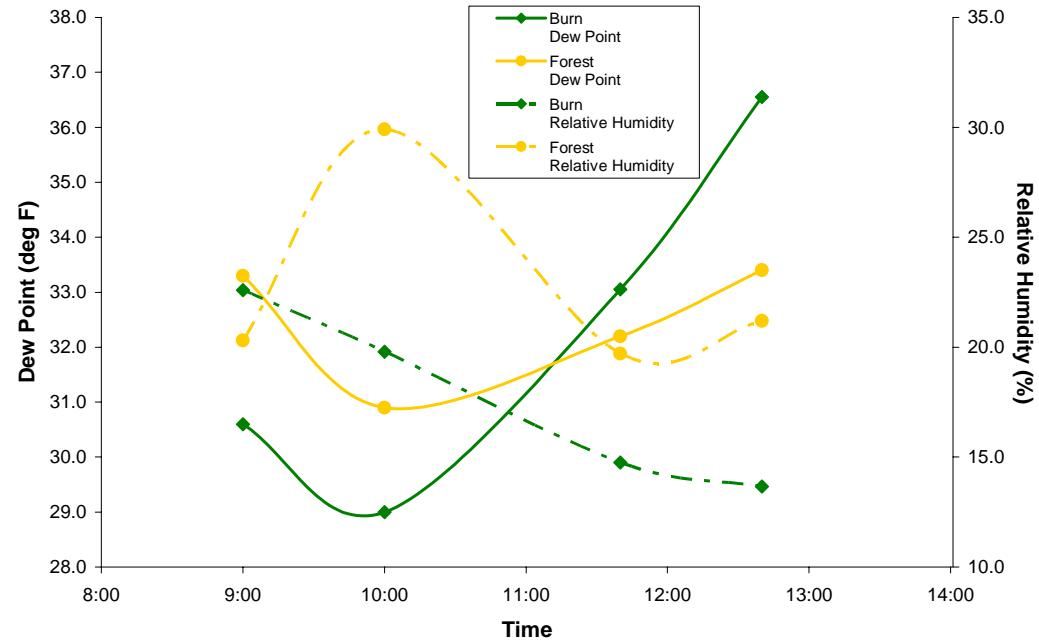
Relative Humidity and Dew Point, Day 1



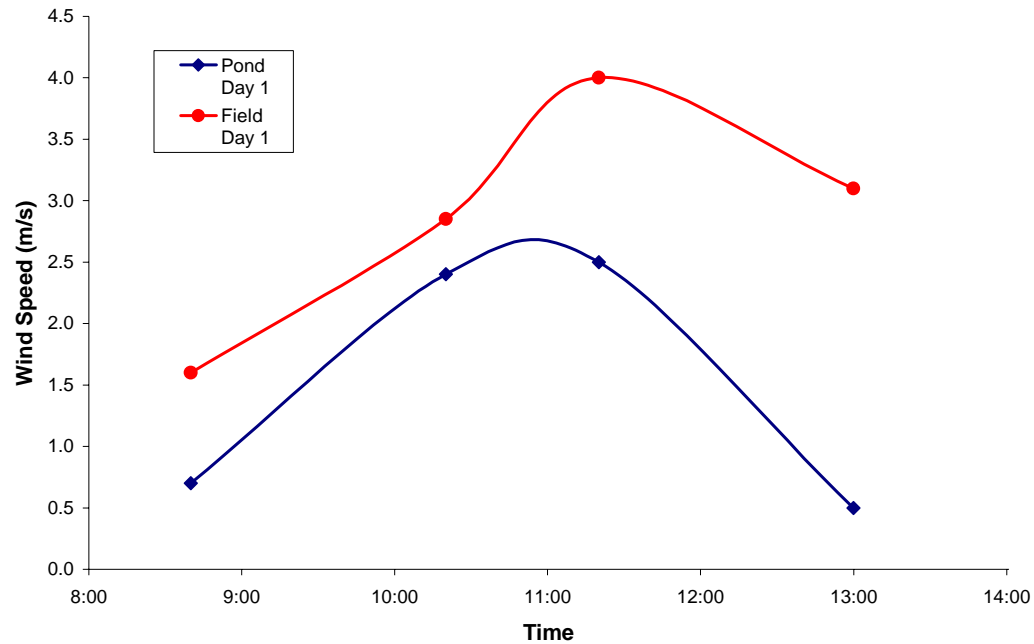
Relative Humidity and Dew Point

Burn vs. Forest

Relative Humidity and Dew Point, Day 2



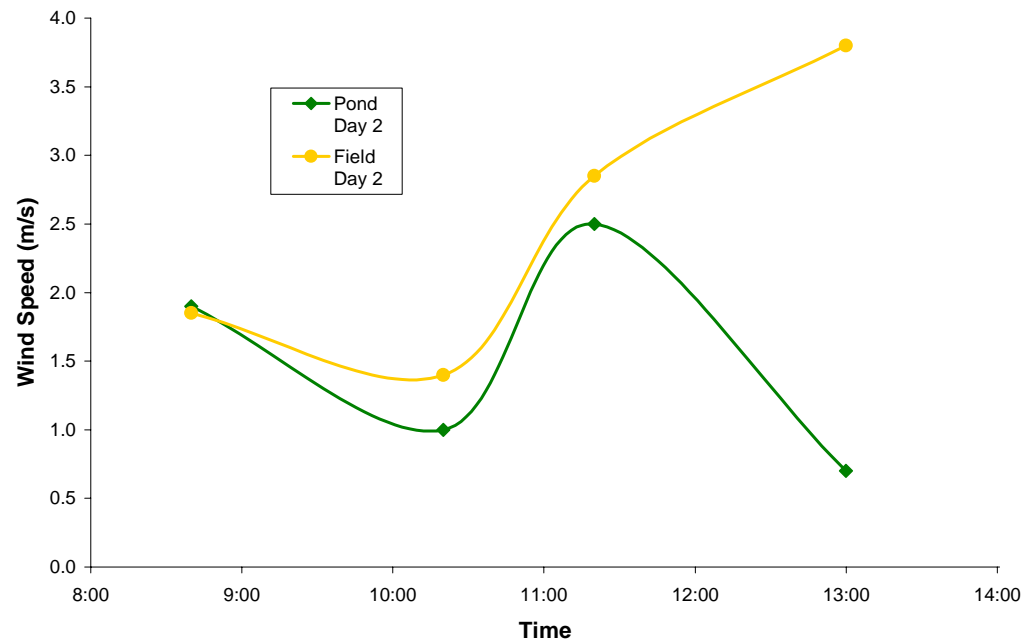
Wind Speed, Day 1



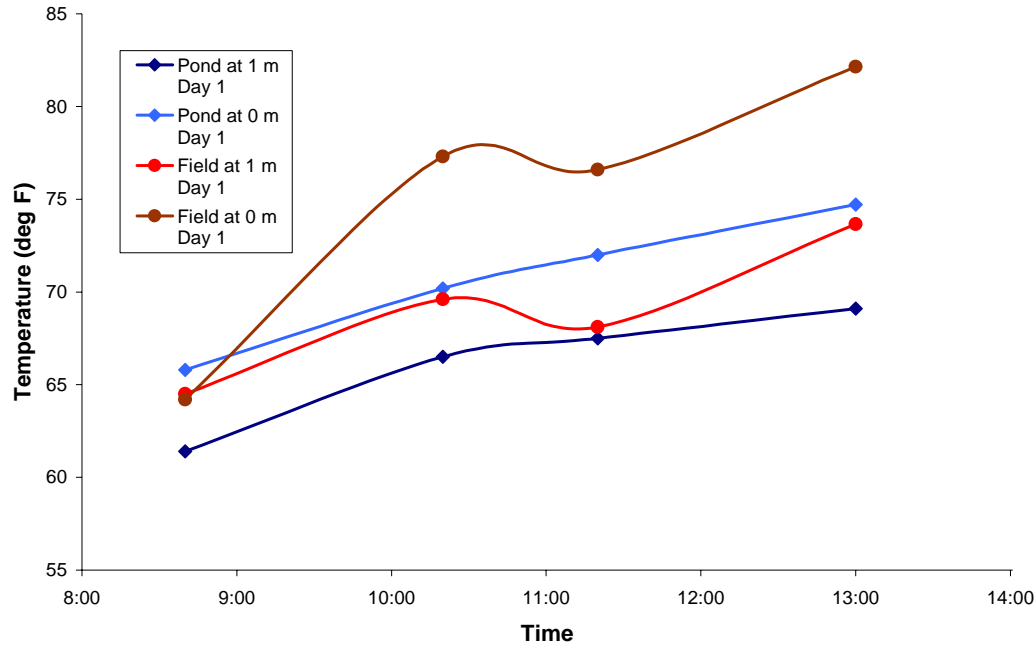
Wind Speed

Pond vs. Field

Wind Speed, Day 2



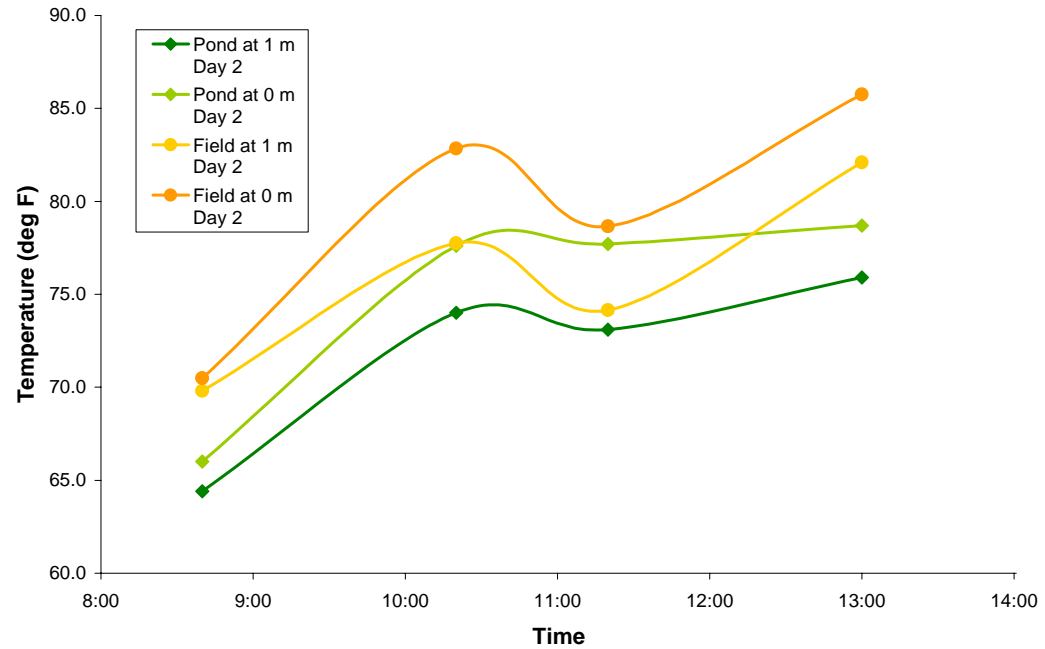
Air Temperature, Day 1



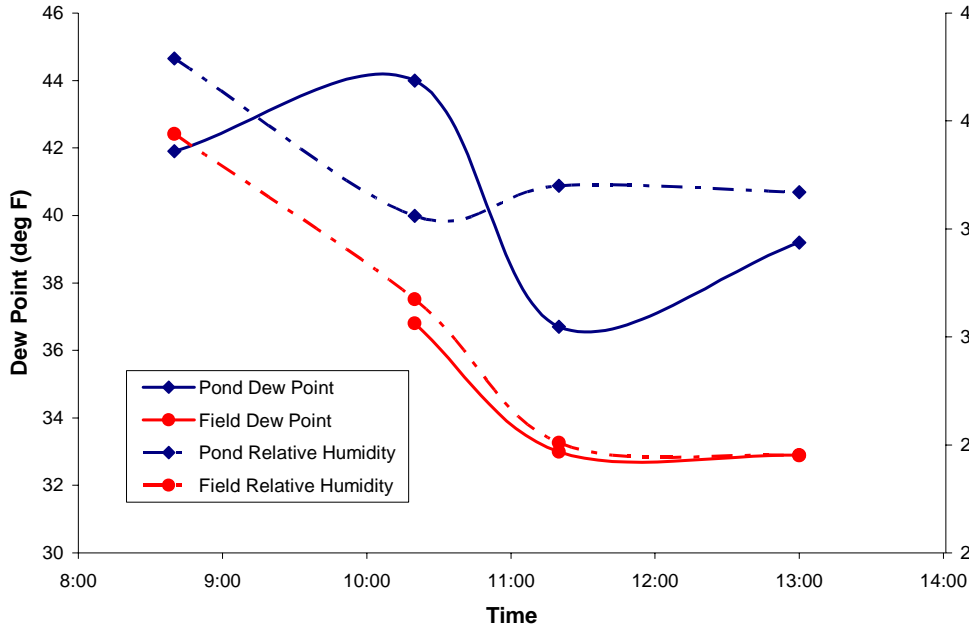
Air
Temperature

Pond vs. Field

Air Temperature, Day 2



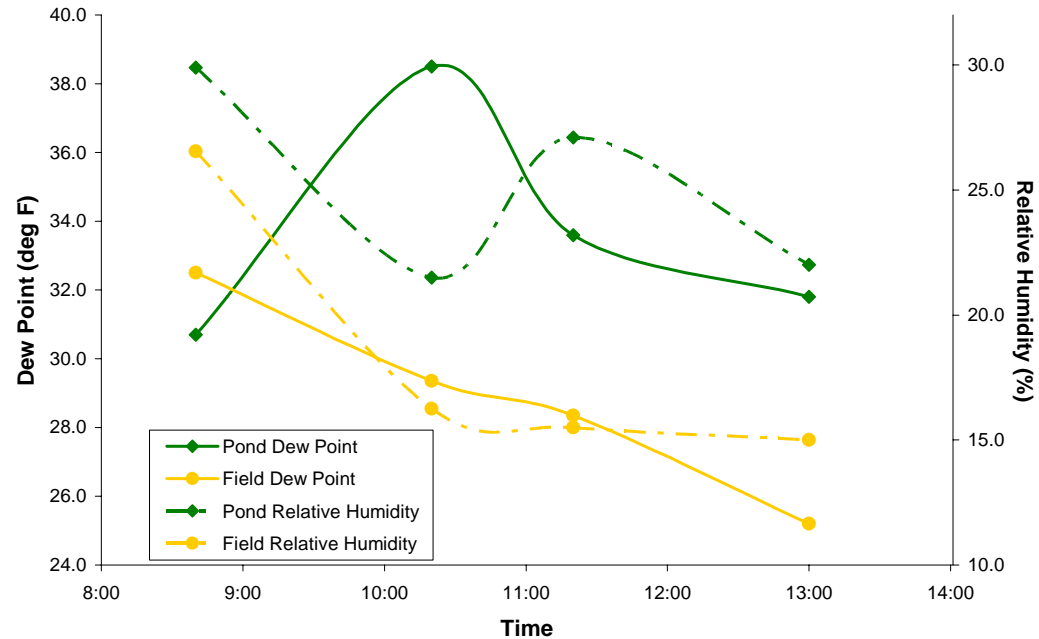
Relative Humidity and Dew Point, Day 1



Relative Humidity and Dew Point

Pond vs. Field

Relative Humidity and Dew Point, Day 2



Problems and Detours...

- Cut back to 2 days of data, not 3
- Small group
- Short sampling day

Extensions

- More days of sampling
- Sample earlier and later in the day
- Larger sample site
- Walkie-talkie communication between sites
- More researchers

Implications

- Insight into broader impacts of land surface variability on climate
- Human impacts on the environment due to land surface change

Thanks...

- Florence Bocquet
 - Sean Davis
- Sarah Tessendorf