SSHCZO All Hands 2014 Agenda

Sunday, May 18

Arrival of out of town participants

Monday, May19 Schedule for Scott Mackay

7:45am – 8:45am Breakfast with Sue Brantley and Ken Davis – meet in lobby Atherton Hotel

9:00am – 10:00am – Trees, nutrients, and soils – 217 Forest Resources Building

10:30am – 11:30pm – Erosion, weathering and trees – 311 Hosler Building

12:00pm – 3:30pm – Field Trip for Scott Mackay to CZO, meet in front of EES Building – box lunches will be provided for participants

12:00pm – Depart from EES Building for Shale Hills
12:30pm – Show and Tell – Shale Hills
1:30pm – Lunch at Lake Perez
2:00pm – Depart for Rothrock
2:30pm – Discussions at Sandstone field site
3:00pm – Depart for PSU
3:30pm – Arrival at EES Building

4:00pm – 5:00pm – Featured Seminar by Scott Mackay ***"Plant hydraulics: Integrator of coupled processes in the critical zone***" in ***117 EES Building***

5:00pm – 6:00pm Poster Set-up – 2nd floor EES Building

6:30pm – Dinner with Scott – Henry Lin and Jason Kaye

Tuesday, May 20th

ALL HANDS MEETING - 117 EES Building

800 – 830 ***Welcome and Introductions and Intro to SSHCZO- talks are to be 15 minutes followed by 4 minute Q/A session and 1 minute speaker switchover.***

830 – 9:15 Opening Poster Session

9:15am – 9:30am – Elucidating the role of erosion in the evolution of the Critical Zone: a review of progress at the Shale Hills-Susquehanna Observatory (Kirby)

9:30am – 9:35am – Discussion – Looking forward to H1

9:35am – 9:50am H2 – Imprint of biota on acid- and redox-weathering hypothesis (Kaye)

9:50am – 9:55am – Discussion of H2

9:55am – 10:10am H3 – The tree-root hypothesis (Eissenstat)

10:10am – 10:15 am – Discussion of H3

10:15am – 10:30am – Data Management at SSHCZO (Dan Arthur)

10:30am – 11:00am ***Break and Posters***

11:00am – 11:15am H4 – The soil macropore hypothesis (Lin)

11:15am – 11:20am – Discussion of H4

11:20am – 11:35am H5 – The regolith-modeling hypothesis (Li Li)

11:35am – 11:40am – Discussion of H5

11:40am – 11:55am H6 - Stream solute flux hypothesis (Russo)

11:55am – 12:00pm – Discussion of H6

12:00pm – 12:20pm – New Developments for Instrumentation at SSHCZO (Andrew Neal)

12:30pm – 1:30pm ***Lunch and Discussions and Posters – 2217 EES Building***

Poster Session Available during Breaks and Lunch:

- CZO Data Management - Shale Hills and Beyond (Dan Arthur)
- New Developments for Instrumentation at SSHCZO (Andrew Neal)
- Elucidating the effects of dams on hydrogeochemical patterns in streams and tributaries (Molly Cain)
- Fully-Coupled Hydrologic Processes for Modeling Landscape Evolution (Yu Zhang)
- Comparisons and Potential Coupling of Biome-BGC and Flux-PIHM at Shale Hills (Yuting He)
- Development of FLUX-PIHM-RT, a Model Coupling Reactive Transport Processes with Hydrologic and Land Surface Interactions (Chen Bao)
- The role of macropores and multi-resolution soil survey datasets for distributed surface-subsurface flow modeling (Xuan Yu)
- Water use dynamics in four temperate tree species in a central Pennsylvania catchment (Katie Gaines)
- A Deeper Understanding: Using the Depth Distribution of N2O in Soil to Improve Predictions of Soil-Atmosphere Emissions (Julie Weitzman)
- Adding topographic solar radiation and more soil layers to Flux-PIHM (Yuning Shi)

- CZ-Tope: Quantifying Critical Zone processes by integrating multiple isotopes (Grit Steinhoefel)
- Seasonal Variation in Suspended Sediment Source and Chemistry in a Shale Watershed (Diana Karwan – University of Minnesota)
- Spatial variability and temporal stability of soil matric potential in the Shale Hills Critical Zone Observatory (Haoliang Yu)
- $^{87}Sr/^{86}Sr$ and Ca/Sr ratios as tracers of solute source materials at the Susquehanna Shale Hills Critical Zone Observatory (Louis Derry – Cornell Univeristy)
- Alignment and divergence of pedologic, geomorphic, and geochemical data for Critical Zone hillslope soils in central PA (Dykman et al., - Lehigh University – Seed Grant)
- Ground-penetrating Radar Images Hydrological Processes within the Unsaturated Zone at the Susquehanna-Shale Hills CZO (Pitman et al., - Temple University – Seed Grant)
- State High Teen Shale Network (Jennifer Williams)

1:30am – 1:45pm H7 - The land – air – ecosystem coupling hypothesis (Davis)

1:45pm – 1:50pm – Discussion of H7

1:50 pm – 2:05 pm H8 - Water-data integration hypothesis (Shi et al.)

2:05pm – 2:10pm – Discussion of H8

2:10 pm – 2:25 pm H9 - Developing approaches to Earthcast climate controls on solute fluxes during shale weathering in the Critical Zone (Sullivan)

2:25 pm – 2:30pm – Discussion of H9

2:30pm – 2:50pm Matt Kenney – CZO "Four Seasons"

3:00pm – 3:30pm ***Break and Posters***

3:30pm – 5:00pm – Discussion: Intra – CZO and Inter – CZO Science Opportunities (pop-ups welcome)

Facilitator – Ken Davis

Notes – Sue Brantley

5:00pm – 5:30pm – Feedback from Scott Mackay – Observations of the SSHCZO

6:00pm – Happy Valley Brewing Company – for Happys – BYO $

Wednesday, May 21st – Scott Mackay departs

- Jason and Sue – field trip to sandstone catena for soil explorations (shovels will be used), others welcome