SPUR Summer Learning Contract

Learning Objectives:

1. How to manage field work and data collection from set-up to finish
2. How to analyze decomposition data in relation to multiple environmental data and write a clear and informative scientific research paper
3. Learn how the carbon flux dynamics from tropical soils relate to decomposition

Work Plan

The plan is to set-up the decomposition experiment in the beginning of June 2016 to be carried out through March 2017. This will include constructing litterbags, collecting and drying leaf litter, and setting out the litterbags in the field along a topographic gradient. The litterbags will be collected every four weeks to be dried and weighed. This research will be conducted within an automated sensor field where soil oxygen, moisture, temperature, and greenhouse gas fluxes are being monitored continuously. Litterbag samples will be shipped back to UC Berkeley remotely during September 2016 to March 2017 by Silver lab members based in Puerto Rico.

*Number of hours per week*: 15 hours

*Timetable*

|  |  |  |
| --- | --- | --- |
| Week | Objective | Method |
| Week 0: Jun 1-4 | Set-up experiment  Measurement 0 | Check field conditions, collect and dry leaves, prep litterbags, start experiment |
| Week 4: July 2-4 | Measurement 1 | Collect litterbag from each location, clean, oven dry, weigh |
| Week 8: July 30-Aug 1 (end of summer) | Measurement 2 | Collect litterbag from each location, clean, oven dry, weigh |
| Week 12: Aug 27-29 (back in Berkeley) | Measurement 3 | Have litterbag shipped, clean, oven dry, weigh |
| Week 16: Sep 24-26 | Measurement 4 | Have litterbag shipped, clean, oven dry, weigh |
| Week 20: Oct 22-24 | Measurement 5 | Have litterbag shipped, clean, oven dry, weigh |
| Week 24: Nov 19-21 | Measurement 6 | Have litterbag shipped, clean, oven dry, weigh |
| Week 28: Dec 17-19 | Measurement 7 | Have litterbag shipped, clean, oven dry, weigh |
| Week 32: Jan 14-17 | Measurement 8 | Have litterbag shipped, clean, oven dry, weigh |
| Week 36: Feb 11-13 | Measurement 9 | Have litterbag shipped, clean, oven dry, weigh |
| Week 40: Mar 11-13 | Measurement 10 | Have litterbag shipped, clean, oven dry, weigh |
| Feb-Apr | Data analysis and write-up |  |
| End of April | Presentation |  |

Summer Plan with Mentor:

* Check in via email once a week to evaluate progress (or as often as needed) over the summer
* On the ground advice and support while in Puerto Rico will also be provided by postdoc in Silver Lab, Christine O'Connell, Ph.D.