**DGE Newsletter, June 2007**

**Field & Berry Labs**

This month **Joe Berry** is participating in the Cloud and Land Surface Interaction Campaign (CLASIC) and the Cumulus Humilis Aerosol Processing Study (CHAPS) research campaigns in the Southern Great Plains Region. The experiments involve several aircraft making measurements of atmospheric properties and an extensive ground based program to characterize the exchanges of energy and trace gases between the land surface and the atmosphere in an intensively instrumented region (ca. 200 x 200 Km) that approximates a grid cell in an atmospheric general circulation model. The site is operated by DOE's Atmospheric Radiation Program, and Joe, together with a group from LBNL, has a DOE supported program to measure and model CO2 water and energy exchange of this region. They are taking advantage of the aircraft campaigns to obtain atmospheric CO2 concentration measurements, to collect flasks for analysis of isotopologues of CO2 and other trace gases and to measure radon concentrations in the atmosphere. The latter is a naturally radioactive gas produced at a constant rate in the soil. This makes it an excellent tracer for vertical mixing of the atmosphere. **June 8: Todd Tobeck** organized a Farewell BBQ for **Miko Tsukimoto** who has been working as a technician on the Jasper Ridge Experiment. He is returning to Japan for a short visit, then hopes to be accepted to one of the medical schools where he is wait-listed. We all wish him the best of good luck. Below you can see Miko modeling the colorful T-shirt that his cohorts designed.

**June 12: Chris Field** participated in the Western Governor's Conference at Deadwood, SD where climate change was a big issue. **Chris Andreassi** has joined the Field Lab as a Technician. **June 26: Ben Houlton** is moving this month to UC Davis as an Assistant Professor of Global Biogeochemistry in the Department of Land, Air and Water Resources. He leaves us with the following message: *I have very much enjoyed my time at Carnegie; the environment is absolutely special for working on creative ideas with a diverse group of scientists. I will certainly look back on my postdoctoral studies with great fondness, and hope to continue my relationship with DGE for years to come. I'm especially grateful to Chris Field for envisioning the program, and will miss my day-to-day interactions with the various faculty, staff, postdocs and students at DGE, Stanford, and Jasper Ridge. We gathered to bid Ben, Jen & daughter, Sydney a fond farewell.*

**June 26: Timothy Searchinger**, an Attorney at Princeton Univ., presented a Seminar titled *Climate Payback Times for Biofuels in US Agriculture*. Tim has been a Transatlantic Fellow of the German Marshall Fund. He showed evidence that converting agricultural crops such as corn, sugar cane and other annual grasses to alcohol for fuel is not only wasteful but harmful in the long run. The process does not even balance the CO2 exchange because the amount of carbon released when the land is first converted to these crops has not been factored in. Also the soil nitrogen and minerals lost when crop residues are no longer plowed under or burned in situ must be replaced at added expense.

**Caldeira Lab**

**June 1: Ken** welcomed **Cristina Archer**, PhD who will be working with him on wind and land use impacts as a Research Associate. **June 14:** In Nature Highlights published online, **Damon Matthews** and **Ken Caldeira** showed through modeling, changes in climate caused by greenhouse gases with and without “geoengineering” interventions. Some such interventions may prevent temperatures from rising, but also produce more droughts and/or more abrupt climate changes.

**Asner Lab**

**Matt Colgan** and **Tim Varga** have joined the lab as technicians while **Rebecca Raybin** has moved on. In May, the CAO completed additional flights over Hawaii for studies of invasive species at the regional scale. **June 23: Robin Martin & Greg Asner** were married in Hawaii.

**Jasper Ridge News**

Although the native grasses are dormant during these dry summer months, data collection and analysis of the results from the recent spring harvest at the Jasper Ridge Global Change Experiment continues. Four new interns shown below are weighing dried samples from each of the plots. The four are High School students **Sarah Teplitsky, Carol Tran, Jinyoung Choe & Dana Feeny** (side). **Michael Alyono**, a Stanford sophomore, is also returning to help this summer (upper right).

**June 27:** We gathered again to bid farewell to Visiting Scholar, **Erle Ellis** who is returning to the Dept. of Geography & Environmental Systems at the University of Maryland, Baltimore County as an Associate Professor.

**June 29:** Again there was a good turnout to answer the call to pull weeds from around the DGE building. It's the best way to keep our garden "native." One of the weeders was **Russell Field**, a Stanford Sophomore, and the latest addition to the summer Intern Group at Jasper Ridge.

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