Field & Berry Groups

Oct. 1: Chris Field and David Lobell were Chair and Speaker resp. in the Biofuels & Bioenergy Conversion Section of the Global Climate & Energy Project (GCEP) Annual Meeting (9/30-10/2). Lobell spoke about Biomass Energy: The Climate Protective Domain. He made the point that bioelectricity links well to carbon capture and sequestration.

Oct. 2: The first Lab Meeting of the Fall Quarter got off to a fine start with Kyla Dahlin presenting a data extravaganza of her field study and estimation of the whole biomass on the Jasper Ridge Preserve. She expects this to be the first part of an extended paper on Topographically mediated controls on above ground biomass across a mediterranean-type landscape.

Tasting: Cantaloupe—How to pick a good one? Participants had been asked to bring a melon for comparison. Odor of the stem end was suggested as a good indication of ripeness. The end results of the tasting generally favored the "Tuscan heirloom" melon from Whole Foods (which was on the upper end of cost), and the worst two melons were from Safeway and J,J,&F; though it was unclear whether that may have been due to the inexperience of the purchaser.

Oct. 9: Jen Johnson spoke about her current research study of "Biosphere-Atmosphere Ammonia (NH3) Exchange." She is exploring the relationships between CO2 and NH3 in C4 and C3 plants and how they might be expected to evolve under different climate conditions.

Tasting: Jen had made pancakes from flour of four different types of plants, two C3 and two C4 (wheat, asinoa, amaranth & corn obtained from the Whole Foods Store). All were good, but the whole-wheat were especially delicious even without syrup.

Oct. 16: Carolyn Snyder is embarked upon a project to Reconstruct spacial patterns of global climate change over the past million years. She described various proxy methods that have been used to determine the climate during a given period. Mostly these dates are from ice cores with a number of uncertainties which need to be reconciled.

Tasting: Carolyn brought six varieties of hummus that is basically ground garbanzo beans flavored with a variety of spices, onions & garlic. Two of her choices were prepared from boxes of the flavored, dried bean powder to which she added just water or water plus oil. These are great for

Seminars

Oct. 2: Noah Diffenbaugh, Assist. Professor, Dept. of Environmental Earth System Science, Center Fellow, Woods Institute for the Environment, Stanford Univ. spoke to the title: Dynamics and impacts of fine-scale climate change. During his introduction, Chris welcomed Noah back to Stanford where he earned his PhD, but then continued his career at Purdue Univ. in the interim. Noah led us through numerous climate models under five different sets of conditions. He suggests that severe heat stress appears imminent in the US during the next two decades.

Oct. 13: David Keith, Director, ISEE Energy & Environmental Systems Group, Canada Research Chair in Energy & the Environment, Dept. Chemical & Petroleum Engineering & Dept. Economics, Univ. Calgary spoke about The capability to engineer the climate is a necessary tool for managing climate risks. He described some of the suggested ways we might get rid of carbon so as to lessen the impact of global warming because CO2 lasts longer than nuclear waste. The dispersal of three grams of sulfur in the stratosphere would off set one ton of carbon in the atmosphere. Keith also suggested that we have instruments ready to take advantage of and measure the aerosol dynamics of the next volcanic eruption to the stratosphere. http://www.ucalgary.ca/~keith/index.html

Oct. 15: Josep (Pep) Canadell, spoke about The 2009 Carbon Budget. He is working jointly with the Global Carbon Project of the Earth System Science Partnership (ESSP, IGBP, IHDP, WCRP, Diversitas) and CSIRO Marine and Atmospheric Research in Canberra, Australia. He presented extensive data of energy growth per capita in various countries around the world leading to the conclusion that the human effect on the carbon cycle continues to grow with a positive trend in emissions.

Caldeira Group

Oct. 1: Caldeira writes about his appearance on YouTube: "I cringe a little at my "million year" comment, said with too much of an air of certainty, but otherwise it is pretty good." The title and reference are: Acid Test: The Global Challenge of Ocean Acidification. http://www.youtube.com/watch?v=5cqCvcX7bvo

Oct. 17 marked the date of the Annual DGE Picnic. Kyla Dahlin initiated the idea of organizing the event around Stone Soup (a folk tale circulated around Europe during past times of mass starvation). Not that we are starving now (except just before eating) this delicious concoction Everyone was encouraged to bring something to add to the soup mix as well as a side dish. Chris purchased an
Oct. 22: Chris Field left to attend an IPCC Plenary in Bali for a week. He had been awarded the prestigious Heinz award on Sept. 15 as one of 10 individuals recognized for extraordinary achievements in fields that were of particular concern to Senator Heinz, but missed the Award Presentation Ceremony in Washington, D.C. on October 28th.

Oct. 23: Julie Ralph, the intern (now a Stanford Senior and Mathematical and Computational Science major) who worked with Kyla Dahlin this past summer at Jasper Ridge, presented her work in the form of a Poster on the 23rd and at the Symposium of Undergraduate Research and Public Service (SURPS) the next day. Her study with the Title: High Resolution Species Distribution Modeling (SDM) provides potential distribution maps of a species, given known occurrence locations and a set of mapped environmental variables, such as average temperature. Maps were created for three different species and then analyzed with independent presence and absence data. She found accuracy well above that expected by a random map could be obtained, and that the model could be projected to nearby areas.

Oct. 30: Bill Anderegg gave us a stimulating talk about overcoming the skepticism surrounding climate change. He is carrying out a study for the Hewlett Foundation on ways that the general public may be educated to distinguish between reputable scientists with data to support climate change and those who are skeptical of it. Two measures that he described are comparisons of the publication records and sources of funding of the two groups.

Tasting: Bill brought four home-baked batches of chocolate chip cookies; two made with butter or margarine and each of those two made with Ghiradelli or Nestle's chips. The most expensive batch made with real butter and Ghiradelli chocolate won hands down.

Asner Group

Oct. 21: By now, you’ve heard the excitement about some of our CLASlite-CAO work in the Amazon. The first CAO airborne campaign (of many to come) just ended, and we made a YouTube video to capture the breadth of the effort. http://www.youtube.com/watch?v=Vm7TypWkJ2c

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