

*Plant Science  
Says*



*Happy  
Thanksgiving!*

*November, 2005*

### **Annual Christmas Party**

Please reserve Sunday, December 11 from 4-7:30 for our annual Christmas Party at Country Lanes. Details will be in the December newsletter.

### **In search of Hot Viruses in a Cool Place**

**By Mark Young**

What a trip... we did not know where we were really going, how we would get there, or what we would find... but what an experience! In August of this year, Blake Wiedenheft and I traveled to the Kamchatka Peninsula in eastern Siberia to look for viruses like the ones we have found in Yellowstone. The Kamchatka Peninsula is about the size of California, extremely remote, with virtually no roads or towns, and one of the world's largest thermal regions. After traveling through 20 time zones (don't ask why we did not fly around the earth in the other direction... it's a long story) we landed at the only significant town in the Kamchatka peninsula, Petropavlovsk (built as the home for the former Soviet Union's Pacific submarine fleet). We found a town surrounded by a surreal collection of volcanoes. Ostensibly, we were in Petropavlovsk to participate in a joint Russian-US workshop on extremophiles. However, our real goal was to skip the meeting, arrange for helicopter transportation into the interior of the Kamchatka to join a small group of Russian and American scientists camping in a remote thermal area, and to look for viruses. After some initial 'setbacks' the Lieutenant Governor of the region intervened on our behalf, arranged transport for us on an old converted Russian gun ship, and we were off to the remote interior. Coincidentally, it was Blake's birthday... and what a birthday present it was for him to be flying in a helicopter for hours through some truly spectacular country.

We landed in the Uzon caldera (another name for a large volcano). Let me try to paint a picture of what

we found. Immediately after landing in a meadow, we were greeted by two large grizzly bears. These were only the first of the grizzlies that we constantly encountered over the next five days. In



the distance, we could see a skyline of snow-capped volcanoes. Many were active and some were constantly erupting, sending ash high in the air. We joined the camp of two Russian geochemists and three American scientists that have

been working together on the microbiology/geochemistry of this thermal basin. Fortunately for us, they had plenty of food and more than an ample supply of beer and vodka to share. For four days we sampled the numerous hot springs in the caldera for viruses, explored the area on foot while trying to avoid the bears, fished for arctic charr for dinner (more like stealing than fishing it was so easy), and drank a 'reasonable' amount of vodka.



The real value of the trip was our interactions with the people we met along the way. Most of the Russians we met were exceedingly kind to us, generous, and a true pleasure to be with. Even though the language barriers presented difficulties at times, there was always a bottle of vodka to share and a keen interest in science that provided common ground. We have been invited back next year to explore another of Kamchatka's thermal basins. We can't wait to go.

### **MSU Undergrads Prepare for Research in Mali, West Africa**

**By Heather McCartney**

Four Montana State University undergraduates have been selected to be externs for the 2006 Spring Semester. They will join Associate Professor Florence Dunkel as she travels to Mali, West Africa in March 2006. A portion of the externs' expenses are sponsored by a Higher Education Challenge Grant called "Discovery-Based Undergraduate Opportunities: Facilitating Farmer to Farmer Teaching and Learning".

Stacey Hellekson is majoring in Civil Engineering with an emphasis in Bio Resources. Her project will focus on water collection during the wet season. Her on-ground goals include inspection of existing water collection and storage containers as well as conducting strength and structure tests on the available soils in the region.

Natalie McGowan is a new Animal Science major and is interested in the issues that affect animal nutrition and other aspects of Malian agriculture.

Christopher Sedlak is a Biochemistry/Biology/Japanese major. His project will focus on the aspects of a national and export product of Mali, shea butter. He hopes to develop field kits for village producers so that they might better regulate such factors as rancidity and fatty acid content during production.

Anna Volkorsz is a senior in Photography and will develop a set of step-by-step photo posters for quality control in shea butter production.

All of the externs are currently enrolled in one of the following courses: ENTO 102G, 470, 490, or 500 and are working with visiting Malian scientists,

Assa Kante and Sidy Ba as they complete their initial research phases.

### **Aravind Jukanti Receives Doctorate**



Aravind received his Doctorate in Plant Sciences on September 27. He is planning on continuing to work in Andreas Fischer's lab as a post doc for 2 years, so he will still be around for a while.

Congratulations Aravind!

### **Grants**

Mike Ivie, "Beetle Assembling the Tree of Life", Harvard University.

**By Bob Gough**

### **Should lawn grass be cut short or left long in the winter?**

The two biggest winter problems with lawns in our region are snow mold and desiccation. In areas that see little snow cover in the winter, the grass will dry out and the crowns may be injured from a lack of insulation. If you live in one of those areas, leave the grass long, thereby protecting the crowns from winter desiccation. Lawns in areas where the snow lies all winter long suffer from snow mold, a fungus which lives beneath the snow and causes the grass to die out in patches. While rarely a severe problem on bluegrass in Montana it can cause great consternation in spring, when the dead patches look horrible. If you live in the heavy snow area, cut the grass to about 1.5 inches in fall to prevent it from matting down beneath the snow and forming a great haven for the snow and mold fungus. And that is all there is to it – simple and logical.



### **Recipe of the Month**

#### Thanksgiving Stuffed Pumpkin

1/2 cup sliced almonds  
1 tablespoon butter  
1 onion, finely chopped  
2 eggs, lightly beaten



1/2 cup mayonnaise  
 1 (10.75 ounce) can condensed cream of mushroom soup  
 2 (14 ounce) bags frozen chopped broccoli, thawed and drained  
 salt and pepper to taste  
 1 large sugar pumpkin, top removed, seeded  
 3 cups shredded Cheddar cheese  
 1 (16 ounce) package herb seasoned stuffing mix  
 1/2 cup melted butter

Preheat oven to 350 degrees F (175 degrees C). Place the almonds in a skillet over medium heat, and cook 5 minutes, stirring constantly, until lightly toasted. Melt 1 tablespoon butter in a skillet over medium heat and sauté the onion until tender.

In a bowl, mix the onion, eggs, mayonnaise, cream of mushroom soup, and broccoli. Season with salt

and pepper. Scoop 1/3 of the mixture into the pumpkin. Layer with 1 cup cheese and 1/3 stuffing, and drizzle with 1/3 melted butter. Sprinkle with 1/3 toasted almonds. Repeat layers. Place pumpkin on a baking sheet. Bake pumpkin 1 hour or until filling is hot and bubbly. Cover pumpkin with aluminum foil if it begins to brown.

### November Birthdays

Jim Berg 4  
 Jack Martin 8  
 Kathi Trujillo 8  
 Harvey TeSlaa 15  
 Leila Feiz 17  
 Adam Richman 20



### Quote of the Month:

“Self-control is often a more important determinant of happiness than is wealth.

Bob's Byte  
 by Bob Johnston



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