Fall 2011
4th Edition

BSPM Bytes

Upcoming Events

- **August 27**
  Almost Annual Old Fashioned Corn Feast. The Holtzer's are generously hosting this event at their place in Rist Canyon. See the fliers around the department for directions.
- **August 30**
  Back to School Picnic. The College of Agricultural Sciences hosts this annual event in the Monfort Quad. Free food and prizes!
- **September 10**
  The 30th Anniversary Ag Day Barbecue at Hughes Stadium. Featuring Colorado fare such as lamb, beef, pork, beans, potatoes, dairy, beer melons, and flowers.
- **Ongoing**
  Gillette Entomology Club 100th Anniversary! This graduate student club has been around since 1912 and is the longest running student club on campus! Anyone is welcome to be a member. Contact Kyle Conrad for more information.

Meet Six New BSPM Graduate Students

BSPM welcomes six new graduate students to the department between the 2011 spring and fall semesters. Please take a moment to learn more about them and help make them feel welcome.

Stacy Biddlecomb is a PhD student in ecology under the advisement of Dr. Ruth Hufbauer and Dr. Andrew Norton. Originally from Annapolis, MD, where she studied Biological Sciences at Cornell University, and stayed in Ithaca, NY after graduation to work in a natural resources lab. Her past research has focused on the ecological impacts of species invasion as well as the impacts of the practices used to 'control' these invasions. Stacy is looking forward to focusing more on plant-insect interactions during her time at CSU, and to studying plant resistance through a more evolutionary perspective. She hopes to look at her systems through the perspectives of the managers and how factors impact the effectiveness of certain biocontrol agents.

Christy Cleaver is a GDPE Master's student in BSPM. She received a BS in Forest Biology and Natural Resource Management from Colorado State University. As an undergraduate, Christy had the opportunity to conduct research in 11 different National Parks to investigate firewood as a potential pathway for exotic insects and pathogens. Loving hiking and the outdoors, she took a year off to hike the 2,179 miles of the Appalachian Trail. Now she is back in Bill Jacobi's lab, studying limber pine stand conditions, regeneration, the extent and severity of mountain pine beetle and white pine blister rust in the central and northern Rocky Mountain regions.

Rachael Fithian recently graduated with a BS in Plant Biology and Insect Science from the University of Nebraska-Lincoln. This summer she moved from Elkhorn Nebraska to start a master's degree with the BSPM department in Plant Pathology. Rachael is beginning work on Thousand Cankers under the advisement of Dr. Whitney Cranshaw and Dr. Ned Tisserat. Her research will focus on non-structural carbon compounds in black walnut trees experiencing varying levels of disease stress. This fall she will be a teaching assistant for Plants and Civilization, and then transition into a teaching assistant for Insect Science and Society this spring.

Courtney Gamola is a New-Englander born and raised. She spent her undergraduate years in New York, and received a BS in Environmental Biology from the SUNY College of Environmental Science and Forestry. From there she changed coastlines, moving to California to act as an ecology field lead for the Youth Conservation Corps at Lava Beds National Monument, and then more recently as a plant ecology research assistant at the UC Davis McLaughlin Reserve in Lake County, CA. She has moved to Colorado to join John McKay's lab studying plant evolutionary genetics. She plans to do her Master's work focusing on the invasive grass *Aegilops triuncialis*, particularly looking at it's effects on California soils, it's impact on native plants, and what role genotypes play

Tom Getts graduated from CSU with bachelors in Forestry Management spring 2010. During his time as an undergraduate, he worked as an hourly student in the Weed Research Lab under Dr. Phil Westra. Tom became interested in the subject of invasive species science during this time, and realized how much of an impact invasive plant species could have upon our natural systems. After an extensive road trip he continued as an hourly worker last fall setting up a study investigating aminocyclopyrachlor as an effective control for Russian Olive, both Cut stump and Basal Bark treatments. Tom officially became a MS student this spring semester with Phil Westra as his main advisor. Recently he has been working on a plantback study with 16 native species and many herbicides over four different application timings, but Tom's official topic for his thesis has not officially been determined. He enjoys backpacking and fly-fishing whenever time allows, and would enjoy going with anyone who's looking to get out in the woods.

Andrew Wiersma is a master's student in Weed Science, and will be advised by Dr. Phil Westra and Dr. Jan Leach in BSPM. His research will focus on glyphosate resistant kochia. Andrew was born in Grand Rapids, MI and grew up in Port -au-Prince, Haiti and the suburbs of Detroit, MI. He received a B.S. in Biology from Calvin College in Grand Rapids, MI. Andrew enjoys hiking, biking, climbing, sailing, and swimming.

Meet Our New Intern

Corinna Peters is an incoming freshman this year at CSU. She is the first in her family to go to a university and is excited to start learning new experiences and meeting new people. She will be working on a Bachelors degree in Business Management. Hobbies include reading, and attending hockey and baseball games.

Corinna will be working in the main office at the front desk every morning and Monday, Wednesday, and Friday afternoons.

15th Anniversary of BSPM Faculty Retreats

Nineteen faculty members participated in the 15th Faculty Retreat for the Department of Bioagricultural Sciences and Pest Management last Friday, August 19 at Tamasag. The very first BSPM retreat was also held at the Tamasag Conference Center. Faculty retreats are an annual event before the start of fall semester and are used as a time to discuss strategic initiatives for the department and the college. This year's day-long retreat included a visit from the College of Agricultural Sciences Dean, Craig Beyrouty and Associate Dean for Research, Lee Sommers as well as the addition of BSPM's newest faculty members, Courtney Jahn and Matt Camper.

Above: Dean Beyrouty and Deb Young

Right: Bill Jacobi and Ruth Hufbauer

Learn more about what goes on in the Department of Bioagricultural Sciences and Pest Management. From center's to clinic's to educational programs, there's bound to be something you may not know about. Read on and if you're interested in even more information, check them out online.

Colorado Center for Sustainable Integrated Pest Management

Faculty and staff from the Colorado Center for Sustainable Integrated Pest Management have been busy this summer helping farmers, ranchers, residents and businesses use integrated pest management practices to control insects, diseases and weeds. Howard Schwartz reports that the national Legume ipmPIPE and Onion ipmPIPE websites track priority pests and diseases across the country and provide a wide variety of information on IPM practices.

See the bean website at http://legume.ipmpipe.org/cgi-bin/sbr/public.cgi and the onion website at http://apps.planalytics.com/aginsights/pipehome.jsp.

Thousand cankers disease of black walnut has been observed in several western states for the last ten years, according to Ned Tisserat. The disease has now been confirmed in Tennessee. (http://www.colostate.edu/Depts/bspm/extension%20and%20outreach/Walnut%20Twig%20Beetle%20Pest%20Alert%2016Aug2010.pdf).

The resurgence of bed bugs has created significant concern in schools, dormitories, homes and businesses. Best practices to prevent and control infestations are being developed nationwide, with expertise from Whitney Cranshaw and Matt Camper. A number of new publications are available, including a bed bug identification poster (http://www.colostate.edu/Depts/bspm/extension%20and%20outreach/bed%20bug%20poster%20V4.pdf).

There is an increased awareness of the use of IPM practices in homes, buildings and schools; Deborah Young reports that there are now 16 schools in the state using IPM to create healthy learning environments and reduce risks to pests and pesticides. George Beck is working with local, state and federal agencies to provide training on noxious weed species such as Dalmatian toadflax. Departmental faculty are collaborating with growers, volunteers, agencies, Extension agents and clientele across the state to investigate and encourage the use of multiple and flexible strategies that will protect resources and people from pests.

CSU Campus Plant Diagnostic Clinic

The CSU Campus Diagnostic Clinic encompasses plant identification, plant disease identification and recommendations and insect identification and recommendations. The Diagnostic Clinic serves as the Extension resource in Colorado for Commercial Grower, Golf Course Maintenance, Crop Consultant and Homeowner samples. Services that the Diagnostic Clinic offers include: Visual Identification including Microscopy; Culturing for Bacterial or Fungal Pathogens; ELISA tests for Viral Pathogens; Molecular Diagnostics; Commercial/Golf Course Turf Disease/Insect Identification; Plant Identification; and Insect Identification. The CSU Campus Diagnostic Clinic processes approximately 600+ samples each year.

The Plant Diagnostic Clinic is a member of the Great Plains Diagnostic Network (GPDN) which is the regional association of the National Plant Diagnostic Network (NPDN).

The Plant Diagnostic Clinic also keeps current and on file, a permit that allows us to accept unknown samples for diagnosis from out-of-state clients.

In addition to processing diagnostic samples, the Plant Diagnostic Clinic is or has been involved in various programs with Extension, State and National Regulatory agencies, and Industry, including, but not limited to:

CAPS (Cooperative Agriculture Pest Survey)

- Potato Cyst Nematode Survey
- Golden Nematode Survey

GPDN Wheat Virus Survey

Advanced Master Gardener Training

- May-Sept for MG Diagnosticians along the Front Range
- Regional MG Training (in cooperation with neighboring states)

Fungicide Trials on turf and other commodities

- Necrotic Ring Spot
- Snow Mold
- Fairy Ring
- Anthracnose
- Wheat Yield/Plant Health

Website Coordination:

- http://plantclinic.agsci.colostate.edu/

New technology/social media for information dissemination:

- http://csuplantdiagnosticclinic.blogspot.com
- http://www.facebook.com/pages/CSU-Plant-Diagnostic-Clinic/116894765012246

Colorado Environmental Pesticide Education Program (CEPEP)

www.cepep.colostate.edu

Do you have questions about how to read pesticide labels or use pesticides safely? Or, perhaps you are studying pest management and you are curious about how to obtain a pesticide applicator license to make you a sought-after candidate in this job market. If so, then the CEPEP website may be the spot to check out! The CEPEP program is responsible for providing accurate, up-to-date information on pesticide laws and regulations, environmental protection, worker protection, and pesticide safety for applicators, trainers, agricultural workers and supervisors, and the general public.

CEPEP is responsible for CSU's Pesticide Safety Education Program (PSEP) which guides individuals through the process of obtaining private or commercial applicator licenses, helps private and commercial pesticide applicators learn how to safely apply pesticides, and provides options for licensed applicators to keep up with current information in the industry through continuing education credits. The CEPEP website contains an up-to-date calendar of upcoming workshops for continuing education credits for pesticide applicator recertification.

CEPEP works with the Colorado Department of Agriculture Pesticides Program to maintain and revise pesticide applicator study guides for those preparing to take their certification exams. Those involved in agriculture may also be interested to know that CEPEP also trains agricultural workers and employers in EPA's Worker Protection Standard requirements.

Beginning in 2011, CEPEP is working with the Colorado Greenhouse and Nursery Association and the Rocky Mountain Regional Turfgrass Association to provide pre-licensing workshops for pesticide applicators seeking certification in the turf and/or ornamental commercial applicator categories.

For those interested in some self-help tools, CEPEP maintains a media library with pesticide training videos and DVDs, as well as CD-ROM information tools and other multimedia resources. A large number of publications are also available through the website.

The GEC Turns 100 this Spring

The Gillette Entomology Club (GEC) is a great opportunity to learn more about some of the most common organisms in the world. There are over a million known species of insects and about sixty thousand arachnid species. The GEC is devoted to the challenge of teaching its members and the community. They hold monthly meetings that often feature guest speakers from throughout the profession, and they also organize outreach events. The mission is partly accomplished through the bug zoo in the Plant Science building that houses many local and exotic species of arthropods. The GEC is also caring for its first bee hive that got up and running last June, which

will be producing honey most likely in the next couple years. If you have any interest in helping the GEC care for their bugs, understanding more about them, or helping spread knowledge of them to the community, please consider joining the GEC. To join the mailing list, please email Kyle Conrad at krcon@rams.colostate.edu, and also search "GEC" on Facebook to join the group.

Matt Camper and his now infamous bee beard courtesy of Northern Colorado Beekeepers Association and Copoco's Honey & Bee Products in Fort Collins.

Bed Bugs

If you are interested in assisting one of BSPM's research associates with her personal colony of bed bugs used for educational purposes, you can contact Terri via email at terri.randolph@colostate.edu and you too can have a cool "bed bug tattoo" as shown here from an approximately fifteen minute feeding.