

Department of Environmental Horticulture • University of California, Davis

GROWING Points

Road Ecology Center Established at UC Davis: Alison Berry Named Director

Excerpts from http://johnmuir.ucdavis.edu/road_ecology/



There are currently 3.9 million miles of roads in the United States, accounting for about 1.5% of the country's land area. This transportation system is vital to the daily activities of the nation's citizens and to the economic health of the country. The continued development and heavy use of this vast network of highways is, however, taking a toll on the land and impacting plant and animal populations in ways we are only now beginning to understand.

During the 1990s, scientists in the disciplines of landscape and ecosystem ecology began focusing their efforts on the adverse effects of roads on nature. They examined such issues as how roads and vehicles interrupt ecosystem processes, how populations of plants and animals are

fragmented by road systems, and how vehicles and their emissions and noise contribute to mortality and suppress reproduction in both plants and animals. The new field of road ecology emerged from these studies.

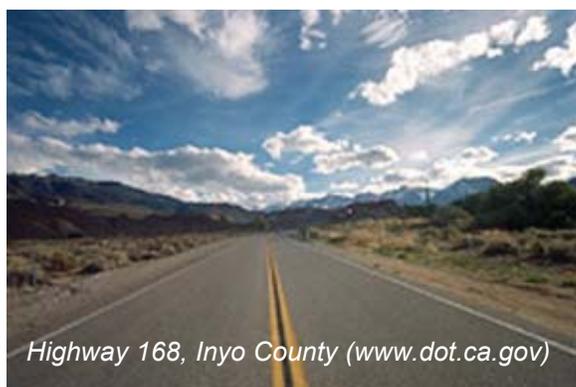
ners responding to increasing demand for mobility recognized the need to minimize the adverse impact of roads and vehicles. Foresight was needed, along with deeper understanding of transportation choices and human behavior, and their consequences. Practitioners in this developing field have come to see that human communities and natural ecosystems have much the same needs for sustainable and friendly transportation systems. This movement toward a fully integrated, multidisciplinary effort culminated in the publication of the book entitled *Road Ecology: Science and Solutions*, edited and written, in part, by Richard Forman of Harvard University and Dan Sperling, director of the Institute of Transportation Studies at UC Davis.

Last year, the Institute of Transportation Studies (ITS-Davis) joined forces with the John Muir Institute of the Environment (JMIE) to create the Road Ecology Center at UC Davis to provide a forum for the advancement of this emerging discipline. The goal of the center is to build the lead-

ing road ecology research and education program in the world, with strong ties to government agencies and public interest groups. The center's members hope to bring together researchers and policy makers from ecology and transportation to design sustainable transportation systems based on an understanding of the impact of roads on natural landscapes and human communities. To accomplish this, a broadly interdisciplinary program will be developed to design transportation systems that are both environmentally and socially friendly.

One of the main activities is a "virtual" Road Ecology Center (http://johnmuir.ucdavis.edu/road_ecology/), jointly administered by JMIE and ITS-Davis, and co-directed by Alison Berry (Environmental Horticulture), Dan Sperling (Director ITS-Davis) and Cathy Toft (Associate Director, JMIE). The mission of the UC Davis Road Ecology Center has three main components. Members will integrate the dispersed disciplines of road ecology on campus to build a coherent state-of-the-science body of principles useful to transportation planning. They will disseminate this information broadly to the professional communities, to students and environmental scientists, to agencies, and to public interest groups. Finally, they will create analytical methods, professional practices, and institutional processes to support sustainable transportation.

Continued on page 8



Highway 168, Inyo County (www.dot.ca.gov)

At the same time, transportation plan-

In This Issue... *Coral Bells and Alum Roots for Shady Central Valley Gardens-* page 2 • *Update on Horticulture Publications and Web Resources-* page 3 • *ENH 125 Field Trip 2004- The Reality Tour-* page 4 • *Notes from the Chair-* page 6

<http://envhort.ucdavis.edu>

Coral Bells and Alum Roots for Shady Central Valley Gardens

by Ellen Zagory, Director of Horticulture, Davis Arboretum

The species and cultivars of the genus *Heuchera* are useful additions to the plant palette for Central Valley gardens. Adapted to shade and well-drained locations, they make easy companions for those lawn chair afternoons, forming flat evergreen mats or mounds of green around trees and shrubs. The leaves can be marbled with silver, fuzzy, smooth or shiny green. In spring and summer they develop delicate clouds of tiny flowers in red, white or pink, the height and impact of which depend on the species or cultivar used.

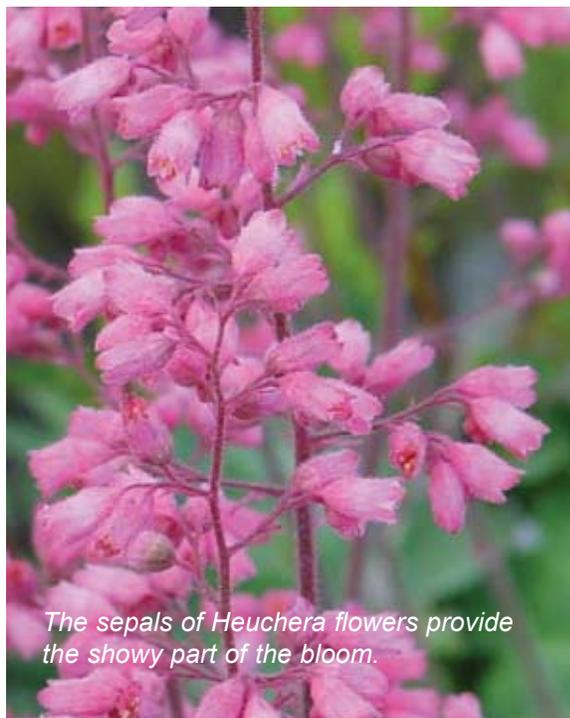
We are growing some of the commercially available cultivars in the Davis Arboretum to evaluate their garden performance in our Central Valley climate. In some cases the origin of these cultivars is obscure. Sometimes identification of species (or of parent species) is difficult- the species of *Heuchera* (pronounced HYOO-curr-uh) are not only especially variable but also have a tendency to hybridize with one another, creating progeny of intermediate character. Their flower taxonomy is only for those of keen eyesight interested in the "micro" world. The sepals (collectively the calyx) provide the showy part of the bloom. Often the petals are tiny and hardly noticeable although they may add to the color and impact of the inflorescence. Whether the flower is showy or subtle is mainly determined by the height of the peduncle, the number of flowers per stalk and length of the sepals.

The more commonly seen garden *Heuchera* are the result of hybridization of the southwest native coral bells, *H. sanguinea*, with other species, and are given the hybrid designation *H. Xbrizoides*. Bressingham hybrids are perhaps the best known of these. Of more interest to California gardeners are hybrids of *H. sanguinea* with California natives such as *H. maxima* and *H. micrantha*. These may provide us with plants better adapted to our special climatic conditions.

Island Alum Root and its Hybrids

Heuchera maxima, the island alum root, is the largest of the species under discussion here. Its light green leaves are large, up to seven inches long, and have

lobes and jagged margins with each tooth tipped with a fine hair. The plants make a mound approximately one foot tall with flower stalks up to two feet above the foliage. The flowers are cream-colored and nearly hemispherical with tiny petals curving out between the sepals. This species and its hybrids are superb ground covers for dry shade. They are ideal companions for our ancient oaks, creating a lush, loose green cover that "swallows" tree litter and doesn't need the heavy irrigation



The sepals of *Heuchera* flowers provide the showy part of the bloom.

that is dangerous to these old trees.

'Old La Rochette', a recently introduced hybrid, came to us from California Flora Nursery in Fulton. Of the same plant size and leaf shape and color as *H. maxima*, its leaf size is about one-third smaller and its leaf dentations are more rounded and less coarse in appearance. The flower stalk is about 30 inches tall and the flowers are creamy pink, hairy on the outside and urn-shaped, not as round as *H. maxima*. An impressive bloomer, it is believed to be a Victor Reiter hybrid.

'Lillian's Pink' is a medium sized plant of smaller stature than those above al-

though leaf shape and texture are very similar. Flower stalks reach 18-24 inches above medium green foliage with the jagged margins and coarser leaf texture of *H. maxima*. More compact in appearance, it has a densely flowered inflorescence which is a good, darker pink than some of the other cultivars.

'Martha Roderick' is purported to be a selection of *H. micrantha*. It is similar in leaf shape to 'Old La Rochette'; but with smaller leaves, more round in outline, and shorter petioles which makes it more compact. The leaf margins take on an almost ruffled appearance and form a plant only 6-8 inches tall. The flower stalks are 18-24 inches tall with tiny pink flowers well spaced on the stems to give an airy appearance. The blooms are less impressive than some of the others mentioned here.

Hybrids from Southern California

Two western botanic gardens have been particularly active in the hybridization of *H. sanguinea* with other California species with spectacular results. Rancho Santa Ana Botanic Garden (RSA) in Claremont has introduced a series of hybrids resulting from the crossing of *H. maxima* with *H. sanguinea*. 'Santa Ana Cardinal' is perhaps the best known of these, a dramatic plant while in bloom with tall (up to 3 feet) flower spikes of rose-red bell-shaped calyces with tiny pink petals set on a maroon colored rachis. The leaves are rounded in outline with scalloped margins, an indicator of the pronounced influence of *H. sanguinea* in this particular hybrid. 'Susanna' is another RSA introduction which blooms later than 'Santa Ana Cardinal'. The plant is only 6-8 inches tall with flower spikes of 18-24 inches. While it has the same red influence in the flowers, they are smaller than some of the other cultivars and have fewer flowers per raceme.

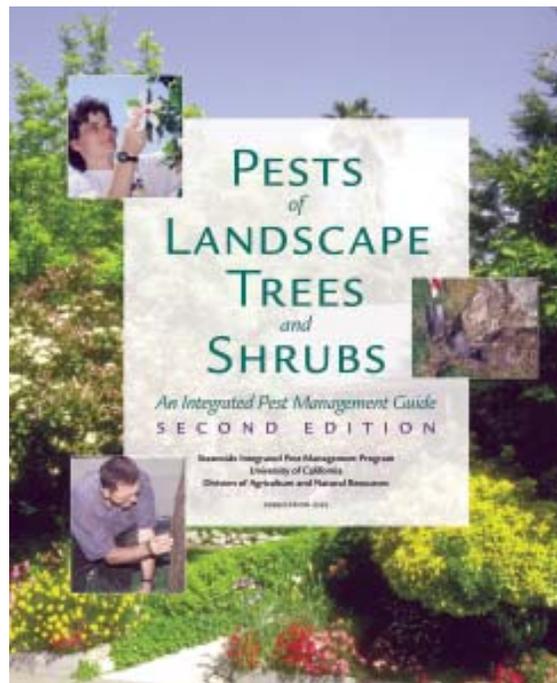
Continued on page 5

Update on Horticulture Publications and Web Resources

Pests of Landscape Trees and Shrubs: An Integrated Pest Management Guide, Second Edition

Back in stock and completely revised—this is the ultimate guide to managing landscape pests! The second edition covers more types of ornamental trees and shrubs, more pests, and contains more photographs and illustrations, together making it 25% larger. You'll want to update your library with this best-selling source book for resolving all kinds of landscape problems. With this manual in hand you will be able to diagnose and manage hundreds of insect, mite, weed, plant disease, and nematode pests. Inside you'll find updated information on how to use environmentally safe, ecologically based IPM methods including landscape designs that prevent pests; how to select resistant varieties; and advice on the use of less-toxic pesticides such as botanicals, oils, and soaps. In addition, you'll find tips on planting, irrigating, and other plant-care cultural activities that help in avoiding problems.

The second edition contains 70 new pest sections, including 13 new diseases, 12 new weeds, and 40 new insect and mite pests. Here you'll find over one hundred pages of easy-to-use tree and shrub pest tables, double the number found in the first edition! As with the first edition, these pest tables are invaluable in helping you identify common pest problems—now on over 200 types of ornamental trees and shrubs. Includes 432 color photographs, 117 drawings and tables, references, glossary, and an index. 2004. 504 pp. \$42.00. Order online at <http://anrcatalog.ucdavis.edu> or by phone 1-800-994-8849.



New IPM Website: The UC Guide to Healthy Lawns (www.ipm.ucdavis.edu/TOOLS/TURF)

Spring is just around the corner, and everyone wants a nice looking, lush green lawn. But can you have one without polluting the environment with insecticides, fungicides, and herbicides? The answer is yes! Look no further than your computer. The University of California's Statewide IPM Program has just added the UC Guide to Healthy Lawns to its Web Site (www.ipm.ucdavis.edu/TOOLS/TURF). Developed for home gardeners and managers of parks, school grounds, and other low-maintenance turf, this site shows you how to establish a vigorous lawn and maintain it with an environmentally friendly lawn care program.



Are you planting a brand new lawn or getting ready to renovate an old one? With a click you'll learn all about preparing your soil, adding amendments, installing an irrigation system, and choosing a turfgrass species right for your conditions. The program even gives you step-by-step instructions on how to seed or sod your lawn.

Need help maintaining your existing lawn? Check out the section on lawn care for established lawns, and find information on mowing, fertilizing, watering, and more. Properly maintained lawns can better withstand pest problems. By entering information specific to your own situation, you can design an irrigation program, calculate the amount of fertilizer to apply, or determine proper mowing height or frequency.

Think you have a pest problem but not sure what it is? This web site will help you identify the cause. Chances are poor cultural practices, and not a pest, are the culprit. In fact, most lawn damage is the result of incorrect watering, fertilizing, mowing, or poor turf selection. The diagnostic key asks you a series of questions about conditions that may have contributed to your problem. Once some of the more common causes are eliminated, you can match your damage symptoms to photos of similar problems. The key leads to information on identification, monitoring, prevention, and least toxic management solutions. More than 40 pests and problems are covered—including insects and other invertebrates, diseases, abiotic disorders, and vertebrate pests such as gophers and moles. Also included is an illustrated key to more than 50 weed species found in lawns and a complete section on managing weeds.

The UC Guide to Healthy Lawns is a "must see" for every home gardener and lawn manager. Whatever information you are looking for, you will find it quickly and easily. You can have that vigorous, healthy lawn that you have always desired but with less pesticides.

ENH 125 Field Trip 2004: The Reality Tour by Robby Flannery

For those of you readers out there who don't know me, my name is Robby Flannery. I am currently a student at the University of California, Davis pursuing a Ph.D. in Plant Biology, while working for Dr. Heiner Lieth in the Department of Environmental Horticulture. This is my third year of graduate school and I have to tell you, it's a pretty sweet deal. Where else am I allowed to work with a subject area that I am passionate about (plants), still get the student discount at the movie theater, and have a perfectly reasonable excuse for not entering the real world yet. Much to my chagrin, I will eventually be forced to leave the world of the perpetual student and will have to find a job. If and when I do get this Ph.D., it might even be desirable to get a job somewhere in the field of horticulture. Lucky for me, and others like me, Heiner offers a class each Winter Quarter at UC Davis called Greenhouse and Nursery Crop Production. At the end of every January, this class heads west toward San Francisco, Gilroy and Salinas to tour greenhouses and other horticultural sites for a two-day field trip. It's on this trip where a perennial student, such as myself, is given the chance to mingle with actual people working in the actual real world and could actually give me a job one day.

The first way that this field trip prepares the student pursuing a never-ending scholastic endeavor for entering the reality of working a respectable job is that Heiner has us wake up before 11 AM. In fact the bus leaves UC Davis "promptly" at 5:30 AM. Granted, it is hard to break old habits of rolling out of bed while the sun has just crested the midday sky, but avoiding a phone call at 5:31 in the morning with Heiner on the other end is motivation enough to be punctual this particular morning. Then finally, like a herd of turtles, we depart for the California and San Francisco Flower Markets. Seeing the flower wholesalers spread out through a warehouse on the corner of 5th and Howard is what makes this stop memorable. Bob Otsuka of the San Francisco Flower Growers Associa-

tion greeted us and led us to a small conference room away from the hustle and bustle of the busy market floor. Bob gave a short talk about the history of the flower market and its origins in the late 1800's.

From San Francisco we lumbered down the coast toward Half Moon Bay and Nurserymen's Exchange. It was here that Tim Oldham greeted us and showed us a small portion of the facilities that this company occupies on the picturesque coast. This particular stop was rather uplifting for us lowly students. Tim is, in fact, a UC Davis alum, which gives us hope that there is a possibility for a future job for us



Julie Lohr and the author debate the merits of the genus Viola.

horticulture students. Nurserymen's Exchange is known for its ornamental potted plant production, and nothing is more impressive than their potted mini rose production. As we listened to Tim's explanations of the various aspects of growing potted plants, he discussed the many triumphs and tribulations of horticulture. It introduces the idea that there is always room for a student educated in the horticultural sciences to come into the workforce and hopefully exercise their knowledge of plants to promote efficiency in crop production.

We eventually found ourselves at Kawahara Nursery for our next stop. I found this stop to be especially interesting. First off, a large portion of the busi-

ness that this establishment does is with the production of bedding plants. It was here that our group discovered that an initial investment in automated machinery could save costs in the long run. Kawahara has a robotic transplanting machine that replaces several laborers, which saves money when everything is said and done. There's also the fact that this machine is cool to watch. It is capable of taking plugs and transplanting them into pots at an alarming rate. Another aspect of this stop that was interesting is interacting with General Manager Keith Francis. He may not be a Cal Aggie Alum, but he is a Texas Aggie. Having spent a lot of time in College Station, Texas (aka: Aggieland), I immediately recognized Keith's Aggie ring on his hand. This led to a discussion of being a California Aggie vs. a Texas Aggie and other such conversations that intersected between his speeches on bedding plant production. As our time at Kawahara came to an end and we made our way to the bus, Keith informed us of how practically any of us could get a job there. He said that if one of us wanted, there would always be a watering hose with one of our names on it. There's always room in the workplace for the college-educated.

As the sun began to set on our first day of this two-day field trip, we made our way into Gilroy where we would eventually be spending the night. First, we stopped off at Goldsmith Seeds and spoke with Mike Capp. Now for those of us who are looking to find a job in this industry, Goldsmith Seeds is a company that seemed to me as a fantastic option. One of the first things you notice when you enter their parking lot is the large softball field on their property. Then as we walked into the first greenhouse/welcoming area, the company had laid down some exercise mats for yoga and other fitness related activities. Mike also informed us about their child daycare facilities. These types of amenities just go to show that Goldsmith is interested in keeping their employees happy.

Saturday morning started off with a trip to Aspen Enterprises in Watsonville to meet with Bill Young. This place is always a great place to visit on these field trips. Not only does Bill grow roses hydroponically (which personally interests me), but he also always



provides muffins, coffee and tea. Working for someone like Bill would be spectacular. Anyone who inherently knows that in order to work well, one must be fed well is ok in my book. Bill also has a top of the line fertilizer injection system that is impressive to look at. Although he claims that when you have more bells and whistles on a device that means there are more things that can go wrong, I tend to look at it in a more constructive manner. Having a large complex irrigation and fertigation system means that there possibly is another job that needs to be filled by an educated person.

Our next stop took us to Pajaro Valley

Greenhouses where we met with Don Howell. This establishment is different from the other greenhouses we'd visited. Rather than concentrating on one type of crop, Don manages the production of numerous different types of cut-flowers. There are dozens of cultivars of roses, oriental lilies, solidasters, *Delphinium*, *Alstroemerias*, irises, carnations and Gerbera daisies (to name a few) growing in the greenhouses. Not only does this diversify the company, but it also forces Don to manage several different crops that all have different growing requirements. Pajaro Valley Greenhouses boasts an automated

rose-sorting machine as well. Not only does this contraption allow the company to save a load on labor, but also it is fascinating to watch in action.

Our next and final stop was Yoder Bros.' facility in Chualar, CA. It was here that we met with Martin Reyes and were able to take a tour of some of the facilities. I'm familiar with Yoder Bros. because whenever I need *Chrysanthemums* for my research, Yoder Bros. is always there for me, especially Linda Boston in the Ohio office. I always have felt great amounts of gratitude towards this company because of their selfless donations of plant material. Since this stop was our last and the previous night I participated in a rather intense lab meeting, it was definitely difficult for my mind to stay on target and concentrate on the matters at hand. I remember that they were growing *Azaleas* though.

I climbed on the bus and headed toward the back. It was a long two days and I needed to lie down. So as I drifted off to sleep, I reminisced about all of the people I had met on this trip. It is entirely possible that I could be watering bedding plants at Kawahara or helping control the complex fertilization system at Aspen one day. First, though, I need to complete my education. Hopefully, there will still be a hose with my name on it when I'm done. GP

Continued from page 2

Also from RSA comes 'Genevieve', a plant that is most remarkable because in the nursery (where plants do not suffer prolonged drought stress) it puts forth glowing pink blooms on 24-30 inch stems well into the summer.

The Santa Barbara Botanic Garden has introduced two highly ornamental cultivars: 'Canyon Delight' and 'Canyon Pink'. The distinctly different form of these plants as compared to the RSA hybrids is the result of their different parentage; they are hybrids of *H. elegans* and *H. sanguinea*. Growing by horizontal stems, these cultivars spread slowly to make a tight mat only 4-5 inches tall but produce 24-inch flower stalks. The cultivar 'Canyon Delight' is densely decorated with bell-shaped flowers of a very dark rose pink. These plants put on quite a show in the Arboretum in spring.

'Rosada', the Davis Arboretum Selection

The Davis Arboretum has its own selection of *Heuchera*, growing in the Foothill Section since before the hiring of any of the present staff members. Clonally propagated every year for our plant sale, it is believed to have originated in the collections made between 1941 and 1958. An apparent *H. sanguinea* X *H. maxima* hybrid (now known to have been the result of a cross made by Don Sexton, former superintendent of the Arboretum), it has persisted under an old valley oak in the face of summer heat and drought for a remarkably long time. This cultivar has been named 'Rosada' for its creamy pink blooms prolifically produced on 24-36 inch stems. The plant's leaves are dark green and round-oval in outline without coarse dentations. A recent planting of 'Rosada' in a sunny location on the Davis campus has survived and thrived, making it a tough Arboretum favorite. GP





Notes From the Chair... by Heiner Lieth

In recent months you have probably heard about huge budget cuts we are taking in the university, in all areas that we work in, especially in something called the "Agricultural Experiment Station" (AES). You may have also heard about tuition increases and figured that we found a way to solve the problem. But that is not the case, because the tuition increases only help us with our teaching, not with the research and outreach. It is very strange to the faculty that the State would impose huge cuts in areas of such great importance. While many of you already know what "teaching" and "extension" are, I would guess that many of you might not be aware how "Agricultural Experiment Station" research differs from other kinds of research. In brief, AES research is highly applied research, being done by us to solve particular problems, especially problems that are of significance now and in the future right here in California. The following are some examples of the AES research projects we have going on in EH.

Updates on Faculty Experiment Station Projects

Most of the EH Faculty are responsible for research done in the context of the Agricultural Experiment Station. With the recent heavy cuts made to this program, it is important to recognize the significant work we do in many important areas.

Michael Barbour's work on classification of vernal pool plant communities in California has led to some conclusions that have fundamentally changed our perception of vernal pool vegetation and how to conserve it. He has shown that each community type is restricted to a single vernal pool region, thereby requiring a local perspective for conservation efforts. Because he is finding that plant taxa are affiliated with only a few community types, it is possible to predict new community localities from known locations.

Alison Berry's research has focused on biological nitrogen fixation and how it can be used to generate nitrogen inputs. By studying aspects of the biology of symbiotic nitrogen fixation, she has shown that organic matter derived from nitrogen-fixing plants has value for soil building thereby contributing to productivity in disturbed or depleted soils.

In pursuing his research on the developmental physiology of woody ornamental plants, **Dave Burger** has enlisted the aid of microcalorimetry to predict plant responses to various environmental conditions by measuring respiration of small samples of plant tissue. Accurate predictions using this kind of data will shorten the time needed for genetic improvement of plants as well as enhance our ability to tailor plants for specific climate zones.

Don Durzan is studying the role of nitric oxide (NO) in the metabolism and death of plant cells during conditions of stress. He is working with scientists at NASA and in the Ukraine to develop technology for controlling this response to increase productivity in various systems.

Jim Harding has focused his research efforts on genetic variability, selection and inbreeding in ornamental and wild plant populations. He is examining the hybrid gene pool of Gerbera, crossing cultivars from Italy with his Davis population to estimate genetic parameters for vase life components and flower quality. He is also examining lines of yellow-flowered lupines (*Lupinus microcarpus*) to determine if a non-fading yellow gene exists that could be transferred to other species such as rose.

Michael Reid's work emphasizes molecular techniques for prolonging the life of ephemeral flowers, an important component for increasing the market for cut flowers. He is currently using virus-induced gene silencing in combination with test genes to identify and study transformed plant tissue. Genes involved in flower senescence can thereby be identified and further manipulated.

The focal points of **Lin Wu's** research have been phytoremediation in restoration projects and tolerance of plants to recycled water irrigation. His work with selenium contamination of agricultural drainage land suggests that nonaccumulator plant species are better choices for restoration to minimize selenium toxicity in the food chain. Use of irrigation water high in salinity for landscape irrigation is inevitable and Wu's trials have established

the tolerance of many ornamental species to recycled water.

Truman Young's areas of research interest revolve around exotic and native plant species in restoration of California grasslands. He has shown that forbs in a restoration planting survive in greater numbers if they get a year's head start over competing vegetation, suggesting modification of planting schedules may be needed. His data confirm that good years for grass growth differ from good years for the growth of forbs.

My own Agricultural Experiment Station research focuses on flower and nursery crop production. I am developing mathematical models that form the basis for production tools. One example is two mathematical models that I built describing flower development of rose and Easter lily. I have built these models into tools that growers can use to assure that these crops are on time for particular holiday sales. I am also currently working with scientists from all over the world to develop tools to help California growers with the regulatory crisis they are facing as various Regional Water Quality Control Boards force them to eliminate all run-off from their property (which is nearly impossible given the current level of technology in the industry).

As you can see, the AES research is the part of what we do that is closest to your needs. We honestly don't know why it is not a priority for the State. It is probably due to the fact that our clients (you) are not being vocal about it. Note also, that what I have described very briefly above is only a small fraction of what UC Davis does in this research that is specific to the needs of

Californians.

Report on Germany Trip

Perhaps you recall that I took a group of students on a Horticultural Research tour of Germany last August. I received many comments about this, mostly along the lines of "I'd like to see some pictures or a talk" or "wow I wish I could have gone". Recently I completed a report on the trip. This report was largely written by the students as each student was assigned one day on which to take notes and write a few pages of text. I compiled the result by editing the text "a bit" and adding in numerous pictures. When I submitted the report to the German Academic Exchange Service, the "DAAD", they were apparently amazed at the report and immediately asked whether they could use it for promotional purposes. As a result of that I am guessing that you might be interested in seeing it as well. You can access it at my web site: <http://lieth.ucdavis.edu/tmp/DAAD/GermanHortTour.pdf> But please note that the file is huge (7 megabytes, 25 pages) so that if you are not using a high-speed Internet connection, then the complete download will take a long time.

Student Accomplishments

Congratulations to **Melody Meyer** who completed her Master's Degree in Horticulture and Agronomy in March 2004. Belated congratulations go to **Bethany Gale** and **Laura Hiyashi** who completed their undergraduate degrees in Environmental Horticulture and Urban Forestry in Fall 2003.

Fabrice De Clerck who plans on graduating in the summer has been awarded a Postdoctoral Fellowship at Columbia University's Earth Institute. He will be working with the Yale School of Forestry and the Smithsonian Tropical Research Institute to develop a functional classification of Panamanian rainforest trees. He hopes to apply this classification to reforestation projects using native species with the principal objective of designing forest plantations which provide ecosystems services similar to primary forests.

Rik Smith finished his Ph.D. dissertation entitled "Nitrogen dynamics of woody plant ecosystems: almond orchards, winegrape vineyards and pinyon-juniper woodlands". Rik has been hired as an assistant professor at the University of Wyo-



Rik Smith will join the faculty at the University of Wyoming.

oming where he will teach agroecology in the plant sciences department. He is busy putting together an equipment wish list for his new laboratory. Best of luck, Rik!

On 5 March 2004, **Stephen Rae** completed the instructional program for the UC Cooperative Master Gardener Program in Napa County. He embarks on the intern phase of training for the next several months to earn his permanent status of a master gardener later this year. The Master Gardener program is an outreach vehicle of the UC system to support better understanding of home horticulture. Steve will pursue volunteer work with the Master Gardeners while working toward his Ph.D. in Plant Biology with Michael Barbour.

Upcoming Events

UCCE Floriculture and Nursery Crops Advisor **Julie Newman** has organized a pesticides-water quality workshop for farm advisors involved with these issues. The one-day event will address regulatory matters, emerging problems, successful mitigation projects and Best Management Practices (BMPs), and education/outreach opportunities. The workshop will be held April 8, 2004 at the UC Cooperative Extension Office in Woodland. Find out more: <http://ucce.ucdavis.edu/calendar>

Don Durzan is on the organizing committee for an upcoming NATO Advanced Research Workshop, "Cell Biology and Instrumentation: UV Radiation, Nitric Oxide and Cell Death in Plants", scheduled for September 8-11, 2004 in Yalta, Ukraine. Participants will acquire the latest information on UV and nitric oxide (NO) ef-

fects on biological systems. Methods for detecting UV and NO and using the latter as a probe in plant physiology will also be presented. Find out more:

www.natoarw-cell.eureka.kiev.ua/

Update on Plant Sciences Merger

If you have been reading the recent issues of this newsletter, then you know that we are currently reorganizing four of our plant science departments. EH is one of these, as are the Pomology Department, Vegetable Crops Department, as well as Agronomy and Range Science. The motivation for this reorganization is to improve our ability to carry out our mission in various areas. We are looking forward to a more comprehensive approach to undergraduate teaching (this is important as we shift to doing more teaching and less research). Also, a more united Plant Science faculty will allow us to be better prepared to respond to emerging issues. There are, of course, also dangers and we are trying to be very careful to not harm our many outstanding programs.

You might ask: "What does this mean to me?" Basically it means that we will be better able to serve you as we can leverage more scientific instrumentation and expertise on your behalf. But it may also require more effort on your part. Since the name "Environmental Horticulture" will be gone, you will have to know that you can find us under our new name "Plant Sciences". With that we will have changes in our address; also some faculty will move to other offices or labs as we bring collaborating faculty closer together.

As I write this, CAES **Dean van Alfen** is making decisions as to who the Chair of the new Department will be. We are hopeful that the new chair will be equally committed to all Plant Science areas, but it would be difficult for anyone outside the current EH department to be as familiar with your needs and interests as I am. And since it is unlikely that someone from the Environmental Horticulture faculty will be the new chair, we will have to make sure that the new chair gets educated on your needs and interests. In the next issue I hope to be able to introduce this new chair to you and I invite you to use the opportunity to communicate with the new leaders. Such opportunities for change are quite rare and I encourage you to take advantage of it.

Continued from page 1

This new Center will have several advisory groups to assist in implementing its mission. One of these is the Road Ecology Think Tank, charged with finding sources of funding and initiatives that would support the center's infrastructure. The Think Tank will then disperse to a series of subgroups of many more collaborators on specific grants and initiatives identified in the initial brainstorming phase. The Road Ecology Center will have standing committees, including (1) a Steering Committee of 5-15 faculty and researchers, (2) a Board of Advisors of senior leaders and experts from outside UC Davis, and (3) a Technical Advisory Board of other outside leaders and experts.

Workshops and activities in Road Ecology are taking place at UC Davis during the current academic year. These include a graduate seminar in Road Ecology with outside speakers and quarterly half-day workshops in specific subareas of Road Ecology. Such subareas are expected to spin off into workgroups seeking funding for research initiatives. Two overarching

Wild turkeys successfully negotiate a road thanks to patient motorists. Many birds and other animals are not so lucky.



photo by Marj Rines

themes with associated subareas have been identified. One focuses on design of transportation systems including human communities and design of sustainable transportation; economics of sustainable transportation and evolving transportation systems; and design of pavements, fuels and alternative transportation. The second theme focuses on effects of roads on natu-

ral landscapes and both human and non-human populations including conservation biology, invasive species, and wildlife ecosystem ecology; ecotoxicology and ecophysiology; air and water quality; hydrological effects of roads on landscapes; and off-road ecology and effects of off highway vehicles (OHVs) on landscapes.



For free subscription, contact Linda Dodge, Managing Editor
Environmental Horticulture Dept., University of California, One Shields Ave., Davis, CA 95616
Phone: (530)752-8419; Fax: (530)752-1819; E-mail: growing@ucdavis.edu
Download back issues of Growing Points (PDF format): <http://envhort.ucdavis.edu>

Cooperative Extension
 U.S. Department of Agriculture
 University of California
 Oakland, CA 94612-3560

Mail ID: 6556
 Official Business
 Penalty for Private Use: \$300

An Equal Opportunity Employer