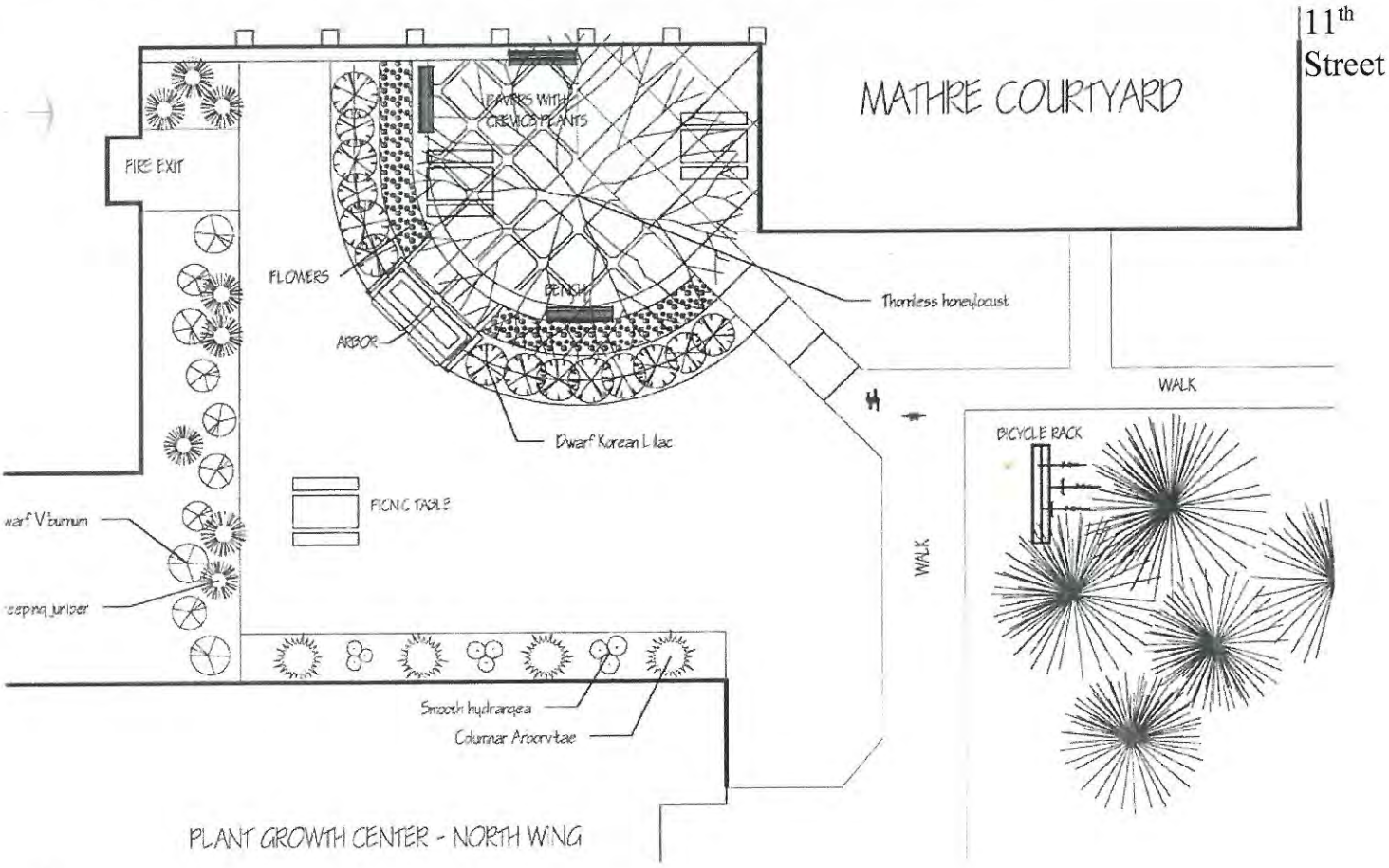
Plant Science Says

Happy Thanksgiving

November, 2001

The Mathre Courtyard
by Dick Pohl

Construction has begun on the Mathre Courtyard adjacent to and south of the Ag BioScience Building. The first phase, the flatwork (concrete), will extend the existing patio into a circular form made of large pavers which will be separated by crevice plants. An arbor fabricated from steel will be installed later forming a transition from the plaza to the lawn area. It will include the symbolic wheat pattern which is detailed on the ABS windows. In the spring students will install the plantings which include a large honeylocust tree, lilac hedges and other shrubs and flowers. Benches and tables will also be installed in the spring. The concept design by Kelly Holden, former landscape design student, was the winning entry in the PS 432 design competition last fall. Dick Pohl, landscape architect, has modified those plans and prepared the construction details for the installation which will continue through the spring. A hearty thank you to Don Mathre as the major donor for the development.



Tom Blake moves to Syria

Dr. Tom Blake, 18 year MSU veteran of the various departments associated with plant breeding, has accepted the position of Director of Germplasm Improvement at the Int[illegible]onal Center for Agricultural Research in Dryland Areas, Aleppo Syria. He has accepted a 2-year contract with ICARDA, and has obtained a 2-year leave of absence from MSU. Seemingly dissatisfied with breeding barleys to cope with the marginal environments of Montana, Dr. Blake will be managing the development of new crops for regions including the Sahara. We all wish him luck.

Bob's Byte

Are you feeling paranoid? Do you think someone is watching you? If you browse the web you are probably right!

Most web sites place small bits of code on your computer called COOKIES when you visit their site. Some of these cookies have value in that they will store information about your last visit. For example, if you purchase something they might store your name and address. In doing so you will not have to re-enter that information the next time you purchase a product. However, many times they track the pages you browse while visiting their site. With this information, web sites can modify their pages the next time you [illegible]it their site. This way they can display information they [illegible]nk might be of interest to you and perhaps entice you into an additional purchase .

The real concern here is that some cookies track your browsing habit over many web sites. When this occurs, the sites that do this will not only have your name and address but other information as well. For example, if you visit WebMD the pages that you view can be associated with your name and address. Plus, some cookies have the capacity to capture the file names stored in your browser's history. With most browsers set to store the last 20 days of visits, this can be revealing!

What can you do about it?

1: Don't tell sites anything you don't want them to know. Things like special offers that ask for personal data are dangerous.

2: Clean out your History and temporary files on a regular basis. With Explorer, go to TOOLS – OPTIONS and click on the delete buttons.

3: [illegible] can delete cookies off your computer by going to the folder that stores your cookies. In W98 this is usually the cookie folder listed under windows. Usually the name of the cookie will give you an idea where it came from. If you delete a cookie from a site that requires a logon, you will need to reenter this info the next time you visit the site.

4: You can change how your computer accepts cookies. Most browsers by default will accept cookies. You can however change this setting. Be aware though that if you set your browser to reject all cookies there may be some sites that you can not browse. With Explorer, these settings are usually found at TOOLS – OPTIONS –SECURITY SETTINGS.

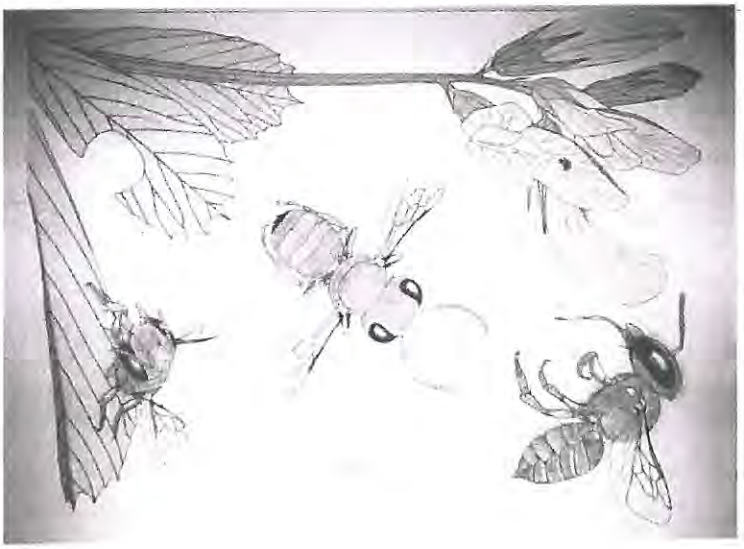
5: If you are really paranoid, you can direct your browse to https://www.safeweb.com/
This site will block sites from placing cookies on your computer and provide an anonymous profile for you to use while browsing.

If you have suggestions for future articles, let me know.

And keep watching your back!!

Ag Appreciation Weekend Juried Art Show

Cathy Seibert (Herbarium Collection Manager) has won first place in the sketch division of the MSU College of Agriculture's Ag Appreciation Weekend 2001 Juried Art Show. Cathy's piece, titled Alfalfa Leafcutter Bees, will be on display with other chosen art pieces of the show in the Exit Gallery of the SUB from October 29 through November 9, 2001.



Gardening Tips by Bob Gough

Should we be watering our trees in the fall?

There's a lot of confusion out there as to when to water and when not to water trees and shrubs. Watering at the wrong time could increase winter damage and

weaken your plants. So timing is a little tricky, but it's not complicated

Slack off watering your trees and shrubs in August. Excess wa that time of year can keep the plants lush. The plants are not dormant in August and can use all the water they get. Keep them fat, dumb, and happy then and they're too soft for winter.

But now, when the leaves have fallen, the tops of the plants are dormant. They cannot make soft growth, but they can store water to see them through the winter. Now is the time to water your woody plants deeply. Give them an inch of water each week until the ground freezes. The roots, still active in autumn, absorb the water and transport it to the crown and trunk, where it is stored and used to replace water lost from the plant during the winter. In other words, you are making sure the plant goes into the cold dry winter with all its water reservoirs brimming full.

If you made a basin around the base of the plant to hold water during summer months, punch a hole in it now. Water held in it during the winter will freeze, decreasing insulation to the roots and possibly damaging the crown.

If you want to know more about care of your ornamental, contact your local county extension office or get a copy of MontGuide 9518, "What's Wrong with this Tree?".

What Some Of Our Grad Students Are Working On:

Fletcher Meyer

Our lab has transformed lines of spring wheat with a sequence from maize. This sequence codes for a starch-producing enzyme (AGP) that has less allosteric inhibition than native wheat AGP. I am currently looking at transformant lines in the greenhouse and the field to determine whether this altered sequence increases seed yield.

Rebecca Bargabus

I study systemic resistance induced in sugar beet by treatment with a non-pathogenic, phyllosphere-inhabiting, epiphytic bacteria utilizing both molecular and biochemical techniques. I am currently finishing up some work related to pathogenesis-related protein production. My future prospects include further characterizing the "oxidative response" in sugar beet to the biocontrol agent treatment (which I've been working on over the past year), as well as elucidating mechanisms by which biocontrol treatment results in decreased severity of Cercospora leaf spot symptoms of sugar beet (Cercospora beticola=causal agent).

Cheryl Petersen

I work with (for?) Tracy Dougher. Tracy's interest is in different wavelengths of light as it affects plant development. I'm currently sectioning lettuce plants grown under different light regimes to see what kind of anatomical differences we can ascertain. We're also working with the Plant Materials Center in Bridger, Montana on asexual propagation of bur oak, Quercus macrocarpa, to increase their seed orchard. Bur oak is considered difficult, at best, to propagate asexually, and by many, impossible, so it will be a challenge.

Jason Walling

My Project: I am attempting to correlate individual linkage groups with their respective chromosomes in Pisum (Pea). Tools I use to accomplish this: STS anchored probes, BAC library screening, Phase contrast/Fluorescence microscopy, and FISH (Fluorescence In Situ Hybridization).

Thais Hulting

My project is a monograph using morphological and molecular techniques to delimit three species of the genus Strophostyles. The monograph will contain section on biogeography, phylogeny, taxonomy and keys of the three species and one genus.

Tony Kern

My research investigates changes in gene expression in Kochia scopariamediated by the herbicide dicamba. This selective pesticide is thought to mimic the natural plant hormone auxin, which is known to induce and attenuate the expression of an array of mRNAs, several of which code for proteins involved in the induction of cell growth and division. Many of these genes code for proteins with unknown function and their expression is altered within minutes of auxin treatment; these may play key roles in the cellular response to this important hormone. Additionally, my research involves characterizing the expression patterns of choline monooxygenase (CMO) in response to dicamba, 2,4-D, or natural auxin treatment. This enzyme is involved in the biosynthesis of glycine betaine, which is a compatible solute present in Kochia and a few other members of the Chenopodiaceae. This compound is largely responsible for this plant's ability to withstand extreme drought and salt stress. Interestingly, expression of CMO is attenuated within minutes after treatment with any of the auxinic compounds; this down-regulation is evident at both the mRNA and protein levels but it appears that once produced, glycine betaine is not catabolized and accumulates to levels as high as 5% of the plant's dry weight under conditions of extreme stress. This enzyme is a logical target for genetic manipulation of crop plants to improve drought and salt tolerance, and may be one of the tools plant geneticists use when we develop crops to be produced hydroponically using seawater. Relieving the agronomic pressure on our world's fresh water sources is imperative if we are to maintain and improve the quality of recreational flyfishing opportunities: I consider this the bellwether issue defining a successful

society.

Todd Osmundson

I am a M.S. candidate working with Dr. Cathy Cripps on the [illegible] Biotic Surveys and Inventories Program – sponsored Rocky Mountain Alpine Agarics project. My thesis research has three major components: 1.) Collaborating in the survey of alpine macrofungal diversity on the Beartooth Plateau; 2.) A taxonomic and systematic study of Colorado and Beartooth Plateau species in the genus *Laccaria*, an important group of ectomycorrhizal fungi; and 3.) A preliminary study on the ecology and host specificity of Beartooth Plateau macrofungi. The goal of my research is to incorporate molecular phylogenetics, morphological taxonomy, and soil and plant community analysis in better understanding the biodiversity and ecological roles of fungal species in alpine habitats, having implications for high altitude reclamation and global climate change research.

Grad students meeting

Journal Club will be meeting every other Thursday with the next meeting being November 8. If you are interested, just pick up a copy of the article to be discussed in either office and meet in the third floor conference room (327 ABS) by 6:15-6:30 and we will walk to Columbo's for pizza and sci[illegible]fic talk. Please call Rebecca Bargabus (5152) if you hav[illegible]ny questions.

Employee of the Month - Kirstin Golga - 324 LJH

Lest anyone think I have actually earned the Employee of the Month award, think again…I just bugged Irene for about three months to write a new bio about myself. The last one kind of stunk, so here it is…your secretary's life story. Sit back and enjoy.

I was born in Mayfield Heights, Ohio, on the East Side of Cleveland. My parents are both teachers, and though they taught in public schools, my two brothers, sister and I were all sent to Catholic school. You can imagine the hostility we felt towards our parents on Rosh Hashanah and Yom Ki[illegible]r, when they got the days off and we had to go to sc[illegible]. That's life in a Jewish neighborhood when you're a Gentile, I guess.

Being a good student (though always a troublemaker, big surprise), I received a number of scholarships and attended Bowling Green State University in Bowling Green, Ohio, when I graduated from high school. I did quite well at BGSU, earning University Honors and graduating Magna Cum Laude in May 1993. Though I had a lot of job offers to teach in Ohio, I opted to join the Peace Corps at age 21. Having never been out of the country, I wanted to travel, and I most certainly didn't want to lock myself into a career at that age.

The Peace Corps was a lot different than I thought it would be. Let's just say that I had a very nice vacation in Kenya, one of the most diverse and beautiful countries on the daunting continent of Africa. I traveled to the desert for the camel races where I bought an ancient Samburu tribal mother a Coke at spear point (she was nice, but quite stern). Then I went to the rain forest on the edge of Uganda and was almost sold by one of my colleagues to a Kenyan for 30 cows, 10 chickens, and 2 of his sisters. Lake Victoria and the city of Kisumu were my favorite places, but unfortunately, I did get an intestinal parasite and came home. Africa is truly awesome though, and being so quiet and dark, it gave me time to think about what I wanted to do with my life.

Upon returning home, I knew that I wanted to be a writer…and *not* an ambulance-chasing journalist either. However, the only experiences I had were in Africa and college, and I needed more if I wanted to write anything good. So I took the route of the Generation X-er and looked for "McJobs" to save up enough money to travel across the United States. At one job slinging coffee, a co-worker of mine asked me what I really wanted in life, and my response was, "A log cabin in a mountain town with a university…and a cat." But I knew that was a long way off at age 22.

And so I began traveling. I lived in a Ukrainian Village in Chicago, upstairs from booming rock stars, and had a wonderfully star-studded summer going to bars with "famous" musicians…who of course are nobodies now. Time was also spent in strange places like Tulsa, Oklahoma, and Elko, Nevada, when I wanted to get away from it all, but the stories kept coming. I also lived in Little Italy in Cleveland, Oak Forest, Illinois (on the South Side of Chicago), Los Angeles for a tiny spell, and then I finally landed in Missoula, Montana, which is how I ended up in the Big Sky state.

In Missoula, I met the most important being in my life, my cat, Mr. Brown. Mr. Brown and I bounced around from couch to couch as I tried to find a decent job, but Missoula wasn't for me. I was the flyer artist for a punk-rock band bar for a while, but even that didn't pay. So finally, I forced my boyfriend at the time to move Mr. Brown and I

out here to Bozeman where I would have a better chance at better jobs. And thus, here I am.

So far, I think Bozeman is okay. Besides being the most beautiful place I have ever lived, it's small enough for me to find some peace & quiet…and still meet the occasional rock star now and then. My artistic debut, I suppose, was playing a groupie for a band with a float in the Sweet Pea parade…*rock on* to all of you who waved. Also, I just got a computer, and now that I'm 30, it's time to start recording all the strange and interesting stories I have collected these past 10 years. In addition, I am a dee-jay on KGLT now from 10 pm to 2 am every other Wednesday. My show is called Radio Irreverent and replaces the very popular Hard Core 101, so if you're not up for a little screaming, you might want to switch the station. Anyways, it seems like my little quip of a dream at age 22 has now come true. I do have a log cabin (apartment) in a university mountain town, and I have an awesome cat whose picture you can see at my desk.

Ar really like working here in Plant Sciences & Plant Pathology, though why don't *you* try saying that when you answer the phone! Ha ha. Scientists may be weird, creative, and slightly obsessive, but artists fit that definition too. So this is a fun department for me to work in since we're all pretty much the same…oh yeah, except for that astrology thing.

Christmas Party

Our annual Christmas party will be on Saturday, December 15th at Country Lanes from approximately 4-8 p.m. Also, there will be a cookie exchange on the 10th of December. The December newsletter will have more details. Mark your calendars for both of these events!

Update on Sarah

Rumor has it that WSU's College of Pharmacy is a changed place. Sarah has now been there three and one half months; the campus and the College of Pharmacy are reeling from the effects. "Where did this gal come from and why didn't you let us know what we were really getting ourselves into?", exclaimed Cindy, the Dean's assistant. Sarah has been working with the faculty and staff to imr ve employee relationships and the college's working pr ures. "We have all been encouraged by Sarah's limitless enthusiasm and energy", said Jan, the Financial Tech for the Pharmacy Sciences Department. Adds Jerry, the Principle Assistant for the College and Sarah's assistant, "She says what she thinks; she doesn't give you any chance to wonder."

Sarah has settled in a little house outside of Pullman. She has been spending most of her time working but has taken some time to explore the Palouse. Since she accepted a position that had been vacant for nearly ten months, she has had a lot of work to catch up on for the College. WSU is much larger than MSU though it seems that the procedures are very similar. There is never enough money and no one is satisfied with their salaries! Sarah continues to visit Bozeman frequently because her children are still living here with their dad living a luxurious life as bachelors and attending Amsterdam School. Hockey season is starting now and the kids are excited about being back on the ice. The ranch at Four Corners is still for sale if anyone is interested in all or some of it.

"I still really miss the people at MSU, my desk and especially the members of the Plant Sciences and Plant Pathology Department, but I'm having a great time here at WSU. My desk is not as nice and I certainly don't have as great an office partner here. Actually, I have no office partner, and I'm having a hard time adjusting to that", said Sarah. Anyone visiting Pullman can reach Sarah at 509-335-4760 and see her at 105 Wegner Hall.

A Note from Susie Miller (former Fisher rep for MSU)

Well, it is official...I am a toy store owner. We opened the store on October 12th and the three day grand opening was very successful. We exceeded our sales expectations and the community has embraced us with open arms. I must hear the remark " Great Falls really has been in need of a good toy store" at least once a day. I have been working 14 hour days and have lost 8 pounds. It is called the "open a retail store" diet. I have never been so tired, but I am really happy.

I am beginning to meet many people here in my community

and have already scheduled some fundraisers for the local elementary schools. (we make a donation of sales.....) We are ramping up for Christmas and I figure I will lose another five pounds. Hah hah.

I sure hope all is well with you and the rest of the folks over there at Ag Bio Sci. I have met your new Fisher rep and he is awesome! He will do a great job for MSU.

Take care and my regards to all.

Grants

Barry Jacobsen, "Mycofumigation: A Novel Methyl Bromide", USDA/CSREES.

Barry Jacobsen, "Bacillus Seed Treatment", Research and Development Institute.

Vladimir Kanazin, "Barley Resistance Gene Analog", Oregon State University.

Thank You from Cathy Cripps

Thank you to everyone for contributing to the Fall International Potluck. We had a stunning array of delicious dishes from Italy, Spain, China, Japan, Thailand, Russia, Scandinavia, Germany, Norway, Mexico, Venezuela, Israel, Pakistan, USA, and more! The international music added a special touch. A special thanks to everyone who lent a hand! Let's do it again!

On The Personal Side

Jim Berg and Chris Reynolds will be tying the knot on January 26 at Chico Hot Springs. Congratulations!

Congratulations to Steve and Martha Mikkelson who are adopting a baby boy from Cambodia. He was born on June 6 and Martha is quite sure he is the cutest baby in the whole world. They hope to be traveling to Phnom Penh in January to bring him home. We will be having a baby shower sometime in early December. Watch the December newsletter for more details.

November Birthdays

Angie Solvie	3
Jim Berg	4
Jack Martin	8
Harvey TeSlaa	15
Ron Lockerman	18
Adam Richman	22

Recipe of the Month

Spinach Lasagna (very good!)

Two 10 ounce packages of frozen chopped spinach, cooked and drained
1 Tablespoon parsley
2 cloves garlic, minced
2 pounds small curd cottage cheese
2 eggs
1/4 cup butter, softened
1/8 teaspoon ground nutmeg
1 teaspoon salt
1/4 teaspoon pepper
8 ounce lasagna noodles, cooked and drained
1 pound Monterey Jack Cheese, shredded
1 cup grated Parmesan cheese
1 quart Spaghetti Sauce

Squeeze all excess moisture from spinach with your hands. Combine spinach with parsley, garlic, cottage cheese, eggs, butter, nutmeg, salt and pepper. Preheat oven to 350 degrees. In a buttered 13 x 9 x 2 inch baking pan, layer 1/3 noodles, ½ spinach mixture, 1/3 spaghetti sauce, and 1/3 each cheese. Repeat layering. On top, place last 1/3 noodles and cheese. Bake, uncovered, for 30 to 40 minutes or until hot and bubbly. Let stand for 15 minutes before cutting. Serves 12.