Greetings from the Department Head

Dear friends,

Greetings once again from Duluth and welcome to the 3rd edition of the Geography Department newsletter. It seems hard to believe that it has been more than two years since the last newsletter, and there have been many changes occurring in the department. Larry Knopp, after nearly 20 years’ of teaching at UMD, left the department to become Director of Interdisciplinary Arts & Sciences at University of Washington-Tacoma. Scott Freundschuh, who joined UMD in 1994, moved to Albuquerque last year to become head of the Geography Department at the University of New Mexico. I wish both Larry and Scott every success in their new positions. I would also like to welcome five new members to the department since last newsletter. Steve Graham, who received his Ph.D. from UT-Austin, joined the department as a research associate in the GIScience lab. Kate Carlson joined the department to teach courses in GIS and cartography. Randy Hanson, together with his wife, joined UMD. He teaches classes in conservation, food systems, and sustainability. Prior to joining UMD, he held faculty positions at Rice University and Arizona State University. Laure Charleux moved to Duluth this year from Grenoble, France. She teaches a range of GIS classes in the department. Nathan Clough, who graduated from the Twin Cities campus, also joined the department this year to replace Olaf Kuhlke who is now associate Dean of CLA.

The department faculty members continue to be very active in research. The $1.3 million “Vicus Farm” project, directed by Mike Mageau, is a unique collaboration between UMD and the City of Silver Bay, MN aimed at creating local jobs producing healthy food and renewable bio-fuels in a greenhouse production system that integrates fish, plants and algae. The Sustainable Agriculture Project at UMD (SAP@UMD), founded and coordinated by Randy Hanson, aims to institute education, research, and community engagement around local food systems and food security in the western Lake Superior region. Stacey Stark and Steve Graham are currently working on a Hazard Mitigation Plan for Lake County, developing an interactive campus map for UMD, and using GIS to assist UMD administration with student enrollment and housing statistics. Pat Farrell is continuing to work on a "Historical Ecology of the C Pre-Columbian Caribbean" project, an interdisciplinary geoarchaeology study. Caribbean. She has begun a collaborative endeavor with her sister who is an art professor at Gonzaga University. They are combining their interests in soil and landscape in their first project called "Sibling Soil". For the past three years, her Soils class has collected and analyzed soil samples from the UMD farm, in order to help guide agricultural activities at the site. They are currently compiling the data and have built and began monitoring of a compost window for the SAP site. Adam Pine’s current research examines two aspects of food insecurity in Duluth: (1) how people in neighborhoods without grocery stores access fresh and healthy food; and (2) the effectiveness of “non-traditional” food outlets such as food shelves and food buying clubs to address the needs of those experiencing food insecurity.” Nathan Clough is busy on a project that examines Industrial Workers of the World union campaign to organize Starbucks and Jimmy John's fast food workers. I am continuing to investigate gully erosion and development in the Loess Plateau of China.

GIS activities and programs have been flourishing year after year in the department and at UMD. GIS Day this year, organized by Stacey Stark and held at UMD last month, was truly phenomenal. Fifteen regional organizations participated in the expo and demonstrated how GIS is used in our community. David DiBiase, Director of Education at ESRI, delivered a splendid speech about “GIS and Community” to a room- packed audience in the Rafters. Since the department launched the GIS certificate and minor program in the fall of 2010, there have been more than 10 students receiving the certificate. The department also plans to create a GIS major and expect to accept students next fall.

The UMD Alumni Networking Day was held on November 9, 2011. It was pure joy for us to meet with a group of alumni from the Duluth area, some of whom graduated thirty or forty years ago. The advice they gave to our current students was very valuable. We hope such events will be held regularly. We also would be delighted to hear from all of you and include the news of alumni in our newsletter. Finally, I would like to thank everyone who has expended time and effort in contributing to this newsletter. I am particularly grateful to Linda Klint for all her help in editing and producing it. In the meantime, I hope that this newsletter finds you well and prospering in the New Year!

Tongxin Zhu
Head, Geography Department
The Geographic Information Sciences Lab, in partnership with the Northern Minnesota GIS Users Group, hosted the educational “GIS and Community” event on November 17, 2011 at UMD. Twenty-one tables with maps, demonstrations, and information from regional organizations filled the Kirby Rafters. Participants included local governments, consulting firms, utility companies, and four regional educational institutions. Over 200 students, educators, planners, business owners, and other interested people came through the event. This event was a terrific opportunity to provide an opportunity for GIS users to network and share experiences, and for non-GIS users to learn just what GIS is all about.

The five presentations by the National Weather Service, NRRI, DNR Forestry, UMD Geological Sciences, UMD geography, and the USDA Farm Services Agency were all well attended, with 30-80 people in each. The space was standing room only to hear about George Hudak’s use of ArcGIS cartographic tools to create geologic maps of Northeast Minnesota. George ended his presentation by saying that “if you want to get a job in geology today, you must have GIS skills”. Equally popular was Chris Pouliot’s Mobile GIS presentation. A student offered that the mobile application development discussion was very interesting because it “tied into my major which is Computer Science”.

David DiBiase (Esri, Director of Education) gave a very dynamic presentation to over 100 people to close the afternoon. He began speaking about geography awareness in our community and how we can experience the presence of GIS all around us in new ways and share this with our children. DiBiase demonstrated Community Analyst, a powerful Esri tool that will soon be available through the UM/MNSCU site license at no additional cost. With Community Analyst, thousands of demographic, health, economic, education, and business data variables; combined with instant reports and interactive color-coded maps; allows quick exploration of any area – with no GIS experience.

DiBiase also shared some incredible statistics published by the Dept. of Labor. There are currently more than 450,000 geospatial professionals in the U.S. with an estimated additional 180,000 needed by 2018. Some of the seasoned GIS users enjoyed the keynote and the emphasis on both ArcGIS and Open Source tools being a key skill for the future. Educators appreciated DiBiase’s comments that written skills and the ability to work in a team are two of the most important skills to have as a GIS professional.

Many community organization representatives expressed their pleasure in connecting with students. Many students also reported that they had made new contacts and developed new interests in GIS areas.

Great door prizes were donated by Esri and UMD, including iTunes gift cards and two popular 2011 Esri publications: "Web GIS" and “Understanding GIS". This event was a collaborative project between UMD Geographic Information Sciences Lab and the Northern Minnesota GIS Users Group. The MN GIS/LIS Consortium granted funding for the event which served its mission to "develop and support the GIS professional in Minnesota for the benefit of our state and its citizens." UMD College of Liberal Arts and UMD Geographic Information Science Laboratory provided additional funding.

Participants included: Community GIS, MN Power / Allete, MN DNR Forestry, Duluth Transit Authority, ARDC/Duluth-Superior MIC, EMR, US EPA (SRA), Fond du Lac Reservation, NOAA National Weather Service, North Point Geographic Solutions, St Louis County, City of Superior / Douglas County, Superior Water and Light, UMD Geographic Information Sciences Lab, UMD Natural Resources Research Institute, UMD Geological Sciences, UMD Continuing Education, USDA Farm Services Agency, USDA Natural Resources Conservation Service, St Mary’s University.
Laure Charleux

My name is Laure Charleux and I just arrived at UMD this summer. I was hired as an Assistant Professor to replace Scott Freundschuh in the Geography Department and I’ll be teaching mainly GIS and GIS related classes (Cartography, Spatial Statistics).

As my name might tell you, I am adding one more touch of diversity to the department. I was born and bred French and just made the big move from overseas with my family. Prior to my coming here, I was Associate Professor at the Institute for Alpine Geography in Grenoble, one of the biggest geography departments in France, where I was in charge of the GIS master’s program.

So, what made me switch my great mountains for a great lake? Well, even though I had never lived here before, “moving back” had been a family project for a few years, since my husband is from the US. So when we saw a job announcement that I could almost copy-paste to summarize my CV, we thought this could be the right opportunity.

I must say we hesitated though.

Nathan Clough

Duluth...

As a geography student, I had been taught in the early 90’s this was the big port of the Great Lakes and the Iron Range, a declining industrial town, up to no good. Being from Southern California, my husband knew it was supposed to be something like a big freezer.

Well, a little bit of research on the internet and we learned that the city had been doing a lot better than expected the last decades. UMD was actually a more than decent university. The natural beauty was magnificent and yes, indeed, it was a good place to greet global warming. But what ultimately motivated my decision was meeting the department members, even though the interview was only on ITV, I could feel the good team spirit that irradiated through this transatlantic connection and felt like I could totally fit in.

So here I am, and after a few months I can confirm that this department is really a collection of great personalities who are all working together for the good of our students and our programs, which makes working here a very pleasant experience so far. I hope to become a great colleague for them too! In my area of specialization, I am very impressed by all that they have accomplished during the last few years to develop the GIS Lab and a GIS program – a minor and a certificate so far – and I hope I can contribute to its strengthening and expansion, that would meet a demand from both students and the broader community.

Linda asked me to write about what was different or surprising being new at UMD. I must say that differences are countless and it is difficult to decide which one to mention. In many aspects, my experience at UMD compares positively to my experience in France. However, there is something of great concern to me that I want to share and this is the wellness of students. Being a young adult in 2011 is not easy, not in France or here.

Originally from Vermont, Assistant Professor Nathan Clough came to Duluth this fall from the Twin Cities. He completed his Ph.D. in Geography at the U of M in December of 2010, where his dissertation examined protest politics at the 2008 Republican National Convention. Nathan’s research focuses on public space, social movements, freedom of speech, and policing and security in post-9/11 America, though he’s also very interested in social theory, urban redevelopment, and the spatialities of the globalizing economy.

Nathan has published original research in the journal, Urban Studies, has another forthcoming in Antipode, and is guest editor of a special issue of the journal ACME that should be forthcoming in 2012. He is also a staff reporter for the new Antipode politics blog, which is being launched in January of 2012.

In addition to teaching Geographic Thought, Geography of Development, and Geography of Cultural Diversity, Nathan is in the midst of preparing several dissertation chapters for submission to journals, and beginning a new research project investigating recent attempts by the Industrial Workers of the World union to organize workers at Starbucks and Jimmy John’s restaurants. This project asks how the attempt to organize young, hip workers, whose social status and youthful appearance are very desirable to their employers, works as an attempt to rebrand the labor movement in the United States. Additionally, he is examining how the spaces of these cafes and fast food restaurants influence the process of unionization and the development of effective solidarity among workers.

On a more personal note, Nathan enjoys chatting with his wonderful new colleagues, riding his bike, cooking for his wife, gardening, and attending meetings of the Minneapolis Beard and Moustache Club whenever he can.
UMD CSCD

Written by Mike Mageau

Victus Farms! A unique partnership between UMD and the City of Silver Bay, MN aimed at creating jobs, producing sustainable food, and fuel using an integrated fish, plant and algal production system.

UMD’s Center for Sustainable Community Development (CSCD) is excited to announce a new community project (Victus Farms) aimed at demonstrating a process for creating jobs producing sustainable food and fuel. Working with the City of Silver Bay, MN the Victus Farms project has secured $1,380,000+ in total project funding from the following sources:

1. U of MN’s NE Region Sustainable Development Partnership (NMSDP) – 5K
2. MN Pollution Control Agency (MPCA) – 40K
3. Iron Range Resources (IRR) – 262K+
4. MN State Legislature – 299K+
5. MN Dept. of Employment and Economic Development (MN DEED) – 597K+
6. MN Lake Superior Coastal Program - $30K
7. Lake County, MN – 50K
8. Silver Bay, MN – 100K

The UMD project team consists of Mike Mageau, David Abazs, Baylor Radtke and Andy Klemer.

Project Proposal Overview:

We have received over 1.3 million dollars for the design, economic feasibility, engineering, permitting, construction and installation of a 9,000 ft2 building to contain an integrated fish, plant and algal production system. Approximately 3,000 ft2 will contain a well-insulated building on a concrete slab to house the fish tanks and filtration equipment along with a lab, bathroom and processing area. The other 6,000 ft2 will be devoted to a greenhouse also on a cement slab. The fish (13,000 lbs annual harvest) will be grown in 2,000 gallon tanks at high density (.5 lbs/gallon). At this density the fish tank water requires constant treatment (tank residence times just under 60 minutes) to prevent O2 depletion, and the build up of nitrates, ammonia and other nutrients or potentially toxic conditions. The high nutrient, low oxygen waste-water from the fish is pumped through three (20 ft x 40ft x 16” deep) troughs to support the hydroponic growth of a wide variety of fruit and vegetable plants. In addition, this water will flow through a single (20 ft x 40ft x 16” deep) algal trough to support the growth of oil rich algae. Together, the plants and algae will remove nutrients and add oxygen before it is returned to the fish to complete the cycle. The algae can be harvested for both oil production and valuable organic fish feed. Finally, sediments (both solid and dissolved) resulting from undigested food and fish feces will be removed and composted. The integrated production system will contain approximately 50,000 gallons of water, and produce over $120,000 in annual fish, produce, algal (oil and fish feed) and compost revenues.

Required system inputs and outputs are minimal and completely sustainable. The building will be heated using a biomass boiler to heat the water to the 75-80 degrees F desired by Tilapia. These 50,000 gallons of heated water will then heat the building. Organic fish feed will be used to subsidize the algal feed. The facility is expected to lose approximately 2% (1,000 gallons) of its water per day to evaporation and harvest. This water will be replaced by rainwater collected from the rooftops and stored in large tanks (20,000 gallons total) located in the greenhouse under the plant and algal troughs. Electricity use will be offset by two 20 kw wind turbines scheduled for a spring of 2012 installation. Outputs will consist of whole fish, herbs, fruits, vegetables algal oil, algal feed and compost. In the end, we hope to demonstrate that communities can create jobs producing their own sustainable food and biofuel in this manner.

The City of Silver Bay will own the 9,000 ft2 building, and lease it to UMD’s Center for Sustainable Community Development (CSCD). The CSCD has completed the production system (and building) research, design and economic feasibility work, and is now working with engineers and construction crew on building construction. In addition, the CSCD is currently ordering all production system components and preparing to move into the new facility to install the production system in January of 2012. The CSCD has a 10-year contract with the City of Silver Bay to operate the facility (including a research and educational program) in exchange for the revenues generated. We estimate an annual revenue stream of $140,000/yr. We have already secured local markets for the Fish and Produce produced by the facility. The algae will be used as food for the fish, and for the production of algal oil. Tentatively, we plan to harvest and extract the algal oil within the production facility experimenting with a variety of different techniques. The algal oil will be converted to bio-diesel by students working in UMD’s chemistry labs, and the resulting bio-diesel may be used by UMD’s Fleet Vehicles. We have designed the production system to allow flexibility in the composition of these revenue products. For example, space allocated to plant growth, could be easily converted to additional algal production or vice versa. This will allow the system to quickly respond to any changes in market conditions, or research funding. In addition to these main products, we anticipate additional revenues from educational uses (tours, class projects, wolf ridge etc.) and a small portion of research grant overhead channeled to the facility.
The United States Department of Agriculture estimates that each year 18% of the United States population experiences “food scarcity,” which they define as existing “whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain.” There is a large variety of data linking food insecurity with poor health outcomes. For example, malnourishment negatively affects the cognitive development of children resulting in loss of knowledge, brainpower and productivity. People without a secure source of food often choose to eat filling, less healthy foods that lack the nutritional benefits of fresh fruits and vegetables, but causes serious health problems like diabetes and obesity.

My current research examines two aspects of food insecurity in Duluth. First, I worked with John Bennett, an Assistant Extension Professor at the University of Minnesota to examine access to groceries in the Lincoln Park / West End neighborhood of Duluth. This neighborhood is often referred to as a “food desert” because there is no grocery store in the community. Food deserts are defined as low-income neighborhoods with poor access to healthy food. While many low-income communities have fast food restaurants and small convenience stores, they often lack full-service grocery stores that stock a range of healthy food options. In addition, many residents of these communities do not have adequate transportation and, therefore, lack the ability to leave their community to shop at grocery stores in adjacent communities. We conducted an inventory of stores in the community, distributed a survey to 2,800 households in the community asking where they did their shopping and what types of problems they encountered, interviewed local community leaders about what problems they see in the area, and conducted a market analysis of the Lincoln Park / West End trade area. Our research found that the Lincoln Park/West End has a complex and innovative food provisioning system. Residents purchase groceries at the West Duluth Super One, but also travel to grocery outlets throughout the Twin Ports area and make use of a variety of non-traditional food sources such as food buying clubs and gardening. However, significant problems in the local food community demand our attention: a small but significant portion of the Lincoln Park/West End population (10-15%) experience significant barriers to accessing food. They overpay for food at local convenience stores and, generally, have a difficult time finding the food that they and their families need. We are using this research to press for better access to healthy food in the community. The research can be accessed at: http://lincolnparkfoodaccess.blogspot.com/.

My second research project examining food access in Duluth is being conducted along with my wife, Assistant Professor of Communication Rebecca de Souza at University of Minnesota Duluth. We are examining the effectiveness of “non-traditional” food outlets to address the problem of food insecurity. We are interviewing and surveying the people who administer and use local food shelves, food-buying clubs, and distributions of surplus food organized by churches to better understand how these alternative systems work. We hope to learn more about how these different systems work in order to suggest better ways to connect food – which this country produces in abundance – with those who need it most.
Early one sunny May morning, a Frenchman in white pick-up truck pulls up outside my house. Dressed in a flannel shirt, tan boots, and the dirtiest Wranglers I could find, I run outside and hop in. As I turn to sit down in the cab, I am startled as an unfamiliar squawk rings out from beneath me. Nearly spilling my coffee, I jump back in a double take. Perched in a toilet paper nest right on the seat, a frazzled baby crow stares up at me in curiosity. As I drop my jaw in astonishment, Francois lets out a chuckle. I knew right then that I was in for a great summer.

Hired by the Duluth Grill to develop and maintain their new urban farm and edible garden project, the multitalented Francois Medión was to be my mentor and supervisor for the course of my summer SDROP internship. He had an immense passion for growing food, though his knowledge extended far beyond agriculture. He was a storyteller and a field guide for all things wild. From raising fledging crows to unknown Native American history, Francois taught me things you cannot find in a University. Whether or not the knowledge he shared would later prove to be useful in my career, his true enthusiasm was incredibly inspiring.

In movies and TV shows, interns are often portrayed as determined young individuals, scurrying about in their newly acquired business attire, taking coffee orders and filing paperwork. I was not that intern. Though similarly composed of mostly grunt-work, my experience was much more untraditional. It was dirty, backbreaking, sweaty, and unbelievably satisfying.

Accompanied by our avian mascot (whom I named Russell Crow), our days were spent weeding, mulching, bed-building, transplanting, uprooting, watering, Home-Depot-running, hoop-house-erecting, compost-acquiring, and everything in between. At a first glance, it seems like your typical small-scale, inner-city farming, but this was something new, something different, innovative, and exciting. I admired the owner of the Duluth Grill, Tom Hanson, for his undoubted willingness to pursue such a progressive project. Just weeks after being inspired by Will Allen’s Growing Power workshop, Tom had bought a house with a vision of converting the front and backyard into an urban farm that supplies a portion of his restaurant’s produce. What for many would be a rash business decision, for him was a dream being followed.

Francois’s approach to urban farming was incredibly creative and sustainably resourceful. It reminded me of the Native American principle of ‘using every part of the buffalo.’ The clay-rich sod that was cut beneath the hoop-house was chopped into bricks to build paddy-style growing beds on the sloping backyard, held in place by recycled clay putty we made along with the roots of grass and clover. Compost bins were built of old recycled shipping pallets and chicken wire. Old, thrown out carpet and cardboard lined the beds to prevent outside weeds from intruding. These were the types of creative techniques that opened my eyes to the endless possibilities of sustainable development.

My internship with the Duluth Grill was not work. It was a learning experience. It was sustainable development. It was a sense of being a part of the beginning of something big. I was a character in the next chapter of “The Little Restaurant that Could”; the part where the restaurant takes a big chug forward to become a community leader in urban farming, restaurant business, and sustainability.

Senior Projects  Written by Kate Carlson
The culmination of academic achievement for UMD Geography majors is the semester long senior capstone project. With the support of a faculty adviser, students initiate a field, lab, or library research project pushing them to experiment, use critical thinking, and impose their own brand of creativity on a topic of their choice. The Senior Project is not just a semester paper, it is a part of a faculty adviser, students initiate a field, lab, or library research project pushing them to experiment, use critical thinking, and impose their own brand of creativity on a topic of their choice. The Senior Project is not just a semester paper, it is a part of the academic journey.

Jacob Jensvold is using his senior project time to solve a real world problem in his home town of Aitkin, MN. In this time of low student body enrollment and decreasing school operational budgets, how can geographic theory and GIS be used to enable more efficient bus routing? Considering the size of the school district and the location of each student within the district, Jake has been working on a GIS model that will determine optimal bus routes to school. This is all in an effort to lower operating costs, provide fewer miles of travel to and from school, and ultimately spend less time on the road. Sounds easy, right? Well, he has fully embraced the concept of data formatting and preparation for such a task!

After 4 years of college, living on/off campus, and working for UMD Athletics and Facilities Management, Brett Ausmus has come to appreciate the parking situation at UMD. He has spent this fall semester researching UMD campus parking and drawing comparisons to other campuses, looking for potential solutions that may alleviate the problem. This research includes qualitative and quantitative methods. Brett disseminated an electronic survey to all UMD students inquiring how they travel to school, where they park, and what their personal feelings are toward parking availability on and near campus. He had an astounding return on these surveys; 2,755 students respond within 11 days! He is also using GIS to calculate walk distances from each parking lot to the closest door and will demonstrate these results cartographically.

Sean Bevans will present his research on the white tail deer population of the Duluth area, focusing on urban populations and how it has increased in recent years. Knowing that this increased population has caused problems at an urban level, Sean will look into what these problems are, how they are currently alleviated, and what else can be done to control deer populations. He has gathered some interesting statistics on vehicle/deer collisions and the rate of deer harvest over the last decade.
Congratulations to our Graduates

The Growing Pleasures of the Sustainable Agriculture Project

The Sustainable Agriculture Project at the University of Minnesota, Duluth (SAP@UMD) formed in 2009 to institute education, research, and community engagement around local food systems and food security in the western Lake Superior region. SAP@UMD is an interdisciplinary faculty collaborative that provides overall leadership and is housed in the Center for Sustainable Community Development. SAP@UMD was awarded stewardship over fifteen acres at UMD’s Research and Field Studies Center (formerly the Northeast Agricultural Experimental Station), including a five acre heritage apple orchard and a ten acre field, for which we use as an experiential learning and research site and call simply ‘the Farm’. We had a very busy and successful year in 2011, and now that the fields have been put to bed for the winter, we're able to take a break, reflect, and think about plans for next year.

In 2011 we launched the collaboration with UMD Dining Services at the Farm, in which we grew produce for use on campus. This project began in the Spring with building the fences with the help of many people and getting a well and electricity installed on site. Under the direction of Randy Hanson, the help of 7 dedicated interns, and a host of volunteers as well as input from area farmers, some 6700 pounds of vegetables were grown over the course of the summer, and we all learned and sampled a lot. In addition to marketing the produce to the UMD Dining Services, produce also went to Mt. Royale Fine Foods, the Duluth Grill, and the Farmers Market at the Harvest Fest. It was rewarding to work the soil on the UMD Farm for the first time in at least four decades and witness the succession of the land. It was also interesting and enjoyable to work with Claudia Engelmeier and others in the UMD Dining Services, learning about their challenges in integrating fresh local foods into their existing system. They are enthusiastic about next year, and we will be expanding the 1.2 acre site, encompassing nearly six acres to begin a four year rotation in building soil fertility and producing food.

Using the frosted plant materials from the 2011 garden, hay cut from our fields, wood chips, straw and horse manure, Pat Farrell launched a large scale composting project out at the Farm. A soil worshipper from the get go, Pat's project will supply our fields in 2012 with rich soil amendments, helping us in our quest to make the soil richer every year we use it. Our current compost system is about 15 feet by 40 feet and originally about 6 feet high, and temperatures within the pile in six different points are being monitored daily to determine when it should be turned and mixed. To be fair, Pat has had help in making the compost from the countless earthworms and aerobic creatures who work for food. And our farmer partner Hobbs Quast has turned the pile twice, and we are looking forward to the fertility that this project will provide! Pat is also doing annual soil tests to help us understand the changing nature of our work in our fields.

SAP@UMD won a fifty tree Community (apple) Orchard through Edy’s Fruit Bars, thanks to the leadership of Cindy Hale and the online voting of some 20,000 voters. This experiment in crowd sourcing was fun and ultimately successful, and we have prepared the grounds for the new orchard, ordered the heritage trees, and we'll begin planting them in the Spring. All produce from these trees will be donated to community organizations, strengthening our ties to our surrounding community. The Trial Seedling Orchard renovation got a boost in 2011 as well, when we contracted with a local company to clear the ‘weed trees’ that had grown up over the past several decades. Remaining apple trees have been marked and pruned, and we will continue pruning again this winter. Cindy has also been monitoring the Orchard with an ‘Integrated Pest Management’ system, gauging the pests that need to be managed going forward.

We will be launching a ‘Teacher Training Garden’ in 2012 as well, modeling it on the school gardens already in place at several schools in Duluth. This garden will provide opportunities for further collaboration with the Duluth Public Schools, the Duluth Community Garden Program, and SAP in helping aspiring and established teachers integrate experiential education around food and gardening. We thank the Institute on the Environment for providing the initial funding for this project.

We will be launching a botanical garden component under the direction of Anthropology Professor David Syring. The initial plantings will include western and indigenous medicinal and dye plants, which will be (continued on page 9)
used for teaching and demonstration going forward. This project is in the planning stages and we are
eager to add it to the botanical mix out at the farm.

The Farm has also been a site for students to utilize their Geographic Information Systems skills, and un-
der the direction of Stacey Stark and Steve Graham, we have benefitted from the mapping of the fields,
soil sample sites, existing and future apple trees, and a variety of other activities.

As this brief overview indicates, we’ve had a busy year building the infrastructure and carrying out the
projects described. We’ve benefitted from a huge number of enthusiastic students, UMD staff, University
for Seniors members, area farmers and community organizations in carrying these activities out and
charting our future. We are also fortunate to have been funded by several entities in 2011, including the
Duluth Superior Area Community Foundation, the Lloyd K. Johnson Foundation, the Northeast Regional
Sustainable Partnership, the Natural Resources Research Institute, the UMD Office of Finance and Opera-
tions, the UMD GIS Lab, the UMD Office of Civic Engagement, the Institute for Advanced Study, the In-
stitute on the Environment, and the federally funded Science, Technology, Engineering and Math (STEM)
program.

We imagine the Farm to be a ‘google site’ for food, farming and gardening activities at UMD, and we look
forward to providing the field sites, courses, and other opportunities for people to participate in UMD’s
part in rebuilding a regional food system. We invite you to look around at our website (http://
www.d.umn.edu/cscd/sap/main/index.php) and contact us if you are interested in participating in one of our
projects or have questions.
Scholarship Winners

Carlson/Amy's- Reaching Higher Scholarship  2008-2009 Derek Nading, 2010-2011 Matthew O'Fallon


Catherine Cox-Reaching Higher Scholarship 2010-2011 Nicholas Galli & Micaella Kinzli, 2011-2012 Micaella Kinzli


The Catherine Cox-Reaching Higher Scholarship was newly created in 2009 by the estate of Catherine E. Cox and awarded for the first time in the 2010. The purpose of the scholarship is to provide scholarship awards to UMD student with a declared major in Geography. We also have a newly created scholarship the Fredrick and Lois Witzig Geography Scholarship. This scholarship was just created in November 2011 by the Witzig Family. This scholarship will support faculty, students and staff who are studying or teaching Geography. This scholarship will be awarded in 2012. As you can see our scholarship opportunities have really grown in the past few years and this is very important to the success of our students especially given the current economic situation and rising tuition costs. We truly appreciate your incredible generosity and continued support of the UMD Geography Department.

NEW DEPARTMENT EMAIL is umdgeog@d.umn.edu Please send us updates. We want to hear from you!

We are working on reducing costs and cutting down on paper usage so most of you are receiving this newsletter via email. For those of you receiving a paper copy that are willing to share an email address for future newsletters please send us an email to umdgeog@d.umn.edu