



ALUMNI NEWSLETTER

Winter 2008

DEPARTMENTAL NEWS

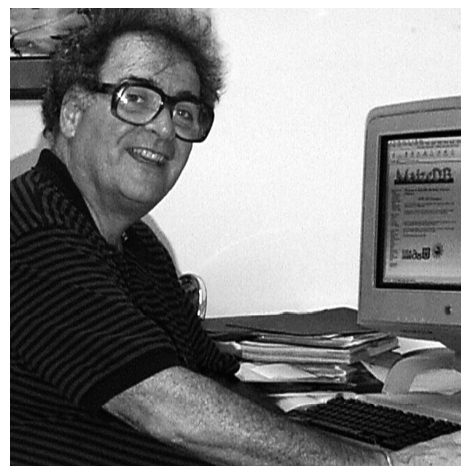
May 2007 saw the retirement of two long-time faculty members, Drs. Steve Goldman and Elliot Tramer who, between them, logged over 70 years of active service at UT. As a Professor

Emeritus, Steve continues to write and publish. He was recently featured

in an article in the March 2008 issue of "Greenhouse Grower" regarding techniques that he and his colleagues have developed to detect and develop disease resistant strains of geraniums for the greenhouse industry.

As Professor Emeritus, Elliot continues to serve on a part-time basis as the Department's 'undergraduate adviser' for the Environmental Studies BA, Environmental

Sciences BS and Biology BS programs. When he's not advising students, Elliot stays busy with his ongoing research interests (both writing and reviewing papers) and public service. In the latter arena, he is serving on the Tree Commission for the Village of Whitehouse (near Toledo) and the Animal Care Committee of the Toledo Zoo, and he is also a volunteer for the Toledo-Lucas County Metroparks.

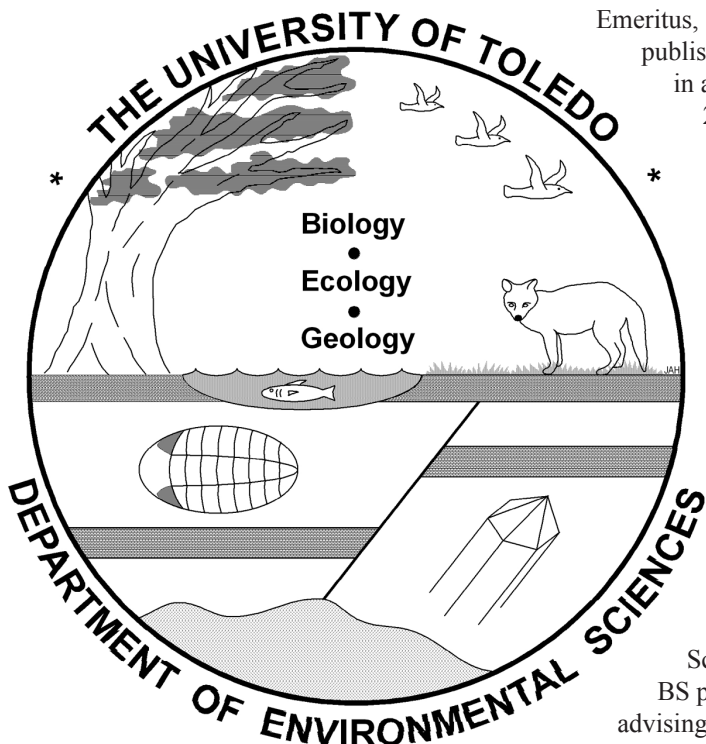


Dr. Stephen Goldman

Regrettably, the Department also lost another staff member, Jim Coss, who died in July 2007 after a long battle with cancer (see his obituary later in this newsletter). He was the web site manager and GIS computer specialist at the Lake Erie Center for the past several years.

Elliot's retirement opened a faculty position within the Department and so a search for a new faculty member was recently conducted. It was decided that this should be someone who can contribute to the geology program's new 'Earth surface processes' focus and also, ideally, have expertise in remote sensing and GIS techniques. The interviews have been conducted and we are currently negotiating with a candidate that we hope will be joining us next fall. Dr. Max Brown will retire in May 2008 and coupled with the new arrival, the Department will have 9 geology and 14 ecology faculty members in Fall 2008.

Mike Phillips and Jim Harrell



<http://utoledo.edu/as/envsciences/>



Dr. Elliot Tramer



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ALUMNI NEWS

George Alther (UT MS Geology '76), President of Biomin Inc. in Ferndale MI, writes "I entered TU in 1973, in the wooden shack where the Geology Dept. was at that time. My thesis advisors were John Shade, Darryl Dunn, Don Angelback [Chemical Engineering] and Dr. Gordon Parker [Chemistry]. The other geology profs were Bill Kneller, Stu Dean, Greg Spansky, Lloyd Charlesworth, John Wilband and Craig Hatfield. Hatfield helped me publish an excerpt of my bachelor's thesis in GSA in 1974, my first publication. Since I am Swiss by birth, and Kneller was German, we became friends, we thought alike. This year I am celebrating my 20th year in business. I am the world's greatest manufacturer of organically modified clays (see my web site at <http://www.biomininc.com>). TU shaped my knowledge in many of these topics, though I would not have imagined in my wildest dreams that some day I would have my own plant, here in Oak Park, MI. My classmates that I remember most were: Bob McBride, Gary Gindelsberger, Jerry Sikora, Mark Silverman, Mike Kunz, Karl Hopfinger, Ron Schneider, Tom Boyd, Mike Perkins, to name a few. My wife Marcia Urban is from Toledo. We have two sons, Martin, a math major at Wayne State, and Philip. Those were the days. I used to live in a trailer on Dorr Street."

Janny (Jung) Campbell-Haught (UT BS Geology '86), 'Long Term Care Claims Examiner and Care Management Coordinator' for the State Farm Mutual Automobile Insurance Company in Columbus OH, writes "My 2 sons, Samuel and Andrew, are growing like weeds. They are in the 5th and 4th grade respectively, at Hanby Arts Magnet School. We are planning a trip to China (the boys' first and my third) with our entire family, including my parents and siblings (spouses and offspring). We are still trying to decide which year to go: 2008 (Olympics time) or 2009 (less exorbitant cost of airfare for 26 people)."

Jeffrey Elliot (UT MS Geology '01), a GS-7 Hydrological Technician with the USGS - Mississippi Water Resource Center in Jackson MS, writes "I am still working with the survey down here in Mississippi. My wife is teaching in the Jackson Public School system. We are recovering slowly from Katrina. Luckily our apartment only lost power for about an hour. My parents retired to New Orleans about 3 years ago and love it; they stayed with us during the aftermath till they could get back in the city. Street flooding was about 2 or 3 blocks away. They are about 9 blocks from the river levee, uptown or near the Tulane area. This area stayed relatively dry. The devastation on the coast was immense. We lost several gage platforms in the Mississippi sound. Doing recon to recover any equipment, streets were unrecognizable. Stennis Space center was my home for about 6 weeks while our office collected water samples and bacteria data from the surrounding beaches and water treatment effluents. Overall, things are going pretty well. We are getting some funding for sediment analysis of streams running off the loess bluffs into the delta. My boss will be training me on collecting discharge and concentrations of several site samples and transferring the data to software which calculates daily mean loads, the main EPA threshold for water pollution standards. Tell Dr. D that we have a possible buried meteor crater down here near Kilmicheel, MS (about 80 miles north of Jackson), there is actually some data published about the site. Dr. Brown's fishing poles have been very useful, a small one he gave me after some spring cleaning has been working great on bream and crappie. Finally, let Dr. Camp know there are many good sites down here for arrowheads, sharks teeth, whale bones and even older Devonian marine fossils (in gravel deposits)."

Katherine (Venturoli) Gallup (UT MS Geology '78) lives in The Woodlands TX. She reports that **Marty Reimann (UT MS Geology '79)** passed away 4 years ago in the summer of 2003 of stomach cancer. She was my close friend in both undergrad and grad school. We traveled together and were roommates at UT."

Jessica Hickey (UT BS Environ. Science '99) is a biologist and project manager for Davey Resource Group, a Division of the Davey Tree Expert Company. She now also holds a MS degree in biology from John Carroll University.

Chris Plymale (UT MS Geology '99) who is in the Atlanta Office of the U.S. Environmental Protection Agency is currently serving as Acting Chief for their Coastal Section.

Cheryl (Crosson) Kovalcik (UT BA Environ. Studies '99) writes "after graduating, I went out to Estes Park Colorado to teach outdoor education in Rocky Mountain National Park for 5 months. Upon returning, I got a job at COSI Toledo as a science lab teacher where I instructed field trip classes on the different subjects such as weather and simple machines. I would also hold labs for teachers on how to make teaching science in the classroom more entertaining. While working at COSI, I married Kasey Kovalcik who at the time was working on his PhD in analytical chemistry at UT. After receiving his doctorate, we moved to NC where Kasey taught at Appalachian State University. I got a job at a child development center where I was able to bring my passion for the environment into the eyes and hands of 4 year olds. After 2 years of that, I got pregnant with my first child, and I have been a stay at home mom for the past 4 years. We now live in the RTP area of NC, and Kasey has a job with the EPA. We have two children, Nicholas 3 1/2 and Abby is 15 months. I am hoping that when I go back to work, the EPA will have an opening for me too!!"

Beth Lashaway (UT BA Geology '95) is a flight nurse on LifeFlight and is doing well. Her son took Alison Sponberg's Physical Geology course last spring, while a high-school senior, and last fall started at Marietta College where he is majoring in Petroleum Engineering.

Frank L. Majchszak (UT BS Geology '70, MS Geology '74) is currently serving as President of the Ohio Geological Society.

James Meyers (UT BS Geology '72, MS Geology '74), Program Director at Lockheed Martin Corp. in Herndon VA, writes "Although I never worked as a Geologist after graduation, the computer work I did as part of the data analysis for my thesis plus my experience from various classes in interpreting aerial stereo photographs landed me a job in high tech in 1976 helping to develop the first terrain-following programs for cruise missiles. My career has taken me all over the US, and my most recent move was from New Orleans (where I spent 6 years managing a program for the US Navy) to Washington, DC in early 2004. I am currently leading the development of a \$300M case management system for the FBI."

Jeffrey Quick (UT BS Geology '81, MS Geology '84) received his PhD from the University of Canterbury in Christchurch, New Zealand and currently is employed by the Utah Geological Survey. We recently learned from an online newsletter of The Society of Organic Petrology that Jeff served as this society's president in 2006-2007.

Kelly (Driscoll) Saiya-Cork (UT MS Biology/Ecology '01) writes "Just a quick update. I know it may seem like we fell off the planet, but really we're doing well. I started a new job here in Ann Arbor 2 weeks ago as the manager-in-training for EMSL Analytical Labs. We test materials for asbestos and molds and bacteria and what not. I've been learning to use the TEM microscope which has just been a dream come true. I will also get to use the light microscope as well after I go through a training program in NJ in May. It is an interesting job and will enable us to stay here in MI where we really love being."

MUSICAL FACULTY *(at the December 2007 Christmas Party)*



Dr. Elliot Tramer (left), Dr. Jamie Martin-Hayden (center) and Dr. Don Stierman (right)



Dr. Stacy Philpott (left), Dr. Scott Heckathorn (center) and Dana Martin-Hayden (Jamie's 'better half'; right)



RECENT FACULTY AND STUDENT PUBLICATIONS

(Department of Environmental Sciences faculty in bold, students [both current and former] in bold italics, and post-docs and adjunct/affiliated faculty underlined)

BOOKS

Camp, M.J. 2007. *Railroad Depots of Northeast Ohio*. Arcadia Publishing (Charleston, SC).

Spencer, J.A. and M.J. Camp. 2008. *Ohio Oil and Gas*. Arcadia Publishing (Charleston, SC).

ARTICLES

Baranoski, M.T., V.M. Brown, and D. Watts. 2007. Deep gas well encounters ultramafic kimberlite-like material in the Sauk Sequence of southeastern Ohio, USA. *Geosphere*, v. 3, p. 177-183.

Li, L., **J. Chen**, J.L. DeForest, R. Jensen, **D.L. Moorhead** and **R. Henderson**. 2007. Effects of timber harvest on carbon pools in Ozark forests. *Canadian Journal of Forest Research*, v. 37, p. 2337-2348.

Ryu, S.R., J. Chen, D. Zheng and **J.J. LaCroix**. 2007. Relating surface fire spread to alternative landscape management: an application of FARSITE in a managed forest landscape. *Landscape and Urban Planning*, v. 83, p. 275-283.

Zhang, W.L., S.P. Chen, **J. Chen**, L. Wei, X.G. Han and G.H. Lin. 2007. Biophysical regulations of carbon fluxes of a steppe and a cultivated

cropland in semiarid Inner Mongolia. *Agricultural and Forest Meteorology*, v. 146, p. 216-229.

Noormets, A., J. Chen and T.R. Crowe. 2007. Age-dependent changes in ecosystem carbon fluxes in managed forests in northern Wisconsin, USA. *Ecosystems*, v. 10, p. 187-203.

Cheng, X., R. Peng, **J. Chen**, Y. Luo, Q. Zhang, S. An and B. Li. 2007. CH₄ and N₂O emissions from *Spartina alterniflora* and *Phragmites australis* in experimental mesocosms. *Chemosphere*, v. 68, p. 420-427.

Li, Q., **J. Chen**, B. Song, M.K. Bresee, J.A. Rademacher, and **J.J. LaCroix**. 2007. Areas influenced by multiple edges and their implications in fragmented landscapes. *Forest Ecology and Management*, v. 242, p. 99-107.

Cheng, X., S. An, **J. Chen**, B. Li, Y. Luo, S. Liu, and Y. Liu. 2007. Spatial relationships among species, aboveground biomass, N, and P in disturbed prairie communities. *Journal of Arid Environments*, v. 68, p. 652-667.

Chen, J., K.J. Davis and T. Meyers. 2008. Ecosystem-atmosphere carbon and water cycling in the Upper Great Lakes Region. *Agricultural and Forest Meteorology*, v. 148, p. 155-157.

Noormets, A., A. Desai, D.M. Ricciuto, B. Cook, K. Davis, P. Bolstad, H. Schmid, P. Curtis, E.V. Carey, H.B. Su and **J. Chen**. 2008. Moisture sensitivity of ecosystem respiration: comparison of 14 forest ecosystems in northern Wisconsin, USA. *Agricultural and Forest Meteorology*, v. 148, p. 216-230.

Ryu S-R, J. Chen, A. Noormets, M.K. Bresee and S.V. Ollinger. 2008. Comparisons and insights of predicted (PnET-Day) and measured gross carbon exchange in northern Wisconsin forests. *Agricultural and Forest Meteorology*, v. 148, p. 247-256.

Sun, G., A. Noormets, J. Chen and S.G. McNulty. 2008. Evapotranspiration estimates from eddy covariance towers and hydrologic modeling in managed forests in northern Wisconsin, USA. *Agricultural and Forest Meteorology*, v. 148, p. 257-267.

Desai, A., A. Noormets, P. Bolstad, **J. Chen**, B. Cook, K. Davis, E. Euskirchen, C. Gough, J.M. Martin, D.M. Ricciuto, H. Schmid, J. Tang and W. Wang. 2008. Influence of vegetation type, stand age and climate on carbon dioxide fluxes across the Upper Midwest, USA: Implications for regional scaling of carbon flux. *Agricultural and Forest Meteorology*, v. 148, p. 288-308.

Rofkar, J.R., D.F. Dwyer and J.M. Frantz. 2007. Analysis of arsenic uptake by plant species selected for

growth in northwest Ohio by inductively coupled plasma-optical emission spectroscopy. *Communications in Soil Science and Plant Analysis*, v. 38, p. 2505-2517.

Yansa, C. H., and **Fisher, T. G.** 2007. Absence of a Younger Dryas signal along the southern shoreline of Glacial Lake Agassiz in North Dakota during the Moorhead Phase (12,600-11,200 CALYBP): *Current Research in the Pleistocene*, v. 24, p. 24-28.

Timmons, E.A., **T.G. Fisher**, E.C. Hansen, E. Eiasman, T. Daly and M. Kashgarian. 2007. Elucidating eolian dune history from lacustrine sand records in the Lake Michigan coastal zone, USA. *The Holocene* v. 17, n. 6, p. 789-801.

Lepper, K., **T.G. Fisher**, I. Hajdas and T.V. Lowell. 2007. Ages for the Big Stone moraine and the oldest beaches of glacial Lake Agassiz: Implications for deglaciation chronology. *Geology*, v. 35, n. 7, p. 667-670.

Fisher, T.G., W.L. Loope, W.C. Pierce and H.M. Jol. 2007. Big lake records preserved in a little lake's sediment: an example from Silver Lake, Michigan, USA. In: Karrow, P. and Lewis, C.F.M. (eds.) *The Greater and Lesser Great Lakes. Journal of Paleolimnology*, v. 37, p. 365-382.

Fisher, T.G. 2007. Abandonment chronology of glacial Lake Agassiz's northwestern outlet. In: Teller, J.T. and Lewis, C.F.M. (eds.) *Late Quaternary North*



- American meltwater and floods to the Atlantic Ocean: evidence and impacts. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 246, p. 31–44.
- Fisher, T.G.** and T.V. Lowell. 2006. Questioning the age of the Moorhead Phase in the glacial Lake Agassiz basin. *Quaternary Science Reviews*, v. 25, p. 2688–2691.
- Evans, J.E. and **J.F. Gottgens**. 2007. Contaminant stratigraphy of the Ballville Reservoir, Sandusky River, NW Ohio: Implications for dam removal. *Journal of Great Lakes Research*, v. 33, p. 182–193.
- Gottgens, J.F.** and J.E. Evans. 2007. Foreword – Dam Removals and River Channel Changes in Northern Ohio: Implications for Lake Erie sediment budgets and water quality. *Journal of Great Lakes Research*, v. 33, p. 87–89.
- Lawrence, P., D. Eastop, S. Leblanc, **J. Gottgens** and T. Klinger. 2007. The river runs through it: Planning for the Ottawa River, The University of Toledo. Proceedings of the Greening of the Campus Conference, Ball State University, Muncie, Indiana, p. 284–294.
- Roberts, S.J., **J.F. Gottgens**, **A.L. Spongberg**, J.E. Evans and N.S. Levine. 2007. Assessing potential removal of low-head dams: An example from the Ottawa River, NW Ohio. *Environmental Management*, v. 39, p. 113–124.
- Harrell, J.A.**, J.G. Dunn and J.W. Welshimer. 2006. Effect of crystal size on dolomite decrepitation in glass furnaces. *Glass Technology: European Journal of Glass Science and Technology*, Part A, v. 47, n. 6, p. 188–192.
- Harrell, J.A.** 2006. Archaeological geology of Wadi Sikait. *PalArch Journal of Archaeology of Egypt/ Egyptology*, v. 4, n. 1, p. 1–12.
- Harrell, J.A.** and A.F. Osman. 2007. Ancient amazonite quarries in the Eastern Desert. *Egyptian Archaeology*, n. 30, p. 26–28.
- Harrell, J.A.**, S.E. Sidebotham, R.S. Bagnall, S. Marchand, J.E. Gates, and J.-L. Rivard. 2006. The Ptolemaic to early Roman amethyst quarry at Abu Diyeiba in Egypt's Eastern Desert. *Bulletin de l'Institut Francais d'Archéologie Orientale*, v. 106, p. 127–162.
- Harrell, J.A.**, M.A.T.M. Broekmans and D. I. Godfrey-Smith. 2007. The origin, destruction and restoration of colour in Egyptian travertine. *Archaeometry*, v. 49, p. 421–436.
- Harrell, J.A.** 2007. Geology. In: S.E. Sidebotham and W.Z. Wendrich (eds.), *Berenike 1999/2000 — Report on the Excavations at Berenike, Including Excavations in Wadi Kalalat and Siket, and the Survey of the Mons Smaragdus Region*. Cotsen Institute of Archaeology, University of California at Los Angeles, Los Angeles, p. 166–174.
- Harrell, J.A.** 2007. Building and ornamental stones of the Awam (Mahram Bilqis) Temple in Marib, Yemen. *Arabian Archaeology and Epigraphy*, v. 18, p. 182–192.
- Spijkerman E, D. Barua, A. Gerloff-Elias, J. Kern, U. Gaedke and **S. Heckathorn**. 2007. Stress responses and metal tolerance of *Chlamydomonas acidophila* in metal-enriched lake water and artificial medium. *Extremophiles*, v. 11, p. 551–562.
- Zhu B, **C. Mayer, S. Heckathorn** and L.G. Rudstam. 2007. Can dreissenid attachment and biodeposition affect submerged macrophyte growth? *Journal of Aquatic Plant Management*, v. 45, p. 71–76.
- Wang, D., S. Heckathorn**, D. Barua, **P. Joshi**, E.W. Hamilton, **J. LaCroix**. 2008. Effects of elevated CO₂ on the tolerance of photosynthesis to acute heat stress in C₃, C₄, and CAM species. *American Journal of Botany*, v. 95, p. 165–176.
- Delabie, J.H.C., B. Jahyn, I. Cardoso de Nascimento, C.S.F. Mariano, S. Lacau, S. Campiolo, G. Schroth, **S.M. Philpott** and M. Laponce. 2007. Contribution of cocoa plantations to the conservation of native ants (Insecta: Hymenoptera: Formicidae) with a special emphasis on the tropical Atlantic fauna of southern Bahia, Brazil. *Biodiversity and Conservation*, v. 16, p. 2359–2384.
- Dunn R.R., N.J. Sanders, M.C. Fitzpatrick, E. Laurent, J.P. Lessard, D. Agosti, A. Andersen, D. Bruhl, X. Cerda, A. Ellison, B. Fisher, H. Gibb, N. Gotelli, A. Gove, B. Guenard, M. Janda, M. Kaspari, J.T. Longino, J. Majer, T.P. McGlynn, S. Menke, C. Parr, S. **Philpott**, M. Pfeiffer, J. Retana, A. Suarez and H. Vasconcelos. 2007. Global ant biodiversity and biogeography--a new database and its possibilities. *Myrmelological News*, v.10, p. 77–83.
- Philpott S.M.**, P. Bichier, R. Rice and R. Greenberg. 2007. Field testing ecological and economic benefits of coffee certification programs. *Conservation Biology*, v. 21, p. 975–985.
- Choi, W.I., **D.L. Moorhead** and D.A. Neher. 2006. A modeling study of soil temperature and moisture effects on population dynamics of *Paronychiurus kimi* (Collembola: Onychiuridae). *Biology and Fertility of Soils*, v. 43, p. 69–75.
- Tran, S.L.** and **D.L. Moorhead**. 2006. A note on effective basking trap size. *Herpetological Review*, v. 37, p. 307.
- Barrett, J.E., R.A. Virginia, D.W. Hopkins, J. Aislabie, R. Bargagli, J.G. Bockheim, I.B. Campbell, W.B. Lyons, **D.L. Moorhead**, J.N. Nkem, R.S. Sletten, H. Steltzer, D.H. Wall and M.D. Wallenstein. 2006. Terrestrial ecosystem processes of Victoria Land, Antarctica. *Soil Biology & Biochemistry*, v. 38, n. 10, p. 3019–3034.
- Moorhead, D.L.** 2007. Mesoscale dynamics of ephemeral wetlands in the Antarctic Dry Valleys: Implications to production and distribution of organic matter. *Ecosystems*, v. 10, p. 87–95.
- Barrett, J.E., R.A. Virginia, W.B. Lyons, D.M. McKnight,

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J.C. Priscu, P.T. Doran, A.G. Fountain, D.H. Wall and **D.L. Moorhead**. 2007. Stoichiometric evolution of the Antarctic Dry Valley Ecosystems. *Journal of Biophysical Research*, v. 112, online G01010, doi:10.1029/2005JG000141.

Foley, M.E., **V. Sigler** and C.L. Gruden. 2007. A multiphasic characterization of the impact of the herbicide acetochlor on freshwater bacterial communities. *International Society for Microbial Ecology Journal*, online doi:10.1038/ismej.2007.99.

Kassem, I., V. Sigler and **M. Esseili**. 2007. Public computer surfaces are reservoirs for methicillin-resistant staphylococci. *International Society for Microbial Ecology Journal*, v. 1, p. 265–268.

Lohner, R.N., **V. Sigler, C.M. Mayer** and C. Balogh. 2007. A comparison of the benthic bacterial communities within and surrounding *Dreissena* clusters in lakes. *Microbial Ecology*, v. 54, p. 469–477.

Stepien, C.A., D. Murphy, and **R.M. Strange**. 2007. Broad- to fine-scale population genetic patterning in the smallmouth bass *Micropterus dolomieu* across the Laurentian Great Lakes and beyond: An interplay of behavior and geography. *Molecular Ecology*, v. 16, p. 1605–1624.

Strange, R.M. and **C.A. Stepien**. 2007. Genetic divergence and connectivity among river and reef spawning populations of walleye (*Sander vitreus*) in Lake Erie. *Canadian Journal of Fisheries and Aquatic Sciences*, v. 64, p. 437–448.

Strange, R.M. and **C.A. Stepien**. 2007. DNA analysis distinguishes North American and Eurasian yellow perch in unknown fried fillet samples. *Fishery Bulletin*, U.S., v. 105, n. 2, p. 292–295.

Haponski, A.E., T.M. Marth and **C.A. Stepien**. 2007. Genetic Divergence across a low-head dam: A preliminary analysis using logperch and greenside darters. *Journal of Great Lakes Research*, v. 33, Special Issue n. 2, p.117–126.

Weintraub M.N., L.E. Scott-Denton, S.K. Schmidt and R.K. Monson. 2007. The effects of tree rhizodeposition on soil exoenzyme activity, dissolved organic carbon, and nutrient availability in a subalpine forest ecosystem. *Oecologia*, online DOI: 10.1007/s00442-007-0804-1.

Grandy A.S., J.C. Neff and **M.N. Weintraub**. 2007. Carbon Structure and Enzyme Activities in Alpine and Forest Ecosystems. *Soil Biology and Biochemistry*, online DOI: 10.1016/j.soilbio.2007.05.009

S.K. Schmidt, E.K. Costello, D.R. Nemergut, C.C. Cleveland, S.C. Reed, **M.N. Weintraub**, A.F. Meyer and A.M. Martin. 2007. Biogeochemical consequences of microbial turnover and seasonal succession in soil. *Ecology*, v. 88, p. 1379–1385.

Allison S.D., T.B. Gartner, K. Holland, **M.N. Weintraub** and R.L. Sinsabaugh. 2007. Soil enzymes: linking proteomics and ecological process. In: *Manual of Environmental Microbiology* (3rd Edition). American Society of Microbiology Press (Washington DC), p. 704–711.

EXTERNAL RESEARCH GRANTS RECENTLY RECEIVED BY FACULTY

(Department of Environmental Sciences faculty in bold, students in bold italics, and post-docs and adjunct faculty underlined)

Dwyer, D.F. (PI) and co-PI's **D.E. Krantz, T.G. Fisher, A.L. Spongberg** and K.J. Egan. "Phytoremediation research: Design of treatment wetlands." U. S. Department of Agriculture, \$511,475 for July 2007-June 2008.

Dwyer, D. (PI) and co-PI's **D. Krantz, T.G. Fisher, K. Eagan**. "Function of a mitigation wetland at Maumee Bay State Park, Lucas County, Ohio."

U.S. Department of Agriculture, \$511,000 for 2007–2008.

Fisher, T. G. "Determining the origin and dynamics of coastal processes of Sand Point at Pictured Rocks National Lakeshore." U.S. Geological Survey, \$18,000 for 2007–2008.

Fisher, T.G. "Boulder sampling in northwestern Ontario." Comer Science and Education Foundation, \$22,000 for 2007.

D.B. Baker (PI) and co-PI's **J.F. Gottgens, T.D. Crail** and two others. "The Honey Creek Targeted Watershed Program Proposal." U.S. Environmental Protection Agency, \$60,000 (UT-share only) for January 2008-December 2011.

J.F. Gottgens (PI) and co-PI **T.D. Crail**. "Status and distribution of native unionid mussels (Unionidae) in the coastal wetlands of Winous Point." Winous Point Marsh Conservancy, \$5,000 for May-December 2007.

M. Horvath (PI) and co-PI's **J.F. Gottgens** and J.E. Evans. "Dam removal in the Ottawa

River: A case study on fish community response, sediment budget adjustments and public outreach." Ohio Environmental Protection Agency, \$204,970 for October 2007-December 2009.

Sigler, V. "Community Molecular fingerprinting to identify the spatial origins of microbial contamination in Cuyahoga County within the Rocky River watershed III." Cuyahoga County Board of Health, \$4000 for June 2007-June, 2008.

Sigler, V. "Tracking fecal pollution at recreational beaches". Ohio Lake Erie Commission, Lake Erie



Protection Fund Small Grants, \$14,581 for January 2008–December 2008.

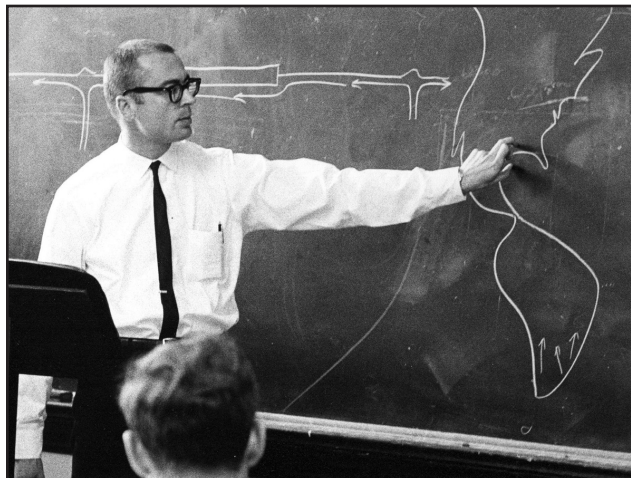
Stepien, C.A. “Population genetic diversity and divergence patterns of the rainbow darter fish and the Lake Erie watershed”. National Science Foundation Research Experiences for Teachers “RET” Supplement award for Timothy Bollin, Toledo Public Schools, \$10,000 for 2007-2008.

Stepien, C.A. 2006. “Molecular systematics, biogeography, and invasion identity of Neogobiin fishes” National Science Foundation Supplement award for Visiting scientists from Russia and Ukraine, \$10,000 for 2006-2007.

J. Schimel (PI) and co-PI's **M. Weintraub** and two others. “International Polar Year: Microbial winter survival physiology: a driver on microbial community composition and carbon cycling.” National Science Foundation, \$904,623 for September 15, 2007 – August 31, 2010.

Carol Stepien (PI) received a \$2.4 million 5- year National Science Foundation grant, for a GK-12 program, “Graduate Teaching Fellows in High School STEM Education: An Environmental Science Learning Community at the Land-Lake Ecosystem Interface”. The Co-PIs are Daryl Moorhead, Timothy Fisher, and Thomas Bridgeman from our department and Dr. Cyndee Gruden from Civil Engineering.

THE CASSANDRA OF TOLEDO (*Craig Hatfield, Professor of Geology 1964-1999*)



Dr. Craig Hatfield about 1975.

[This is a shortened version of the article by Mike Bendzela in the March 2007 online issue of ‘The Oil Drum – Discussions about Energy and Our Future.’]

I have a lasting impression of Geology Professor **Craig Bond Hatfield**, University of Toledo, circa 1980: a no-nonsense man in white shirt and skinny tie, flattop buzz cut, and tortoise-shell glasses. At the outset of each class, he would draw a map of North America's coastline as it currently looks in freehand on the blackboard, and then lecture us on the past coastlines and sedimentary basins of the continent. To have several hundred million years collapsed into a few weeks of Hatfield's course in Historical Geology is about as close as I've come to a mystical experience.

In late 2003, while reading an on-line article about something called “peak oil,” I saw a bottom-of-the-page citation that permanently influenced how I view the subject: Oil Back on the Global Agenda. Craig Bond Hatfield in *Nature*, Vol. 387, page 121; May 8, 1997.

I decided that if Professor Hatfield was involved in the subject, it was clearly something that must be taken seriously. Another early article, “How Long Can Oil Supply Grow?” first published in 1997 by the M. King Hubbert Center, lays out all the peak oil arguments in a clear and succinct way – several years before forums like this one

began giving voice to such concerns. His was among the earliest voices warning of oil shortages to come in the twenty-first century. Some articles of his go back to the early 1980s.

After a couple of years of dawdling, I decided to look up the professor again after not seeing him for over twenty-five years. You see, I never completed my geology major: that career-goal foundered on the shoals of math and chemistry. Now I'm an adjunct professor of English in Maine, and I use my writing course to inform students about the importance of such basic scientific concepts such as evolution and energy.

My visit to Mr. Hatfield's house was not done with this essay in mind. We spent most of the time catching up. He was curious about my life in Maine, and I was delighted to hear that his children had interests in common with me: His son is a paramedic in Ann Arbor (I'm a volunteer EMT); his daughter, a History professor in Austin, enjoys playing old time tunes on the fiddle, my favorite hobby, too.

Turning to peak oil: I was curious to know – as he hadn't written about the subject in years – if he had written anything lately that showed he was still of the opinion that oil was going to peak soon and that this was a bad thing. Little did I suspect the simple message he would give me: “Michael, it's too late.”

Recently I submitted a list of questions for Professor Hatfield to answer to get a better look at his current thinking on the subject.

Please summarize how you first got involved in publishing warnings about the energy crisis.

During the late 1960s, 1970s, and early 1980s, I taught annually a graduate course in petroleum geology to geology majors who were just about to complete their master's degrees and enter the petroleum industry in exploration for crude oil or natural gas. Throughout this time, I had to keep up with the current literature in petroleum

continued on page 8



continued from page 7

geology, and by the late 1970s, it had become apparent to me that the petroleum industry, in the U.S. and globally, was becoming progressively less successful at finding oil. That is, in spite of steadily improving technology for exploration and drilling, and in spite of increasing rates of exploration for oil, global discovery rates were declining from a peak reached in the early 1960s. In other words, we were drilling more and finding less. This, coupled with the drop in U.S. oil production rate after 1970, is what made me start writing about future oil supply problems. The timing

to be able to evaluate his talk. But his conclusion about future U.S. oil production was clear enough. My professor introduced me to him after the talk, and I got to shake his hand. I was thoroughly impressed by all this, because Hubbert was already well known in geologic circles for his contributions to geophysical techniques useful in subsurface exploration. My second meeting with Dr. Hubbert came thirteen years later, in April 1969, at the annual meeting of the American Association of Petroleum Geologists in Dallas, Texas. We met on an elevator in the convention hotel,

up with all the diverse and voluminous literature on petroleum geology and other energy matters. I eagerly anticipated this release but also realized that abandoning the current literature on energy would soon render me incompetent to write about oil supply problems. Besides, by 1999 I was in my mid-sixties and had been writing about long-term fuel supply problems for twenty years without discernible beneficial effect. This was discouraging; I was tired, and my wife and I were looking forward to permanent vacation, travel, play, and no alarm clocks.

“...by the late 1970s, it had become apparent to me that the petroleum industry, in the U.S. and globally, was becoming progressively less successful at finding oil.”

seemed opportune, because the temporary oil shortages of 1973 and 1979 had made the public aware of our dependence on oil. So in 1979, I started collecting rejection slips from editors of popular magazines and newspapers, and occasionally an article got accepted for publication.

You have called M. King Hubbert “the premier living authority on fossil fuels” (this was several years before he died in 1989). Had you ever met Hubbert?

I met M. King Hubbert twice. The first time was in March, 1956, in San Antonio, Texas, at a meeting of petroleum geologists and petroleum engineers. I was a 21-year-old undergraduate student at the time, and one of my geology professors had been kind enough to let me come along with him to the meeting. I heard Dr. Hubbert give the talk in which he first publicly predicted that U.S. oil production rate would reach its maximum between 1966 and 1971 and permanently decline thereafter. This was the talk on which his 1956 paper Nuclear Energy and the Fossil Fuels was based. Being a typical undergraduate student, I didn't know my ankle from my elbow, so I did not have enough critical information

and I told him that I had heard his 1956 talk and asked him if he still thought that U.S. oil production was about to stop growing and start declining. He said it would start to decline within the year. We talked for maybe an hour sitting in the hotel lobby – mostly about fishing. He was an avid fisherman (fresh water lakes – not deep sea).

You mentioned that you stopped publishing after your retirement in 1999 because “it’s too late.” Was there a specific moment or incident that prompted you to say “enough”?

Because development of large-volume, economical substitutes for oil is likely to require many years if not decades, and because I think that global oil production rate is likely to start declining around the year 2010, it seemed to me that, by 1999, when I retired, we probably no longer had enough time to develop substitutes for petroleum adequate to compensate for the coming decline in oil production rate. Also, on a more personal note, retirement meant that I no longer had to teach courses or direct master's theses, which in turn meant that it was no longer necessary to keep

Your 1994 article for the Journal of Geological Education, “A Permanent Solution to the Fuel-Supply Problem,” states, “World oil production is likely to begin its permanent decline by...about 2020.” Yet you mentioned to me that you were “pressured” by a representative of the USGS to use that date instead of your own estimate (mentioned in the Washington Post in 1997) of a “permanent decline before 2010.” Have your ideas about the date changed?

I still think that global oil production rate is likely to reach its maximum and begin to permanently decline around the year 2010. Such a forecast, of course, is necessarily imprecise and is influenced by several unpredictable variables both geological and political. I would not be surprised to see world oil production rate start to decrease any time between now and 2013. I will if it does not start to diminish until after 2015.

You said that you haven't read the oil journals since you retired; yet you mentioned having read your friend Kenneth Deffeyes' recent book “Beyond Oil.” Do you have any thoughts about his prediction (now a post-diction) that world oil production peaked at the end of 2005?

I think that Kenneth Deffeyes' prediction of Thanksgiving Day, 2005, as the time of maximum world oil production rate was a playful reflection of his sense of humor and was meant to draw attention to the fact that no one can know precisely when oil production rate will peak or precisely when it will begin its long-term decline. He probably thought that an obviously



facetious forecast, far more precise than available data can permit, might at least draw some attention to the problem and its

urgency. More power to him! Anything that might interest the public in this problem is worthwhile.

You stated pointedly in the Chicago Tribune, "Today's population and living standards cannot be maintained without continuation of the profligate fuel consumption that fostered them." That was back in 1983, when world population was a mere 4.6 billion (it is now circa 6.5 billion). Do you still believe, as you say at the end of that article, "we will experience...truly catastrophic effects" when fuel supply begins declining?

To gain an appreciation of the economic effect of decline in oil production rate, it may help to remember the oil shortages of the 1970s. Those shortages were largely political in origin, very temporary, and minor as well. Demand exceeded supply by a very few percent. Yet, we had rampant global inflation. We briefly had double-digit inflation even here in the United States. The world experienced economic hardship and strain on the global monetary system. Economic growth was severely impacted. If we can envision that situation on a permanent rather than temporary basis, with world oil production rate declining every year indefinitely into the future, then we can begin to appreciate the magnitude of the problem. Today, because of more efficient fuel use, we get more economic product per unit of oil consumed than we did in the 1970s. But this does not mean that economic growth and oil consumption have been decoupled. They are still strongly coupled. What I envision is, after a few years of decline in oil production rate, a situation reminiscent of the depression of the 1930s, except that this depression will be permanent and worsening rather than temporary and improving – until we develop a large volume, inexpensive substitute for petroleum.

“...a situation...will be permanent and worsening rather than temporary and improving – until we develop a large volume, inexpensive substitute for petroleum.”

You gave a talk titled “Limits to energy” in 1998 at the Gordon Research Conference on “Assessing Resource Limits.” What sort of persons attended this conference, and what was the response?

I gave my talk to the most prestigious audience I have even been honored to address. They included researchers in physics, chemistry, geology, biology, various fields of engineering, environmental studies, geography, and economics. Included were faculty from Harvard, Yale, Princeton, Berkeley, Penn State, MIT, Carnegie Mellon, Columbia, Stanford, and various universities in Europe, Australia, and Japan. Others worked in research and development at AT&T, Bechtel Corporation, Alcoa, General Electric, Worldwatch Institute, Monsanto, the EPA, the USGS, Motorola, General Motors, World Resources Institute, Bell Labs, and the National Science Foundation. Because of the nature of the audience, I prepared more fully than for any other talk I’ve ever given, made super-clear, colorful power-point slides to accompany my statements, and even rehearsed my answers to every question that I could imagine might come in response to my talk. I was loaded for bear, and I gave what I am certain was the best talk of my career. Questions after the talk continued for about twenty minutes, and, luckily, I had anticipated every one of them. The response was the most positive I have ever received for a talk. I felt profoundly grateful for this good fortune with such an elite audience.

You’ve probably heard of Matthew Simmons’ book “Twilight In the Desert,” an expose of “the Saudi miracle.” In the wake of declines in Burgan (Kuwait) and Cantarell (Mexico), everyone on The Oil Drum seems to be waiting with bated breath for confirmation that the super giant Ghawar field is also in decline. Do you think

this to be as imminent and catastrophic as Simmons makes it out to be?

I did read Matthew Simmons’ book. I lack expertise on the Ghawar oil field, but I have heard statements from other petroleum geologists who do have experience with the Ghawar field and whose views are not very different from those expressed in *Twilight In the Desert*. It will be interesting to see how long secondary recovery efforts can maintain Saudi oil production at or above its present level.

One of my favorite quotations for my writing students to ponder comes from your piece in the Hubbert Center Newsletter of 1997: Our nation’s current attitude toward this dilemma is serene apathy. We have no long-term energy plan. We don’t even seem to recognize the existence of a long-term problem. Rather, we simply vacillate from panic to complacency in response to short-term shortages and surpluses. Recent events have certainly borne that out. I find it ironic that complacency now reigns at \$61 a barrel. Have you done anything to prepare for a possible Mother of All Panics?

A financial advisor whom my wife and I use did his master’s thesis in geology under my direction a few decades ago. After working in petroleum exploration for several years, he left the oil industry and, with some additional training in other areas, joined A. G. Edwards as a financial consultant. He’s been there for many years now. He has helped me choose energy stocks for our portfolio as a hedge against the coming oil supply problem, but he admits that owning the right energy stocks probably will not be adequate protection for the economic difficulty that declining oil production will bring. I have asked him what we should do, and he answered, “I don’t know.” ■

WARRIOR FROM AN EARLIER AGE

(Ernie Fink, Machine Shop Superintendent 1982-1992)

From 1982 to 1992 Ernest Heinrich Fink was the Department of Geology's 'Machine Shop Superintendent.' Students who were here then will remember 'Ernie' as a diminutive and soft-spoken Old World gentleman with an exceptional ability to make or repair anything mechanical. Few would know, however, of his service in the German army during World War II. Ernie is a kind and gentle person by nature with a genuine dislike of war, so it is all the more surprising that he was a warrior in an earlier age. I first heard Ernie's story in February 2008 when I joined Prof. Steven Sidebotham, a historian from the University of Delaware, and his collaborator Mary Caulfield in their 'living-history' research on the experiences of World War II veterans from all sides of the conflict. They came to Toledo to interview three former German soldiers, Ernie among them.

“Fortunately, this path led him to the University of Toledo, where for ten years we were fortunate to have him as a colleague.”

Ernie was born in Offenbach near Frankfurt, Germany, in 1921. In his early teens he joined the Hitler Youth League, as was compulsory for all German children, and in 1939 enlisted in the German army. He served in a Panzer (mechanized armor) division, where he drove a supply truck. In 1940 his unit was in Poland and then, beginning in 1941 with Germany's invasion of the Soviet Union, he spent the next two years on the Eastern Front. He saw early action at the battles for Leningrad (today's St. Petersburg) and Kalingrad (former Prussian Königsberg), and had subsequent deployments around Kiev in the Ukraine, Sevastopol in the Crimea, and the Caucasus Mountains between the Black and Caspian

Seas. During one of these engagements he was shot by a Russian sniper, but it was only a grazing wound. Although Ernie's unit was constantly in the thick of the action, he seldom had occasion to fire his gun in anger as his driving duties kept him mostly in the rear. Toward the end of the war, Ernie's unit was transferred to Strasbourg on the Rhine River and from there it was thrown into the Battle of the Bulge, Germany's last gasp on the Western Front. After that battle was lost, Ernie's unit was pulled back to the Harz Mountains in central Germany, where it was given the task of protecting the V-1 and V-2 rocket launchers. These rockets were Germany's last, futile hope for stopping the Allies from overrunning the Fatherland. In early 1945, when it became clear to him that the war was utterly lost, Ernie threw

away his gun and abandoned his unit to look for American soldiers to surrender to. He spent the next several months in a POW camp and upon his release went to live on his grandmother's farm near Frankfurt. He said that in those first few years after the war's end it was a major struggle to find enough food and heating fuel. This was a very dark time for Ernie and, indeed, for all Germans. He eventually got a job in reconstruction work in Frankfurt and his life then began to turn around. In 1948 Ernie was married to his wife of 60 years, Gertrude, and how they got together is an interesting story in itself. During the war, German schoolgirls would write letters that were distributed at random among



Ernie Fink while serving in the German army during World War II

the soldiers. In 1940, Gertrude's letter was given to Ernie. He wrote back and they continued corresponding during the war, and it was only after his release from the POW camp that they first met.

The same year he married, Ernie started going to night school for training in mechanical engineering, and in 1951 he and Gertrude immigrated to Canada, where Ernie found factory work in Hamilton and Brantford, Ontario. In 1963 they moved to Ohio where Ernie worked at a variety of industrial jobs in Castalia, Fostoria and, in 1973, Toledo. His last position, before retiring, was as the Geology Department's Machine Shop Superintendent. Ernie and Gertrude still live in Toledo. They have two daughters nearby with five grandchildren and three great-grandchildren.

At nearly 87 years of age, Ernie has followed a long and at times torturous path through life. Fortunately, this path led him to the University of Toledo, where for ten years we were fortunate to have him as a colleague. We miss Ernie and wish him all the best in the years to come.

Jim Harrell



IN MEMORIAM

(from The Blade, July 12, 2007)



Jim Coss (1966-2007)

James Gregory James Gregory Coss, 41, Toledo, died at home July 4th, 2007, after a courageous year-and-a-half long battle with cancer. Born April 11, 1966, in Pensacola, Florida, to Susan Ashley Coss and Brian P. Coss, he graduated from Northwood High School in 1984. After his US Marine Corps enlistment, Jim wed Annette Albert of Fremont. They had one child, Elisabeth Gwyn, now 17. Jim received his BA and MA in geography and planning from UT with honors. He worked for Kodak in Rochester, NY as an image scientist, returning to UT as research tech/instructor. Most recently, Jim worked as a Geography Communication

Analyst at the Lake Erie Center, UT. Beloved by all, Jim enjoyed traveling with his wife and daughter, was an extensive reader, relished museums, music, art and life. He sang with the 1st Congregational Church choir. His brilliant, delightful wit made him an extraordinary storyteller and inspiring teacher. He is survived by his wife; daughter, and mother; sister, Shelly (Catherine M. [Salvatore] Molaro) and grandmother, Mary Coss; numerous in-laws, a large family and a loving friends. He was preceded in death by his dad; grandparents, James M. and Ruth S. Ashley, Bert A. Coss. A memorial service to celebrate Jim's life is planned at 1st Congregational Church, 2315 Collingwood Blvd. at Virginia, Toledo, for July 17, 2007, at 10:00 a.m. Donations to a college fund for Elisabeth may be made through College Advantage Savings Plan, P.O. Box 691078, Cincinnati, Ohio 45269-1078, Account #2325722.

RECENT GIFTS AND DONATIONS

(if there are any omissions, let us know and please accept our apologies)

2006

Toledo Gem & Rockhound Club
Terrence G. Perris
Frank L. Majchszak
Mark E. Huffman
Lou Bertolie
Susan Smith
Jayne Ludwikoski
Emerson (company match for Steve Clarke)
Owens-Illinois (company match for Sue Smith)
Joyce Dunkin
In memory of Robert D. Stutz
Timothy G. Fisher
Gene and Nancy Collins
Jeffery Leberfinger
Clark L. Scheerens
David M. Beverstock
Carl L. Hopfinger

Matthew Cousino
Kent O. and Patricia L. Starrett
Andrew J. Taddei
Mrs. Lee Black
Mrs. Virginia Black
Michael T. McGee
Matthew P and Penny K (Davis) Choma
Jerold R. Thomas
David S. Hume
Nicholas Valkenburg
Elliot J. Tramer
Tim E. Eckstein
In honor of Mrs. Virginia Black
Frank L. Majchszak

2007

Terrence G. Perris
Toledo Gem and Rockhound Club

Mrs. Lee Black
Ernest H. Fink
Norm Heydinger
James M. King
Robert W. Miller
Natasza Walker
Daryl Moorhead
Debra L. Hanneman
David L. Abt and Beth Tramer
Debra L. Stoudt
Edward M. and Nancy J. Rose
Jean T. and Janet Ward
Johan Gottgens
Bennett Tramer
Curtis D. Black
Lindsay Seders
Brian F. Shadbolt
Susan L. Smith
Carl L. Hopfinger

Matthew Cousino
Douglas and Mary Brewer
Clark L. Scheerens
Tim E. and Dale Ann Eckstein
David S. Hume
Mark E. Huffman
Kent O. Starrett
Marc S. Silverman
In memory of Mrs. Grace Hessler

2008 (January)

Terrence G. Perris
Frank L. Majchszak
Ernest H. Fink
Toledo Gem and Rockhound Club
Charles E. Ashley & Kathleen B. O'Brien



STUDENT SCHOLARSHIPS/AWARDS FOR 2007-2008

OUTSTANDING DEPARTMENTAL UNDERGRADUATE AWARD FOR 2006-2007

Kristin Marie Gardner: Kristin graduated Magna Cum Laude with a BS in Environmental Sciences in May 2007. Kristin is currently enrolled in graduate school at Indiana University's School for Public and Environmental Affairs and is working on a project to quantify organic and pharmaceutical contaminants in an urban watershed.

C.V. WOLFE SCHOLARSHIP

Kristin Cavanagh: A senior majoring in Environmental Studies

Russell Friedrich: A senior majoring in Environmental Science

Jared Hawkins: A senior majoring in Environmental Science

ELLIOT TRAMER SCHOLARSHIP IN ENVIRONMENTAL SCIENCE

Emily Sopkovich: A senior majoring in Environmental Science

TOLEDO GEM AND ROCKHOUND CLUB SCHOLARSHIP *(Support for geology summer field camp)*

Tracy Busch: A senior majoring in geology

Lacey Myers: A senior majoring in geology

Matt Weller: A senior majoring in geology

JEFFREY A. BLACK SCHOLARSHIP FUND IN ENVIRONMENTAL SCIENCE

Michael Elk: A senior majoring in Environmental Science

WILLIAM A. KNELLER GEOLOGY GRADUATE SUPPORT FUND AWARDS

(The following graduate students in the Geology MS program were awarded funds to attend and present papers at the Annual Meeting of the Geological Society of America- North-Central Section in Lawrence, Kansas, Spring 2007.)

Jessica Brandeberry

Mario Castaneda

Patricia Gallent

Tammy Henry

Abby Norton

LON C. RUEDISILI HYDROGEOLOGY/ ENVIRONMENTAL GEOLOGY FUND AWARD

Mario Castaneda, a graduate student in the Geology program, to support travel to the University of Arizona for a week to enable him to process and analyze thesis samples.

COLLEGE OF ARTS AND SCIENCES FACULTY RETIREMENT SCHOLARSHIPS

(These are one-time awards to honor A & S College faculty members upon their retirement)

STEPHEN GOLDMAN RETIREMENT SCHOLARSHIP

Myla Skalsky: A sophomore majoring in Environmental Science

ELLIOT TRAMER RETIREMENT SCHOLARSHIP

Kathie Swann: A junior majoring in Geology

OHIO ENVIRONMENTAL SCIENCE AND ENVIRONMENTAL ENGINEERING SCHOLARSHIP *(a state-wide competition funded by Ohio-EPA and administered by the Ohio Academy of Science)*

Kristin Cavanagh: A senior majoring in Environmental Studies

Emily Sopkovich: A senior majoring in Environmental Science



NEW ALUMNI

BACCALAUREATE STUDENTS

2006 GRADUATES

JOHNSON, Cortina

BS Environmental Science

KUHN, Rebecca

BS Biology, Magna Cum Laude

NELSON, Donald

BS Environmental Science

PILBEAM, Anne

BA Environmental Studies, Cum Laude

RONAU, Edward

BS Geology

2007 GRADUATES

BORING, Tiffany

BS Environmental Science

DUNCAN, Alexander

BS Environmental Science, Cum Laude

GARDNER, Kristin

BS Environmental Science, Magna Cum Laude

HERRICK, Lucille

BS Environmental Science, Cum Laude

KUREK, Danielle

BS Environmental Science

MYERS, Lacey

BS Geology

OROSZ, Chris

BS Environmental Science

PITTENGER, Alycia

BA Geology

PLUTE, Tom

BA Environmental Studies

SCHAEFER, Jessica

BS Environmental Science, Cum Laude

WELLER, Matt

BS Geology, Cum Laude, Departmental Honors

ZOOG, Everett

BS Environmental Science

GRADUATE STUDENTS

2006 GRADUATES

BENEDICT, Michael (PhD Ecology, 2006)

Dissertation: "Riparian forests in NW Ohio watersheds -- relations among landscape structure, land use/land cover, and water quality in streams" [adviser: J.F. Gottgens]

DEVANNA, Kristen (MS Ecology, 2006)

Thesis: "Role of Dreissena as ecosystem engineers -- effects to native bioturbators and benthic community structure and function" [adviser: C.M. Mayer]

JOSHI, Puneet (MS Ecology, 2006)

Thesis: "Investigations into Interactive Effects of Global-Climate-Change Factors on Plant Function" [adviser: S.A. Heckathorn]

2007 GRADUATES

ABU-ALAIWA, Wissam

(PhD Ecology, 2007) Dissertation: "Advances in biotechnology for the enhancement of medicinal plants pharmacology" [adviser: S.L. Goldman]

AL-ABED, Diaa (PhD Ecology, 2007)

Dissertation: "Genetic engineering of maize (*Zea mays* L.) using a novel explant 'split-seed'" [adviser: S.L. Goldman]

AUSTIN (FUSSELL), Brittany

(MS Geology, 2007) Thesis: "Holocene paleoecology and climate change in Silver and Stony Lakes, Oceana County, MI, USA" [adviser: T.G. Fisher]

BODAMER, Betsy (MS Ecology, 2007)

Thesis: "Wetlands as barriers -- effects of vegetated waterways on downstream dispersal of zebra mussels (*Dreissena polymorpha*)" [adviser: J.M. Bossenbroek]

CRAIL, Todd (MS Ecology, 2007)

Thesis: "Testing the impact of plant colonization on fish communities in agricultural ditches of the Ottawa River, northwest Ohio" [adviser: J.F. Gottgens]

HENDERSON, Rachel

(MS Ecology, 2007)

Thesis: "Partitioning soil respiration through vertical profiles of experimental forests in MOFEP" [adviser: J. Chen]

HUANG, Xixi (MS Ecology, 2007)

Thesis: "Identification of putative geographic sources of bacterial pollution in Lake Erie by molecular fingerprinting" [adviser: W.V. Sigler]

MAINALI, Kumar (MS Ecology, 2007)

Thesis: "Impact of heat waves on plant-soil links in tall-grass prairie" [adviser: S.A. Heckathorn]

STRUFFOLINO, Pamela

(MS Ecology, 2007)

Thesis: "Identifying sources of *Escherichia coli* to Maumee Bay, Oregon, Ohio" [adviser: D.F. Dwyer]

TENNEY, Gwendolyn

(MS Ecology, 2007)

Thesis: "Quantifying the impact of prescribed burning on Ohio oak woodland" [adviser: J. Chen]

DECEASED ALUMNI

The Department recently learned of the following alumni who are now deceased:

Syvert, Raymond J. - BS Geol. 69, MS Geol. 73

Gibbs, Calvin H. - BS Geol. 71

Thompson, Charles E. - BS Geol. 72

Boyd, Thomas M. - BS Geol. 73, MS Geol. 75

Sheahan, Joseph W. - BS Geol. 75, MS Geol. 77

Reimann, Martha A. - MS Geol. 79

Spengler, Thomas J. - MS Geol. 87

Sager, Constance - BS Env. Sci. 02



MISSING ALUMNI

BA/BS AND BA/BS+MS RECIPIENTS

Estelle, Duane - BS Geol. 67
Horvath, Terry M. - BS Geol. 70
Dunham, John B. - BS Geol. 71
Taylor, Larry E. - BS Geol. 71, MS Geol. 74
Fraute, Enrique D. - BS Geol. 72
Gonzalez, Franklin - BS Geol. 72
Eleftheriou, Panayotis - BS Geol. 74
Lopez, Raymond J. - BS Geol. 74
Dutcher, Bruce J. - BA Geol. 76
Taylor-Climo, Amy E. - BS Geol. 76,
MS Geol. 83
Adetoye, Adebayo A. - BS Geol. 79
Spong, Lawrence L. - BS Geol. 82
Kassaie, Mohammad N. - BS Geol. 85
Darus, Muhammad J. - BS Geol. 93
Sitzenstock, George W. - BA Geol. 97

MS ONLY RECIPIENTS

Johnson, Russell P. - MS Geol. 69
Minning, Robert C. - MS Geol. 70
Sherif, Nasreddin - MS Geol. 71
Kowalczyk, Gary R. - MS Geol. 76
Wu, Chia Hsin - MS Geol. 79
Behbehani, Abdulsamee S.K.
MS Geol. 80
Tsai, Louis L-Y. - MS Geol. 80
Kose, Celal - MS Geol. 84
Elias, Mohd R. - MS Geol. 87
Zhang, Hua - MS Geol. 88
Trytten, Brad - MS Geol. 95
Lefticariu, Mihai - MS Geol. 97
Scarbro, Jona - MS Biol. 06

If you know the whereabouts of any of these missing alumni please notify either Diane Brown (diane.brown@utoledo.edu) or Jim Harrell (james.harrell@utoledo.edu).



DONATION FORM (ASESNEWS)

Yes, I would like to join other alumni in supporting education and excellence in the Environmental Sciences Department at the University of Toledo. Please apply my donation to the following fund(s):

- ☐ Lon C. Ruedisili Hydrogeology / Environmental Geology Fund
- ☐ Toledo Gem & Rockhound Club Scholarship Fund
- ☐ Helen Edenburn Geology Fund
- ☐ General EEES Progress Fund
- ☐ Ernest Fink Fund
- ☐ William A. Kneller Geology Graduate Student Support Fund
- ☐ Jeffrey A. Black Environmental Science Scholarship Fund
- ☐ Elliot J. Tramer Environmental Science Scholarship Fund

☐ Enclosed is my check for \$ _____

☐ Please send an invoice and bill me for \$ _____

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Please make your check payable to "UT FOUNDATION". Your gift is fully tax deductible.

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What's NEWS With You?

Please fill out this page and mail it to “Department of Environmental Sciences, The University of Toledo, Toledo, Ohio 43606-3390” (using the enclosed business reply envelope) or fax it to us at 419.530.4421. If you prefer, you can e-mail the information to Jim Harrell at james.harrell@utoledo.edu.

Name: _____

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FAX _____

NEWS YOU WOULD LIKE TO SHARE WITH READERS OF THE NEXT NEWSLETTER:
