Message from the Department Chair

**Friends of Soil Science at UW-Madison:**

Yes, understanding a soil requires laboratory experiments, chemical and physical characterization, equations, and statistics. But all of these are merely in service to a richer appreciation when we view, touch, and discuss a soil in the field. This past weekend several of us toured some classic Wisconsin soils: Loyal – the central idea of a vast area of drainage-challenged alfisols, Sayner – a northwoods spodosol, and a histosol that changed only subtly meter-after-meter downward. Most of you have experienced the power of visiting soils in the field. On page 3, you will learn of the new F.D. Hole fund to support this increasingly endangered part of soil science education.

In the past two months, I’ve had the great pleasure of hosting two remarkable alums of our department. Their stories are terrific reminders to the teachers among us of how our students go on to illustrious careers. In late September, Don Owens and wife Barbara of Elma, New York visited the department while participating in the UW-Madison Class of 1963’s 50th Reunion. Don did his MSc with Professor G.B. Lee, and for some years after mapped soils for SCS. In 1977, he started his consulting firm Earth Dimensions, Inc and did very early work on Love Canal, the soil contamination case that brought us the Superfund program. For Don, nothing is as important in a soil scientist’s training as experience seeing the variability of soil at the few-meter scale.

Henry Fribourg, Professor Emeritus at the University of Tennessee, was in Madison recently to receive the 2013 CALS Distinguished Alumni Award and visited with us. Henry came to UW-Madison as a 16-year old in 1946, and completed his BSc in Soils and Agronomy by 1949. A masters from Cornell and PhD from Iowa State led to a faculty position at the University of Tennessee that he held for 45 years. He recorded his remarkable life in two ebooks available on-line. Phil Barak and I particularly enjoyed Henry’s recollections of Emil Truog’s lecture style: stock-still, eyes closed, for an hour.

Please take note of the celebration we will hold in May 2014, of the great legacy of soil science here at UW-Madison, in conjunction with the College of Agricultural and Life Sciences 125th anniversary. If you are unable to join us, please update us on your whereabouts - the great legacies of our department are sources of wonder, pride, and motivation.

Bill Bland, Chair
Awards, Honors, and News

Steve Ventura was recently named the third Gaylord Nelson Distinguished Professor. The award honors members of the faculty of the Nelson Institute for Environmental Studies (with which we share Steve) for innovation, research excellence and contributions to interdisciplinarity in environmental studies. Ventura will hold the title and receive flexible research support for four years.

Carrie Laboski, Associate Professor and Extension Soils Specialist, received the ARS Researcher Award.

John Peters, Director of the UW Soil Testing Laboratories and Extension Soil Scientist, received the ARS Service Award.

Matt Ruark is leading a research team recently awarded a $10 million federal grant to help find ways to improve carbon and nitrogen management on dairy farms. The project is part of a larger initiative to mitigate and adapt to climate change.

Department Hosts International Soil C Conference. Over 140 soil scientists from around the world gathered in Madison in June 2013 to participate in a conference on soil carbon, jointly sponsored by the department and the International Union of Soil Sciences (IUSS). Soil C is at the heart of global climate change and food and ecosystem sustainability, so we were delighted to have the opportunity to participate in the discussions. Alfred Hartemink is the secretary general of IUSS.

James Bockheim has recently co-authored a book titled Pedodiversity. The first of its kind, the book is intended to be a combined handbook, historical account of pedodiversity research, and essay on its future challenges.

Matt Ruark’s lab welcomes three new members. Carolyn Betz, research program manager, Allison Dungan, associate outreach specialist, and Jaimie West, research specialist.

Troy Humphrey joined the department as our new Electronics Technician.

In Memorium

Larry G. Bundy - Professor Emeritus Larry G. Bundy, age 69, passed away after a brief illness on July 8, 2013 in Madison, WI. From 1973 to 1982, Bundy worked in industry as a soil scientist for Libby, McNeill & Libby, and Nestle Enterprises, Inc. in Janesville, WI. He then joined the soil science faculty, where he served for 25 years until his retirement in 2007. During his tenure in our department, Larry authored 80 refereed research papers and more than 250 extension articles. He served as major adviser for 16 graduate students seeking MS or PhD degrees. His recognitions included the CALS Pound Extension Award (1992), the ASA Agronomic Achievement Award (1998), the ASA Agronomic Extension Education Award (1999), and election as a Fellow of ASA (1994) and SSSA (2001).

The Larry Bundy Graduate Student Fund has been established in the UW Foundation to continue his legacy to our discipline and department. Contributions may be made using the form on page 3. Additional information on Larry’s life and legacy is posted on our website (http://soils.wisc.edu).

David Sloan - Dave Sloan, Electronics Technician for the department, passed away after a courageous battle with cancer on April 22, 2013. Dave was a wonderful member of our community, and he left us much too soon.

Leo M. Walsh Distinguished Lectureship in Soil Science

Dr. Jenny Talbot, a microbial soil ecologist, presented the first Leo M. Walsh Distinguished Lecture in Soil Science, “From hyphae to biomes: a continental-scale look at form and function of soil fungal communities.” She is a post-doctoral researcher at Stanford, on her way to a faculty position at Boston University. A generous gift by Dean Emeritus Leo Walsh supports an annual lecture from a distinguished soil scientist. We were delighted to focus on the vibrant area of soil ecology for the first of what surely will be an exciting series of lectures.

Research Corner: Barak Lab

Generations of UW-Madison students have learned the value of fertilizers from Professors Emeritus Dick Corey, Emmett Schulte, Jaya Iyer (deceased), and, for the past two decades, Professor Phil Barak. But knowing the value of fertilizer has always cut two ways with Barak—yes, the right investment can be easily paid back through higher yields, but what of the financial value of plant nutrients lost during manure management and human wastewater treatment? Three undergraduate scholars estimated that $63 million worth of NPK end up in Wisconsin wastewater treatment plants, where they are largely considered a nuisance by the operators.

Barak is leading a multi-pronged research effort to capture these nutrients for fertilizer. He was recently awarded US patent No. 8,568,590 for a method to extract brushite, a phosphate-containing mineral, from sewage. A grant from the National Collegiate Innovators and Innovators Alliance is allowing his team to document the fertilizer value of this mineral. Barak also set up a company, Nutrient Recovery and Upcycling (NRU) LLC, to commercialize the process, and NRU was awarded a $100,000 USDA Small Business Innovation Research (SBIR) Phase I grant. Looking to nitrogen, Barak estimates that $2.5 billion of it ends up in US wastewater treatment plants annually. He has disclosed to WARF an invention that recovers up to half of that in a fertilizer-friendly form.

After years of dedicated work in the basic science side of soil science and agroecosystems, Phil Barak is enjoying applying his knowledge and experience toward practical problems of the day, and answering the call of the University leadership for the professoriate to engage in commercialization of their findings.
Recent Graduates

Undergraduate Degrees

Ambrowiak, Gloria M. - BS, 2012
Agricultural and Natural Resources

Arneson, Jens O. - BS, 2013
Agricultural Science-Production

Gerds, Matthew J. - BS, 2013
Agricultural and Natural Resources

Huiras, Brian A. - BS, 2012
Agricultural and Life Sciences

Reuteman, Patrick L. - BS, 2013
Agricultural Science-Production

Schmidt, Jason E. - BS, 2012
Agricultural Science-Production

Vanderleest, Clay P. - BS, 2012
Agricultural and Natural Resources

Weber, Jarvis R. - BS, 2012
Agricultural Science-Production

Graduate Degrees

Evans, David M. - MS, 2013
Digital soil mapping of the red clay in the driftless area near Verona, WI, USA (Hartemink)

Stock, Melanie N. - MS, 2013
Using soil temperature dynamics and ground-penetrating radar to investigate the subsurface habitat of eastern American toads (Anaxyrus americanus america) during winter (Balster)

Wells, Ana J. - Ph.D, 2013
Disturbed soil resources and seed availability regulate plant community assemby after a dam removal in southwestern Wisconsin (Balster)

F.D. Hole Soil Studies and Expedition Endowment

Francis Hole believed passionately that students of soil science (of all ages) should learn to "read each landscape for practical purposes or simply the pleasure of it." "Reading a landscape" requires getting out into it and spending time there, in the company of other students of soils and landscapes. These things require busses and lodging, costly items for which university funds are not available. To address this, we have established the F.D. Hole Soil Studies and Expedition Endowment, initiated by generous donations from Francis' children, Ben and Sarah. Please consider helping keep alive Francis' legacy of field experiences that whet the curiosity and train the eye for the beauty of landscapes by contributing to the fund at http://supportuw.org/giveto/soilstudy.

Department of Soil Science at the University of Wisconsin-Madison

We wish to join other students/alumni, industry, and friends in enhancing the teaching, research, and outreach programs in the Department of Soil Science by contributing as indicated below.

□ $50 □ $100 □ $250 □ $500 □ $1,000 □ Other

Please charge my gift of $________ to my (please circle): Mastercard Visa American Express

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Home Phone: Work Phone:

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Online donation is available on our website http://soils.wisc.edu/alumni-friends/
Profiles

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Alumni Updates

Eric Cooley (BS 1998, MS 2005) and Amber Radatz (BS 2007, MS 2009) were appointed Co-Directors of Discovery Farms in July 2013.

Steve Houlihan (BS 2003, MS 2005) is now the head golf course superintendent at Blue Mound Golf and Country Club in Wauwatosa, WI.

James A. Pomerening (BS 1951) is a Professor Emeritus who retired from California State Polytechnic University - Pomona in 1992, and moved to Las Vegas in 2002.

Dr. Bryant Scharenbroch (PhD 2007) is this year’s recipient of the International Society of Arboriculture’s (ISA) Early Career Scientist Award. Dr. Scharenbroch, an urban soil scientist, studies urban soils to improve tree growth and longevity at The Morton Arboretum Soil Science (MASS) Laboratory.

Leslie Sherman (PhD 1997) is the chair of Environmental Sciences at Washington College.

We’d love to hear from you! Please complete and return this form or send your updates via email to: jgoh@wisc.edu

Alumni Update

Name:
Degree(s) and Year(s): BS ( ) MS ( ) PhD ( )
Home Address:
Email: Phone No.:
Position: Employer:
News to share:

Return to: Profiles
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(continued from pg. 3)
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