

Profiles



DEPARTMENT OF
SOIL SCIENCE
University of Wisconsin-Madison

APRIL 2014

Message from the Department Chair

Friends of Soil Science at UW-Madison:



Spring is coming ever so slowly to Madison -- the coldest winter since 1978/79, the February of which I first moved here. I've been telling my undergraduate students that this is the coldest winter of their lifetimes (in the Madison area) -- BUT that it in no way means the scourge of global climate change brought about by

our burning of fossil fuels will not remain a central theme of the rest of their lives.

Helping us stay optimistic about spring days to come is our continuing planning for the upcoming celebration of 125 years of soil science at UW-Madison. The Department of Agricultural Physics was established in 1889, with F.H. King as its first department chair, at a time when the potential value of the scientific study of agriculture was first being recognized. It was one of the founding departments of the University of Wisconsin's College of Agriculture, which was established in the same year. King Hall was built in 1894. In 1909, the Department of Soils was established from the Department of Agricultural Physics, and in 1915, the Soils Building was constructed. The College of Agricultural Life Sciences is marking its 125th this year, and we are a proud part of this year-long celebration. The Department of Horticulture is also marking its 125th.

On May 23rd, we will spend a day reviewing our past, hearing about the topics at the leading edge of soil science, and thinking a bit about where it might be going. It will feature a greeting from Dean Kate VandenBosch, and an engaging lineup of talks by leading faculty members, current graduate students, and graduates of the department who are now distinguished scholars of soil science.

We hope that you will find it possible to join us. Please register using the form on page 4, or on-line at our website: <http://soils.wisc.edu>. There is no registration fee, but an accurate count of attendees is important so that we can plan for the meals. To help defray the cost of the event, we are continuing to accept donations to the "Soil Science Anniversary Fund" at the UW-Foundation. Please consider a donation to this fund through the gifting form on page 3 or on-line at:

<http://supportuw.org/giveto/soilsanniversary>

Bill Bland, Chair



125

1889 ~ 2014
years

Celebrating Soil Science and King Hall
at the University of Wisconsin - Madison

Join Us for Our 125th Anniversary!

Friday, May 23, 2014

Soils Building

Registration available on page 4 or online!

- 9:00-10:00 Reception
- 10:00-10:30 Welcome from CALS Dean Kate VandenBosch
- 10:30-10:50 Phil Barak (UW)
History of the Soil Science Department
- 10:50-11:10 Bill Bland (UW)
Soil science futures
- 11:10-11:40 Mike Vepraskas (North Carolina State)
Hydric soil research
- 11:40-12:10 Mary Beth Kirkham (Kansas State)
Heavy metals in the environment
- 12:10-13:10 Lunch
- 13:10-13:40 Paul Gessler (University of Idaho)
Soil landscape modeling
- 13:40-14:10 Tom Sauer (USDA-ARS Iowa)
Sustainable bioenergy production
- 14:10-14:20 Carrie Laboski (UW)
From test kits to statutes: The evolution of soil fertility
- 14:20-14:30 Clay Vanderleest (UW, graduate student)
Soil water potential and cranberry irrigation
- 14:30-14:40 Steve Ventura (UW)
Soils and urban agriculture
- 14:40-14:50 Melissa Haber (UW, graduate student)
Heavy metal sequestration via soil
- 14:50-15:10 Break
- 15:10-15:20 Doug Soldat (UW)
Rapid soil formation in golf course root zones
- 15:20-15:30 Megan Chawner (UW, graduate student)
Benefits of radish as a cover crop
- 15:30-15:40 Joel Pedersen (UW)
Soil and the transmission of prion disease
- 15:40-15:50 Melanie Stock (UW, graduate student)
Agricultural runoff on frozen soils
- 15:50-16:50 Plenary discussion
- 16:50-21:00 Barbeque, music, and dance

ANTIGO SILT LOAM

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Research Corner: Jim Bockheim

Our most-senior faculty member, Jim Bockheim, remains one of our most active. His decades of work on permafrost soils continues to garner interest as the effects of global warming on this vast area of Earth are increasingly understood to play a central role in our climate future. He was recently awarded a Fulbright Scholarship to collaborate with the University of Magellanes (UMAG) in Punta Arenas, Chile from March 24 to April 24, to train graduate students and young faculty in permafrost science, initiate research between UMAG and the University of Wisconsin on the Antarctic Peninsula, and train students in the investigation of soils in southern Chile.

After his stint in Patagonia, Jim will travel directly to the Federal University of Viçosa, Brazil, where he will cooperate with Dr. Carlos E.G.R. Schaefer. Jim will participate in Dr. Schaefer's Antarctic/Andes project, provide lectures and seminars, assist in establishing scholarship between Viçosa and the UW, and participate in field trips to the Atacama Desert and Amazonia.

Jim will travel across the globe again in early summer. He has been invited to give a keynote address on "Recent advances in Antarctic Permafrost" at the European Conference on Permafrost, June 18-21 in Évora, Portugal.

In addition to the collaborations that quite literally take him around and to the ends of the globe, he has also been busy here at home. Springer will publish two books this spring that have been edited or written by Jim, including *Soils of Antarctica* and *Soil Geography of the USA: A Diagnostic-Horizon Approach*. Last year, he co-authored a book titled *Pedodiversity*. Talk about productivity!

Awards, Honors, and News

The Cates Family Farm, operated by **Dick and Kim Cates**, is a recipient of the Wisconsin Leopold Conservation Award, which honors Wisconsin landowner achievement in voluntary stewardship and management of natural resources.

Marvin Beatty and John Murdock, Emeriti Professors, have been awarded the title of Doutor Honoris Causa by the Federal University of Rio Grande do Sul in Brazil.

After 36 years of service to CALS and Soil Science, **John Peters**, Director of the UW Soil Testing Laboratories and Extension Soil Scientist, has set off on a new career with USAID in Washington, D.C.

Oliver Chadwick, UC-Santa Barbara, has been selected as the 2014 recipient of the **Leo M. Walsh Distinguished Lectureship in Soil Science**. He will be presenting his lecture on Wednesday, April 30 at 3:30 p.m. in the Soils Building. Details will be posted on the department website as they become available.

The department welcomes outreach specialist, **Geoff Siemering**. Geoff will be doing extension soil science work.

Congratulations to the recent undergraduate turfgrass-related scholarship recipients: **Tyler Gerrits** - *Charles O. Newlin Scholarship in Turfgrass Management*; **Benjamin Luedtke** - *Wisconsin Turfgrass Association Scholarship*; **Luke McGhee** - *WGCSA James R. Love Scholarship*; and **Adam Wepfer** - *National Seed Egon Herrmann Turf Scholarship*.

Recent Graduates



UNDERGRADUATE DEGREES

Berezowitz, Ryan M. - BS, 2013
Agricultural Sciences

Czaplewski, Ryan J. - BS, 2013
Agricultural Sciences

Meyer, Kevin K. - BS, 2013
Agricultural and Natural Resources

Rushford, Lindsey L. - BS, 2013

Wepfer, Adam C. - BS, 2013
Agricultural Science

GRADUATE DEGREES

Obear, Glen R. - MS, 2013

Three physicochemical problems of anthropogenic sand root zones (Soldat)

Watson, Heather D. - MS, 2013

Soil genoforms and phenoforms in the Wisconsin central sand plain (Hartemink)

West, Jaimie R. - MS, 2013

Organic nutrient and weed management on sandy soil under sweet corn production (Ruark)

Smith, Ashly P. - Ph.D, 2013

Linking microbial community structure and function with tropical forest recovery (Baiser/Marin-Spiotta)

In Memorium

J.R. Love - Professor Emeritus J.R. "Jim" Love passed away in Madison on February 25, 2014, at the age of 93. Jim was the face of soil science to countless undergraduates from numerous majors in his many years as the instructor of introductory soil science. In a sure manner, he conveyed the importance and beauty of soil, while never cutting corners on the difficulty of the subject. Jim received both his MS (1952 with Emil Truog) and PhD (1956, with Ed Englebert) in Soils at UW-Madison. He then joined the faculty and became a focused and caring teacher and advisor. In 1960, he established the turf grass management specialization in the college, a tremendous legacy that continues to this day. He retired from the department in 1986. Jim was a loyal alum of our community, rarely missing a social event at the department, including this past holiday season. We will miss his warmth, calm demeanor, and unwavering curiosity about the good things happening in the department.

One way that Jim's contributions to scientific turfgrass management are remembered is through the Wisconsin Golf Course Superintendents Association James R. Love Scholarship, presented annually to an undergraduate student specializing in turf management. Contributions to this scholarship in his memory may be made out to "UW Foundation – JR Love Scholarship" and mailed to the Department of Soil Science, 1525 Observatory Dr., Madison, WI 53706.

Our Foundation Resources at Work

Our Supporters

10/1/2013 thru 2/28/2014

Professor and Mrs. Arriaga
 Mr. and Mrs. Asselmeier
 Professor Beatty
 Dr. Beaver
 Dr. and Mrs. Beestman
 Mr. Bertram
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 Mr. and Mrs. Helmeid
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 Mr. Jennrich
 Mr. Kaap
 Professor Keeney
 Professor and Mrs. Kelling
 Mr. King and Ms. Kokas
 Professor Kirkham
 Mr. Krueger

Generous benefactors of our department have contributed financial resources that help us advance soil science in many ways. Here we highlight the funds that support our graduate training mission – work at the heart of our department and university. Four funds endow stipend and tuition support for graduate students, providing the opportunity to develop the next generation of soil science researchers:

- Charles and Alice Ream Soil and Water Protection Fund – stipend and tuition for Elyssa McFarland (MS student with Francisco Arriaga), working on the effects of flue gas desulfurization gypsum on soil properties.
- Champ Tanner Agricultural Physics Award – stipend and tuition for Mingwei Yuan (PhD student with Bill Bland), working on dynamic modeling of water and nitrate balances.
- Leo M. Walsh Distinguished Graduate Fellowship – stipend and tuition for Megan Chawner (MS student with Matt Ruark), working on how cover crops can improve nitrogen use efficiency.
- Wayne Kussow Distinguished Graduate Fellowship – Sabrina Ruiz (PhD student with Doug Soldat), working on organic matter and N cycling in turfgrass.

Additional funds support graduate students in diverse ways, including recruiting, expenses, field experiences, and travel to scientific meetings:

- O.N. Allen Graduate Fellowship
- R.D Powell Memorial Scholarship
- M.L. Jackson Memorial Fund
- Kelling Soil Fertility Award

These resources provide a stable base of support that greatly enhances our ability to recruit and support top students. While competitive funding supports a comparable number of students, our foundation resources provide invaluable core strength and stability to the graduate program.

In our next issue we will highlight the Foundation resources that support the undergraduate training mission.

Mr. and Mrs. LaCroix
 Ms. Laszewski
 Professor and Mrs. Lowery
 Professor Martens
 Dr. and Mrs. Milford
 Drs. Morgan
 Ms. Neumann
 Professor Orr
 Mr. and Mrs. Owens
 Dr. Pan
 Dr. Parker
 Mr. Pearson
 Mr. and Mrs. Pelzer
 Dr. Petersen
 Professor Peterson
 Ms. Powell
 Mr. and Mrs. Renkas
 Dr. and Mrs. Sauer
 Ms. Schmidt and Mr. Huseh
 Professor Schuler
 Professor and Mrs. Schulte
 Dr. and Mrs. Sharratt
 Professor Sommers
 Mr. Stellato
 Professor and Mrs. Stevenson
 Mr. and Mrs. Sturgul
 Professor Swan
 Ms. Tanner
 Ms. Trudell
 Ms. VanSchaik
 Professor Ventura and Ms. Krome
 Dr. and Mrs. Walling
 Dean Emeritus Walsh
 Mr. Watson
 Ms. Whitney

Department of Soil Science at the University of Wisconsin-Madison

I/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

Card Number: _____ Expiration Date: _____

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Cardholder's Signature: _____ Date: _____

Name: _____

Home Phone: _____ Work Phone: _____

Address: _____

City: _____ State: _____ Zip: _____

If paying by check, please make your check payable to the UW Foundation-Department of Soil Science and mail to:
 University of Wisconsin Foundation • US Bank Lockbox • P.O. Box 78807 • Milwaukee, WI 53278-0807

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



Profiles

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Alumni Updates

Lindsey Rushford (BS 2013) won third prize in the National Darrel S. Metcalfe Student Manuscript Contest.

Karl Jennrich (BS 1988) and **Mary Rasmussen** (BS 1990) report they are still happily married (25 years in 2015) and living in Conover, WI. The two met in Soils 301. They have a small "hobby farm" raising pasture chickens, Scottish Highlanders, and a few Black Angus steers.

Looking for the Alumni Update form? We ran out of room this issue, but we still want to hear your updates! Please send a note to Jennifer Etter Goh (address on the mailing label) and include your degree level and year information.

125th Anniversary Celebration Registration Form

Please register to attend the 125th Anniversary Celebration on **Friday, May 23, 2014**.
See the full program on page 1. You can also find details and register on-line at our website: <http://soils.wisc.edu>

Name: _____

Address: _____

City/State/Zip: _____

Day Phone: _____

Email: _____

Morning Session
_____ (How many)

Catered Lunch
_____ (How many)

Afternoon Session
_____ (How many)

BBQ Dinner and Dance
_____ (How many)

Mail, fax, or email form to:

Attn: Carol Duffy
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