

# Profiles

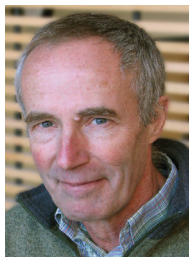


DEPARTMENT OF  
SOIL SCIENCE  
University of Wisconsin-Madison

MAY 2015

## Message from the Department Chair

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



It has been my honor to act as department chair for nearly the past six years, but I am looking forward to passing on this responsibility in June. I am glad to have contributed in at least some small ways to the notable events of these years. We have been fortunate to have had some great faculty hires—Alfred Hartemink, Francisco Arriaga, and Thea Whitman—but, like most of campus, not enough to keep our numbers steady! We are now the home of the campus-wide Environmental Science major, and reallocated department funds to provide top-notch advising to this growing group of undergraduates.

Our infrastructure has been slowly updated, with much improved ventilation in the Annex, new lighting throughout Soils, new windows and shades in Soils, and a monumental clearing of obsolete equipment and furnishings. The seats in 270 remain unchanged, however.

We are fortunate to enjoy generous support from alums and past members of the department. The 125th Anniversary celebration was a wonderful reminder of this, and we were gratified at the financial support for it from our community. We now benefit from the Leo M. Walsh Distinguish Lecture in Soil Science; Keith and Andrea Kelling have given soil fertility faculty members additional tools for recruiting the best students; and Jaya Iyer's remarkable gift to the department will support meetings that foster student and faculty member professional development. Francis Hole's family has generously supported a new fund to assure that students experience field studies of soil. And many other folks continue to support the department's general fund. Thank you all.

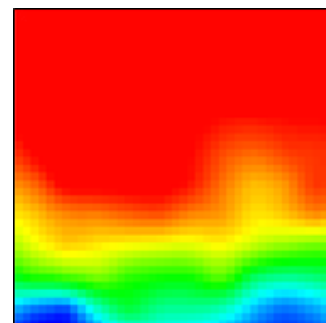
I am delighted that Professor Alfred Hartemink will be the next chair. Alfred is an internationally known scholar of soil, and a prolific author and editor. Alfred recently completed a twelve-year term as (Deputy) Secretary General of the International Union of Soil Sciences (IUSS). We are fortunate that Alfred has agreed to lend his leadership experience and web of contacts to furthering the department's work.

Thank you for your continuing interest in our department.

**Bill Bland, Chair**

## Research Corner: On the FD Hole Soils Lab

The FD Hole Soils Lab is named after Professor Francis Hole, one of the great American pedologists. Hole worked at UW-Madison from 1946 to his retirement in 1983, and wrote "The Soils of Wisconsin" in 1976. In the FD Hole Soils Lab, we work on the soils of Wisconsin and on three partly overlapping research domains: digital soil mapping, soil carbon, and digital soil morphometrics. We have mapped red clay subsoils and carbon in the soils near Verona and currently work on carbon mapping in sandy soils. It seems that sandy soils store more carbon than commonly assumed, and we are investigating the soil mechanisms for the high carbon stocks. Lastly, we work on novel practices for soil profile analysis including tools and techniques for soil profile observations, continuous depth functions of soil properties, and the mapping of the soil profile. These practices are termed digital soil morphometrics, and the inaugural global workshop on this topic will be held June 1-4 at UW-Madison. The research sites near Verona, West Madison and in the Central Sands are also used for the lab sections of Soil Science 325: Pedology to provide a connection between our research and instruction. — Alfred Hartemink



*A Mollisol near West Madison, a hand-held XRF, and a map of the Fe content of the same profile (1 by 1 m, values increase from red through yellow and green to blue)*

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## Awards, Honors, and News

**Carrie Laboski** received the Werner Nelson Award at the 24th Annual Fluid Forum.

The department welcomes the following new additions: **Robert Florence** is the new Outreach Program Manager for the Soil & Plant Analysis Laboratory (SPAL) and the Soil and Forage Analysis Lab (SFAL). Robert is located in Marshfield. **James Beaudoin** is a programmer analyst with the SNAP Plus group. A recent MS grad, **Laura Schultz**, joins Phil Barak's lab as an Associate Research Specialist.

Congratulations to **Matt Ruark** who will be granted tenure and the title Associate Professor on July 1, 2015.

## Student Profile: Claire Campbell



Graduate studies are a time for rapid-fire exposure to new experiences, and Claire Campbell would be quick to confirm this. Claire is fast becoming an expert on dairy cow manure, from how best to collect it before it hits the barn floor, to gaseous losses once spread, to its value as a fertilizer. She is working on her MS degree with Profs Matt Ruark and

Mark Powell, on a large USDA-funded project, "Climate Change Mitigation and Adaptation for Dairy Production Systems in the Great Lakes Region." Learn about her research and see it underway in a video at the link: <https://www.youtube.com/watch?v=XHUBtwv-fC0>

Claire grew up in Oak Ridge, Tennessee and received her BS from Furman University in Greenville, South Carolina in Earth and Environmental Sciences. Over the summers during her undergraduate degree, Claire worked at Oak Ridge National Laboratory as a research assistant with projects in ecological assessment, biological monitoring, and climate change. Claire's interest in agriculture grew from her experience working with a poly-culture farm in Dacusville, SC, where she completed field work for her undergraduate thesis on soil organic carbon in cattle rotational grazing systems. At Wisconsin, she is pursuing a joint MS degree in Soil Science and Agroecology, and hopes to intertwine her two loves of soil and environmental education by teaching kids the value of environmental stewardship and sustainable food systems.

## Leo M. Walsh Distinguished Lecture in Soil Science

The 3<sup>rd</sup> Leo M. Walsh Distinguished Lecture in Soil Science was presented on April 29, 2015, by Dr. Martine van der Ploeg, Assistant Professor at Wageningen University, in the Soil Physics and Land Management subdivision. Her lecture was entitled, "The landscape of biophysical interactions." She also presented a Weston Roundtable Lecture entitled, "Sustainable land management: The importance of coupling physics and socio-economic research." Dr. van der Ploeg was the 2014 recipient of the Outstanding Young Investigator Award of the soil physics division of the Soil Science Society of America.

The Leo M. Walsh Distinguished Lecture is made possible by the generosity of Leo M. Walsh and the Leo M. Walsh Distinguished Lecture in Soil Science Fund.



2015  
International  
Year of Soils

## In Memorium

**Arthur Peterson** - Emeritus professor and extension soil scientist Art Peterson died at the age of 91 on January 26, 2015, in Madison. Art grew up on the family farm near Curtiss, WI. He was inspired to pursue soil science at UW-Madison by the example of his uncle, Carl Thompson. After receiving his PhD under K.C. Berger, Art joined the faculty of the Department of Soil Science in 1950, and began a career of extension work, teaching, and research in soil and water conservation. He did early research and demonstrations on no-till farming, which is now a widely practiced soil conservation method. Art also contributed to the remarkable international presence of the department in the 1960s, working in Egypt, Syria, Armenia, and Indonesia. He retired from the UW-Madison in 1994, and was a regular visitor to the department for most of the next two decades.

**R. John Hanks** - Department alum John Hanks died at age 87 on December 18, 2014, in Logan, Utah. John earned his PhD degree from our department in 1953, as Champ Tanner's first doctoral student. The post-WWII boom in student population at the university led to a severe housing shortage, so Champ ran plumbing up to the attic of his home and John and his wife moved in. Both always recalled how well this arrangement worked. John first worked for the USDA in Manhattan, KS and later Fort Collins, CO, before joining the faculty of Utah State University in 1968. He was an early pioneer in numerical modeling of soil water phenomena, so early that he first had to decide if he should work with analog or digital computers. After long consideration, he would say with a grin, he concluded that analog was the way to go.



# Foundation at Work: Jackson-Tanner Commons



While we cherish the department's historic buildings—Soils, King Hall, the Hiram Smith Annex—a great deal has changed over the past 100 years in how creative workspaces are designed. A central innovation is the emphasis now given to how a building encourages and supports the sense of community and synergy amongst the inhabitants. The attention and space paid to this are striking as one tours the recently constructed buildings on campus.

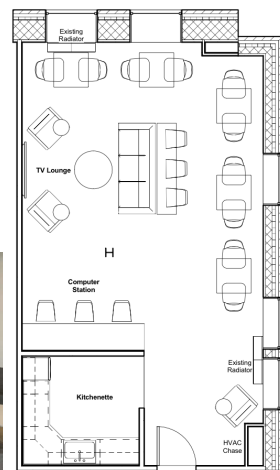
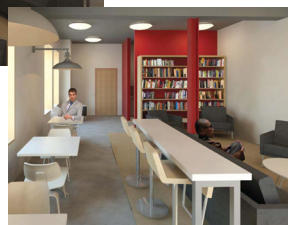
As a step towards creating spaces that encourage and foster the interactions that so often lead to innovation and productivity, the department is creating the Jackson-Tanner Commons. We chose to honor part of our department's wonderful legacy by naming the commons after our first two faculty members to be elected to the National Academy of Sciences, Marion Jackson and

Champ Tanner. Marion joined our faculty in 1946, was elected to the National Academy in 1986, and died in 2002. Champ was one of Marion's first graduate students and joined the faculty in 1953. In 1981, he became the first soil scientist elected to the Academy. He retired in 1987 and died in 1990.

The Jackson-Tanner Commons will be in room 360 of the Soils Building. This room sits at the northeast corner, with wonderful views of the Lake Shore dorms and Lake Mendota to the north, and the lovely savannah and Elizabeth Waters dorm to the east, through five ample windows. The room reveals the wonderful architectural details of the Soils Building, in the gabled ceiling and exposed steel column.

The room has been cleared, and campus architects and engineers are drawing up plans. The funds to do the necessary renovations, like relocating electrical conduits and adding a small kitchen, as well as for furnishings, must be raised through donations. To

learn more about the project, monitor progress, and contribute, please visit the Commons' webpage at <http://soils.wisc.edu/alumni-friends/commons/>. Donations may be made directly to the UW Foundation at <http://supportuw.org/giveto/jackson-tannercommons> or by using the form below and adding a note that you would like your contribution to be for the Jackson-Tanner Commons project.



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## Profiles

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## Recent Graduates

### UNDERGRADUATE DEGREES

**Gerritts, Tyler J. - BS, 2014** Soil Science,  
Biological Aspects of Conservation

**McGhee, Luke J. - BS, 2014** Soil Science

### GRADUATE DEGREES

**Haber, Melissa J. - MS, 2014**

An investigation of microbially induced mineral  
precipitation as a technique to remove stron-  
tium from groundwater (Bleam)

## Alumni Updates

**Megan Chawner** (MS 2015) completed her  
joint MS in Soil Science and Agroecology  
under Matt Ruark in January, and joined  
Discovery Farms as an Extension Specialist.

**James Van Herwynen** (BS 1991) is the golf  
course superintendent at South Hills Golf and  
Country Club in Fond du Lac, WI, and became  
the President of the Wisconsin Golf Course  
Superintendent Association in December.

Share your latest news with the form below.

## Our Supporters

*(Continued from Pg. 3)*

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Ms. Van Schaik  
Prof. Ventura & Ms. Krome  
Dean Emeritus Walsh

## Alumni Update

**We'd love to hear from you!** Please complete and return this form  
or send your updates via email to: [jgoh@wisc.edu](mailto:jgoh@wisc.edu)

Name: \_\_\_\_\_

Degree(s) and Year(s): BS (       ) MS (       ) PhD (       )

Home Address: \_\_\_\_\_

Email: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Position: \_\_\_\_\_

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News to share: \_\_\_\_\_

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