

# Ohio Pedologist

[www.ohiopedologist.org](http://www.ohiopedologist.org)

## Dear Members,

**H**ere it is the end of 2006 and near the time for the annual meeting and near the end of my presidency. Where did the year go? Let's look back a little and also look forward to next year and beyond.

One of the highlights of this year was the combined meeting of the Executive Council and of the Certification Board in June. Also attending were a couple members of the Indiana group who were instrumental in getting their licensing/registration program officially passed. Luther Smith from SSSA and ARCPACS also attended. These gentlemen were invited to help us understand how they went about getting state licensing/registration passed for soil scientists. (On a personal note, I was not able to attend due to recent surgery. However, from the reports I received, it appears the meeting was a success.)

Another highlight was the first (annual?) workshop in November that replaced the summer picnic. Under the very capable planning of President-Elect, Matt Deaton, it was a huge success. The idea of the workshop was to have an opportunity for us to do some field exercises to help us "re-calibrate" our fingers in texturing some samples, fill out the new Ohio Department of Health soil & site sheets from soil pits, discuss the new sewage rules and field sheets and explanations with Jean Caudill from the ODH, have a business meeting, and also some fun and fellowship. We also tested some applicants desiring to be AOP certified. During the business meeting, Matt presented how ARCPACS and AOP can have a partner-

ship in obtaining a state-based certification for us. Obviously, there are many details (such as an MOU) still to be worked out, but as a concept, it seems sound. We owe Matt a great deal of gratitude for working on this.

Also, throughout the year, we sponsored, co-sponsored, or were privileged to attend several good meetings. One was the ODH Midwest meeting in March where some members presented the draft Soil & Site form. Another was Julie's Fracture Flow Working Group that held a meeting/workshop in the Erie County area.

Our annual meeting in January is going to take on a little different flavor. We have some technical sessions planned before and after lunch. Of course, we will have our election of officers, awards, and a business meeting. I hope you can attend. It should be fun and worthwhile.

When I assumed the presidency at last year's annual meeting, I challenged each of you to come forward with what you wanted for activities, programs, and ideas. It is your organization. You have taken that challenge seriously. This association is not simply for the officers but for each member to grow with our association. As with any organization, we have our share of "growing pains." This is only natural as our association matures. I believe we are now postured to move forward with our state-based licensing/registration with ARCPACS's help and prestige. We will continue to plan meetings that will have solid content to help us learn more, earn CEUs, and have some fun. We have some younger members now who want our association to provide them with es-

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## 2006 Directory of Officers

<b>Tom Zimmerman, President</b>
<b>Matt Deaton, President-elect</b>
<b>Rick Buzard, Past President</b>
<b>Dan Benyei, Secretary</b>
<b>Jim Svoboda, Treasurer</b>
<b>Steve Miller, Newsletter editor</b>
<b>Tom Nash, Academic Rep.</b>
<b>Rick Griffin, Federal Rep.</b>
<b>Linn Roth, Private Rep.</b>
<b>Aaron Lantz, State Rep.</b>

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# ASSOCIATION NEWS

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sential services as they “grow” their careers.

We will continue to face new challenges as our profession changes from mostly field mapping to other aspects of pedology/soil classification/morphology, etc. Also, the government service part of our profession is also changing. AOP must be in a position to respond to these changes.

It has been a pleasure to serve as your president during 2006. However, the title of “Past” President has a good sound. Any success I had was because of you. Good luck to the new officers and certification board members.

*Tom Zimmerman*

## Certification Program Discussion

During our Annual Meeting on Wednesday, the 24th of January, at Highbanks Metro Park, we have Luther Smith, from SSA, on the agenda to discuss the ‘State-Based ARPACS Certification Program’. As was discussed during our Fall Workshop we are planning on adopting the State-Based program pending the results of the Grandfather Clause.

There will be a question and answer session after his discussion so that the entire membership will be well informed.

## State Licensing Fund

A fund to help establish a state licensed soil science program has been established. As many of you are aware this could cost approximately \$20,000. Remember donations are welcomed anytime and are always tax deductible. Send donations to:

Jim Svoboda, AOP Treasurer  
520 West Main Street, Suite 3  
Cortland, Ohio 44410

## SMITHSONIAN EXHIBIT

Jeff Glanville and Rich Gehring are still tirelessly working towards acquiring funding for the exhibit.

## EVENTS

**January 24th**—AOP’s Annual Winter Meeting—Highbank Metropark, Columbus

Originally scheduled for the 25th

**January 25-26th**-OOWA Annual Conference—Columbus, Ohio

**Late Summer to Fall**– AOP’s Workshop



Don Burgess, one of our youngest and brightest soil scientists, proudly modeling a mollic epipedon.

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# Soil Series: A Source of Confusion in Communications

*Submitted by Tim Gerber*

What does it mean when a soil scientist identifies a pedon by a soil series name? From my experience, it depends on whether he is referring to a soil series technically or conceptually. Since the technical definition of a particular soil series may be very different from its “concept,” clarity is required if soil series names are to be useful for communications among soil scientists and others in the future.

When a soil scientist refers to a soil series in a technical sense, he is communicating a) that the pedon fits within the taxonomic family in which the series is currently classified and b) that none of its characteristics are outside the range in characteristics spelled out in the current official soil series description (accessible at <http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdnamequery.cgi>). On the other hand, when a soil scientist refers to a soil series in a conceptual sense, he is communicating that the pedon is nearer to fitting the concept of that soil series than any other series with which he is familiar.

I can identify two basic problems with communicating at the soil series level of classification. First, there are gaps between the range in characteristics of seemingly similar series. Secondly, the range in characteristics for a given series have and will continue to change over time.

*While any pedon can be classified (with laboratory analysis) into one and only one taxonomic family, many pedons observed in on-site investigations or in transects being conducted to update soil surveys do not fit within the range of characteristics of any series. In other words, those pedons are in-between two or more series. Some soil scientists refer to them as “tweeners.” For example, on a ten-point transect in a map unit previously identified with the Wooster series (Fine-loamy, mixed, active, mesic Oxyaquic Fragiudalfs), a soil scientist could find pedons that classify in eight other subgroups, listed below in the order found in the 10<sup>th</sup> Edition of the Keys to Soil Taxonomy:*

*Aquic Fragiudalfs, if it has a diagnostic subsurface horizon that meets all six characteristics of a fragipan and if redox depletions with chroma of 2 or less are within 40 cm of the mineral soil surface. (The Canfield series is in this subgroup.)*

*Typic Fragiudalfs, if it has a diagnostic subsurface horizon that meets all six characteristics of a fragipan and if it is not saturated in any layers above the fragipan in normal years for 20 or more consecutive days or 30 or more cumulative days.*

*Fragiaquic Hapludalfs, if it does not have a fragipan but has a layer 15 cm or more thick with the four soil properties required for having fragic soil properties in 30 percent or more of the volume and if redox depletions with chroma of 2 or less are within 75 cm of the mineral soil surface.*

*Fragic Oxyaquic Hapludalfs, if it does not have a fragipan but has a layer 15 cm or more thick with the four soil properties required for having fragic soil properties in 30 percent or more of the volume and if redox depletions with chroma of 2 or less are not within 75 cm of the mineral soil surface but it is saturated in normal years for 20 or more consecutive days or 30 or more cumulative days.*

*Aquic Hapludalfs, if it does not a layer 15 cm or more thick with the four soil properties required for having fragic soil properties in 30 percent or more of the volume and if redox depletions with chroma of 2 or less are within 25 cm of the upper boundary of the argillic horizon. (The Centerburg series is in this subgroup, but the particle size control section has 26-35 percent clay, rock fragments in the till are sandstone and shale, and the series originally required a calcium carbonate equivalent of 8 percent or more in the till. Areas where Wooster has been mapped generally have less clay in the particle size control section and less shale and a lower calcium carbonate equivalent in the till.)*

*Oxyaquic Hapludalfs, if it does not a layer 15 cm or more thick with the four soil properties required for having fragic soil properties in 30 percent or more of the volume and if redox depletions with chroma of 2 or less are not within 25 cm of the upper boundary of the argillic horizon but it is saturated in one or more layers within 100 cm of the mineral soil surface in normal years for 20 or more consecutive days or 30 or more cumulative days.*

*Fragic Hapludalfs, if it does not have a fragipan but has a layer 15 cm or more thick with the four soil prop-*

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erties required for having fragic soil properties in 30 percent or more of the volume and if it is not saturated in any layers within 100 cm of the mineral soil surface in normal years for 20 or more consecutive days or 30 or more cumulative days.

*Typic Hapludalfs, if it does not a layer 15 cm or more thick with the four soil properties required for having fragic soil properties in 30 percent or more of the volume and if it is not saturated in one or more layers within 100 cm of the mineral soil surface in normal years for 20 or more consecutive days or 30 or more cumulative days. (The Riddles series is in this subgroup, but its normal extent is in MLRA 111 in northern Indiana and southern Michigan. The Amanda series is also in this subgroup, but rock fragments in the till are sandstone and shale, and the series originally required a calcium carbonate equivalent of 8 percent or more in the till. Areas where Wooster has been mapped generally have less shale and a lower calcium carbonate equivalent in the till.)*

*The Wooster series was changed from the Typic Fragiudalfs subgroup to the Oxyaquic Fragiudalfs subgroup in 1994, after the Oxyaquic subgroup was added to the Keys to Soil Taxonomy. The series is included in the current correlations for 12 Ohio counties, correlated between 1966 (Mahoning) and 1989 (Holmes). The depth to a seasonal high water table has appeared in the soil surveys at the following depths, from the oldest survey to the most recent: 4+, >4, >3, >4, >4, >3, >3, 4-6, >4, 2.5-4.0, 2.5-4.0, and 2.5-4.0. We can speculate that the most common soil component in map units identified with the Wooster series may or may not be saturated in any layers within 100 cm of the mineral soil surface in normal years for 20 or more consecutive days or 30 or more cumulative days. In other words, the Oxyaquic subgroup modifier may not be appropriate.*

## OOWA ANNUAL CONFERENCE

The Ohio Onsite Wastewater Association Annual Conference will be held on January 25 and 26th at the University Hotel and Conference Center in Columbus. There are several topics that are pertinent to soil scientists and the new rules. Anyone interested in conducting site and soil evaluations in 2007 should consider attending. CEU's may be available.

Current session topics include:

- Biochemistry and Wastewater Characteristics
- Bacterial Process
- Sewage Rules Update
- Principles of Site and Soil Evaluation
- Water Movement and Treatment in Soils
- Challenges of the Professional Engineer
- Septic Tanks
- Advanced Treatment Systems
- Soil-Based Treatment Technologies
- Analytical Sampling
- Excavation Safety
- Legal Liability
- General Permit and Phase II
- Etcetera

We are hoping all soil scientists actively involved with soil investigations for onsite sewage treatment and disposal will attend. Visit their website (<http://www.ohioonsite.org/?p=295>) for registration information.

## Winter Meeting Agenda and Absentee Ballot

**ANNUAL WINTER MEETING—HIGHBANKS METRO PARK, 9466 US RT 23 NORTH (5 MI N. OF I270)  
WEDNESDAY JANUARY 24TH, 2006 (ORIGINALLY SCHEDULED FOR THURSDAY JANUARY 25TH, 2006.  
Please check your calendars!)**

Agenda—

- 9 to 10AM Social Hour
- 10 to 10:30 GPS, GIS & SOILS -- THE GOOD, THE BAD AND THE DIRTY—Bob Parkinson, NRCS GIS/NRI Specialist, Columbus
- 10:30 to 11 Web Soil Survey, Soil Data Mart, Official Series Description Website, and Other Web Available Technical Resources—Rick Griffin, NRCS Resource Soil Scientist, Zanesville
- 11 to 12PM Stream Morphology and Soils—Dan Mecklenburg, Ecological Engineer, ODNR—Division of Soil and Water Conservation
- 12 to 1 Lunch—City BBQ
- 1 to 1:30 Distinguishing Anthropogenic Properties from Pedogenic Properties Using Soil Taxonomy  
Dr. Neil Smeck, OSU Professor Emeritus
- 1:30 to 2 Ramblings and Career Highlights from Dr. Smeck
- 2 to 3 Discussion on the State-Based ARPACS Certification Program—Mr. Luther Smith, Executive Director of Certification Programs, SSA
- 3 to 4:30 Business Meeting
- 4:30 Adjourn!

### Absentee Ballot

**President**

**Steve Hamilton**

**Aaron Lantz**

**Academic Representative**

**Jerry Bigham** \_\_\_\_\_

**Federal Representative**

**Don Burgess** \_\_\_\_\_

**Private Representative**

**Duane Wood**

**Todd Houser**

**State Representative**

**Rick Buzard** \_\_\_\_\_

Circle or fill in candidate you intend to vote for. Ballot must be received by 1/23/07 to be included in vote.  
Send ballot to AOP Treasurer, c/o Jim Svoboda

**Vote on Dr. Neil Smeck as Honorary Member for his 40+ years of service and dedication to soil science.**

**Must be received by 1/23/07**

**This will not be voted on during Winter Meeting**

**Must be approved by 2/3rds majority of returned ballots**

**Should Dr. Neil Smeck be elected as an Honorary Member? YES \_\_\_\_\_ NO \_\_\_\_\_**

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## Soil-Judging Team Qualifies for Nationals

*Rookies' Surprise Big-School Competition*  
10/19/06

Ten Wilmington College students aren't afraid to get their hands dirty. In fact, they went half way across the country to do it.

WC's soil-judging team traveled earlier this month to Orono, Maine, where they ambushed such big-school competition as Ohio State, Penn State and the University of Maine by placing third in the region and qualifying for the national intercollegiate soil-judging championships to be held later this fall in Utah.

Entering the competition with little experience in soil judging and a team history of never having qualified for the national competition, few had any reason to take Wilmington College seriously.

"The expectations for our team were very low, but the students believed in themselves," said Matt Deaton, the team's coach. "None of these students had ever done this before — we were all rookies, myself included as a rookie coach."

But Deaton is no novice when it comes to soil judging.

Deaton, who teaches soils courses at WC, is a 2001 graduate of OSU's agriculture program, with which he was an individual soil-judging champion. He is a soil scientist with the Ohio Department of Natural Resources and has a soil consulting business, Deaton Soil Services.

Wilmington, which fielded two teams, placed third in the region behind the University of Maryland and Rhode Island. WC's second team placed sixth. Deaton's alma mater, Ohio State, was fourth.

Individually, Andrea Gibson was third with Sam Lahmers and Cody Beacom placing sixth and eighth, respectively. Taking 12th and 13th places were Jason Sneed and Jim McAdams. Rounding out the teams were Preston Simmons, Jeff Rutan, Brent Deidrick, Delwyn Walker and David Miller.

The students spent more than 20 hours during the three days before the competition working in the practice pits, sampling Maine's unique soils and training for the Oct. 7 championships.

"Our success is a testament to them learning the material and applying it," Deaton said, noting the soils in Maine provided "a learning experience in itself,"

Soil judging includes providing technical soil descriptions that determine color, texture, horizons, indications of water and soil structure. Also, participants classify soil orders with regard to its suitability for roadways, buildings with basements and septic tank absorption.

"It's a rigorous competition," Deaton said. "You have an hour to take samples, describe it and classify it."

He said initially Ohio State had been declared as placing third, but, once a computation error was revealed, Wilmington's score eclipsed OSU's by more than 250 points. In light of the judges' mistake, OSU was awarded a chance to go to the nationals as the fourth place finisher.

Sponsors of the soil-judging team's excursion to Maine included the WC Aggies, Southwest Landmark, Rapid Forge Metal and the Association of Ohio Pedologists.

**FROM WILMINGTON COLLEGE WEBSITE**

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MEMBERSHIP DUES, CERTIFICATION DUES, WINTER MEETING REGISTRATION

**Membership Dues** (Add 50% late fee for dues received after 1/31/07). Individuals sending dues in after 3/31/07 will have to reapply for membership and pay appropriate fees.

PRINT NAME \_\_\_\_\_

Soil Professional & Pedologist—\$20 \$\_\_\_\_\_

Affiliate & Student Member—\$10 \$\_\_\_\_\_

**Certification Fees** (ARCPACS Certified, # \_\_\_\_\_, (\$10; Not ARCPACS, \$20) \$\_\_\_\_\_

**Winter Meeting Registration**—Wednesday, January 24th at 10:00, social hour at 9:00. \$25 registration includes City BBQ lunch.

Meeting Registration \$\_\_\_\_\_

Smithsonian Exhibit Donation \$\_\_\_\_\_

Licensing Fund Donation \$\_\_\_\_\_

Total Enclosed \$\_\_\_\_\_

Send payment to

AOP Treasurer

c/o Jim Svoboda

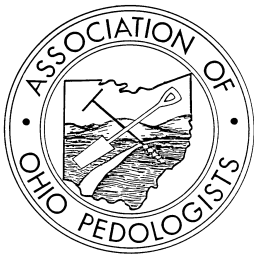
520 West Main St., Suite 3

Cortland, Ohio 44410

**Thanks for your support.**

# Ohio Pedologist

The Ohio State University  
School of Natural Resources



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