



National Association of Geoscience Teachers

Central Section Newsletter

<http://www.nagt.org/nagt/organization/central/index.html>

Fall 2007

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MI-Cris DeWolf
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OH-William Slattery
WI-Robert Baker
WI-Kerry Keen

UPCOMING EVENTS!

- **Tri-State Field Conference,** River Falls, WI, October 5-7, 2007 (Kerry Keen and Mike Middleton)
Paleozoic Stratigraphy to Quaternary Features of the River Falls Area. Special trip to the Rock Elm Impact Structure. See details and registration form attached.
- **GLS-SEPM Field Conference,** SE Ohio, October 5-6, 2007 (Greg Nadon and Dan Hembree)
Variations in Sequence, Fluvial, and Pedogenic Architecture in the Distal Appalachian Foreland Basin; see flier below. [Register now.](#)

FREE REGISTRATION for the first 4 geoscience teachers to sign up. Teachers contact me at janis.treworgy@prin.edu.

North-Central GSA Meeting University of Southern Indiana Evansville, IN, April 24-25, 2008

*Events sponsored by
NAGT Central Section*

CALL FOR ABSTRACTS!
Deadline: January 29, 2008

Theme Sessions (details p. 2)

1. **Program Development and Assessment – Step 1: Identifying Learning Objectives** (Annabelle Foos, convenor)
2. **Initiating a Dialogue on Dealing with Resistance to Teaching the Geologic Time Scale and Fossil Record** (C. Moosavi, Kurt A. Shoemaker, Helen Greer co-convenors)
3. **Inquiry-based, hands-on, class and lab demonstrations** (Mark Francek, convenor)
(cont. p. 2 NC-GSA)

PRESIDENT'S MESSAGE

Every time I leave my house and look around my environment, I give thanks that I work with geology. I use other science fields to explain the intricacies of the earth. I get to work outdoors. And I get to share my love of my field with my students. I am sure many of you feel the same way about your profession.

With the privilege of teaching geology comes the responsibility of teaching it well. Giving general education students an appreciation of their world as well as a basic understanding to support responsible citizenship is important. Imparting geologic concepts to future earth science teachers and to geology professionals will allow them to function within their own careers. They, in turn, will pass the information to others.

Recently, most of us in geoscience teaching have been asked to assess our courses and our teaching. This involves determining techniques to measure how much valuable information and skills students are gaining in the years they are studying with us. The results of the assessment should be used to improve our teaching methods.

Before we assess, however, we must determine the learning objectives in geology and geoscience education. This is going on at many institutions around the country. Why are we all re-inventing the wheel? Is each departmental learning objective correct or are we simply repeating the practices (bad or good) of our own educational experiences? A national dialogue is needed for consistent and appropriate educational goals in geology. A national, general set of such goals could be a guideline for each department.

Last year's Central NAGT Section president, Annabelle Foos, is organizing a theme session, Program Development and Assessment - Step 1: Identifying

(cont. p. 2 President's Message)

(NC-GSA from p. 1)

Theme Sessions:

1. Program Development and Assessment – Step 1: Identifying Learning Objectives

A number of geoscience departments are redesigning their curriculum in an effort to attract more majors. At the same time, their university administration is requiring they develop program assessment plans. Identifying and clearly defining a programs' learning objectives is essential to the successful completion of both these tasks. (Annabelle Foos, University of Akron, afoos@uakron.edu, convenor)

2. Initiating a Dialogue on Dealing with Resistance to Teaching the Geologic Time Scale and Fossil Record

This session seeks to initiate a broad discussion of strategies for creating tolerant and open K-16 science classrooms in which critical scientific concepts such as the geologic time scale and fossil record are presented accurately without allowing them to become divisive based on an individual's cultural or religious background. We especially encourage contributions from K-16 educators, scientists, scholars, school officials, and spiritual and community leaders interested in sharing techniques, triumphs and challenges encountered in this area. (Sadredin C. Moosavi, Tulane University smoosavi@tulane.edu; Kurt A. Shoemaker, Shawnee State University, kshoemaker@shawnee.edu; Helen Greer, University of Southern Indiana, greerp@sigecom.net, co-convenors)

3. Inquiry-based, hands-on, class and lab demonstrations

Demonstrations depicting earth science phenomena can clarify abstract concepts and reinforce the process of scientific inquiry. Eye-opening and exciting inquiry based demonstrations can be a memorable science experience for students. This session features engaging, easy to set up, inexpensive, and safe demonstrations. Guidelines are suggested for having students recognize independent, dependent, and confounding variables associated with demonstrations. (Mark Francek, Central Michigan University, mark.francek@cmich.edu, convenor)

K-16 Geoscience Educator Workshop:

Cheap and Easy Hands-On Earth Science Investigations (Carrie Wright, University of Southern Indiana, clwright@usi.edu, Debbie Vannatter, Evansville-Vanderburgh School Corporation davanna@evsc.k12.in.us)

24 April, 4pm-6pm Cost: US \$15. Max.: 40

Have you ever wondered how to capture student interest when teaching concepts such as glaciers, streams, rocks and minerals, etc.? Let us show you how! This workshop is intended for K-16 earth science educators interested in hands-on activities/demonstrations/labs that encourage student participation and active learning of earth science concepts. Several activities will be demonstrated for elementary, middle and high school grade levels, as well as labs appropriate for college courses. Participants will have the opportunity to test out the activities, get ideas for how to teach them, and will also receive some materials to take back to their classrooms. All activities are aligned with Indiana and national science education standards.

Field Trip:

Building Stones and Cultural Geology of Evansville (Joe Hannibal, Cleveland Museum of Natural History, hannibal@cmnh.org, Sabina Thomas, Baldwin-Wallace College)

Business meeting and luncheon

Friday, 25 April, 12 noon

(President's Message from p. 1)

Learning Objectives, for the spring 2008 NCGSA conference. Please come and discuss your ideas for what we SHOULD be doing to produce excellent geology and geoscience education graduates.

Kathy Bower, President

Guest Lecture 1700 ORPHAN TSUNAMI

On Wednesday evening 24 October, Dr. Brian Atwater will be presenting his IRIS/SSA Distinguished Lectureship presentation on *The Orphan Tsunami of 1700 - A Trans-Pacific Detective Story* at Waubensee Community College in Sugar Grove, IL. The presentation starts at 7PM in our auditorium. The presentation is free, but we would appreciate anyone who is interested to sign up. For questions or further information, please contact David Voorhees, dvoorhees@waubonsee.edu, <http://chat.wcc.cc.il.us/~dvoorhee/> or 630.466.2783. This presentation is part of our *Asset Earth* lecture series, a brochure of the Spring 2007 presentations is available at our Department web site (<http://chat.wcc.cc.il.us/~earth/index.html>). If there are any ideas or volunteers for future presentations, geared to a general audience, please contact David Voorhees.

WEB SITES FOR CLASSROOM ACTIVITIES

Mark Francek, Central Michigan University
(Mark.Francek@cmich.edu)

[ACME MAPPER](#) from Acme labs, One of the best ways to get students interested in maps is by having them view sites of relevance whether it be home, school, or favorite vacation spot. The Acme Mapper makes this easier. Using imagery and topographic maps filed with Google Maps, the site has these advantages: a) the ability to enter GPS coordinates (lat-long or UTM – WGS 84) to find desired locations, b) a marker that indicates where you clicked.

<http://mapper.acme.com/>

[PALEONTOLOGY PORTAL](#) from California Museum of Paleontology, The site serves as an entryway to paleontology in the United States. The centerpiece of the site is an interactive geologic map and associated geologic column that allow the user to explore the paleontology of any state during any time period. The site provides information on changes in the flora and fauna, major geologic events, paleogeography, and past climate and ecosystems.

<http://www.paleoportal.org/>

RUBISTAR from University of Kansas, With greater calls for objective assessment methods, the use of evaluation rubrics is becoming more popular. Constructing a good rubric, however, can be a challenging task. Rubistar makes it easier. Numerous rubric templates for a variety of assignments are available. The easy to edit format makes this a useful site for all instructors.

<http://rubistar.4teachers.org/index.php>

[STELLARIUM DESKTOP PLANETARIUM](#) from Solarium, `Stellarium is a [free] open source desktop planetarium for Linux/Unix, Windows and MacOSX. It renders the skies in realtime using OpenGL, which means the skies will look exactly like what you see with your eyes, binoculars, or a small telescope. Stellarium is very simple to use, which is one of its biggest advantages: it can easily be used by beginners.`

<http://stellarium.sourceforge.net/>

Outstanding Earth Science Teacher (OEST) Award – Call for Nominations

Nominations for the OEST award are still being accepted. Please take the time to nominate a deserving teacher in your state or encourage them to nominate themselves. If you have any questions or need additional information, contact Sallie Greenberg (greenberg@isgs.uiuc.edu).

NATIONAL NAGT NEWS

NAGT Announces New Executive Director

<http://www.nagt.org/nagt/execdir-announce.html>

On behalf of the Executive Committee, we are pleased to announce that Dr. Cathy Manduca has been appointed as the Executive Director of the National Association of Geoscience Teachers. She will assume the full duties of this position for a five year term effective September 1, 2007.

Dr. Manduca is the Director of the Science Education Resource Center at Carleton College in Northfield, MN. She and the SERC staff will manage business operations of NAGT from their offices starting this fall. Dr. Manduca holds a Ph.D. in Geology from the California Institute of Technology and served as the President of NAGT from 2003-2004. She brings considerable expertise in geoscience education and gesocientific research to NAGT with her appointment.

Dr. Manduca will be replacing Dr. Ian MacGregor, who is stepping down after five years of service in the Executive Director position.

We welcome Dr. Manduca's vision, enthusiasm and experience, and we are confident she will prove to be an excellent addition to NAGT in this important leadership role.

Dr. Karen Havholm, President
Dr. Eric Riggs, Vice-President, Chair,
Executive Director Search Committee

NAGT Activities at GSA Annual Meeting, 28-31 October, 2007 – Denver

NAGT is pleased to sponsor a variety of symposia and sessions at the [2007 Annual Meeting](#) of the Geological Society of America meeting:

<http://www.nagt.org/nagt/programs/GSA07.html>

Pardee Keynote Symposia:

P1. Creating Citizen Scientists: Needs and Opportunities to Engage Students and the Public in the Process of Science. The goal of this session is to highlight techniques that allow students and the general public greater access to the process of science, increasing their understanding of socioscientific issues, ideally leading to their participation in society as citizen scientists (presentations by invitation only).

Topical Sessions:

T62. Teaching Sedimentary Geology in the Twenty-First Century. This session encourages abstracts that showcase effective methods of teaching sedimentary geology in the classroom, laboratory, and field. This session will also present outcomes from the 2006 workshop "Teaching Sedimentary Geology in the Twenty-First Century." Oral session.
(cont. p. 4 NAGT at GSA)

(NAGT at GSA cont. from p. 3)

T67. Understanding Mineral Resources: Educating the Public for Sustainable Mineral Resource Development. The session explores how minerals development is portrayed in public education and the media. It explores ways for professional geologists and educators to work together to define realistic options for sustainable and environmentally sound mining in today's global economy. Oral session.

T128. Charting the Future of Geological and Environmental Science Undergraduate Programs. Talks will discuss the steps undergraduate geoscience programs are taking to define key variables, make pivotal decisions, and construct models for charting future successful paths for two- and four-year degree programs in an evolving academic world. Oral session.

T129. Teaching Climate Change and Energy Issues in the Classroom: An Imperative for Educated Citizens and Geoscientists. Presentations will provide geoscience educators essential knowledge and methodologies for effectively communicating salient conclusions and predictions of climate change science and energy policy analysis in the classroom and the public arena. Oral session.

T135. Early Undergraduate Research Experiences. Research experiences in the first two years of college provide students skill sets needed to succeed in upper-level research. This session highlights classroom to independent research projects in community colleges to research institutions. Poster session.

T136. Involving Students with Little Science Background in Authentic Research: Challenges and Victories. In this session, two- and four-year college educators will share ideas for fostering research done by introductory students. The small-group and panel discussion format will help participants explore the topic. Oral session.

T138. Learning in the Field: Effective Strategies for Teaching Undergraduate Geology Outside the Classroom. Presentations are encouraged that explore approaches to teaching geology through field-based learning. Of particular interest are local projects linked to primary course objectives, sequences of projects with a common focus, and stand-alone thematic excursions. Oral session.

T139. The Future of Geoscience Field Courses. This session will focus on future directions of geoscience field camps. Principal themes will include traditional goals of teaching field geology and mapping, recent technological advances, and modern topics like geomorphology, geophysics, and environmental assessment. Oral session.

T143. Geoscience and the Community: An Exploration of Ways to Become Involved. The geoscience perspective is often overlooked to the detriment of society. This session will present various ways geoscientists can promote our perspective through participation in the community and government with an emphasis on being proactive. Oral session.



GSA ANNUAL MEETING 2007

Geoscience Educators' Social Reception

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Everyone welcome!

Saturday, 27 October, 2007

5:00 - 7:00 pm

**Hyatt Regency Denver,
Centennial Ballroom A**

- Cash bar -

Co-hosted by:

GSA Education Committee,
National Association of Geoscience Teachers,
GSA Division of Geoscience Education,
IRIS Consortium, Cutting Edge,
Digital Library for Earth System Education,
EarthScope, UNAVCO,
American Geological Institute,
National Earth Science Teachers Association

YOUR E-MAIL ADDRESS

If you change your email address, please tell me –
janis.treworgy@prin.edu. Thanks!

ANNOUNCING
Dorothy LaLonde Stout
**NAGT PROFESSIONAL
DEVELOPMENT GRANTS**



In honor of Dottie Stout's outstanding work and lifelong dedication to Earth science Education, NAGT will award three grants in support of the following activities:

- Participation in Earth science classes or workshops
- Attendance at professional scientific or science education meetings
- Participation in Earth science field trips
- Purchase of Earth science materials for classroom use

One grant of \$500 will be awarded to a Community College Faculty

One grant of \$500 will be awarded to a Community College Student

One grant of \$500 will be awarded to a K-12 Educator

Eligibility: Community College Faculty and K-12 teachers who teach one or more Earth science courses and Community College students actively pursuing a career in the Earth sciences are encouraged to apply for these awards.

Application Process: Interested applicants are asked to submit a 1-2 page proposal describing how the grant will be used to support their professional growth in, or classroom teaching of Earth science.

Applications must be received by April 1 with awards being made by April 15th. Please include your name, address, telephone, and email along with your proposal and send all materials to:

Dottie Stout Professional Development Grants
The National Association of Geoscience Teachers
P.O. Box 5443
Bellingham, Washington 98227-5443

**MINUTES OF CENTRAL SECTION
OF NAGT BUSINESS MEETING**

SC & NC GSA, Lawrence, KS, April 13, 2007

<http://www.nagt.org/nagt/organization/central/index.html>

- **Welcome and introduction of attendees and officers** (Annabelle Foos, President)
- **Minutes of previous meeting, approved** (Janis Treworgy, Secretary)
- **Treasurer's Report** (sent by Ed Hansen)
- **Elections, slate was approved unanimously** (*new terms take effect at end of meeting*)
 - New **President** – Kathleen Bower, Eastern Illinois U (kmbower@eiu.edu)
 - New **1st Vice President** – Mark Francek, Central Michigan (Mark.Francek@cmich.edu)
 - New **2nd Vice President** – Carrie Wright, University of Southern Indiana (clwright@usi.edu)
 - **Secretary/Editor** for 2007-2010 – Janis Treworgy, Principia College (janis.treworgy@prin.edu)

Nominations

- **2nd Vice President for 2008**

The officers have decided that from now on we will try to pick a 2nd VP from the area in which the NC-GSA will be held the year they take office (2008 in this case). The 2nd VP will then coordinate with the Sectional GSA Planning Committee in putting together the education program for the subsequent year. The Duties of Officers has been rewritten to reflect this change. Carrie Wright is on the Planning Committee. Since it is uncertain at this time where this meeting will be (normally this is known at this point), we held off nominating someone for 2008.
- **OEST – Outstanding Earth Science Teacher Awards 2006-2007** (sent by Sallie Greenberg)
 - Record number of nominations this spring
 - Nominations still being accepted through June 1, 2007 – send to Sallie Greenberg, OEST Chair (greenberg@isgs.uiuc.edu)
- **NAGT (National) Report** – no report
- **Old Business**
 - **Newsletter** (Janis Treworgy, Editor)
 - Solicited content from officers/members
 - Email distribution
 - 14.6% of members (48/329) did not receive a newsletter due to lack of a current email address
 - Newsletter is posted on our web page

(cont. p. 6 Minutes)

(Minutes cont. from p. 5)

- **Events Sponsored by Central Section NAGT 2006-2007**
 - Combined Great Lakes Section of SEPM and Tri-State Field Conference, Rock Island, IL – September 30, 2006
 - New Perspectives on Paleozoic Epeiric Seas and Carbonate Platforms of the Iowa and Illinois Basins
 - Led by Jed Day, IL State University, Normal
 - > 100 participants, 12 university campuses
 - NC-GSA meeting, Lawrence, KS, April 2007
 - One theme session – Issues in Geoscience Education (poster & oral)
 - Luncheon business meeting
 - Staffed NAGT booth
 - **New Business**
 - **Future Activities**
 - **Tri-State Field Conference**, River Falls, Wisconsin, October 5-7, 2007 (Kerry Keen and Mike Middleton)
 - **GLS-SEPM Field Conference**, SE Ohio, October 5-6, 2007 (Greg Nadon)
 - We voted to sponsor and subsidize each of the two field trips by the amount of \$250 each provided they offer a lower registration fee for students and K-12 teachers
 - **Proposed NAGT program, April 24-25, 2008 NC-GSA, Evansville, IN**
<http://ncgsa.unl.edu/misc/meetings.htm>
 - Paul Doss, Chair of the Sectional Planning Committee for the Evansville meeting reported that Carrie Wright, our newly elected 2nd VP, is coordinating the K-16 education program for the meeting.
 - The officers have been discussing by email the program for next year
 - with Carrie and Mark Francek, both of whom could not make this meeting. After some discussion, we decided to sponsor the following items:
 - **K-12 Workshop**
 - “Easy-setup, Easy-to-use, and Cheap Earth Science Demos” (Carrie Wright and Debbie Vannatter, Evansville-Vanderburgh School Corp.)
 - Carrie will work on arranging professional development credit as an option for participants
 - Suggested schedule: 3-6 pm on Thursday of the meeting
 - We voted to provide up to \$250 in financial support for the workshop.
 - **Theme sessions:** We discussed several possible topics and settled on these:
 - Learning Objectives in the Geosciences (Annabelle Foos, convenor)
 - Evolution (Penny Greer, Dean Moosavi, Elizabeth Heise, co-convenors)
 - Inquiry-based, hands-on, class and lab demonstrations (Mark Francek)
 - **Field Trip**
Proposed a field trip on local buildings and geology – WE NEED SOMEONE TO LEAD THIS - did someone volunteer?
 - **Other**
Paul Doss recommended that the executive directors of NAGT and GSA support the planning committee by sending a letter to the supervisor of each member of the planning committee stating how essential the work of the planning committee member is to his/her profession. Members should be asked who the most appropriate person would be.
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Society for Sedimentary Geology
Great Lakes Section

GLS-SEPM Field Conference 2007—October 6-7, Athens, Ohio

Variations in Sequence, Fluvial, and Pedogenic Architecture in the Distal Appalachian Foreland Basin, SE Ohio

Greg Nadon and Dan Hembree of Ohio University will lead the field party across much of the Pennsylvanian section in SE Ohio along US routes 33 and 50. The outcrops will include the upper Pottsville, Middle to Upper Allegheny, Conemaugh and Monongahela Groups. A lot has been learned and there has been significant revision of the story since the last large viewing during the 1998 GSA trip. We will look at the effect on marine sequences and fluvial architecture of tectonics, eustasy, and climate (don't we always?) but this time we have some interesting new information from detailed studies of paleosol profiles and terrestrial ichnology.

Details, Details:

Tentative schedule:

Friday, Oct. 6 — 6-9 PM: registration, talk: field overview, laffs

Saturday, Oct. 7 — 8 AM - 5 PM: field trip, transportation in Ohio University vehicles only
6-9 PM: dinner, talk, GLS-SEPM business meeting

Sunday, Oct. 8 — informal field trip to be arranged on Saturday night.

Registration: A registration fee of \$65 includes transportation, box lunch, and dinner on Saturday. [Register now](#) through the secure site at the Ohio University Lifelong and Distance Learning Center.

Lodging: [General lodging information](#) Group rates will be available at Amerihost and the Ohio University Inn.

Where: Registration, etc. will occur on campus, details to follow. [General campus/city map](#)

Conference Flyer

Journal of Geoscience Education

Published by National Association of Geoscience Teachers (NAGT)

NAGT Membership Application or Renewal Form / JGE Subscription Form

Name: _____ Phone: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____ Country: _____ Postal Code: _____

Fax: _____ Email: _____
(email address is required to receive newsletters)

____ College/University Professor @ _____

____ Precollege Teacher @ _____

____ Other @ _____

Checks, MasterCard, or VISA (US funds only) are payable to:

National Association of Geoscience Teachers

Mail to: NAGT, PO Box 5443, Bellingham, WA 98227-5443

☐ Check

☐ Credit card: MC/VISA (circle one) Card #: _____

Signature: _____ Exp. Date _____

Membership Rates (US funds)

Regular \$45 _____

Outside USA \$57 _____

Student* \$20 _____

Student* outside USA \$35 _____

Retired NAGT member \$30 _____

Library Subscriptions

Regular \$135 _____

Outside \$174 _____

_____ New _____ Renewal

The membership year runs from January through December, and members receive five issues of JGE per year. Subscriptions received after June 1 will begin receiving the *Journal* in January of the following year. Back issues are available for \$15 (foreign \$18) each.

*To qualify for student rate, indicate and obtain verification from a NAGT member: ____ Undergraduate ____ Graduate

Signature of NAGT member

School



NATIONAL ASSOCIATION OF GEOSCIENCE TEACHERS

OUTSTANDING EARTH SCIENCE TEACHER

Nomination Form

Name of Nominee _____ Years Teaching _____

Home Address (street, city, zip) _____

Telephone (Home) _____ (Work) _____ E-Mail _____

College/University Attended _____

Degrees _____ College Major _____ Minor _____

Annual percentage class time devoted to teaching earth science _____ Grades _____

Name of School _____ Telephone _____

School Address _____

Name and Address of School Superintendent _____

Name and Address of Local Newspaper _____

Respond to the following, using no more than one (1) typewritten page per item. Include supporting documentation in the form of letters, products, or publications as appropriate.

1. Teaching ability: What techniques does the nominee/applicant employ? What is his/her teaching philosophy? Are his/her courses challenging and comprehensive? Do students enjoy his/her classes?
2. Inventiveness: What new ideas, materials, software, instructional strategies, or techniques has the nominee/applicant developed?
3. Initiative: How does the nominee/applicant handle new situations and accommodate students of various abilities? Be specific.
4. Cooperativeness: How does the nominee/applicant cooperate in the total school program and in other academic areas?
5. Strengths: What are the principal strengths of the nominee/applicant?
6. Community involvement: How is the nominee/applicant involved in community and/or youth activities?
7. Other activities: List other professional activities and noteworthy accomplishments.

Name of Recommending Person (Nominator) _____

Address _____ Telephone _____

Nominator's Signature _____

Send all forms, materials, and supporting documentation in one package to:

Sallie Greenberg, OEST Chair of Central Section NAGT
Illinois State Geological Survey
615 East Peabody Drive
Champaign, IL 61820

Please feel free to copy this form for nomination purposes.