CENTRAL
NEW YORK
ASSOCIATION OF
PROFESSIONAL
GEOLOGISTS

CNYAPG

INSIDE:

We will convene on Thursday, February 11 at 5:30 PM, back at the Glen Loch in Jamesville for a joint meeting with the ASCE. It will be a full evening you won't want to miss! We look forward to seeing you then!

February CNYAPG/ASCE Joint Meeting: A Three-Phase Approach

Phase 1: *Student Poster Session***:** CNYAPG/ASCE members will be joined during the dinner hour by college and high school students as they display and discuss their current science and engineering research projects. Students and professionals will benefit from the interaction. Poster displays will range from thesis research topics to science fair projects.

Phase 2: *Dr. William Kelly*, President of the New York State Council of Professional Geologists will present an overview of the organization's efforts to achieve professional licensure for geologists in New York State.

Phase 3: *Kevin M. Bernstein, Esq.,* presents ***How Attorneys and Consultants Can Work Together Productively - Within or Outside the Court Room***

Just as being a practicing attorney is not usually taught in law school, being a consultant or expert witness is not usually taught as part of a consultant's professional training (whether the consultant is a geologist or engineer). Unfortunately for consultants, working with attorneys is a fact of life. Whether there are environmental legal issues involved or a matter is headed to court, attorneys always seem to be involved. However, this fact, unfortunate or not, can still result in a productive team working environment, as long as each professional knows the boundaries of their expertise.

Mr. Bernstein will talk about some of the different areas of the law in which geologists and engineers and attorneys (solid waste, wetlands, and mining) work together, what expectations attorneys and consultants should have of each other when working together, and the different ways attorneys can utilize the expertise of consultants. Mr. Bernstein will focus on utilizing a consultant as an expert witness and how a consultant can be an effective witness.

Kevin Bernstein is a partner in the environmental practice group at Bond, Schoeneck & King, LLP. He has extensive environmental experience with matters involving solid and hazardous waste, petroleum contamination, PCBs, wetlands, landfill permitting, mining, wastewater treatment, hazardous substance and petroleum storage tanks, SEQRA, and in defense of claims asserted by federal and state governmental agencies for cleanup costs, penalties, and other relief under federal and state Superfund statutes, New York State Navigation Law, and the Clean Water Act.

Mr. Bernstein also has extensive experience in toxic tort litigation, and defending environmental criminal investigations. Mr. Bernstein has been involved in a number of trials or hearings at which experts with a geology/hydrogeology or engineering background have testified.

PRESIDENT'S PAGE

Regarding last month's cancellation: Once again we had to make a hard decision concerning cancellation. Luckily, the CNYAPG and ASCE Board members were in agreement on the weather cancellation issue! I know my feelings are shared by other geologists and, likely, engineers as well (lawyers, maybe?): We should not be stopped by weather conditions. Yet, common sense prevailed with the heavy winds and snow, and we canceled. Thank you to all who helped spread the word. Gerry Gould will always post updates and cancellations on the CNYAPG web site. Apologies go out to the few (two) who did show up last month. I would venture to bet on their discipline!

This situation does bring up a good point. CNYAPG could further benefit you by having updated telephone and e-mail addresses on file. As you ***renew your membership*** this month, be sure to include this information on the renewal form, or provide it to Gerry Gould by visiting our Web site or calling it in directly. Additionally, leave your name and number when making reservations in advance with Buck Gabriel.

We had an excellent pre-registration for the January meeting. We hope you all return this month. Kevin Bernstein agreed to reschedule and, from talking with him, his presentation promises to be interesting to all disciplines. This month will be a full evening and we anticipate that it will be a bit different and fun.

Professional mentoring and tithing: Part of CNYAPG's intention for including a Student Poster Session in the meeting agenda is to recognize the importance of professional mentoring. I also like to include the word tithe in the sense of giving back from one's professional prosperity and gain for the good of the organization/group/profession. Giving of your professional prosperity does not necessarily mean financial donations, although most organizations and students would welcome such gifts. Consider volunteer time such as participation in CNYAPG, judging local science fairs, talking to students at all levels, to name a few, as professional tithing and on the right path to mentoring. As professionals, consider the options available to give of your time to students, younger colleagues, and organizations like CNYAPG.

Mentoring has become a corporate buzz word in an attempt to make young professionals feel incorporated. However, stories suggest that many programs can fall short of actually achieving this intent; however, they do provide circumstance for a Dilbert cartoon. I wonder why the corporate arena has a more difficult time actually achieving mentoring. Consider the meaning of the word mentor, "a wise and trusted counselor or teacher."

There are good reasons why individuals should consider looking beyond their current work establishment for a mentor. It is rewarding to find another individual with more professionally-related experiences to assist us in making personal decisions during professional changes and challenges. A mentor should be someone capable of listening, helping you identify your goals and how to achieve them, willing to give of their time and experiences, not bound in opinion by personal agendas, or corporate philosophy and rhetoric, and has your best interest in mind.

Obviously, a mentor need not necessarily be an elder. Often close friends or colleagues can provide the perspective you need. A mentor, in my opinion, is someone who not only provides advancement on a technical level, although professionally this is important and necessary. We all continue to need individuals, organizations, short-courses, and continued education venues to maintain technical proficiency. Mentoring and tithing should go beyond merely the transfer of technical experiences.

I remember my first opportunity to provide professional tithing to a group of Boy Scouts involved in a collect-and-identify-rocks project. I was a graduate student, requiring my own mentoring, yet to these kids, I was real geologist. I struggled to identify weathered remnants of pebbles glued to the inside of a dresser drawer. The key was not to be concerned about being correct in the identification. I was not there as a technical resource alone; I was there to exhibit excitement about the process of learning. To invoke interest and participation makes for a greater contribution to all involved. Don't take my word for it, try it yourself in your community! **Join CNYAPG on February 11, 1999 as we talk with students during the pre-dinner Poster Session.**

Join together for talk and entertainment to help ease the passage through the quantitatively shortest, yet mentally longest, month of the year.

Vita DeMarchi P.G.
CNYAPG President

E-Mails from the Membership

A true story from the halls of a local consulting firm, upon receiving notice of the cancellation of the December CNYAPG/ASCE dinner meeting:

Vita,

I kidded Matt Millias (ASCE member) that it must have been engineers who canceled out; the geologists wouldn't let a little weather stop them. However, in the interests of geologist-engineer cooperation (and technical evaluation of the data), we finally decided to blame it on the lawyer.

Looking forward to the next meeting.

Regards,
Steve Rossello

Apologies Are in Order!

In our rush to get the newsletter to the printer before the holidays, we neglected to credit Bill Morrow of Parratt-Wolff for his contribution. when you see Bill at the next meeting, please let him know you enjoyed his item and that you look forward to his presentation in March. Sorry, Bill! It won't happen again...

GEOLOGIC NEWS

In the Know...

with Jon S. Fox

Natural "Greenhouse Effect?!"

Recent paleoclimatic research (*GSA Bulletin*, v. 111, pp. 52-70) presents additional evidence from paleosols in the Sydney basin (Australia), which suggests that the paleoclimate after the extensive *mass extinction at the end of* the Permian showed pronounced warming (obviously having nothing to do with industrial air emissions. The Permian mass extinction is the most profound mass extinction in the geologic record. Recent published theories regarding potential causes of the Permian-Triassic mass extinction include oceanic anoxia, overturn of carbon-dioxide-enriched deep ocean water, massive flood basalt eruptions in Siberia, catastrophic methane release from oceanic and/or permafrost clathrates, and extraterrestrial impact(s). The paleosol data represent a terrestrial addition which apparently compliments previous research suggesting a relatively rapid increase in global temperature at the Permian-Triassic boundary. Previous data and interpretations are based predominantly on marine-derived data, including paleomagnetic, isotropic, radiometric dating, and paleontological data. However, additional research regarding atmospheric modeling is required to more adequately compare theories to observed atmospheric changes. An obvious implication of this research involves re-examination of the relative importance of anthropogenic contributions of carbon dioxide and other "greenhouse" gases relative to natural contributions of these gases. Additional research may suggest that humanity ultimately cannot regulate our physical world to our own pre-conceived notions of acceptable chemical and physical composition and property.

Don't Ignore the Minerals!

Iron and sulfate reduction may play a dominant role in microbial degradation of organic contaminants in the subsurface, particularly in anoxic subsurface environments. Current research published in *Bioremediation Journal* (v.2, pp. 259-276) suggests adequate characterization of natural attenuation remediations involving iron and sulfate geochemistry should include analysis for iron and sulfur minerals rather than being limited to groundwater concentrations. However, such analyses are hindered by sampling considerations involving preservation of the ambient oxygen content in the subsurface zone of interest. The authors outline several techniques for sampling and analysis to preserve anoxic sample conditions and/or minimize oxygen contamination of samples. The proposed techniques may be cost-effective for medium- to large-scale natural attenuation projects. However, some extra sampling effort (apparently minimal) and a specialized arrangement with a competent environmental laboratory probably would be required to obtain reproducible, valid analytical results.

PAH from Coal or Crude Oil?

Geochemical and geological investigation of marine sediments in the Gulf of Alaska and Prince William Sound suggests many areas of polycyclic aromatic hydrocarbons (PAH) represent naturally-occurring background concentrations derived from coal particles naturally present in the sediment, not from crude oil-derived PAH from the contamination event popularly known as the Exxon Valdez *(Environmental Science and Technology*, v. 33, pp. 34-42). The authors collected and analyzed samples of marine sediment, coal from local outcrops, unweathered crude oil, and local pelagic and benthic organisms. Analytical results suggest the geochemical PAH signature of coal is distinguishable from crude-oil derived PAH. Analysis of salmon and mussels for PAH revealed that the coal PAH is not bioavailable, whereas the petroleum-derived PAH is bioavailable. These results have implications for remediation of petroleum releases at coastal sites where local geology or anthropogenic activity (i.e., coal-burning plants) suggests coal clasts are a constituent of the affected sediments.

Recent Earthquakes in New York State

Seismic data from the Lamont Cooperative Seismic Network (LCSN) operated by Lamont-Doherty Earth Observatory is available over the Internet. A review of recent data from LCSN revealed the following earthquakes were identified in northern New York State.

Date	New York Location	Depth (km)	Magnitude (Mc)
7/31/97	52.3 km SE of Watertown	5,4	3.0
10/12/97	21.0 km W of Malone	14.0	2.9
10/13/97	30.7 km SE of Canton	4.2	3.0
10/20/97	21.1 km of Malone	13.3	1.5
6/9/98	21.9 km W of Plattsburgh	5.0	2.9
7/9/98	18.2 km W of Plattsburgh	0..0	2.5
7/24/98	24.1 km of Malone	4.5	2.2
12/5/98	21.7 km S of Canton	0.1	1.7
12/5/98	41.6 km S of Saranac Lake	5.0	2.0
12/25/98	53.5 km N of Brockport	9.6	3.0
1/5/99	21.5 km of Malone	6.0	2.3
1/5/99	22.2 km W of Malone	7.0	2.0

Review of epicenter depths of northern New York earthquakes reveals the vast majority of the earthquakes are centered well into the Precambrian basement (shallow to moderate depths into the continental crust). The most active area recently is the vicinity approximately 21-22 kilometers west of Malone. This area is located in northwestern Franklin county immediately north of the hamlets of Brushton and Moira on United States Highway 11.

Reminder - Membership Renewals Due

CNYAPG renewal forms were provided in the November 1998 newsletter. Renewals are still a low, low $20 per year! All CNYAPG memberships expired in December. If you need a form, you can download it from our Web site: ***www.dreamscape.com/cnyapg*** or call Gerry Gould (CNYAPG Secretary) at 437-1142. Don't miss out on any of the benefits of your membership. Renew today!

Cool News from the Internet

From the Association for Women Geoscientists News: www.awg.org

Request for Outstanding Photos from children's Book Project: Most geologists understand the aesthetic qualities of rock. A children's *Art of Rocks* Book Project has been designed by photojournalist Lou Jacobs, Jr., a writer of over 40 books on photography and numerous children's books. The *Art of Rocks* Book Project is designed for 8 to 12 year old children, to interest them in science, in the aesthetics of geology, as well as the important lesson of seeing the art in rocks. The planned book will contain numerous color and black and white photos combined with limited text about the interesting features or special history of the photo.

The *Art of Rocks* Book Project is requesting those with appropriate photos to submit them for the upcoming book. Submitters of photos selected for publication will receive a free copy of the book and a listing in the photo credits. Rules of submission: Please send color slides or 4" x 6" prints to James A. Jacobs, Art of Rocks Book Project, 707 View Point Road, Mill Valley, CA 94941; work phone (510) 232-2728, ext. 222; e-mail: augerpro@jps.net. The photos are requested by February 15, 1999. In addition to the photos, please submit a brief discussion of the subject matter and a few sentences about how the photo came to be taken and a little about the photographer.

American Geological Institute Seeks Summer and Semester Interns: The American Geological Institute is accepting applications for both semester and summer internships with the Government Affairs Program. The internships are open to both undergraduate and graduate geoscience students with an interest in federal science policy. Activities include:

- Monitoring and analyzing geoscience and environmental legislation in congress.
- Updating legislative and policy information on AGI's World Wide Web site.
- Attending House and Senate hearings and preparing summaries.

The summer internship lasts 12 weeks and carries a $3,000 stipend. The fall semester internship lasts 14 weeks and carries a $3,500 stipend. The application deadline for both internships is March 1. For details on how to apply and more information on the internships, visit the AGI Web site at ***http://www.agiweb.org/gapac/intern.html*** or e-mail ***govt@agiweb.org***.

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PhytoWorks Update from Michael Coia

PhytoWorks and Doe's Brookhaven National Laboratories to Sign $1.5 Million Agreement to Develop Heavy Metal and Radionuclide Phytoremediation Solutions: On January 22nd, PhytoWorks, Inc. announced that the US Department of Energy (DOE) has approved a Cooperative Research and Development Agreement between PhytoWorks and Brookhaven National Laboratories (BNL) in the amount of $1.5 million. PhytoWorks and BNL will analyze the ability of PhytoWorks' genetically-engineered plants, already proven to take up mercury, to cost-effectively remediate radionuclides and other heavy metals.

Radionuclide and heavy metal contamination account for a significant portion of the remaining $147 billion in projected cleanup costs at DOE installations. 90% of DOE sties have radionuclide contamination and 55% are contaminated with heavy metals. "Phytoremediation" solutions, which use plants to take up and store these contaminants for recovery, are expected to reduce cleanup costs by 60% to 90% versus conventional remediation methods. This could save the DOE and taxpayers billions of dollars.

We congratulate our December speaker, Mike Coia, and PhytoWorks for this tremendous opportunity.

You are Still Needed!

Do you have any ideas for a CNYAPG sponsored Spring Field Trip or Seminar? Let us know at **www.dreamscape.com/cnyapg**.

Keep the newsletter input coming. Send ideas, articles of interest, requests, and questions for the newsletter to Vita DeMarchi at **vdemarchi@secor.com**.

✹ CONTRIBUTIONS TO THIS MONTH'S CNYAPG NEWSLETTER WERE MADE BY:
Vita DeMarchi Jon. S. Fox
Gerry Gould
Nancy Gensky Georgia Popoff

CNYAPG CALENDAR

Thursday, February 11, 1999

CNYAPG and ASCE join to welcome Kevin Bernstein, Esq., with Bond, Schoeneck & King, to discuss the professional working relationship between geologists, engineers, and attorneys. Dr. Bill Kelly, president of the New York State Council of Professional Geologists (NYSCPG) will give an overview of professional geologist licensing status. See meeting details below. Additionally, regional college and high school students will display their research posters during the pre-dinner hour. Join us early to meet and talk with students.

Friday, March 5, 1999

Professional Seminar: ***A Review of Geology for the Practicing Geologist and the Pennsylvania Professional Geologist Examination***. A unique professional review course covering both the fundamentals and practice of geology. Presented by the Pennsylvania Council of Professional Geologists (PCPG) to serve the professional interests of geologists. Contact: PA PCPG, PG Review Course, 717 North Second Street, Suite 300; Harrisburg, PA 17102-3211; (717) 238-1222.

Thursday, March 11, 1999

CNYAPG will host a series of short technical presentations. The prospective agenda includes "Practical Considerations for Well Design, Installation, and Development," by Bill Morrow of Parratt-Wolff, Inc., and a new method in PCB, dioxin, and PAH screening techniques by Columbia Analytical Services, Inc.

March 22 - 24, 1999

Northeastern Section GSA Meeting, in Providence, Rhode Island. Contact O. Don Hermes, Department of Geology, University of Rhode Island; (410) 847-2192; e-mail: ***dhermes@uriacc.uri.edu***. Call by February 12th for the pre-registration fee.

Thursday, April 8, 1999

Members of CNYAPG have voiced an interest in an update on **Onondaga Lake**. We are coordinating speakers to accommodate this request. Tentatively, the evening will include a viewing of a slide show produced by Atlantic States Legal Foundation to generate new excitement about the lake's future and trace the history that created one of the most polluted bodies of water in the U.S.

April 15 & 16, 1999

Unified Watershed Assessment: ***Where Do We Go From Here?*** The American Water Resource Association Mid-Atlantic Conference to be held in Matamoras, PA. Unified watershed assessments, restoration priorities, and strategies are cornerstones to the Clean Water Action Plan, an initiative designed to support continued progress toward clean eater across the nation. Join a multi-disciplinary group to reflect on key questions. For info, contact: Glenn Maurer at (717) 787-2666, or e-mail him at ***maurer.glenn@a1.dep.state.pa.us***.

May 1999

CNYAPG Walking Tour with Mr. Bob Preyer of the MOST. Tour downtown Syracuse, reflecting on the geologic origins of local building materials and stone work. The tour will conclude with dinner and end-of-year party at a downtown pub location.

Directions to the Glen Loch

February CNYAPG & ASCE Joint Meeting: Back to the rustic setting at the Glen Loch. Pre-dinner hour features munchies and cash bar during the Student Poster Session, beginning at **5:30 PM**. Dinner will start by **7:00 PM**. Our guest speakers will take the podium at **8:00 PM**. The cost is $15 when reserved at least 24 hours in advance and $17 that evening. Students with IDs enter for $10. H***elp us plan; reserve early Contact Buck Gabriel at (315) 437-6100, ext. 2656.***

CUT & PASTE
MAP HERE

The Board Members would like to thank all of the corporate and individual supporters of CNYAPG throughout the past year. We would like to encourage you to continue your pledge of support throughout the upcoming year. Contact Steve Crook at (315) 437-1429 or (518) 827-5720 details.

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CNYAPG MISSION STATEMENT

The CNYAPG was founded in 1993 to strengthen and advance the geologic sciences as a profession and to provide an open forum for the exchange of ideas; to promote the protection of public welfare through the professional practice of geologic sciences; to inspire and maintain the highest standards of professional conduct, business ethics, and personal honor of the membership; to foster the spirit of scientific research throughout the membership; to publish and otherwise disseminate information related to the geologic sciences and associated technologies; to maintain and encourage intra- and inter-association activities, to enhance the association's programs, and to encourage the affiliation of individual members with other scientific and technical organizations.