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**ASSOCIATION FOR WOMEN GEOSCIENTISTS**  
To **Encourage** the Participation of Women in the Geosciences,  
To **Exchange** Educational, Technical, and Professional Information,  
and to **Enhance** the Professional Growth and Advancement of  
Women in the Geosciences

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## Member Profile: Lourdes Lubas, Micropaleontologist

Lourdes Lubas has been an AWG member since 1990: "Ms. Leuren Moret of the San Francisco Bay Area Chapter recruited me. She is a really nice lady and very accommodating, too. She became a friend of mine later on. It was during the 1989 Geological Society of America meeting in St. Louis, Missouri, that I met Leuren. Through her, I was invited to two AWG meetings. The first was the AWG breakfast meeting in St. Louis where I met more members of AWG, including the then-President of AGI who was, if I remember it right, also our speaker. On the second occasion, Dr. Tanya Atwater, if I remember it right, was the speaker in the Palo Alto meeting. I enjoyed meeting other women geoscientists from all over the Bay Area Chapter and beyond. I par-

ticularly remember the Field Trip to Marin County which successfully enjoyed the participation of many of the members. I brought along a friend of mine who is also a geologist. We had fun exploring as the invited lecturer spoke about the geology of the area."

Lourdes was a Visiting Scientist in the Museum of Paleontology at the University of California-Berkeley from August 1989 through August 1990 under the tutelage of Dr. Jere H. Lipps, a micropaleontologist. Her position was funded by the USAID. Lourdes notes that "as my stint in the museum came to a close, my participation in AWG activities also came to a halt. However, I have maintained my membership since then and also my friendships with Leuren, Dr. Lipps, other museum staff, and AWG members." She

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## President's Column

It's time to say farewell since this is the last address I will be making as your President. I have had a thoroughly enjoyable and educational experience this year. Many accomplishments were made, but not without the volunteers dedicated to AWG. I would like to thank the chapters, officers, delegates, committee chairs, liaisons, and many other individuals who have contributed to AWG's success. I also appreciate deeply the contributions of Jeanette Leete who, as our Executive Director, has worked through the years to keep the Association on track.

AWG's next Board of Director's meeting will take place October 2-4 in Las Vegas, Nevada. Some important issues to be covered at the meeting will include proposed changes to AWG's bylaws and policies that would affect the manner in which Association Directors are removed, institute a conflict-of-interest statement and policy, and officially recognize the AWG Executive Director's position. Please contact your delegate if you would like to review the proposed text for these changes and submit your comments. We will also be planning our 1999 Spring Board meeting and are now accepting proposals from Chapters and individuals who would like to host a meeting in their area. Having a meeting in your area is a terrific way to see how the Association functions; it can also help to attract new members to your Chapter, or can help to inspire the formation of a Chapter in your area if one

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— Lourdes Lubas in the field. She's on the left with the big buri hat!

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## Ethics Statement

AWG members shall conduct themselves in an ethical and professional manner.

# Gæa

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*Gæa* (pronounced je a) is named after the Greek goddess of the earth.

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## President's Letter, cont.

doesn't already exist. Please contact Debra Williams, AWG's President-Elect, for more information.

Several Association officers will be passing on their responsibilities at the October meeting and deserve much recognition for their contributions to AWG. Allison Kozak whose determination made AWG a fully functioning organization will be stepping down as Past-President. Sarah Stoll, who has served as Treasurer for the past two years (and in almost every other officer position that AWG has), will be completing her term. Linda Schieber, who has served as *Gæa* Editor for the past two and a half years, will also be moving on. I also want to thank Janet Thornburg who will be leaving the Outstanding Educators Award Committee, which she has chaired for the past seven years, and Tania Brice Coffin who has served the AWG Foundation for the past three years and has completed her term as

Past-President. Other officers who will be staying on for the next year include Sean Hunt as Association Secretary and Web site Master, and myself as Past-President. Rachael Craig will also be fulfilling her second year as an At-Large Delegate.

Lastly, I extend my congratulations to the officers and delegates that will be taking over beginning at the Las Vegas board meeting. Some of the familiar names include Debra Williams who will be taking over as President and Pranoti Asher who will begin her second term as At-Large Delegate. Joanne Kluessendorf, who has served as one of our outstanding At-Large Delegates for the past two years, has agreed to take over the remainder of the Editor's term. Some of the new names include Maggie Toscano who will be taking over as President-Elect, Laurie Scheuing who will be taking over as Treasurer, and Kathleen E. Johnson who will become the third At-Large Delegate. Congratulations to all of you and thank you for your generous contribution to AWG.

## Member Profile, cont.

continues her AWG membership through her parents, who live in Eagle Rock, California, receiving her copies of *Gæa* and the AWG-LA newsletter whenever someone from the States visits her in the Philippines.

"I am a geologist by profession, and my specialization is micropaleontology/biostratigraphy of Tertiary small and large foraminifera. I am currently expanding my scope to Mesozoic and Paleozoic larger foraminifera. I have been working as a Paleontologist in the Energy Research Laboratory of the Department of Energy since 1986, and as a Supervising Science Research Specialist of the Paleontology Section from 1993 to present. As a Section Chief, I have initiated projects applying sequence stratigraphy and sequence biostratigraphy in the Department's search for new oil and gas fields."

Lourdes became interested in geology when her best friend in high school told



her to take a course in geology at college. Her friend told Lourdes that her sister, who was a geologist, was enjoying a job that paid her considerably well. "Persuaded by our Assistant Principal not to take a medical career which was my initial choice, I then took up the B.S. Geology course when I enlisted at the State University, the University of the Philippines."

"I never thought that the geological profession could be this fulfilling. Had someone showed me the way earlier in life, I

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## Editorial

I'd like to begin my first Gaea editorial by thanking Linda Schieber for the fine job she did as editor and by promising to uphold her high standards. I am still amazed at how she was able to produce all those excellent issues of Gaea while maintaining such a diverse and crowded teaching schedule. I find myself very fortunate to have mentors like Linda, her editorial predecessor Sarah Stoll, and Managing Editor Jennie Leete to help guide me as I assume my new responsibilities.

I have often been lucky that way. Although I grew up at a time when young women typically were guided into three main career tracks (secretary, nurse, teacher), I dreamed of more exotic options. Fortunately, my parents, especially my father, never even hinted that I should limit my choices because I was a girl. By the time I reached high school, the women's movement had begun, and I was lucky to have a progressive academic advisor. I was even fortunate to have a woman, Katherine Graecan Nelson, as a professor at the beginning of my geological education. What an impression she made on me! Katherine was the first woman to receive a doctorate in geology from Rutgers, a petroleum industry veteran, long-time curator of the Greene Museum (a National Historical Landmark in part for its role in women's science education; Gaea, vol. XVII, No. 3, 1994), and a respected university professor—in short, a woman my mother's age who had made it in a male-dominated profession when that wasn't an easy task. Although she had encountered obstacles along the way, she never lost her pluck and she retained her boundless enthusiasm for geology through it all. Sadly, she passed away just as I was entering graduate school, and it wasn't until joining AWG ten years later that I found similar mentors.

Would I have pursued a geological career without the support of these people in my life? I don't know for certain, but I do know that they sure made it a lot easier for me to accomplish my goals. I also know that not every woman is lucky enough to have any professional counselor, let alone a woman geoscientist. In my view, providing role models and mentors is one of the most fundamental and important goals of AWG, whether sponsoring education programs that encourage young girls to become interested in the geosciences, helping students stay the

course, or enhancing the professional development of women who have settled into their careers.

AWG has provided me with ample opportunity to act in this capacity myself, and I can assure you that it has been a rewarding experience. Now, as Gaea editor, I would like to do what I can to encourage mentoring and provide additional role models. One of the ways I hope to accomplish this is to publish more articles about women geoscientists of the past—those women who helped pave the way for our entry into this field, who acted as mentors, and whose stories still offer inspiration. Every AWG member today can continue the tradition these women began by serving as a mentor to someone. Not only will these members derive great personal satisfaction from helping others, they will ensure the vitality of our Association and help to strengthen the position of women in our profession overall.

My inaugural Gaea has information about an on-line mentoring opportunity, reviews of one book that offers mentoring tips and another that provides inspiration, as well as articles that underscore the importance of mentors and role models.

— *by Joanne Kluessendorf*

### Member Profile, cont.

would have been better prepared in college. This thinking led me to embark on a lecture/seminar project where we introduce the geosciences (as well as the Profession) to 2nd through 4th year high school students in 5 regions of the country." Lourdes worked on the seminar project in 1995-96 as the Committee Chair of Special Concerns and as a Secretary and Board Member of the Geological Society of the Philippines (GSP). With the help of the then-President, Dr. Raymundo Punongbayan, and fellow GSP officer, Dr. Mario Aurelio, hundreds of high school students from the Quezon City, Iloilo, Leyte, Mindanao and Bicol regions took part. They had to turn down some students due to lack of space. The enthusiastic response was so encouraging that another project is underway to benefit science high school teachers.

"My hobbies are reading books, watching movies, hiking, listening to the radio, working out in a gym, and talking to friends over a cup of coffee or tea." Lourdes is a delightful companion and I look forward to her next visit to the States!

— *by Rachel Fischer*

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## Mary Anning Symposium

Mary Anning, widely considered the first woman paleontologist, will be honored with a symposium "Mary Anning and her Times: The Discovery of British Palaeontology, 1820-1850" on June 2-4, 1999, at the Lyme Regis Philpot Museum, Lyme Regis, England. Beginning as a young woman collecting fossils at Lyme Regis, Anning worked with the leading scientists of her day to assure England's place in the developing field of paleontology. Nearly 150 years after her death, the true importance of her work and contributions is not yet adequately recognized and her life is still largely shrouded in mystery and misrepresentation. Yet, her discoveries helped to form the foundations of paleontology, and she was quite possibly the first professional fossil collector.

The convener of the symposium is Sir Crispin Tickell, Patron of the Museum, formerly Warden of Green College Oxford and British Permanent Representative at the United Nations, President of the Royal Geographical Society, and a great-great-great nephew of Mary Anning. The symposium aims to bring together specialists in paleontology, history and sociology of science including Hugh Torrens, James P. Secord, Stephen Jay Gould, Roy Porter, Michael Taylor, Christopher McGowan, Kevin Padian, and John Fowles, Honorary Archivist and formerly Honorary Curator of the Lyme Regis Museum. Fowles is one of Britain's greatest living writers and a renowned conservationist; his novel *The French Lieutenant's Woman*, which was largely concerned with evolution and paleontology, was set in Lyme Regis. The participants will explore who Mary Anning was; what her contributions meant to the science of her times; and her role in Victorian society in an age of simultaneous liberation and constriction. A geological walk through the spectacular Mesozoic horizons in the environs of Lyme Regis is also planned.

Further information on the symposium is available from the Lyme Regis Museum, Lyme Regis, Dorset, United Kingdom DT7 3QA.

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## Mentoring On-Line

In today's U.S. workforce, women are: 8.5% of the engineers, 30.6% of the mathematical and computer scientists, 29.3% of the natural scientists. Technical women are more likely to be employed in public or nonprofit sectors than in industry.

If you're interested in encouraging more women to pursue their interests in scientific and technical study and careers, please consider serving as an on-line mentor to an undergraduate or graduate student through MentorNet. We need at least 500 mentors to be matched this fall for a second year of a national program, involving students from 25 universities across the country. MentorNet provides a time-efficient, cost-effective way for women students to benefit from a personal mentor. Mentoring helps students learn more about career opportunities in industry, to be encouraged in pursuing a technical/scientific career, and to be introduced to professional communities and networks in these fields. Mentoring is a proven strategy in encouraging the retention of women in these fields where they are currently underrepresented. Through MentorNet, male and female professionals with scientific and technical backgrounds working in industry will be paired with women studying engineering, science, and math in college and at the graduate level. Mentors provide students with valuable information about industry not readily available on college campuses. E-mail allows mentoring relationships to occur where geography, time, or financial constraints would otherwise prevent them.

Basic requirements include a commitment to mentor for one academic year and weekly e-mail exchanges with a student-protégé. Introductory and training information and on-going program communications are provided to assist mentors and students in creating an effective mentoring relationship. On-line applications are available at [www.mentornet.net](http://www.mentornet.net). For more information, or to sign up, contact Dr. Carol B. Muller, Executive Director, MentorNet, c/o College of Engineering, San Jose State University, One Washington Square, San Jose, CA 95192-0080; (408) 924-4070; fax (408) 924-4069; [cbmuller@email.sjsu.edu](mailto:cbmuller@email.sjsu.edu).

—Abridged from the *AWG San Francisco Bay Area Chapter newsletter*, August, 1998

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## Fall Board of Directors Meeting — Las Vegas

The AWG Fall Board of Directors meeting will be held in Las Vegas, Oct. 2-4, 1998. In addition to the business meeting, there will be a "Meet the Association" evening gathering at the University of Nevada-Las Vegas and a field trip to Red Rock Canyon on Sunday. If you would like registration information, please contact AWG President-Elect Debra Williams at [grapevine@hotmail.com](mailto:grapevine@hotmail.com).



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## AWG-AWIS Collaboration

Collaboration between AWG and The Association of Women in Science (AWIS) has been under discussion at AWG for the past year and, at the spring BOD meeting, Rachael Craig was designated as liaison to the AWIS BOD. In July, Rachael traveled to Washington, D. C. to present AWG's ideas at a working lunch during the AWIS BOD meeting; their board was very enthusiastic and supportive. Some of those ideas will be taken up by the AWG BOD at the meeting in Las Vegas. AWIS has designated Margot Kingston (who is active in AWG and AWIS and works with the USGS in Reston) as their liaison to AWG, and Margot and Rachael are now busy collecting ideas. One of their first goals is finding AWG chapters interested in holding a joint meeting with a neighboring AWIS chapter. There is also an interest in sharing list-serve communications and other such notices. Another idea is a cooperative effort for the upcoming Earth Science Week observations in late October. Members with ideas on this should contact Rachael ([rcraig@geology.kent.edu](mailto:rcraig@geology.kent.edu)), Margot ([mkingsto@usgs.gov](mailto:mkingsto@usgs.gov)) or Mary Anne Holmes ([mholmes@unlinfo.unl.edu](mailto:mholmes@unlinfo.unl.edu)).

— by Rachael Craig

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## For All Our Daughters — How Mentoring Helps Young Women and Girls Master the Art of Growing Up

According to author, youth counselor, mentor and mother Pegine Echevarria, there are a number of crisis points that will come up in every girl's life as she manages the difficult transition from girlhood to young womanhood. "Girls entering puberty often face a 'crisis in confidence' which makes them vulnerable to risky behavior, and these bad choices can have devastating lifelong consequences." What's more, most teen girls will not talk to their parents about the dangers they face. "No matter how good your communication is with your daughter, there are things she will not and cannot tell you," Echevarria says, "things she needs desperately to tell someone." The answer? Female mentors—some girls can trust who isn't Mom or Dad. The author cautions, "You must point your daughter toward a trustworthy role model—an aunt, a cousin, a grandmother, a Girl Scout leader, a teacher, a friend, or some other responsible caring woman, because your daughter's survival depends on it."

For All Our Daughters (1998, Chandler House, \$14.95) is filled with true stories of real girls, the hurdles they faced, and the mentors who helped pull them through. Beyond describing the dangers girls face, the book tells how to find a mentor and how to be a mentor yourself. She notes that the most important thing a mentor can do is to listen and to lead by example. The book also gives practical, sound advice about what girls really need to become healthy young women, and offers hundreds of practical tips on how to connect with teen girls. Echevarria offers insights in five key areas, the "Five Essentials" of physical, emotional, intellectual, and spiritual development, and financial accountability. For example, she examines why, when girls enter junior high and high school, their levels of self-esteem plummet and they no longer participate as aggressively in math and science courses. But she also shows how mentors can help with this widespread "Academic Falloff."

Pegine Echevarria holds a master degree in social work from Adelphi University, and is a nationally-recognized speaker and youth counselor specializing in issues facing teens, young women, and Latinos. She is an advisor to the editors of Chicken Soup for the Teenage Soul and to Blue Jean Magazine, which is written by and for teen girls. Working as a speaker and consultant, Echevarria helps companies and non-profit groups develop school-to-work-partnerships and other career programs for women, Hispanics, and teens.

— *Abridged from a Chandler House press release*

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## Stepping-Stones

Stepping-Stones: The Reminiscences of a Woman Geologist in the Twentieth Century is the autobiography of a remarkable woman who devoted more than seven decades to geologic study and conservation. In her lifetime, Katherine Fowler-Billings embarked on daring and often dangerous adventures exploring the natural wonders of the American West—from a narrow escape from a forest fire in Glacier National Park to a chance meeting with moonshiners in the Laramie Mountains of Wyoming. Kay's exploration continued in West Africa, where, as "the woman who dressed like a man," she charted hematite, discovered the sources of molybdenum, and helped prospect for gold.

Yet another chapter in this life opened with her second marriage, to Harvard University geologist Marland Billings. Combining motherhood with geological study, Kay orchestrated a careful balancing act that will resonate with every woman trying to have both a career and family. Two children and an extensive list of geology publications attest to her success in both endeavors. In later years, she added conservation activities to her catalogue of interests and accomplishments.

Kay offers humorous and always fascinating glimpses of travel with husband Marland, from dining with opossums in Melbourne to rock climbing Huayna Picchu in Peru to a helicopter descent into Alaska's "Valley of Ten Thousand Smokes." As Kay herself writes, it has been a "full life, spanning the century and circling the globe."

This book is available for \$35.00 (plus \$3.95 s & h) from: The Connecticut Academy of Arts and Sciences, P.O. Box 208211, New Haven, CT 06520-8211; phone (203) 432-3113.

— *Reprinted from publisher's press release*

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## Member News

**Dana Polacsek** is leaving her post as Denver Chapter secretary to accept a Peace Corps assignment in Africa beginning in August.

**Mara Yale** has left California for a position with Environmental Research Institute of Michigan where she will continue to work with remote sensing and satellite altimetry data.

Member-At-Large **Jean M. Bahr**, University of Wisconsin-Madison, has been elected 2nd Vice-Chair of the Geological Society of America Hydrogeology Division.

Member-At-Large **Kathleen Walsh** will begin graduate study in paleontology this Fall at the University of Georgia at Athens.

Northeast Chapter Member and AWG Treasurer **Laurie Scheuing** presented a paper on "Use of downhole geophysics to correlate water-bearing zones in fractured bedrock systems" at the Northeast Section Geological Society of America meeting this past March in Portland, Maine.

New Members At-Large **Dallas Rhodes** and **Lisa Rossbacher** recently moved to Georgia. Dallas Rhodes, formerly of Whittier College in California, is now the new chair of the Department of Geology & Geography at Georgia Southern University in Statesboro. Geotimes columnist Lisa Rossbacher, former Dean of the College at Dickinson College in Pennsylvania has been named President of Southern Polytechnic State University in Marietta; she wrote an excellent article about AWG in the latest Geotimes.

Member-At-Large **Carolyn Rebbert** has been named Director of the Bob Campbell Geology Museum at Clemson University, where she will also do some lecturing in the Geology Department.

In late September, Member-At-Large **Susan Turner** will begin a six month position at the University of Hannover Institut für Geologie & Paläontologie as a DAAD Visiting Professor. She will teach courses on fish microfossils and their uses and on the geological and biological evolution of Australia.

Member-At-Large **Susan Glasauer** will be starting a post-doc position in geomicrobiology at the University of Århus in Denmark in September. She will be studying some iron-rich soils that may have been formed by iron-metabolizing bacteria.

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## Studying the Participation of Women in Science

On May 14, The House Science Committee passed the Advancement of Women in Science, Engineering, and Technology Development Act, which would establish a commission to study the barriers women face in science, engineering, and technology careers. The 18-member commission would include the Secretary of Energy and his peers and would conduct a study to develop statistics on the participation and preparedness of American women scientists and on employer practices for recruiting, retaining, and advancing women in the sciences. The commission would prepare a status report on the findings no later than one year after its formation. I appreciate this goal, but I think that just studying the problem is too narrow a task. The only way to accomplish change is to develop and implement recommendations. Plenty of information already exists explaining the barriers women face in science careers. We already know what can be done to break these barriers down.

### The Barriers

Working as a geologist for 13 years and actively volunteering with the Association for Women Geoscientists (AWG), I have heard personal accounts from women scientists and can summarize three types of barriers to women pursuing science:

First, the presence of women in science and technology fields is still relatively new. When I began working as an environmental geologist seven years ago, I was surprised and pleased to find many practicing woman scientists and engineers—not at all typical for a scientific industry. The rapid growth of the environmental industry in the 1980s created a demand for environmental scientists directly out of school. Graduating women were hired at the same rate as graduating men. Today, the environmental field contains a higher percentage of women scientists than older geological fields, which tend to function under established hierarchies consisting mostly of men. It takes time for hierarchies to evolve and for women to become established in them.

Second, both men and women consciously and unconsciously build barriers to women entering and working in science fields. Parents and educators are responsible for encouraging children and are at fault for not nurturing the curious

minds of girls. Many women scientists say they succeeded because they persevered despite the barriers others tried to put in front of them. Once a woman does earn a science degree and find employment, she may find she is the only woman or one of only a few women on staff. She can feel isolated. When a support system of mentors or of organizations like AWG is not available, women can find it difficult to sustain their goals and careers as scientists.

Third, a perception exists that a woman must choose between motherhood and a career. This can be true if a woman does not receive support in raising her children. Women who went to start families may choose not to go into a science career or may leave a science career because developing it requires time and a high level of education.

### What Can Be Done?

One of the profound changes in my own vision of my career occurred when I joined AWG. I discovered, as many others had, that knowing I could communicate with other women like me gave me needed support to continue my science career. Although I was encouraged by my parents and most instructors to enter the science field, several experiences left me feeling isolated and made me wonder if I had chosen my correct path. Joining AWG changed that. It boosted my morale and gave me opportunities to serve as a mentor and role model for girls and young women. Mentor programs and professional organizations like AWG already exist but rely on volunteers. Supplemental funding could boost participation in mentor programs and women's technical organizations nationwide.

Both women and men need flexibility in the work place because they share childcare responsibilities. Although some institutions are broad minded enough to provide flexible hours and quality on-site child care, most are not. The commission should develop incentives for employers to provide this type of support.

### Conclusion

The commission proposed by the Advancement of Women in Science, Engineering, and Technology Development Act should use the existing abundance of information on women's participation in science and technology fields. Instead of focusing energy and funding to study what the barriers are, the commission should make recommendations for implementing changes feasible for government,

private industries, and academic institutions.

—*"Studying the Participation of Women in Science"* by Anne Cavazos, *GeoSpectrum*, July/August 1998, p. 2.

*Reprinted with permission from the American Geological Institute. Visit the AGI web site <http://www.agiweb.org/hearings/womensci.html> for an overview of this bill and links to web sites with the text and committee proceedings.*

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## Teaching Astronomy to Non-science Majors

At the end of June, the Astronomical Society of the Pacific (ASP) held a national symposium on teaching astronomy to college non-science majors, during the Society's 110th Annual Meeting in Albuquerque. About 150 instructors from a wide range of colleges and universities participated, and were asked to bring a concise summary of their presentations in hand-out format. These handouts included course syllabi, innovative ways to handle large-lecture classes, clever lab exercises, research results on teaching and learning, new uses of the world wide web, student project ideas, teaching resource guides, and much more. The ASP has agreed to make available a package reprinting the 300 pages of symposium handouts. The package is collated but not bound, with a table of contents and an introduction to the main themes of the symposium by Andrew Fraknoi, the conference moderator. To obtain a set of copies, please send a check for \$24.95 (which includes shipping and handling) if you live in the U.S. and \$32.95 in US funds if you are outside the U.S. Purchase orders cannot be accepted for this special offer. Include your name and the full address to which you want the package shipped. Make checks (in U.S. funds) payable to "A.S.P." and send to:

Astronomical Society of the Pacific  
Symposium Handouts Dept.  
390 Ashton Ave.  
San Francisco, CA 94112, USA

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## New Video Highlights Geoscience Careers

"Careers for Geoscientists" was created by the American Geological Institute to inspire college and high school students to pursue careers in the earth sciences. The 40-minute video introduces the wide scope of careers in the geosciences, encompassing the atmosphere, the oceans, and the solid Earth. It was created for freshmen or sophomores in college and for high school juniors and seniors. It is a resource for students who realize their interest in the earth sciences but need a description of real-life jobs to determine what focus they should take in their studies. Interviews with 11 geoscientists with diverse occupations and backgrounds reveal information about the variety of careers in the geosciences. The "day in the life" approach and the description of the geoscientists' current projects provides a practical understanding of each career.

The geoscientists profiled in the video discuss the opportunities for travel, the use of technology, and the chance to work outdoors - all facets of the geosciences that appeal to students. "Careers for Geoscientists" features different earth scientists and the connections between them. Christopher Henry, a research geologist in Nevada, discusses the opportunity for teamwork in his career. "No one geologist can address every problem - can resolve every issue. [Teamwork among geoscientists] ties into a more complete understanding of the whole geology." The others interviewed include a physical oceanographer, a geomorphologist, a geochemist, a meteorologist, a stratigrapher, an environmental geologist, and a geophysicist as well as petroleum and exploration geologists.

"Careers for Geoscientists," along with other career-oriented materials, will become part of a Speaker's Kit designed for geoscientists interested in speaking to students about careers during Earth Science Week or year-round. The regular price for the video is \$14.95, and the AGI member society price is \$12.75 (the lower price is applicable for AWG members). Both prices include shipping and handling. The video will be available to academic geoscience departments at no cost until Nov. 1, 1998. To order your copy, contact Robert Tiffey at AGI, 4220 King Street, Alexandria, VA 22302-1502.

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## Outstanding Educator Award

The AWG Foundation established the Outstanding Educator Award in 1988 to honor college or university teachers who have played a significant role in the education and support of women geoscientists both within and outside the classroom. Examples of support include encouraging women to enter and continue in a geoscience career, providing opportunities for field and laboratory experience, and serving as a positive role model. In addition, awardees are selected on the basis of their professional contributions such as active research, a strong publication record, involvement in professional societies, and participation in science education programs in their community.

Deadline for the 1999 Award is February 1. Nominations must include the nominator's supporting letter, a summary of the nominee's academic and professional accomplishments, and at least eight letters of recommendation from professional colleagues and former and current students. Send Nominations to Carolyn Rindosh Miller, 14214 Withersdale Drive, Houston, TX 77077.

Janet Thornburg, chair of the award selection committee, will present the 1998 Outstanding Educator Award at the AWG breakfast on Tuesday morning, October 27, at the annual meeting of the Geological Society of America in Toronto, Ontario, Canada.

This is the last year that Janet Thornburg and Charlotte Schreiber will serve on the selection committee for the Outstanding Educator Award, and we offer them the heartfelt gratitude of the Association. However, Carolyn Rindosh Miller, Jody Bourgeois, and Cindy Carney, all of whom joined the committee in 1998 have agreed to serve again in 1999. Carolyn Rindosh Miller, who was a founding member and the first vice president of the Denver AWG chapter, has agreed to chair the selection committee in 1999. Carolyn teaches introductory geoscience courses at Houston Community College and plans may activities for the Houston members of AWG.

— submitted by Carolyn Rindosh Miller  
& Janet Thornburg

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## Women of NASA

The Women of NASA project provides an archive of biographies of NASA's diverse scientific and technical women, and online and offline resources for teachers who are trying to deal with the issue of gender equity in their teaching. This project is designed to encourage female involvement in math and science careers via role models within NASA. Visit the web site at <http://quest.arc.nasa.gov/women/intro.html>.

Speaking of NASA women, check out *Managing Martians* (by Donna Shirley and Danelle Morton, 1998, Broadway Books, \$25.00), a new book chronicling the life of Donna Shirley, creator of the Mars rover Sojourner.

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## AWG Policy Paper on Science Curricula and the Teaching of Evolution in K-12 Classrooms

The Association for Women Geoscientists supports the teaching of evolution in the science curriculum and urges the separation of science from religious teaching in public school's science curricula. We believe that all students should be taught the method and principles of modern science, including the method of hypothesis testing by observation, data collection, experimentation, and the difference between scientific theory and hypothesis. Any hypothesis that is not subject to testing, or does not arise from observation and repeatable data, cannot be considered science. To do otherwise puts students at a disadvantage in understanding and appreciating the wonder of our Earth, as well as in their pursuit of higher education and careers in science. We support other professional organizations in holding this view. —Passed by the AWG Board on 25 April 1998.

This policy paper and a list of Internet resources for science teachers with information on the nature of current scientific thinking on evolution, and statements of policy from many professional scientific organizations on this subject has been placed on the AWG web site.

— by Mary Anne Holmes

## Classified Ads

### University of Wisconsin-Oshkosh

The Department of Geology at the University of Wisconsin Oshkosh invites applications for two tenure-track assistant professor positions. Ph.D. required; prior college teaching experience preferred.

1) Field-oriented structural geologist to teach and direct summer field camp and teach structural geology and field methods. Field camp accounts for about one half of the teaching load allowing flexibility in scheduling research and teaching during the regular academic year. Candidates also able to teach geophysics (in alternate years) will be given preference. Starts either June 14 or September 1, 1999.

2) Field-oriented sedimentary geologist with specialties in clastic sedimentology and/or paleontology to teach undergraduate courses in his or her specialties as well as freshman-level courses. Candidates also able to teach oceanography will be given prefer-

ence. Starts September 1, 1999. Candidates should be committed to undergraduate education and to developing a research program that includes undergraduates. Please submit a résumé, concise statements of your teaching and research interests and experience, transcripts (original or copy), and three letters of reference (sent by referees) by December 15, 1998 to Dr. Norris Jones, Chair, Department of Geology, University of Wisconsin Oshkosh, Oshkosh, WI 54901. Information about the Department, its programs, and research facilities can be found at <[www.uwosh.edu/departments/geology/](http://www.uwosh.edu/departments/geology/)>

AA/EOE

### Faculty Positions Structural Geology and Geophysics State University of New York at Buffalo

The Department of Geology invites applications for two tenure-track faculty positions, structural geology and geophysics, starting in September 1999 at the Assistant Professor level.

The successful candidates will demonstrate a potential for research and teaching, which will both complement and integrate with our existing programs in volcanology and environmental geology. Existing research includes studies of active volcanoes, analysis of neotectonics, characterization of fractured rock systems, remediation of ground water, and applications of basin analysis. The geology home page gives more details of our departmental research and teaching program (<http://wings.buffalo.edu/academic/department/geology>).

Teaching duties for both positions will involve undergraduate and graduate level courses in their respective specialties.

The salary and the initial University contribution to the candidates research equipment will be very attractive.

Successful candidates must have the Ph.D. degree as of the date of appointment. Apply with a statement of teaching and research goals and a curriculum vitae, including published research, grant support, and names of at least three references to:

Chair, Search Committee, Department of Geology, State University of New York at Buffalo, 876 Natural Sciences Complex, Buffalo, NY 14260-3050. We will begin evaluating applicants on December 20, 1998.

*The State University of New York is an Equal Opportunity/Affirmative Action employer and encourages applications from women and minorities.*

### The National Science Foundation Division of Earth Sciences Program Directors For Petrology & Geochemistry and Instrumentation & Facilities

NSF's Division of Earth Sciences is seeking to identify qualified candidates for program directors in our Petrology & Geochemistry program and our Instrumentation & Facilities Program. We expect to fill these positions with the next 1-6 months, as either permanent or temporary appointments.

Applicants must have a Ph.D. or equivalent experience in some field of Earth Sciences and at least six years of successful research, research administration, and/or managerial experience in an area of petrology or geochemistry. In addition, it is desirable that applicants have a broad general knowledge of Earth Sciences research and familiarity with the U.S. scientific community. Applicants for the Instrumentation and Facilities position should have experience with major research equipment or facilities, knowledge of the infrastructure needs of the Earth Sciences research community and a broad understanding of the research enterprise supported by the Division.

The Petrology & Geochemistry program supports field, laboratory, theoretical, and computational research in volcanology, experimental geochemistry/petrology (including mineralogy, crystallography, and mineral physics), and crustal and mantle petrology and geochemistry (including economic geochemistry).

The Instrumentation & Facilities Program provides support for the acquisition, modernization, and development of instrumentation required to enable research in the Earth Sciences, and for operation of shared facilities that make complex or expensive instrument systems available on a national or regional basis.

For information, contact Allen Gaines at +1-703-306-1553, e-mail: [againes@nsf.gov](mailto:againes@nsf.gov) or Dan Weill at +1-703-306-1558, e-mail: [dweill@nsf.gov](mailto:dweill@nsf.gov). Hearing impaired individuals should call TDD at +1-703-306-0189.

*NSF is an equal opportunity employer committed to employing highly qualified staff that reflects the diversity of our nation. Qualified applicants who are women, ethnic/racial minorities, and persons with disabilities are strongly encouraged to apply.*

Colby ad goes here. It locked up Ventura while the pdf maker was working so we couldn't show it to you.

## Geology:

Hartwick College seeks a full-time, tenure-track appointment commencing Fall 1999 (pending final budgetary approval). Teaching responsibilities include introductory and major courses, including field geology. Strong background in earth materials (mineralogy, petrology and structural geology). Hartwick is a small liberal arts and sciences undergraduate college in a rural western Catskill setting. The Department of Geological and Environmental Sciences has 20-25 majors and a strong commitment to teaching. Faculty/student collaborative research (preferably externally funded) is required. Send curriculum vitae including statement of teaching and research interests to Nancy Heffernan, Hartwick College, Oneonta NY 13820. Review of applications will begin February 1, 1999 (women and underrepresented groups are especially encouraged to apply).

*An Equal Opportunity Employer.*

## Postdoctoral Opportunities

The U.S. Geological Survey, Geologic Division, is conducting a national competition to find outstanding scientists, who have recently completed doctorate-level research, to fill 1-2 year contractual positions as guest Research Associates. The objective of the program is to provide guest Research Associates of unusual promise and ability a formal opportunity to conduct research in an area of their choice that falls within the realm of Geologic Division's long-term scientific strategy goals as follows:

- conducting geologic hazard assessments for mitigation planning
- providing short-term prediction of geologic disasters and rapidly characterize their effects
- advancing the understanding of the Nation's mineral and energy resources in a global, geologic, economic, and environmental context
- anticipating the environmental impacts of climate variability
- establishing the geologic framework for ecosystem structure and function
- interpreting the links between human health and geologic processes
- determining the geologic controls on ground water resources and hazardous waste isolation.

Approximately five (5) Research Associate opportunities are available. The principal duty stations will be Reston, VA, Denver, CO, or Menlo Park, CA, depending on the candidate's chosen research area. Limited opportunities, however, may be available at other field locations. Compensation will be in fixed weekly stipends for the geographic area in which they work. Approximate stipend amounts are as follows: Reston, VA, \$820.00; Denver, CO, \$855.00; and Menlo Park, CA, \$886.00. Awardees are offered a services contract initially for 12 months. However, a 1-year extension may be granted at the discretion of the USGS should funds be available.

For more information about the program and the application materials required, complete details are provided in the Postdoctoral Research Associateship Program An-

nouncement which is available on the web at <http://geology.usgs.gov/postdoc/> or you may call (703)-648-6630 to request a copy.

*The U.S. Geological Survey is an equal opportunity employer. Qualified applicants will receive consideration without regard to race, creed, color, age, sex, national origin, political preference, labor-organization affiliation or non-affiliation, marital status, or non-disqualifying handicap.*

## Assistant Professor Geology Department, State University of West Georgia

The Department of Geology at the State University of West Georgia invites applications for two tenure-track positions at the rank of assistant professor to begin in August, 1999. Applicants must have a Ph.D. and a strong commitment to undergraduate teaching and research. Applicants should submit a letter of application summarizing teaching and research philosophy and research interests, curriculum vitae, official transcripts, and the names of three persons who will provide letters of recommendation. Review of applications for both positions will begin November 1, 1998; applications will be accepted until the position is filled.

Position 1. We seek candidates whose specialties complement those of our diverse faculty, but we are particularly interested in a field-oriented geoscientist with expertise in clay mineralogy, tectonics, or crystalline rocks and minerals. The successful candidate will teach introductory geology courses, advanced courses in their specialty, and graduate courses for students majoring in education. They will also be expected to conduct research in their area of expertise. Application materials should be sent to Dr. Richard Sanders, Department of Geology, State University of West Georgia, Carrollton, GA 30118.

Position 2. We seek candidates in one of the following specialties: surface water hydrology, soil science, or environmental/engineering geology. Teaching responsibilities will include introductory geography, environmental impact statements, and courses in the applicant's area of expertise. GIS skills are highly desirable. Applicants should send materials to Dr. James Mayer, Department of Geology, State University of West Georgia, Carrollton, GA 30118.

The Geology Department ([www.westga.edu/geology/](http://www.westga.edu/geology/)), recently recognized by the University System in Georgia for its teaching excellence, currently has eleven faculty members (expanding to thirteen this year) and runs strongly field-oriented undergraduate programs in geology and geography that encourage faculty/student interaction. Located fifty miles west of Atlanta, the State University of West Georgia is a growing regional university of the Georgia University System with an enrollment of 8500.

*The State University of West Georgia is an equal-opportunity/affirmative action employer. Women and minorities are especially encouraged to apply.*

## Geomorphology/Quaternary Geology

Tenure-track assistant professor. Requirements: Ph.D. emphasizing one of above; demonstrable commitment to teacher/scholar model, public and University service, and a culturally diverse learning environment. Preferences: fluvial geomorphology; record showing promise for funding and publication; potential to contribute to and complement other research and teaching; post-doctoral experience; skills in RS/GIS, quantitative techniques, or geotechnical applications. Responsibilities: teach geomorphology, specialty, internships, research, thesis, and service courses. Advise majors in Geoscience and Environmental Science. Participate in governance, service, and professional societies. Application letter, c.v., statements of teaching and research philosophy and interests, transcripts, and names of three references to Nicholas H. Tibbs, Chairperson, Dept. of Geosciences MS6500, Southeast Missouri State University, Cape Girardeau, MO 63701. Screening begins October 30, 1998.

*An equal opportunity/affirmative-action employer. Women and minorities are strongly encouraged to apply.*

## Assistant Professor In Paleontology University of Iowa Department of Geology

The Department of Geology at the University of Iowa invites applications for a full-time tenure-track Assistant Professor with a specialty in micropaleontology or invertebrate paleontology. The appointment will begin on August 1999. We seek an outstanding researcher and teacher whose approach is both quantitative and specimen-based, and who will work with other faculty to improve our strong graduate program in paleontology and sedimentary geology. In addition to developing an active, externally-funded program of research, the successful candidate will be expected to teach three courses per academic year. These will include: (1) an upper-level undergraduate/graduate course in biostratigraphy, micropaleontology or invertebrate paleontology, (2) team-participation in Evolution and History of Life, a general education course, and (3) a graduate seminar in paleontology. He/she will be expected to contribute both to our Paleontology Repository as well as to new departmental initiatives in the environmental sciences and climate change.

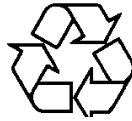
Applicants should have a Ph.D. or be in the final stages of completing the degree. Women and minorities are especially encouraged to apply. Applicants should send a complete resume (including a bibliography and statement of teaching and research interests) and have at least three letters of recommendation sent to:

Dr. Holmes Semken  
Search Committee Chair  
Department of Geology  
University of Iowa  
Iowa City, IA 52242-1379

319/335-1818; Fax: 319/335-1821



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Association for Women Geoscientists  
4779 126<sup>th</sup> St. North  
White Bear Lake, MN 55110-5910

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### **Kansas State University**

The Department of Geology at Kansas State University invites applications for a tenure-track Assistant Professor position to start fall, 1999 (pending final approval by the University administration). We are looking for a dynamic, energetic geoscientist with expertise in one of the following: tectonics and sedimentation, basin analysis, petroleum geology, or geophysics. The successful candidate will be expected to develop an active, externally funded research program, and to teach one introductory-level course and one upper-level undergraduate or graduate-level (Master's) course in his or her field of expertise per semester. A field component to teaching and research is encouraged, and collaboration with faculty in Geology or in other departments at K-State is considered essential. The Ph.D. in geology is required. K-State is located in the tall-grass prairie of the Flint Hills in northeastern Kansas. See <http://www.ksu.edu/geology/> for information about the Geology Department and Kansas State University, which is a land grant university.

Applications, including a resume and publication list, statements of research and teaching interests, copies of relevant publications, and names, phone numbers, and addresses (postal and e-mail) for three referees, should be received by November 9, 1998. Applications or requests for further information should be directed to Jack Oviatt, Department of Geology, Kansas State University, Manhattan, KS 66506-3201 ([joviatt@ksu.edu](mailto:joviatt@ksu.edu)). Women and minorities are encouraged to apply.

*Kansas State University is an equal opportunity/affirmative action employer.*

### **Structural Geology – Petroleum Geology – West Virginia University**

The Department of Geology & Geography invites applications for a tenure-track faculty position in structural geology. The appointment will be at the level of beginning assistant professor, effective January or August 1999, and the PhD degree is required at the time of appointment.

We are seeking an individual who is adept in both quantitative and field approaches to geological research and teaching. This individual will be expected to collaborate with others in the department and to establish linkages with the petroleum industry. The successful candidate will have demonstrated research capabilities in structural geology and petroleum geology, and he or she should be able to effectively teach undergraduate and graduate courses in these two fields and supervise MS and PhD students. The candidate should be able to teach a large section of introductory geology and to participate in the team-teaching or our capstone field camp. In addition, the successful candidate must attract external research funding. Additional information is available on-line at <http://www.geo.wvu.edu>.

Interested candidates should submit a curriculum vita including a list of publications, grants, a statement of teaching and research interests, transcripts from graduate schools, and contact information for five references to: Dr. Richard Smosna, Chair of Search Committee, Department of Geology & Geography, Box 6300, West Virginia University, Morgantown, WV 26505. Review of applications will begin on September 1 and will continue until the position is filled.

*West Virginia University is an equal opportunity/affirmative action employer.*

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## **Earth Science Week**

October 11-17, 1998

Join the celebration! For Earth Science week information visit:

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