

# 2011 MEDALS & AWARDS

## BROMERY AWARD FOR THE MINORITIES

Presented to  
**A. Wesley Ward**



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*U.S. Geological Survey (Emeritus Scientist)*

### **Citation by Robert J. Johnson**

*The recipient of the GSA Bromery Award is an individual who has been selected for recognition of their persistent passion for the geosciences, significant contributions to research in the geological sciences, and the dissemination of knowledge and mentorship, which has enhanced the professional growth of minority geoscientists.*

Wes Ward once gave a talk to students called "From the South Side of Chicago to the North Pole of Mars", in which he related his personal journey from playing beside features along the shores of Lake Michigan to studying the eolian landforms of another world. And it's been quite a journey.

Honored this year as the 2011 Bromery award winner, a few of you know him as the recent USGS Chief Geologist of the Western United States, and some know him as a tireless worker for a variety of organizations, from youth-serving associations even to railroad historical societies. A select few might even have been lucky enough to have actually seen him in community theater as Harold Hill, King Mongkut, Ben Franklin, or the Mikado. His dedication is highlighted by his public service as past GSA committee member or chair, Chief Scientist of the USGS Astrogeology Program, two-term President of the NABGG -- all interesting way stations along a life of science, service, and participation.

Wes received his formal education by earning a BS degree in geology at Washington State University, and his MS in volcanic geology and PhD in planetary geology and geomorphology at the University of Washington. He then completed a postdoctoral fellowship at Arizona State University. His entire professional career was spent with the United States Geological Survey spanning 30 years of professional development, as he progressed from a Summer Intern to Regional Geologist!

As a Staff Scientist, he conducted geologic mapping in five states in the Southwestern United States. He was tasked with correlating changes in eolian features with regional and site-specific meteorological incidents, while also mapping both terrestrial and Martian eolian features, all the while literally following in the footsteps of Gene Shoemaker, who stated that "In order to be a successful planetary geologist, you had to have a simultaneous terrestrial research project as well." Some of his published works include papers on terrestrial and Martian yardangs, and their roles in identifying ancient wind patterns.

As the USGS Astrogeology Chief, Wes rebuilt the post-Apollo USGS program with new post-doc personnel and staff enticed from Pasadena and NASA headquarters to Flagstaff, AZ. Dr. Ward served as the leader of the Geology and Geomorphology Operations Group for the 1997 Mars Pathfinder mission, and also built a new research center, library, and museum at the USGS facility in Flagstaff, a complex now known as the Shoemaker Center for Astrogeology.

As Western Regional Geologist for the USGS, Wes oversaw the activities of all seven geology teams in the nine states of the west, and helped establish and guide major new programs and facilities for oceans, climate, and megahazards research.

In addition to all his scientific and leadership achievements, he led the USGS Minority Participation programs in the Southwest. These programs were designed to increase the inclusion of ethnic minority, female, and financially disadvantaged students into the geosciences. His management entailed locating mentors, funding salaries, and approving project work that could be translated into either academic or thesis credits for as many as 20 undergraduate and graduate students for each of the seven years he administered the program. His efforts were very successful, as he was recognized to receive the USGS Public Service Award in 1993.

Wes served two terms as Chair in advancing the GSA Ad Hoc Committee on Minorities to the standing Committee on Women and Minorities in the 1990s. This advocacy was essential in setting new purpose, hopes, and direction for the committee. With representatives of other GSA committees and associated societies, he hosted several GSA Annual-Meeting Symposia on the education, recruitment, training, and advancement of Women and Minorities in the Earth Sciences, and Environmental Justice. He has also served on the Nominations Committee and the Presidential Committee on the Environment, and currently, he is a new Trustee for the GSA Foundation.

Wes has served tirelessly with dozens of other organizations, NSF, AGI, NASA, federal and state advisory boards, community arts and sciences organizations, and universities, but his greatest love and contributions have been and are directly for the youth in our society, and especially those who have yet to learn the wonders and the importance of understanding our home, Planet Earth.

I am personally profoundly honored to know Wes as an effervescent, uniquely genuine person, with a very keen sense of humor and a brilliant mind. He never uses the word "No" in tough situations, but always considers all the options and then selects the positive path.

### **Response by A. Wesley Ward**

In addition to my nominators and the Bromerys, I wish to thank Chairman Joseph Mills at Washington State University, who set me on a path of learning from Gary Webster and Peter Hooper; Chairman John Whetten, who invited me to the University of Washington, where I found Stu McCallum and Steve Porter; and Lou Pakiser at the US Geological Survey, who accepted my proposal to work in Flagstaff, with Jack McCauley and Gene Shoemaker.

In preparing for tonight, I began to wonder where 40 years of diversity efforts have brought us. Personally, I have had a wonderful time with Columbia River Basalt flows; San Juan River terraces; trimodal volcanic fields; Mariners, Vikings, and Pathfinders; and yardangs. And I have met many, many wonderful people.

I have also struggled with being the only minority employee in some organizations and in large ones where, at managerial levels, diversity is but one person deep (if at all) -- so fragile that one retirement or one stroke of a

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bad supervisor's pen can set an organization back decades in its efforts for diversity.

Being mindful that geoscience is a wonderful career and that every citizen should at least know about geohazards and resources in our daily lives, I have always participated in outreach programs targeting women, minorities, and financially disadvantaged students.

NSF reports that diverse students have been earning a constant 5% of all geoscience degrees awarded over the last decade, which is still low compared to other sciences.

Diversity is even lower in decision-making roles in our profession in industry, academia, and government.

To an emerging workforce where diversity is the norm and the expectation, a profession where diversity is rare at decision-making levels gives them pause.

Certainly GSA, although having a small leadership cadre, has worked hard and demonstrated diversity multiple times at the presidential, counselor, and committee-chair levels. In the larger world of the earth

sciences, industry has made some progress in developing minority managers; academia has a fair record; in government, middle and upper-level diversity is very slow in coming.

To be sure, any detailed analysis is hampered by the statistics of small numbers from a pipeline that for too long has been too narrow or too leaky; also, we know that it takes a decade or more for entry-level employees to attain managerial positions and, given the ratios of minority employees to the entire geosciences workforce, the numbers simply could not look encouraging. But we have been working on the issue for *40 years*. What will the next 40, or 20, or even 10 produce? What should they produce?

So much of our efforts are focused on entry-level recruitment using institutional partnerships, mentoring, and internships. As we compete for the best and brightest of today's students, if we cannot demonstrate to their increasingly diverse workforce that diversity is not just a recruitment tool but standard practice throughout our ranks, then we cannot expect much of this emerging

workforce to have a strong interest in our profession.

If we do think that, for business or ethical or other reasons, diversity is important to our profession, then we need to ensure that its practice is widespread, effective, practical, affordable, and continuous.

Unless diversity becomes more widespread throughout our ranks, it is geology that is disadvantaged, it is geology that will not be able to compete, and it is geology that is going to be left behind. And, after all that I have gotten from and all that I have given to geology, that is not the future I want to see.

We must be mindful of the resources we have in both recruitment and advancement of our workforce. By ignoring our opportunities and hard-won tools, we can find ourselves both out of step and out of touch with the changes and progress the rest of the world is making.