

In addition to work on the Green River Formation, I am continuing to conduct research and/or supervise thesis projects on the paleoclimatic record of eolian dust in the Permian Phosphoria Formation, on synorogenic conglomerates in foothills of the Brooks Range, on the evolution of the East Java sedimentary basin, and on lacustrine sedimentary basins in China.

Chuck DeMets

The past year was hectic, with my time divided between teaching and managing five field projects in four countries. **Bill Unger** and **Neal Lord**, staff members in geophysics, invested many long hours working on these demanding field efforts, leaving me some free time to contemplate the meaning of the data they collected. Thanks to Bill and Neal, I also found time to make significant progress on a half-dozen modeling projects.

My most exciting new result, related to the present tectonics of Mexico, was done in collaboration with Prof. Bertha Marquez, a professor at the University of Guadalajara. Using geodetic data extending back to the early 1990s, we demonstrated that the Yucatan peninsula moves relative to the North American plate interior, contrary to geologic intuition. This surprising, but robust result will be published in 2003 as part of our unique view of the previously unknown neotectonic velocity field of the country of Mexico.

In the field, the highlight of my past year was a two-week trip to the remote and spectacular Mexican state of Oaxaca to build a new geodetic network. This project is a collaboration with Dr. Enrique Cabral and Francisco Correa-Mora, both at UNAM in Mexico City. Our long-term goal is to measure crustal deformation associated with subduction of the Cocos oceanic plate, with an emphasis on developing a better understanding of how strain accumulates and is released along the subduction fault. Our group not only installed and occupied 15 new GPS sites during

our two-week visit, but installed and equipped five continuously operating GPS sites during multiple additional visits.

I also began two new research efforts in 2002. One project, a collaboration with **Basil Tikoff** and others, combines geodetic, structural, and paleomagnetic measurements to better understand deformation flanking the creeping segment of the San Andreas fault of central California. A second is a collaboration with Dr. R. K. Drolia of the National Institute of Oceanography in India to initiate new studies of the marine geophysics of the seafloor spreading centers in the Indian Ocean.

Finally, I also continued ongoing measurements in the Mexican states of Jalisco and Colima, in Jamaica, and in Honduras. These projects are providing a continual stream of new data that should be excellent fodder for my new students. **Stuart Schmitt** recently joined my research group to work on subduction zone neotectonics. Stu was introduced to my line of work by spending an exciting summer in Sioux Falls, South Dakota learning the ins-and-outs of 3-D finite element modeling as an apprentice to my former post-doc **Tim Masterlark**, who works at the USGS EROS data center.

John Fournelle

A highlight of 2002 for the Fournelle-Munaker family was a 2 1/2 week June vacation to visit old friends across the North Atlantic and see cool sights (and many rock sites)—Iceland, southern England, Northern Ireland and Paris. In Iceland we had an opportunity to stand in a fissure in the valley where the mid-Atlantic Ridge comes up on land (see fig. 1, next page), as well as soak in the hot geothermal waters at Blue Lagoon (ah...). I had an opportunity to visit an outcrop of hyaloclastite—a welded volcanic sediment, formed by eruption under a glacier—which finally explains to me a similar rock I found in the Aleutians. On the eve of the summer solstice (unintentionally) we found ourselves at Stonehenge, and



Columnar basalts at Sheepeater Cliffs, Yellowstone National Park. These 500 ka lavas erupted after the massive, 1000 cubic kilometer Lava Creek tuff, which formed Yellowstone Caldera. Geology 916 students for scale, left to right: Aaron Cavosie, Cory Clechenko, Joyashish Thakurta, Beth Valaas, Melissa Harper, and Jade Star Lackey. (photo by John Valley)

a few days later, at the magnificent Giant's Causeway in Northern Ireland (see fig. 2, next page). And much more. Back in Madison, **Ryan Jakubowski's** senior thesis on vapor deposition of Pinatubo anhydrite was published in the *American Mineralogist* in August. I spent a good amount of energy transferring my probe class teaching materials into PowerPoint (helped by **Stephanie Maes**), which now resides at <www.geology.wisc.edu/~johnf/g777>.

Dana Geary

2002 was a year for me to remember my two paleontological mentors. Erle Kauffman (my MS advisor in Colorado) formally retired and my entire family traveled to Bloomington to celebrate this event with many old colleagues and friends. Sadly, my PhD advisor Steve Gould passed away in the spring. I can't imagine a more dynamic, interesting, wonderful pair of mentors than Erle and Steve. I cherish my ongoing relationship with Erle. I will miss Steve.

Jim Freiheit finished his MS degree on strombid gastropods from the Miocene of the Dominican Republic. Jim's taxonomic problems led us to a collaboration with Stephen Schellenberg exploring stable isotope and trace element ratios in various strombid morphs. In addition to providing the information on growth rates that we were looking for, we think we are getting useful