

summarized in the 6th annual GES (Geochemistry of the Earth's Surface) meeting in Honolulu this May. The long awaited book on the ecology of northern lakes (*Lakes in the Landscape*) is due to go to the press in a couple of months, and I've had a heavy hand in the section on hydrology. One of my aerial photos is scheduled to make the cover of the book.

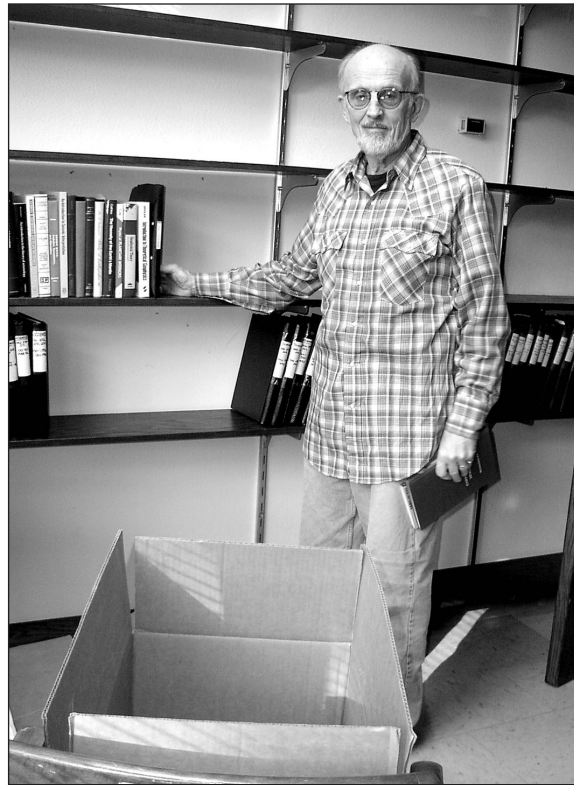
Retirement allows me the freedom to travel, and this past year found me in the Grand Canyon, Phoenix, New York, Northern Mexico, Northern Wisconsin, Cleveland, Niagara Falls, Rhode Island, Santa Fe and Albuquerque (almost all of it driving). Judy and I enjoy driving, and it affords us time to stop and see the sights and spend a few creative moments capturing the countryside on film. Summer plans include a trip down the Colorado River (with the Dotts and a number of other geologists), and who knows where else.

My work in photography has moved to a much more serious level. Now in my second year as a board member of the Center for Photography at Madison I head up the landscape group that meets monthly to share and critique our photographs. Having spent numerous nights helping build a darkroom at the facility and being heavily involved in printing and showing work as part of Photofest 2002 I really enjoy this new and very challenging endeavor. During the month of March I had photos hanging at Ancora's Coffee Roasters on King St., the Madison Civic Center, Samantha's Sunporch Café, and the Camera Company. The Ancora's venue is a show authored by myself and another landscape photographer friend and is my first public fine art photography show. Taking the picture turns out to be only a small part of the business of photography. A lot of time at custom photo finishers, working in the darkroom or in front of a computer mastering the complexities of Photoshop, printing, framing, matting, and trying to keep track of an ever growing collection of 35 mm, 120 and 4" x 5" negatives with a highly disorganized filing system takes a lot more time than I realized. The good news is that a few other people have found my work interesting enough to pay good money for it. I continue to get encouragement. Buy me now while I'm still inexpensive!

Now that Judy has retired (last June) we find more time to visit our daughters and their families. I run a few miles several times a week keeping me in good enough health to enjoy the physically demanding fun of playing with six grandchildren.

❖ Clarence S. Clay

It has been fun to watch the response of the community to radical innovations in the science of our Earth. Almost as a generalization, new classes of data can present the world in different ways and then the same old world looks different.



On the move—Charlie Bentley took over new office space this fall.

About 50 years ago, I took a job with the Exxon (Carter) oil research laboratory and I moved from atomic physics to geophysics. This was before seafloor spreading, global tectonics, and statistical digital data processing. The primary papers in signal theory were being written in the 1950's. Consider an example of industrial fore sight: a joint group of oil companies stopped funding signal theoretical research by Norbert Wiener's students at MIT. A few years later, the same oil labs were fighting to hire Wiener's students.

Commonly one person, often an outsider, is ahead of the pack and their work is ignored, forgotten, or becomes a joke. I skip a few details and the contributions of F.J. Vine, D.H. Mathews and L.W. Morley in the early 1960's, and go back to the last century.

Alfred Wegener, a meteorologist, published "The origin of continents and oceans" in 1915. The validity of continental drift was argued and even voted down. Many proper earth scientists rejected it. Arthur Holmes was an exception. I moved to a Columbia University Hudson Labs of oceanography in 1955. New instruments such as continuous seismic profiling systems and proton magnetometers became standard instruments for oceanographic ships. Under the strong direction of M. (Doc) Ewing, the Lamont ships took miles and miles of seismic, magnetometer profiles and hundreds of bottom cores. Their profiles showed that the oceanic crust was



Mike Stanfield, left, shares a moment with Cam Craddock, right, at her retirement reception in the Cline Lounge May 17, 2001. Mike (Michelyn Hass Stanfield) retired after more than 20 years as a technical typist with the department. She prepared research manuscripts and teaching materials and also helped produce the alumni newsletter for many years. Mike joined the department on March 23, 1981.

thin and maps of the magnetic data displayed strips. All this time, Ewing did not believe in continental drift and seafloor spreading. In the spring of 1966, I was at a colloquium at Lamont when Jim Heirtzler demonstrated his connections of their magnetic maps for the sea floor and remanent magnetism in the cores. Seafloor spreading explained it all. The room was very silent and we waited. Afterwhile Doc Ewing said, "Jim, you tell a mighty convincing story." A revolution started. As people took new looks at their geologic maps and structures, seafloor spreading, continental drift, and global tectonics appeared simultaneously in graduate seminars, geology classes, and then into first year texts. Bob Dott put it his elementary book.

Sometimes an innovation stays within the journals and becomes accepted. W. Leong estimated the spectra of seafloor roughness in the basin east of Spain and Portugal. J. Berkson and his collaborator, J.M. Mathews measured the statistical properties of seafloor roughness and its spectral density in many ocean basins. They found that the wave number spectra obeyed a power law, like fractals. These are often the first references in books and papers on the seafloor.

In 2001 we read about the possibility of global warming in the newspapers. Some climatologists teach that the Earth responds slowly to changes in the atmosphere. Some politicians even doubt the existence of global warming and anyway we need not worry for a few centuries. D. Robertson's time series for the ice durations on our Lake Mendota show something else is happening. The smoothed ice durations have gone from about 100 days in 1855 to 85 days in 1994. This year, 2001-2002, it may be only 10 days. When J. Berkson, T.K. Kan and I were near the North Pole (Ice Island T3) in the Arctic spring of 1972, the Arctic sea ice was 2

meters or more thick. Recent reports indicate its now a meter. It appears that our local climate and even the Arctic is getting warmer. For almost a half a century, the Geophysical and Polar Research has been working in the Antarctic. Recently, Richard Alley, one of Bentley's students has been making news, see the Christian Science Monitor 12/14/01. An NRC report describes the possibilities. Alley's ice core data show that the climate can flip from glacial to warm in less than ten years. It will be very exciting if a flip happens soon.

Observations on being retired for more than a decade: Jane and I like afternoon naps. We have to do regular workouts at the exercise club. People identify me as being a trombone and Jane as being a clarinet.

❖ Cambell Craddock

My last circum-Pacific Map Project contribution seeped forth from the vast government vat; see K.J. Drummond et al., Geologic Map of the Circum-Pacific Region, Pacific Basin Sheet; CP-49, U.S. Geological Survey, scale 1:17,000,000, with 81-page text. I continue working on two Lake Superior Precambrian Projects.

This has been a quiet year for us, with limited travel. In June we went to DePauw University for the 50th reunion of Cam's class of 1951. Most of our trips were to visit relatives in Illinois, Indiana, Michigan, Minnesota, Iowa, and California. In August we attended a Phillips family reunion in Negaunee, MI, and in September a Cornish festival in Mineral Point, WI.

We have continued our genealogy studies with many letters and phone calls, mainly to newly found Phillips relatives. So far no lawyer has contacted me as the missing heir to the Phillips family fortune—not from 1) petroleum, 2) milk of magnesia, or even,