Dana Geary

The start of 2004 found me and my family in Boulder, Colorado, where I enjoyed the second half of my sabbatical. My major project while there was collecting and analyzing data on ontogenetic and phyletic change in two lineages of cardiid bivalves from Lake Pannon—in other words, comparing how individual cockles grow and change in shape over their lifetimes with the changes seen across their respective lineages over several million years. This work has burgeoned into at least two manuscripts, with coauthors **Imre Magyar**, **Rob Bleiweiss**, and **Holly Schultz** (former undergrad, now at Iowa). Having lots of quiet time in Boulder to focus on research was intensely enjoyable.

I kept busy in the fall teaching Paleobiology to a lively group of grads and undergrads, and also doing Evolution and Extinction.

Ongoing grad activity includes **Erik Hoffmann** (Cretaceous brackish gastropods from the Western Interior), **Paul Mayer** (Devonian paleocommunities from the upper Midwest), **Jim Freiheit** (minor element and stable isotope chemistry of mollusc shells as paleoenvironmental indicators), **Hilary Sanders** (evolution of Congeria in Lake Pannon). **Matt Kuchta** returned to grad school with us and will study Pleistocene gastropods from the upper midwest. **Clint Boyd** was awarded a Hilldale fellowship for undergrad research. Clint is using SEM to study the microstructure of hadrosaur teeth.

Life is happy for my daughters Sarah (11) and Molly (8). They enjoyed skiing and backpacking in Colorado, while at home they are quite addicted to books, all to our great satisfaction.

Laurel Goodwin

2004 was a roller coaster. The low point came early in the year, when I broke my kneecap. Despite the opportunity to conduct fracture analysis "up close and personal" (the pattern evident in x-rays clearly recorded fractures emanating from the point at which my thighbone had hammered the patella from above), it was an experience I would not recommend. In addition to being excruciatingly painful, full recovery takes at least nine months, even when (as in my case) surgery is not required. As I write this, I am finally nearing the end of physical therapy. I therefore missed the wonderful San Andreas fault trip (please see **Basil Tikoff's** write-up for details), and my field work was confined to a couple of days of looking at outcrops a short distance from a field vehicle—a sorry state of affairs. The only useful result of this experience was that it became fodder for Elucidation last Spring. Astute graduate students noticed the many unpacked boxes in my office (unpacking in a full leg brace on crutches is not an option), each bearing the moving company's name: S&M. As Dave Barry would say, I'm not making this up. Their take: "First we move you, then we break your kneecap".

Santa and Adrian share a secret at the Geoclub Holiday Party. Only Adrian knows that the man behind the beard is really Adrian's dad, Steven Ralser. His mom is Laurel Goodwin.

Experiences related to students and colleagues here were the hills on the roller coaster. I discovered just how smart both undergraduate and graduate UW students are…keeping up with them is a delightful and sometimes exhausting experience that I would not trade for anything. New graduate students **Kathy Staffier** and **Paul Riley** are wonderful additions to the structural research group. Kathy will conduct research in the Arunta Block of Central Australia, building off the work begun by alum **Cheryl Waters-Tormey**. She is already diving into metamorphic analysis of some of Cheryl's samples. Undergraduate **Daniel Hallau** will join me, Kathy, and **Basil Tikoff** in Australia this summer to work as a field assistant and do some mapping that will lead to a senior research project. **Paul Riley** will jump into ongoing research in New Mexico, looking at spatial distributions of faults in the Bandelier Tuff in collaboration with colleague Claudia Lewis of Los Alamos National Lab. He will also examine modifications in 3D pore space across fault zones with colleague Joanne Fredrich of Sandia National Laboratories. He will be taking an undergraduate student, yet to be named, into the field as well. Paul is also getting ready to roll, thinking about spatial statistical analysis of fault populations.

Renovation of the Structure lab space is creeping forward. In addition to a broader range of microscopes, computers, and image analysis capabilities, I'll be bringing in mini-permeameters to use for *in situ* measurements of fault-zone permeability. But the biggest addition to available facilities will be an SEM with detectors that will allow us to determine the crystallographic preferred orientations of grains in samples of interest as well as image cathodoluminescence of phases such as quartz, feldspar, and calcite. I recently received the phone call notifying me that the proposal we submitted in summer, 2004 would be funded in October, 2005. I am grateful to my co-PIs **John Fournelle**, **Basil Tikoff**, **John Valley**, and new faculty member **Huifang Xu** for their efforts. Nine other faculty and staff members pitched in with descriptions of exciting research that will be facilitated by the equipment. It was great to learn more about what everyone is doing here. I