In the Spotlight: The 2014 Field School Season Kicks Off With Field Mapping in Central Idaho

Imagine you’re a geology major that grew up in Florida and spent virtually your entire life amidst the low-lying wetlands and karst terrains that dominate the landscape. Now imagine being dropped in the middle of Central Idaho, surrounded by buttes and volcanic peaks, with a compass and a mapping assignment. Mind-blowing? You bet. For many USF Geology alums, this doesn’t require imagination at all. If you attended field camp, you probably experienced this yourself.

This is one of the things Dr. Paul Wetmore, lead instructor of the field mapping session of the USF Geology Field School loves the most about his job. “When the jaws and cell phones drop at the same time, it’s a beautiful thing,” he says. Wetmore, a structural geologist, has taught field mapping for nine years. In that time, he’s run the field mapping sessions in a number of locations in the western interior of the U.S., but the last few years in the Mackay, Idaho area have won out in terms of mapping objectives, logistics, and overall fit in the Field School curriculum. “Idaho State University has a field station we rent there, which really made life great as it provided a space for instruction and shelter from the wind and rain. Not to be under-rated! Students fly into Salt Lake City and we head straight up to Mackay where we’ve got a diverse suite of geologic features that support teaching a lot of the skills and concepts in the field mapping session, as well as the geophysics, and now the volcanology sessions.”

Using the station as their base camp, field mapping students spend nearly 5 days each mapping the strata of the Challis Volcanic Complex in Jim Canyon and the Mississippian limestones on Leslie Butte. “They’re learning the mapping basics in this school,” Dr. Wetmore says. “They’re orienting themselves and learning to take compass readings, build cross-sections, and make regional correlations. Starting in 2016, students will have learned a lot of the compass orientation & measuring skills already as part of the Structural Geology course field trip, which will become a pre-requisite for Field Mapping. That way, we’ll be able to make the most of our time here by putting the emphasis on building the mapping...continued on next page

From the editor:

Happy Holidays, and welcome to our second issue of Into the Field, an annual USF GAS publication dedicated to promoting the vitality of the USF Geology Field School Program. It’s been an active year as the Field School evolves, juggling to meet the rising numbers of majors whilst maintaining a high-quality and intellectually rigorous curriculum. In this issue, we take a closer look at what that change means as we highlight the Field Mapping session in an interview with Dr. Paul Wetmore. We also see a literal example of this in an update from Dr. Chuck Connor on the inaugural run of the new Volcanology session that took place this summer.

Though the Field School occurs once a year, as I prepared the content for this issue I was left with the vivid reminder that the Field School is a year-round effort—faculty spend months thinking through the curriculum and planning the logistics for safe and successful execution. At the same time, students progress the requisite coursework needed for this capstone experience and negotiate the time and financial demand of taking weeks out of their summer to attend. As you read on, I hope you’re stirred not only by memories of your own field experience and what it meant to you, but also by the monumental effort on the part of all involved to make it happen each year. As a recruiter of students from geology departments nationwide, I can attest to the exceptional strength and vitality of this program amidst numerous challenges, and to the dedication of an alumni network that supports their department in the upholding of that standard. As a member of that network yourself, you have a lot to be proud of.

In closing, on behalf of the USF Geology Alumni Society, have a very safe and happy holiday, and many wishes for a prosperous New Year!

- Dorien McGee, Ph.D., Class of 2010
and correlation skills themselves and developing a better understanding of the big-picture geologic story here."

When asked what he’d like to see in the future as his field mapping session evolves, Dr. Wetmore is clear. “We really need to own our own field camp property out here. Right now, we rent two storage units in Salt Lake City to house the vehicles and equipment used for the Field School sessions, and of course there’s the cost associated with renting the Idaho State facility, which ran approximately $12K this year.” Historically, Field Mapping and Geophysics were the only two Field School sessions to share these spaces; however, the inaugural run of the Volcanology field session joined them this year, and the department is evaluating the possibility of moving the Hydrogeology session there in the coming years as well. “As we grow, these costs do too and a lot of it is passed to the students through tuition & fees,” Dr. Wetmore states. “Since land in this area is pretty inexpensive, we’re talking $60-70K for a plot that includes living and storage facilities suitable for our field activities, it just makes financial sense to make that investment. It will pay for itself in a few years and lessen the annual burden of cost on the department, and more importantly, the students in the years to come.”

In the meantime, geology undergrads can continue to look forward to taking their lessons out on the rocks in one of the most inspiring natural classrooms the USF Geology Field School Program has offered to date.

Field School Updates

- Volcanology was added as a Field School session, increasing the number of sessions offered from four to five.
- Mark Rains has taken over as sole instructor for the Hydrogeology session following the retirement of Mark Stewart.
- The Geophysics session utilized a FLIR thermal imaging system to on loan from Advanced Industrial Science and Technology (AIST) to demonstrate the use of this technology and include as an additional dataset during mapping exercises.

By the Numbers

- ~30 - number of students enrolled in the 2014 Field School
- $2,190 - 2014 Field School cost for in-state students (tuition & fees) for 6-hr requirement ($4,656 for out-of state students)
- ~$75 - 2014 Field School tuition/fee offset per student from Sam Upchurch Fieldcamp Operating Fund
- $33,485 - Field School Endowment balance, as of Dec 1, 2014
Volcanology Joins the Field School Session Lineup

In previous years, students could choose three of four Field School sessions to fulfill their degree requirements: Field Mapping, Hydrology, Coastal Geology, and Field Geophysics. This past summer, Volcanology joined the roster to meet growing demand, with the inaugural session taking place immediately following the Field Mapping session. Led by Dr. Chuck Connor with support from Laura Connor and Lis Gallant, students mapped volcanic deposits between the Challis Volcanic Complex near Mackay, Idaho and younger rhyolite domes at the nearby Blackfoot Reservoir. Using interpretations from their map data, students ran eruption simulations that included evaluations of high-risk areas and regional maps depicting potential lava flows, ballistic projectiles, and ash dispersion. “The idea of all of these activities was to show students how geologists can use basic map data to improve numerical simulations of geologic processes,” says Dr. Connor, “and how these different kinds of information, models and maps, tie together. Two students from this course are already putting their skills to use in their work with the NSF-sponsored Lassen Volcanic Hazards Project.”

2014 Volcanology Session: Students map and record the characteristics of volcanic deposits in the Challis Volcanic Complex. These data were later utilized in eruption simulations and risk evaluation.

Make a Gift

There are two ways to donate to the Field School Endowment!

USF Foundation Page: Select “Tampa College of Arts & Sciences” link, then scroll down to select Fund #426063

2015 GAS Banquet Registration Portal: enter your name and select Continue. On the next page, scroll down to the Field School Endowment donation field. Banquet registration is not required to donate.

We thank you!

From the Students:

“I was fortunate enough to take all five field camps, which was an incredible life experience. (It) was challenging; however, the satisfaction of connecting the classroom to the field was tremendously rewarding. I loved the changing environment, from the beach to the mountains and then underground in lava tubes.”

-Sara Santarelli, BSc.

“I think what I would like to express the most is that the field camp experience has been the apex of my entire undergraduate career. It has manifested everything I’ve learned in the classroom and has made tangible all those concepts and ideas we’ve read over and over in books - a truly unique and unforgettable experience!”

-Anthony Pham, BSc.

“Working and learning in the field allowed for a greater practical visualization of the classroom and book knowledge gained here in Florida in the spring and fall...The students at USF are a fun bunch of motivated learners...It’s an experience with a group of like-minded people that you won’t have again.”

-Timothy Fallon, BSc.

2015 Geology Alumni Society Banquet

February 21, 2015
Gibbons Alumni Center
Tampa, Florida

Registration is open! Click here to reserve your seats. We look forward to seeing you!

For sponsorship and donation information, email Eileen Rodriguez, Banquet Chair.

Photo Credits: We’d like to thank Judy McIlrath, Paul Wetmore, Chuck & Laura Connor, and Sara Santarelli for generously providing photos for this issue.