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Not working 9-to-5

by Mark Wheeler



John Galetzka

Last April, dropped off by helicopter onto a remote and windswept Himalayan ridge at an altitude of 15,000 feet near the Tibet border, the last thing Caltech's John Galetzka expected to see was another human being.

Yet as he worked alone to install a Global Positioning System (GPS) station, one in a network of stations used by Caltech geologists to measure ground movement, he was surprised to notice a lone figure approach on foot. It was a pilgrim, says Galetzka, a Nepalese man who, it turned out, had built a small Buddhist shrine on the same ridge and had come to pray. Galetzka shared halting pleasantries with the man, and the two got on with their day. Galetzka spent the next 24 hours on the mountain, working and suffering from altitude sickness. That included spending a freezing night in a sleeping bag, huddled under a shelter he roughed together from an equipment tarp. After that, he returned to civilization.

For Galetzka, it was just another day at the office.

Clearly this is not your typical nine-to-fiver. While Galetzka is a bona fide staff employee, you'll almost never find him sitting behind a desk. For that matter, you'll rarely find him sitting anywhere at Caltech, in Pasadena, or within the continental United States. Last year he spent all of four weeks here. Galetzka doesn't have an office, doesn't own or rent an apartment or house, doesn't own a car. Most of his time is spent either in Nepal, Indonesia, and Taiwan, where he works as a (read: field guy) for Caltech geologists Kerry Sieh and Jean-Philippe Avouac.

Galetzka came to Caltech after serving a four-year stint as a U.S. Army Ranger and earning a geology degree at the University of Oregon. He was hired by the U.S. Geological Survey in Pasadena in 1996, but resigned to work with Sieh and Avouac in 2002. Today his primary responsibilities are to install and repair the GPS stations, and download the data the geologists count on to measure local ground movement caused by tectonic activity. To do this, he travels by boat, helicopter, horseback, and foot, scouting out new locations to place the stations, then introducing himself to the local populace in order to negotiate permission to use a piece of their land.

"It's a crazy job," laughs Galetzka, who is 37 and, as you might have guessed, single. "But I love it. Lot's of travel and a lot of physical challenges."



John Galetzka (left) with buddies after installing a new GPS station.

Galetzka also serves as a science ambassador, educating local people to the inherent dangers of living on top of tectonically active terrain. Both he and Sieh believe that educating the public in Sumatra about earthquake and tsunami dangers is an important part of their work. "The educational component is really Kerry's idea," Galetzka says. "He believes that the science should serve mankind."

Sieh studies the Sumatran plate boundary, where the 9.0 magnitude earthquake struck Indonesia on December 26 (and was followed by an 8.7 aftershock on March 28). When the first quake struck, Galetzka was away, visiting a friend who runs a clandestine humanitarian group in a nearby country ruled by a military dictatorship. It took Galetzka four days on foot, dodging roving military bands and avoiding land mines, before he made it back across the border to meet up with Sieh.

With their colleagues, the pair spent the next six weeks getting a firsthand look at the geologic effects of the earthquake, distributing relief supplies, and checking on friends. They downloaded data, made repairs, and continued educating locals about future earthquakes and tsunamis. Just last summer, the group had spent time educating villagers about earthquakes and tsunamis; now, to the locals, their warnings seemed prophetic.

"One of the things we told them to do was to run to the GPS station," says Galetzka. "We try to place our stations on high ground to get good satellite reception, so it was a simple way to get across an important message in case of a tsunami."

Galetzka says some villagers believe it was the GPS stations that saved them. "We tried to tell them no, but on one island they had begun to relocate their village around the station. People were settling in, building shelters."

He was gratified that no one he knew was killed, most likely because the area that he and Sieh are studying is 200 to 500 miles from the epicenter. Later, though, traveling by boat upriver toward downtown Banda Aceh, Galetzka saw the massive destruction. "Everything was completely flattened except for a few very strong structures," he says. "You could see dump trucks and bulldozers clearing rubble. Fires were smoking. People were salvaging metal. There were others in hazmat suits. It was a surreal scene."

Galetzka had received permission to install a GPS station in another town south of the city (by this time, Sieh had returned to Caltech). While they were installing it, a teenage boy came by to watch them work. "He was off at school in Banda Aceh at the time of the tsunami," Galetzka says. "He had returned and found that his home, family, and village were gone. I was amazed at the boy's steady demeanor. He had probably cried so much that he couldn't grieve anymore."