

Working for a Safer Southern California

A Profile of Lucy Jones

An Interview with Lucy Jones

By Diane Noserale

What is your nightmare earthquake scenario?

Any magnitude-7 in the Los Angeles basin, and we have many faults — Santa Monica, Hollywood, Puente Hills, Palos Verdes, Sierra Madre — that are capable of producing an earthquake of that size. During a Santa Ana wind condition when fires cannot be controlled is the scenario for a true nightmare. “Multi-hazard” is not just popular jargon.

What was your most interesting experience while working in the field?

I generally don't do fieldwork. I use the permanent seismic network. But to bribe me to go to graduate school at MIT, Professor Peter Molnar (my eventual thesis advisor) offered to take me on fieldwork in Afghanistan for the two months before school started. I spent the time running portable seismographs in the Hindu Kush Mountains. In one of the villages, someone tried to buy me from Peter for two camels, double the going rate.

You talk to all kinds of groups. Do you see a difference between young and old people's perceptions about earthquakes?

No. There is a fundamental divide between people who are afraid of earthquakes and those who aren't, but I have not found a defining characteristic of what makes people afraid.

By Stephanie Hanna and Diane Noserale

Lucy Jones, chief scientist of the Earthquake Hazards Program in Southern California, is truly a household name and the face of the USGS in Southern California. Over the past 23 years, she has worked tirelessly to calm shattered nerves following earthquakes and to convince Southern Californians that they can take steps to make their lives safer during an earthquake.

Born in Santa Monica in 1955, Jones is a fourth-generation Southern Californian who has earned an undergraduate degree in Chinese language and literature from Brown University and a Ph.D. in geophysics from the Massachusetts Institute of Technology. This somewhat unusual combination tells the tale of her diverse interests and helped her (as a graduate student in 1979) to become the first American scientist to work in China following the normalization of relations.

In 1983, Jones joined the USGS as a seismologist. Her first interview as an employee of the USGS was on PBS's nationally televised “MacNeil/Lehrer Report” in 1985. During a spate of earthquakes that followed, she quickly became the go-to scientist for earthquake interviews, appearing on almost all the major network television news shows and making hundreds of appearances on local Los Angeles affiliates. An articulate spokeswoman, Jones has a knack for seeing through the question asked and responding to the concern or fear that prompted it.

Jones has appeared multiple times on many national programs, including “Dateline,” “Nightline” and “The Today Show.” She has worked with the staff of Universal Studios and even been to Disneyland to instruct the “Three Little Pigs” in earthquake safety and non-structural mitigation (They already had learned the construction lesson!) on Disney's “Toon-Town Kids.”

For broadcasts across the nation, she must often appear awake, alert and articulate at 3 a.m., many times after live late-night newscasts. What little sleep afforded during these times is often interrupted by the shaking of local earthquakes or her beeper.

Jones' most enduring media persona is that of the calm working mom. During a post-earthquake news conference in 1992, she comforted her fussing 1-year-old. She was shown carrying a baby and advising people not to abandon their homes and potentially be caught near freeway



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overpasses during powerful aftershocks. She is still asked, “How's your baby?” and responds that he is a defensive tackle on his high school's JV football team.

In her spare time — between earthquakes, media appearances, running the USGS office in Pasadena and family responsibilities with her two sons and husband, Egill Hauksson, a seismologist at Caltech — Jones has authored more than 80 scientific papers. Her research focuses primarily on earthquake-hazard assessment and forecasting earthquake aftershocks. Her theoretical geophysics work forms the basis for a Web service that provides 24-hour forecasts for strong shaking from aftershocks in California. [See page 30.]

She has also written several guest editorials printed in major daily newspapers and published several guidebooks for the general public and for classrooms. One of her more significant and lasting contributions was in writing and developing the publication “Putting Down Roots in Earthquake Country.” [See page 34.]

Her contributions to public safety also include briefing local and state officials on complex earthquake topics, helping to develop safety plans for several cities, including Los Angeles, and helping to train first responders in cities and counties throughout Southern California.

USGS Earthquake Scientists — A Nationwide Notion of Pride



Peter Haeussler

Title: Research Geologist

Location: Anchorage, Alaska

Length of service with the USGS: 14 years

No doubt, my most exciting experience was as the principal geologic investigator for the immediate post-earthquake geologic response to the Nov. 3, 2002, magnitude-7.9 Denali Fault quake in Alaska.

Right after the earthquake, we chartered a helicopter — we were looking for surface ruptures of the Denali Fault. It was really exciting to be able to follow surface ruptures on land and through glacier ice. It was the

first time rupturing has been seen through glacier ice right after an earthquake.

I also remember following the Denali Fault rupture when it suddenly ended, and we couldn't find any more surface rupture. Our helicopter then flew over a mountain, and there we saw more surface rupture, this time on the little-known Totschunda Fault, which we followed out to the west where it terminated.

Also, in the two days of initial investigations, we discovered there were these humongous landslides that had covered glaciers. The clouds were down low on the deck, and as we flew over in the helicopter, we were asking, “What's all this rock here?” We then

realized, “Oh — landslides!”

About 10 days after the earthquake, we were also continuing to try to map the fault trace, and we wanted to go east but couldn't because of weather. We decided to head west, and we started to find all the valleys full of clouds, so we couldn't get to the trace.

We were getting near the helicopter's fuel limit as we were flying over a glacier, and we saw surface rupture through the glacial ice — we realized we had found a previously unknown major thrust fault, which is now known as the Susitna Glacier Thrust Fault.

That was incredibly exciting to see on the ground, and satisfying because we had heard

of Japanese seismologists who had a notion of there being thrusting at the beginning of the earthquake sequences. So when we saw this, we said, “Well, there it is!”

That first day we were on the Susitna Glacier Thrust Fault, we heard a sound like a deep Howitzer in the distance; then the bushes on the tundra would start shaking. It was very wild hearing and feeling an earthquake aftershock while standing on the fault plane.

In the end, it was the discovery and mapping out of the entire surface rupture and finding these other faults that was just really exciting.