

# Quake prediction: Inquiring minds want to know

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SANTA CRUZ — The great quake of 1989 has further widened the rift between scientists and "quake forecasters" who claim the ability to predict temblors.

Earthquake predictions have become almost as frequent as the aftershocks which continue to rattle Santa Cruz County. Yet, scientists lend little credence to claims that a strong aftershock will hit the

area in the next 30 days.

Judy Heavenly, a Los Angeles psychic, "predicted in May that there would be major earthquakes in California, Central America and Japan by the end of the year," said Edward Sussman, articles editor for the National Enquirer.

"There were major earthquakes in California and Central America in addition to the one in Japan," Sussman said. "Everybody makes predictions. It's always interesting reading. And sometimes

people have even been right."

Charlotte King of Salem, Ore. has called the Sentinel several times in the last two weeks with seemingly accurate predictions of aftershocks.

King lists among her "most notable predictions" the Coalinga quake in 1983, the Whittier temblor in 1987 and the disastrous Mexico City earthquake in 1985.

King says she has an inherent ability to "hear" and "feel" earthquakes. Certain physical symptoms — headaches, sleepi-

ness, back pain, disorientation, cramps, vertigo — allow her to predict the location, time and size of impending quakes.

"Intense sleepiness" and "seismic flu," she said, are symptoms of the specific Morgan Hill-San Jose-Santa Cruz area. King also hears "sounds like a foghorn that are measureable only on electronic equipment.

"I would say two out of every five people are having the same symptoms to some degree," she said. "A lot of people pick up

signs of general body weakness prior to earthquakes. I get calls from people asking 'What's goin on?'"

King didn't make a prediction about the 7.1 magnitude Oct. 17 quake because "I didn't know anybody to call. There was something different about that quake. After the (Oct. 17) earthquake I was absolutely down sick for four days. I was worse after the quake than before it. That frightens me. That concerns me."

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King sees her ability to predict quakes as a "gift.

"But what do you do with it. Prior to the 5.1 aftershock (on Oct. 18) I called five TV stations, one radio station and the San Francisco Examiner" and was greeted with skepticism.

"I understand where people are coming from. You don't want to cause mass panic ... but people can be prepared," she said.

Gary Griggs, earth sciences professor at UC Santa Cruz, said "I would be elated if there was somebody who had an innate ability to tell us when the next earthquake is going to occur," Griggs said. "Whether some people are (physically) sensitive, that seems reasonable. But sometimes the people that are predicting quakes are in the same category as people who are dousing for water — successes are widely touted after the event," Griggs said.

Jim Berkland, a geologist who sometimes uses unconventional methods to predict quakes, recently forecast a quake in the 5.5 to 6.0 range for Nov. 11-18. He also claims a quake will strike between Dec. 10 and 17.

Berkland combines geological training with such purported indicators as extremely high tides and missing pets to predict quakes.

"Jim and I are both working toward the same goal," King said. "I have known Jim for seven or eight years. I think what he's doing is also very valid."

"If you predict an earthquake in California, you're liable to be right," said Dr. Kate Hutton, staff seismologist for the California Institute of Technology in Pasadena.

"I would tend to suspect any prediction made by people who are not geophysicists by profession," Hutton said. "Even the ones who are geophysicists, there is quite a lot of argument among them."

"The big people in geology, they say things like 'I'm sorry, we can't predict quakes,'" King said. "Scientists are supposed to be open-minded. These people are shutting off one of the senses, and the possibility of learning more about the Earth through the people that are living here. The United States Geological Survey, their prediction of another quake in 20 years is garbage. They're not serving the people at all."

"I wouldn't say we're close-minded, but when we've tried to test these kind of predictions the tests always come out negative," said Thomas Holzer, branch chief for engineering seismology and ecology for the USGS.

"To a lot of these people who aren't scientists, it becomes almost a theology. I would not say we have a closed mind, but it has to be testable. Whenever we've approached it as scientists these things have never panned out," Holzer said.

Those in the USGS who reject his the-

ories, Berkland said in a recent McClatchy News Service interview, are motivated by "professional jealousy and a reluctance to change a position."

The use of animals to predict quakes, as advocated by Berkland, King and others, is largely unfounded, scientists and geologists said.

"It's the same story," Holzer said. "Everybody has their favorite animal story. But you put a group of dogs together and try to run a scientific experiment and a lot of the dogs sleep through the quake."

Nancy Schofield, zoologist for the San Francisco Zoo, said she noticed no appreciable reaction in animals before the Oct. 17 quake.

"There doesn't seem to be a correlation between animal behavior and the onset of an earthquake," Schofield said. "Our elephant keeper has been in the yard with the elephants before a quake. It's only maybe two minutes before a quake that

the activity levels become abnormal," she said.

"It just means that if you're in the yard with elephants, you might want to move out. You don't want to be there when they exhibit that kind of behavior," Schofield said.

"We are most interested in reports that are physical changes in the Earth, the kind of thing that relates directly to what's going on in the Earth," Hutton said. "We're not really interested in human or animal interpretation."

"I don't see why it matters," King said. "If we can take the combination of physical and the mechanical we can learn to do a really good job in predicting earthquakes."

"We've had some contact (with predictors)," Hutton said. "But it's not scientific and it's not reproducible. We don't understand how it happens, so how can you believe it's reliable? We just don't have a clue."

REFERENCE

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