

Fort Bragg quake danger found

Project reveals 2 potentially deadly faults that are part of San Andreas system

By **BOB NORBERG**

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Scientists have discovered two faults along the eastern edge of Fort Bragg that are part of the infamous San Andreas Fault system and capable of generating devastating quakes.

"It is exciting scientifically — I never realized there could be active faults in that area," said Dorothy Merritts, a geology professor at Franklin & Marshall College in Lancaster, Pa., who led the four-year research project.

The faults are capable of producing a magni-

tude 6 quake, and may be as dangerous as the San Andreas, which devastated Fort Bragg in the 1906 San Francisco earthquake.

"I would say a big event on the San Andreas would do awful things to Fort Bragg, because it is so close by," Merritts said. "But a fault that is in Fort Bragg might be smaller, but it is right there . . . it needs to be evaluated."

The findings, the results of four years of research, were presented Wednesday at the Seismological Society of America meeting in San Francisco, held this week as part of the 1906 earthquake centennial commemorations.

Discovering such major faults is rare, said Lucille Jones of the U.S. Geological Survey in Menlo Park. Most of the major faults throughout Cal-

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ifornia have already been well mapped.

Only a half-dozen unmapped faults have been found since the Earthquake Hazard Reduction Program began in 1991. Most of the efforts have been concentrated in urban areas, particularly in Southern California, and rural areas such as the North Coast have received scant attention.

Merritts said the newly discovered North Coast faults are visible in the rock formations of coastal bluffs, in the remnants of ancient streams and in river offsets. Merritts said her group was originally on an expedition looking for coral fossil samples, but in the course of their research found evidence of ancient rivers that had become cut off from their sources.

The faults have been mapped with \$415,000 in funding from the college, the National Science Foundation, the Earthquake Hazard Reduction Program and the Keck Foundation.

During the next two summers, trenches will be dug across the faults in an effort to determine the slip rate and when the last quake occurred.

One fault, the Pudding Creek Fault, is about 1.5 miles east of Fort Bragg, population 7,000, running out to sea at MacKerricher State Park.

"We worry about earthquakes and we worry about them regardless of whether they are on faults 1½ miles away or on the San Andreas Fault six miles away," said Mayor Linda Ruffing. "The city, like most communities, puts a lot of effort into disaster preparedness."

The second, called the Pacific Star Fault, is 12 miles north and runs directly under the small Pacific Star Winery.

Winery owner and winemaker Sally Ottoson said the fault is clearly visible in a cove near the winery.

"I have always thought it was an unusual formation on the coast, and this certainly explains why," Ottoson said.

She said, however, that she has not felt a quake on the fault and isn't worried about one.

"I don't think of it as a threat as much as a natural phenomenon," Ottoson said. "It is exciting."

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