

Habitat restoration improves chances for rare salamander

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MOSS LANDING — The endangered Santa Cruz long-toed salamander is making a comeback in the Elkhorn Slough watershed.

For the second consecutive year, researchers have discovered salamander larvae in a pond in the Elkhorn Slough National Estuarine Research Reserve, evidence that the rare amphibian is breeding there again after a five-year hiatus.

"This is an exciting find, and an indication that the restoration actions undertaken have made a real difference for this endangered species," said Nina D'Amore, freshwater ecologist at the Elkhorn Slough National Estuarine Research Reserve.

The salamander, a creature about the size of an adult fin-



Larvae of the Santa Cruz long-toed salamander have been found in a pond in the Elkhorn Slough National Estuarine Research Reserve.

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ger, has been listed federally as endangered since 1967. It lives in Monterey County and in the Watsonville area.

D'Amore said researchers believe the Elkhorn population is genetically unique, and they feared the salamanders had gone extinct. Because of their rarity — researchers only know of 22 ponds where they breed — every long-toed salamander population is a priority, she said.

Like other amphibians, the

salamanders are sensitive to impaired water quality and disturbance. That makes the species a sentinel for environmental and ecological health. At Cattail Swale, where the larvae were discovered this year and last, erosion from upland farming activities had caused sediment build-up and diminished water quality.

Then in 2007, the Elkhorn Slough Foundation purchased 24 acres near the reserve and began returning the farmland

back to its historic state as an oak forest. The restoration has helped protect soil, reducing erosion and improving water quality downstream at Cattail Swale.

The reserve followed up on that effort in 2008 with a project to improve Cattail Swale. The pond, visible from the reserve's South Marsh Trail, was made deeper to allow for more water retention, which in turn provided freshwater species with more time to breed.

D'Amore, whose specialty is the endangered red-legged frog, said it can be hard to pinpoint a specific reason when a habitat becomes unsuitable. Maybe pesticides are the problem, or a spike in the raccoon population.

"When you're lucky enough to hit on what it is and do something about it, it's a very rewarding feeling," she said.