QUARRY OFFERS FROG SANCTUARY

A red-legged frog tadpole.

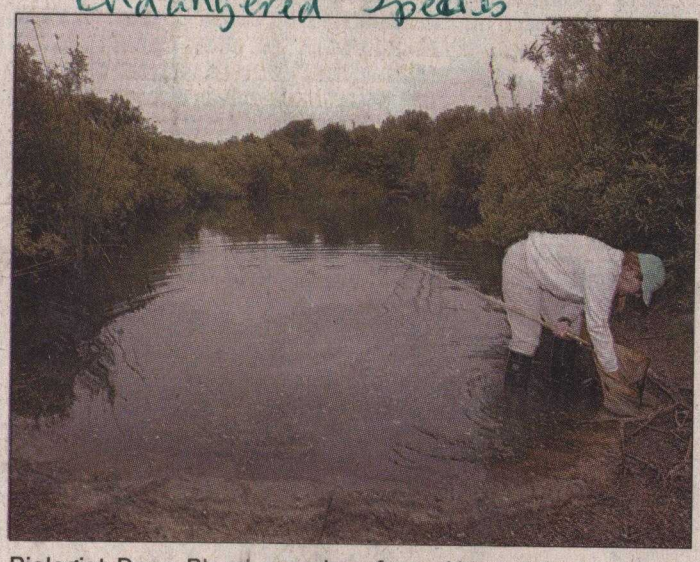
RED-LEGGED AMPHIBIANS THRIVE AT GRANITEROCK PLANT

Dan Coyro/Sentinel photos

Biologist Dana Bland and Graniterock plant manager Dave Hostetler hold red-legged frog tadpoles, which are making a comeback in the converted ponds at the company's North Coast sand quarry.

Company works to rid area of destructive bullfrogs

Endangered Species 5-26-07



Biologist Dana Bland searches for red-legged frog tadpoles in one of four Graniterock quarry ponds now converted to habitat ponds for the endangered frog.

By RACHEL COURTLAND
SENTINEL CORRESPONDENT

SANTA CRUZ — The green, sandy hills of Granite Rock Co.'s Wilder Quarry are filled with heavy mining equipment, man-made ponds and the bustling traffic of a commercial sand mining operation.

It seems an unlikely spot for a fragile, endangered species.

But the 370-acre quarry, which mines sand near Wilder Ranch State Park, has become a powerful breeding ground for the California red-legged frog. Since the site reopened in 1996, the company has mined the area under a federally required Habitat Conservation Plan, designed to minimize the impact on the free-roaming frog, and, hopefully, maintain its numbers.

"It's definitely an important site," said biologist Jacob Martin of the U.S. Fish and Wildlife Service office in Ventura, which

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reviews the company's activities.

The company trains its employees to check their equipment for the red-legged frogs, which often roam for miles. It has moved telephone lines underground to reduce resting areas for birds that might prey on the amphibians. But the biggest contribution, company officials said, is four breeding ponds in an 11-acre corner of the quarry that drains into Old Dairy Gulch.

"We figure we're like an incubator," Graniterock spokesman Jim West said of the lush, swimming pool-size ponds.

A nighttime flashlight survey of the ponds might produce 20 to 30 sets of eyes belonging to the endangered croakers.

But the red-legged frogs weren't always doing so well in the area.

Even before the quarry temporarily closed in 1990, the frogs had been struggling to establish a toe hold in abandoned sediment ponds, which were designed to catch runoff from the exposed hills. The frogs had little cover from airborne predators, and the man-made ponds were unnaturally sloped like teacups, with shallow sides.

"They were almost barren of vegetation," said Dana Bland, a biologist and consultant to Watsonville-based Graniterock.

The frogs prefer steep sides and hanging underwater greenery to hang their eggs. When the quarry reopened, Graniterock reshaped the three existing ponds, added another and planted vegetation along the edges.

But to make it a welcome habitat for the red-legged frogs, the company had to eliminate the competition: bullfrogs. A hardy, invasive species originally from the East Coast, bullfrogs compete with and often eat their red-legged cousins. The large frogs have no predators in California.

"It was funny, when we first went out there they showed me a bullfrog, and it was the size of a bunny rabbit," West said. "I'd never seen a frog that big in my life. He'd just sit there in the middle of the pond and eat everything."

Bullfrogs need two years to fully emerge from their tadpole stage. Red-legged frogs only need one.

So to eliminate the bullfrogs, Bland worked with the quarry to drain several ponds. Now, bullfrogs are a rare sight.

"There used to be hundreds if not thousands," Bland said. "Now we're lucky if we see a couple."

Graniterock expects to finish mining the quarry in several years, according to West. But he said the company has set aside funds to maintain the breeding ponds, including periodic draining to keep the bullfrog population low. The work likely will need to continue for a long time, as bullfrogs travel in from areas outside the quarry.

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