SERENDIPITY STRIKES

NORTH COAST RESEARCHERS AT RIGHT PLACE, RIGHT TIME FOR GROUNDBREAKING FIRE STUDY

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DAVENPORT — Researchers at Swanton Pacific Ranch are fearing the worst this winter: that mudslides from steep, blackened slopes will clog streams that rare steelhead and coho salmon depend upon to spawn, killing the bugs they eat and coating the pebbles they nestle their eggs in.

But scientists are in a better position to study the consequences of wildfire on the Little Creek watershed — which flows into the Scott Creek watershed — than they could ever have planned for.

'... from a research perspective this is really a golden opportunity. Scott Creek may suffer in the long term, but it may help us so much in that we come up with answers for post-fire management solutions.'

SEAN HAYES, National Marine Fisheries Service

For seven years, researchers with Cal Poly San Luis Obispo's North Coast teaching ranch have monitored water quality in Little Creek in anticipation of studying the effects of logging on streams. Now, they plan to document the precise changes that wildfire can bring to creeks and the critters that depend on them.

It was coincidence, said ranch Director Brian Dietterick, that the Lockheed Fire burned through the watershed his students have been studying for the better part of a decade. Now he plans to make the most of it.

"No one can plan for that. They don't know when they're going to have a wildfire occur," Dietterick said.

The Lockheed Fire broke out the evening of Aug. 12 in the hills above the North Coast. Within hours, flames had roared across 1,100 of 3,280 acres belonging to the Cal Poly ranch off Swanton Road. Most of the ranch's scorched property was the 1,800 acres of redwood forest around Little Creek.

The fire was contained on Sunday, with more than 7,800 acres burned.

On Tuesday morning, Dietterick gazed up at a charred slope above Little Creek. The ashen hillside was devoid of the three-foot fronds

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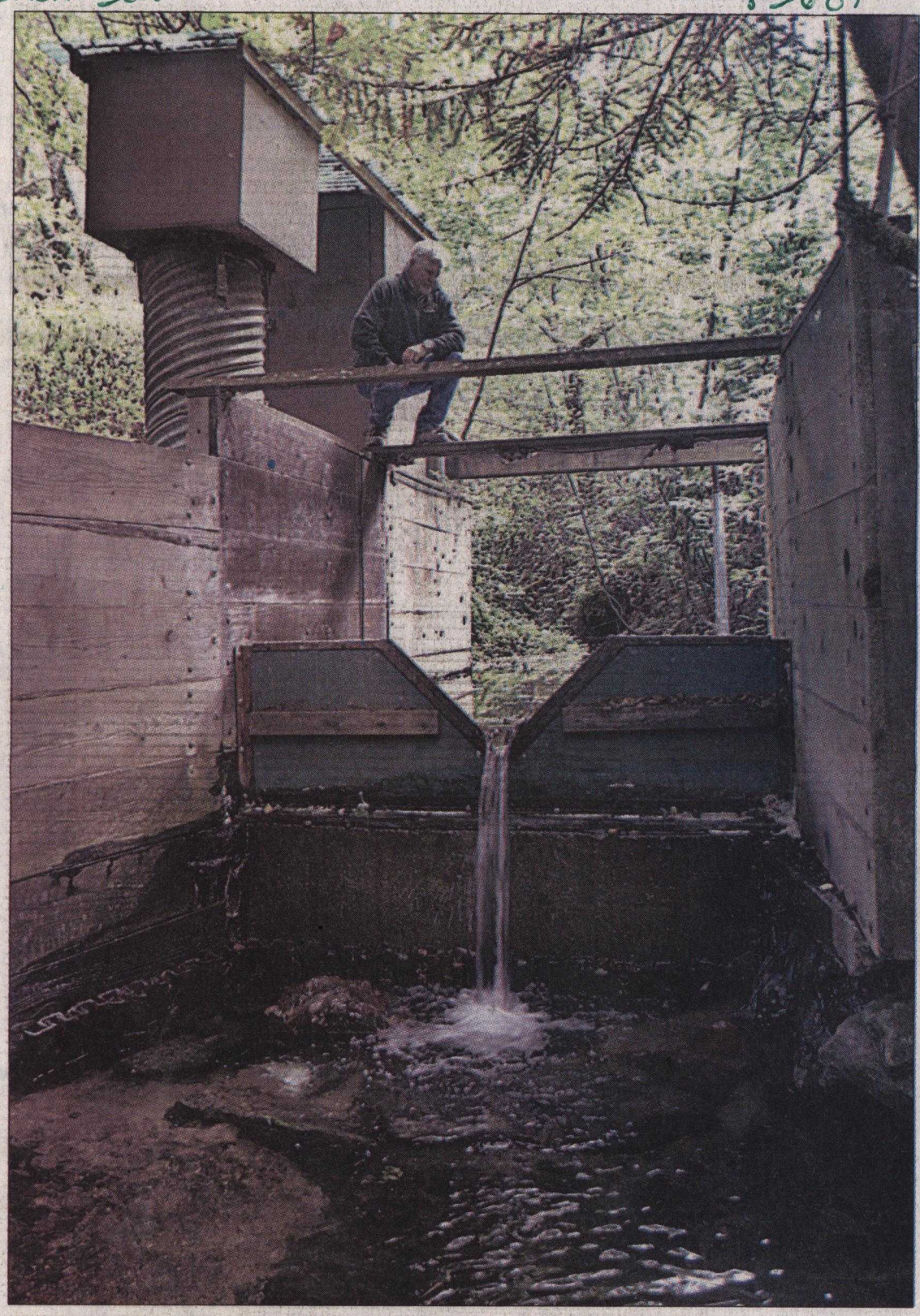

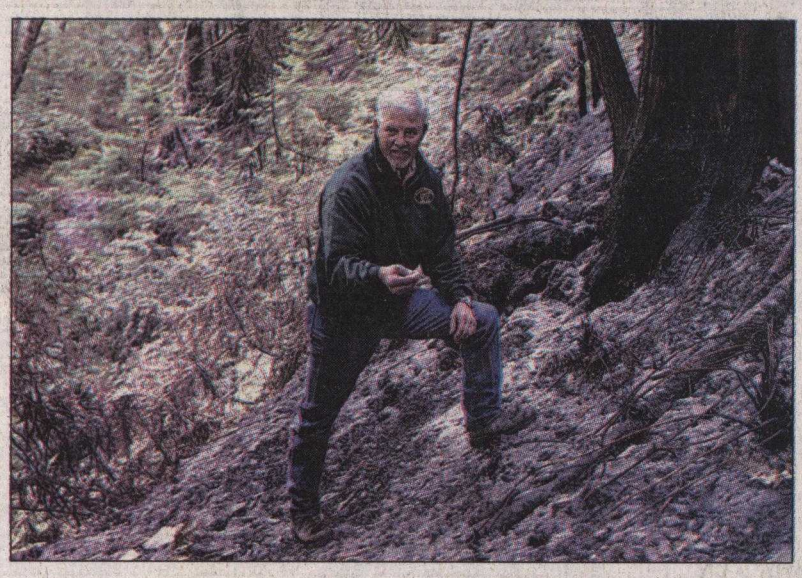

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ABOVE: **Brian Dietterick, director of Cal Poly's Swanton Pacific Ranch, inspects the water monitoring station on Little Creek where Cal Poly students will be studying sediment washing into the watershed from the Lockheed Fire-scorched hillsides.**

LEFT: **Dietterick grabs a handful of the Lockheed Fire-scorched soil that will be washing into Swanton's Little Creek once the rains begin.**

RESEARCH

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and leaf liter that once clutched the soil tightly to the steep earth, leaving it vulnerable to mudslides with this winter's expected rains, he said.

But along the stream below, nine monitoring stations are waiting for the hillside to fall. For seven years, they have drawn water samples every hour during major storms, often keeping graduate students running for days as they shuffle plastic one-liter bottles back to the lab, Dietterick said.

Fellow researchers will check if sediment suffocates spawning steelhead and coho salmon by clogging their gills, burns them by acidifying the water or cuts off air to their eggs by coating the pebbles on the stream bed. Dietterick's crew will use their seven years of data to explain the changes in the water that likely triggered each result, scientists said.

Without the existing research, "there would be an assumption that the fire caused things that were bad. But without the data you can't prove anything," said Sean Hayes, research fisheries biologist with National Marine Fisheries Service. "It's entirely possible that there's never been a river as studied as Scott Creek before and leading up to a fire."

Hayes said he had hoped for a big return of salmon from the Pacific Ocean to spawn up Scott Creek this year. The looming mudslides could dampen that run, he said.

However, "from a research perspective this is really a golden opportunity," Hayes said. "Scott Creek may suffer in the long term, but it may help us so much in that we come up with answers for post-fire management solutions."

"Literally," Hayes said, "we'll probably be studying this for 10 to 20 years."