

Local

End reported to El Nino's warming trend

By JOHN ROBINSON
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SANTA CRUZ — El Nino, a weather pattern that warmed the ocean and created havoc in the marine food chain, has ended, according to scientists who say ocean temperatures should return to normal by the fall.

"For all practical purposes, it's over, though there will be a few residual atmospheric effects," said Ernest Daghir, an oceanographer with the National Weather Service. "It was a moderate event. When it initially got going last February it looked like it was really setting up, but then it relaxed."

Scientists declared the El Nino phenomenon over this week after recording a cooling in equatorial ocean waters. They hope the cooling will cause the normal northwest winds of summer to kick in off the California coast, and in turn cause the upwelling of cold, nutrient-rich water, which fuels the marine food chain.

"A few warm-water anomalies may linger, but we expect it to be back to normal by fall," Daghir said.

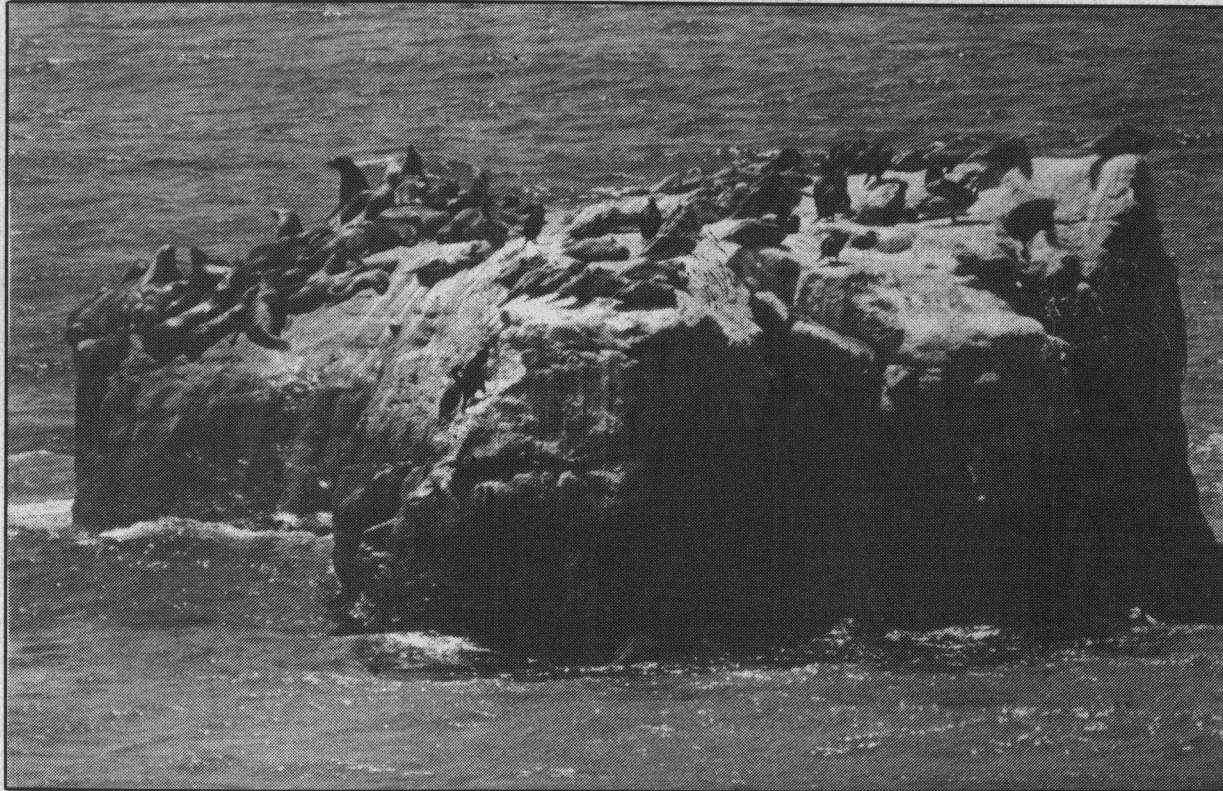
Another indication that nature has returned to normal was the recent departure of thousands of sea lions from the Monterey Bay as they headed toward the Channel Islands off Santa Barbara to mate.

The sea lions were weeks late in leaving, leading some scientists to speculate that the El Nino conditions had reduced food available and would disrupt the mating season.

This week the sea lions left Seal Rock off Lighthouse Point en masse, and cormorants began to claim resting spots in the sun, where only last month hundreds of sea lions battled for space.

Tuesday about 15 young animals, many of them sickly, remained on the tip of Lighthouse Point, most appearing too weak to make the 220-mile journey to the Channel Islands.

One aspect of the El Nino was the breakdown of the



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Sea lions have relinquished Seal Rock to cormorants, pelicans and other sea birds.

marine food chain, as the warm ocean and lack of upwelling — with nutrient-rich cold water — limited the ocean food production. The result was that thousands of young sea lions began starving along the Central California coast, and showing up on area

beaches.

About 300 young sea lions were taken in by the Marine Mammal Rescue Center for nursing back to health. Rescue workers said, however, that the numbers of sea lions brought to the center has dropped off

dramatically in recent weeks.

"We haven't brought in many at all in the past three weeks," said Lance Morgan, a biologist with the marine mammal center. "The counts have really dropped off."

Biologists speculate that a combination of the weak animals dying, as well as an improvement in the food sources, has brought the sea lion population to a sustainable level.

The sea lions migrate to the Channel Islands as well as to small rookeries off Baja California from June through August, where they mate before returning to their home areas. Morgan said an adult sea lion takes about 10 days to make the journey from Monterey Bay to the Channel Islands. The sea lion population extends from Baja California to British Columbia.

During El Nino, the water temperature off California has been 5 to 7 degrees warmer than normal, including a relatively tepid 64 degrees Tuesday at the Municipal Wharf.

The warm waters pushed salmon north into cooler waters, and in turn brought more tropical species such as barracuda and striped bass into the Monterey Bay. Other fish such as mackerel arrived in large schools in March, a couple of months earlier than normal.

The lingering effects of El Nino will be seen in warm coastal waters, and in the flow of tropical moisture from hurricanes off Mexico farther north than usual, Daghir said.

In the Monterey Bay, such tropical moisture will have little effect, other than a few humid days. Two hurricanes are building off southern Mexico, and as they move north and disperse over cool water, they may spark heavy thunderstorms in the Sierra, Daghir said.

Some forecasters had speculated that if El Nino had remained strong it could result in unusually severe winter storms.