

# Monarch numbers take wing

## 50,000 butterflies pay a winter visit to Natural Bridges

By CASSIE FERGUSON  
Sentinel correspondent

**A**FTER five years of decline, the monarch butterfly population is fluttering back to normal at Natural Bridges State Beach.

Last year was one of the worst in recent history, when only 5,000 butterflies migrated to the park's small eucalyptus grove for the winter. This year, 50,000 of the orange and black insects stopped by, marking a dramatic comeback.

But while the number of butterflies is clear, the reason for their return isn't. Experts disagree on whether drought, disease or some other factor influenced the decline and comeback.

**'It's significantly different from last year. Not just at Natural Bridges, but they were all around Santa Cruz.'**

— Julie Sidel

Monarchs in Pacific Grove. Last year, she said, only 4,000 of the butterflies arrived.

Art Shapiro, an entomologist at UC Davis, said he noticed a dramatic increase of butterflies in the Central Valley beginning in July, after very low numbers earlier in the spring.

"In 1993 and 1994, I'd seen fewer than 100 individual monarchs in the entire calendar year. In 1995, during the second half of the season, I was seeing sometimes 15 or 20 in a day," he said.

Although the monarch population does not cycle regularly, said Shapiro, the populations do change. The extreme fluctuations of the numbers of monarchs appear to be a little understood phenomenon, though.

Sidel said the population decline was tied to the drought of the past few years. She said the drought affected the population of the milkweed plants where the monarchs lay their eggs. With the milkweed population down, the monarchs had nowhere to lay their eggs, she said.

Other factors may have been involved, said Shapiro.

"There is no obvious correlation between the recent fluctuations in monarchs on the West Coast with the abundance of milkweed or changes in land use or pesticides or anything like that.

"Milkweeds are perennials, the colonies tend to be long lived, and there just is no indication that the number of milkweed plants has fluctuated dramatically during the time that the numbers of monarchs have," he said.

"One of the most striking aspects of the depressed monarch population was one could go to the places where one used to find larvae and there would be beautiful plants and no trace of the insect."

One of the most common types of milkweed typically grows along drainage ditches and flues and would be the last one to be affected by drought, he said.

Disease may have played a role, Shapiro said. "We have some anecdotal evidence that it may have been disease. A lot of schoolteachers bring monarchs in for kids at school. Those of us with reputations as butterfly people were getting calls, mostly 'I can't find any monarchs where are they?' but sometimes, 'I managed to find some and I brought them in. Then they all turned black and died and I've never seen that happen before.'"

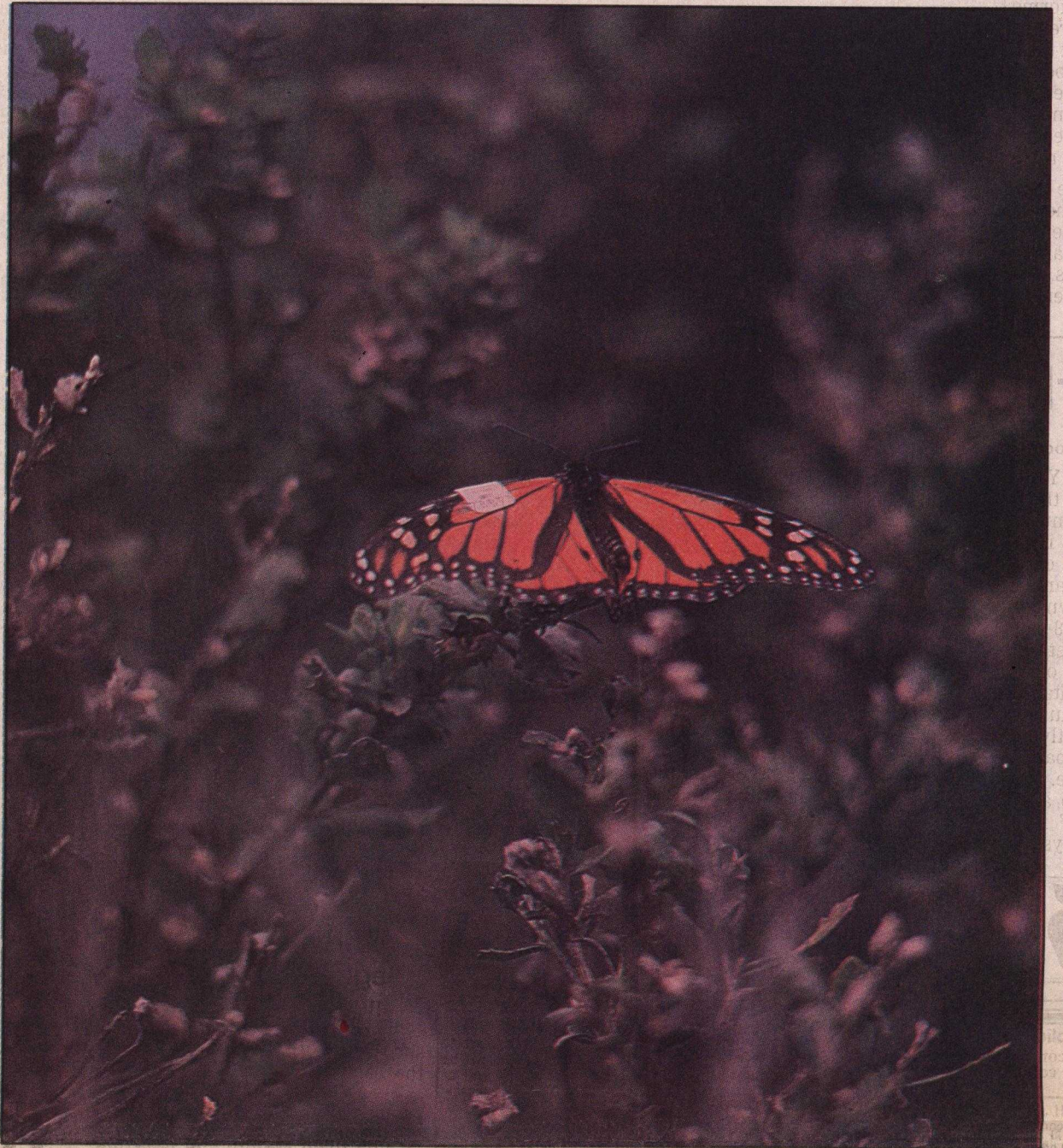
That is suggestive of disease, Shapiro said. "A virus

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"It was really exciting," said park interpretive specialist Julie Sidel of the return of the butterflies. "Residents were seeing them in their yards, which hasn't happened in a long time.

"It's significantly different from last year. Not just at Natural Bridges, but they were all around Santa Cruz," she said.

People throughout Central California have been noticing the upsurge of monarchs. In Pacific Grove, home to another spot known for its overwintering monarchs, 50,000 flew in for the winter, said Ro Vaccaro, president of the Friends of the



Dan Coyro/Sentinel photos

Elizabeth Hammack and Julie Sidel watch the monarchs fly overhead at Natural Bridges State Park.

## Annual migration festival Saturday

By CASSIE FERGUSON  
Sentinel correspondent

**D**ANCE with an elephant seal, chat with a human-size butterfly and pretend to be a newt in a celebration of migratory journeys Saturday at Natural Bridges State Park.

The 9th Annual Migration Festival will be held in honor of migratory creatures, such as birds, whales, turtles and of course, butterflies.

"We think of winter as a blah time," said Julie Sidel, park interpretive specialist. "Actually, it's really neat to see all these animals migrating."

The guests of honor — about 20,000 monarch butterflies — will be present, said Sidel.

Some monarchs have already left, in tune with the rest of the animal kingdom, feeling the need to migrate this time of the year, said Sidel.

The remaining ones will turn out in full orange and black, fluttering above the heads of people taking part in events. Kids and their parents can tour a "Whale Bus," tackle a newt obstacle course, and learn more about the Ohlones, along with Snowy Plovers, sea turtles and salamanders.

Bob Barnes of the Audubon Society will present a slide show on neotropical birds at noon, and the Mostly Mediocre, Musical Monarch Mariposas band will entertain. A dancing elephant seal is scheduled to appear at 1 p.m. Hard rain will cancel the festival said Sidel.

The festival, sponsored by Friends of Santa Cruz State Parks and California State Parks, will run from 11 a.m. to 4 p.m. at Natural Bridges State Park at the end of West Cliff Drive. The event is free, but there is a \$6 parking fee. Food and drinks will be available. For more information, call 423-4609.



# Monarchs

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or parasitic wasps may have been the cause of the disease. We really don't know for sure," Shapiro said. "There's a lot of arm waving."

Fewer and fewer butterflies returned to their perch in Santa Cruz after a good year of 120,000 in 1990. In 1992 the number was 15,000. At 5,000, last year was the lowest year since researchers began tallying the butterflies 14 years ago.

Monarchs are resilient creatures, though. Migrating thousands of miles and surviving through a hurricane-like storm in December, the butterflies are headed back up to their average number of 80,000 or maybe a high like the one of 200,000 recorded in 1982.

Monarchs west of the Rocky Mountains spend the winter on the coast, then fly inland during the spring to lay eggs on milkweed and die. Over the course of a year, the

butterflies go through four or five generations, said Lee Summers, park interpretive specialist at Natural Bridges. Each butterfly can lay up to 100 pin-sized eggs during her lifetime.

Randy Morgan, a research associate with the Santa Cruz Natural History Museum, said butterflies are affected by food, weather, competition, predators and diseases. "These have more drastic effects in short-lived animals," he said.

The happy change from the recent story of missing butterflies was mirrored in the faces of the Boulder Creek Elementary School kids visiting Natural Bridges last Friday. Tromping down the wooden boardwalk into the butterfly grove, the 5- to 8-year-olds pointed and exclaimed for first time possible in their young lives, "Look, there's one. Look, there's tons of them."