

BUTTERFLIES

Fewer monarchs spotted at Santa Cruz

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When Nadine Allgeier told husband Stanley the other day that there seemed to be fewer monarch butterflies at Natural Bridges State Park in Santa Cruz than in the mid-1970s she was probably right.

Down from Sacramento to catch the return of thousands of the lovely black-and-orange insects to the park's breezy eucalyptus groves, the Allgeiers peered through binoculars at small clusters of monarchs.

"There were more when I was down in '76," Nadine Allgeier

said. "But then, it could have been later in the season."

It's true that fewer butterflies are roosting in the trees now — which could mean that the returning flocks are later than usual or that the overwintering population in Santa Cruz this season will be relatively small.

The monarchs return to Natural Bridges and other sites in the Monterey Bay Area each October and stay until late winter, when they head north.

Actually, the monarchs that reach the park each winter are two or three generations removed from their ancestors that visited

the previous year. It isn't known just how the bugs navigate back to the Surf City trees where their grandparents spent the prior winter — although biologists suspect genetics.

After they depart in February, the monarchs follow trails of milkweed — the only thing they'll eat — to the north. Butterflies tagged in British Columbia, Montana and Idaho in the summer have been spotted months later in Santa Cruz.

The monarch population at Natural Bridges State Park fluctuates, said a UC-Santa Cruz scientist who studies the insects.

"The fluctuations are apparently in response to rainfall in California the previous winter," said Beth Bell, who is writing her doctoral dissertation on fluctuations in the park's monarch population. Rainfall in the Golden State, she noted, generally reflects weather patterns throughout the West, along the monarchs' migratory routes from the north to Monterey Bay.

"After a rainy winter," Bell said, "there are more butterflies. It seems that how much rain there is in the winter determines

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how much milkweed grows the following summer. So more rain means more milkweed and a larger population the next winter."

In recent drought years, she said, the number of monarchs visiting locally has dropped. Last winter, Bell said, about 80,000 stopped at Natural Bridges — about average for the past decade.

But, she said, the population has ranged from 46,000 to 170,000 during the 10 years of her research.

Nadine Allgeier's observation that the park's monarch population has fallen from 16 years ago is probably right.

Usually at this time, Bell said, the park has about 10,000 monarchs.

But as of last weekend, just a week before Welcome Back Mon-

archs festivities, only about 1,000 were in the eucalyptus groves.

Have humans adversely affected the monarch population?

Yes, indeed, Bell said.

The use of Bt, or *Bacillus thuringiensis* — a bacterium used to eliminate gypsy moths and other pests — could be killing monarchs along with other insects, she said.

"But the biggest threat," warned Bell, "is the degradation and destruction of their overwin-

tering habitats. The monarchs spread out across the continent in the summer, but they come together in the winter at a relatively few sites."

Logging in Mexico is destroying the winter home of the monarch population east of the Rockies, she said.

And development on or near monarch winter homes in California threatens those sites.

"The monarch is not a rare or endangered species," she said.

"But the migration pattern is an endangered phenomenon."

IF YOU'RE INTERESTED

The annual Welcome Back Monarchs Day will be from 10 a.m. to 4 p.m. Sunday at Natural Bridges, at the west end of Santa Cruz where West Cliff Drive ends. Activities include dedication of the new visitors' center and tours of the butterfly grove. Monarch fans will be dressed in orange-and-black costumes.