

Flight of the Butterfly



SHMUEL THALER/SENTINEL

The eucalyptus trees at Natural Bridges State Beach are currently alive with the color of monarch butterflies.

Winged visitors increasingly scarce in SC

Butterflies

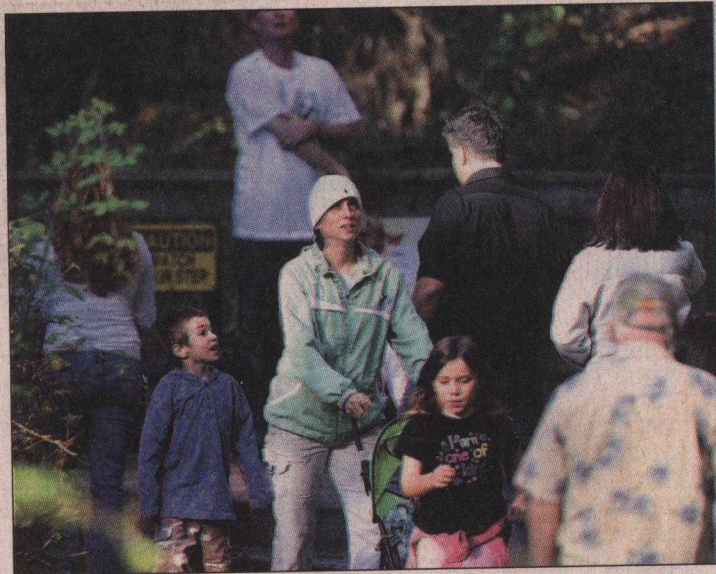
By LILY DAYTON

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SANTA CRUZ — Natural Bridges' days as the Santa Cruz hot spot for wintering monarch butterflies appear numbered. The good news is that the winged visitors are still nestling in for the winter at nearby Lighthouse Field, albeit in numbers far fewer than just a few years ago.

For decades, Natural Bridges State Beach was a butterfly magnet. In the late 1970s through the 1980s, the number of monarchs wintering in the park ranged from a low of 40,000 to a high of roughly 150,000, according to biologists. That made Natural Bridges the largest wintering site in Santa Cruz, and one of the largest in California.

Winter visitors to the park during the past few years, however, have been lucky to see a few thousand butterflies in the park's eucalyptus grove. Last year's annual Thanksgiving monarch count at the park fell



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Locals and visitors alike make their own migrations to Natural Bridges State Beach to see the monarchs. Unfortunately, there are a lot fewer monarchs to see nowadays at the state park.

below 4,000. As the population peak nears this year, estimates are between 700 and 1,000 butterflies.

The Lighthouse Field State Beach numbers are stronger.

There are roughly 4,500 monarchs currently in that park's eucalyptus groves, said John Dayton, a monarch biologist

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AT A GLANCE MONARCH BUTTERFLIES

Western monarch butterflies travel from as far away as Canada to the coast of California, where they seek conditions that allow them to survive the winter. They will roost in Monterey pines, Monterey cypress, and coast redwood, but have adapted quite well to the non-native eucalyptus. Ideal 'overwintering' habitat for monarchs includes the following characteristics:

- Protection from frost and severe storms
- Mild temperatures that range from 50-70 degrees Fahrenheit
- Large trees in an 'amphitheater' formation that provides wind shelter as well as some sun exposure
- A multi-leveled tree canopy with pendulous branches
- A somewhat open canopy that allows sunlight to filter through
- Nectar sources, such as the winter-flowering eucalyptus trees or flowers in nearby gardens
- Moisture in the form of fog or dew droplets

SOURCE: John Dayton, monarch biologist; Chris Lynch, State Parks

'It used to be that they would stay through late February or March.

Now, we do our last monarch tours around Christmas.'

CHRIS LYNCH, Natural Bridges State Beach interpreter



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The monarch season at Natural Bridges State Beach is in full swing.

MONARCHS

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who lives in Santa Cruz County.

Part of the Natural Bridges decline is indicative of a larger trend in the western monarch population. Sites up and down the coast of California are seeing wintertime monarch colonies a tenth of the size they once were, according to Dayton, who has been studying monarchs since the 1980s.

He called drought conditions and a disappearing food supply — namely milkweed, which monarch caterpillars exclusively feed on — the likely culprits.

“One contributing factor is prolonged drought,” Dayton said. “We think the other factor is the increased use of herbicide, which is decreasing the milkweed population both in farm fields and in adjacent areas where the herbicide runs off.”

In addition to the sharp population decline, Natural Bridges, which holds an annual Monarchs Day event, has seen another change over the past decade. The monarchs that do make it to the park aren’t staying for the winter.

“It used to be that they would stay through late

IF YOU GO

NATURAL BRIDGES
STATE BEACH

WHAT: Even though monarch numbers are low this year, State Park interpreters encourage the public to come to the Natural Bridges monarch preserve, where they can still have viewing opportunities. Binoculars and spotting scopes are available, as well as educational tours.

WHERE: Natural Bridges State Beach, 2531 W. Cliff Drive, Santa Cruz

WHEN: Park open from sunrise to sunset, with visitor center hours 10 a.m. to 4 p.m. daily. Public tours on weekends at 11 a.m. and 2 p.m.

ADMISSION: \$10 per vehicle
INFORMATION: 423-4609,
www.santacruzstateparks.org/parks/natbridges

February or March,” said park interpreter Chris Lynch, noting that the butterflies are still arriving in mid-October or so “Now, we do our last monarch tours around Christmas.”

One problem is that Natural Bridges has lost many of the large eucalyptus trees that were ideal habitat for roosting butterflies. Many of the trees began to fall after the Monterey

pinos sheltering the grove became infected with pitch canker in the 1990s.

“The pines and eucalyptus protected each other from the impact of winds,” said Dayton. “When the pines died, the eucalyptus trees were left unprotected. After a rainy winter with saturated soils and high wind, we lost the big trees at the back of the grove.”

As Natural Bridges has shifted to an autumnal site, other sites such as Lighthouse Field have become primary wintering sites for monarchs in the Santa Cruz area. Still, no one knows where they go once they leave Natural Bridges. They may be moving on in search of better overwintering habitat or they may get blown out and die.

“It’s still a mystery,” Dayton said. “We don’t know how much intra-site movement there is. My feeling is that they aren’t moving around much. There is no trend that when the population is lower at Natural Bridges it’s higher at Lighthouse Field. It’s possible they go to sites in Monterey, but there is currently no data.”

Wintering habitat is important to maintaining the western monarch population, which includes all monarchs west of the Rockies.

“Over the course of time,

we’ve lost a number of overwintering sites,” Dayton added. “The basic trend in California is urban invasion. In Santa Cruz County, we’ve got three of the 25 largest sites in the state. If we lose the overwintering sites, we lose the migratory population.”

Complicating the issue, the eucalyptus trees that the monarchs prefer are native to Australia, and it is against State Parks philosophy to plant non-native species. The invasive eucalyptus has been the target of large-scale removal programs in California, including around the main parking lot and adjacent areas at Natural Bridges.

Park personnel are trying to protect the eucalyptus trees that remain by planting Monterey cypresses as a wind break around the grove. Though the Monterey cypress isn’t actually native to Santa Cruz, the species is acceptable to park resource ecologists since the geographic origin is much closer than the invasive Southern Hemisphere eucalyptus species.

“We’re starting to see some success,” Lynch said. “Some of the trees on the east and west side are now 15 feet tall and beginning to provide some wind break. They will grow taller with time.”