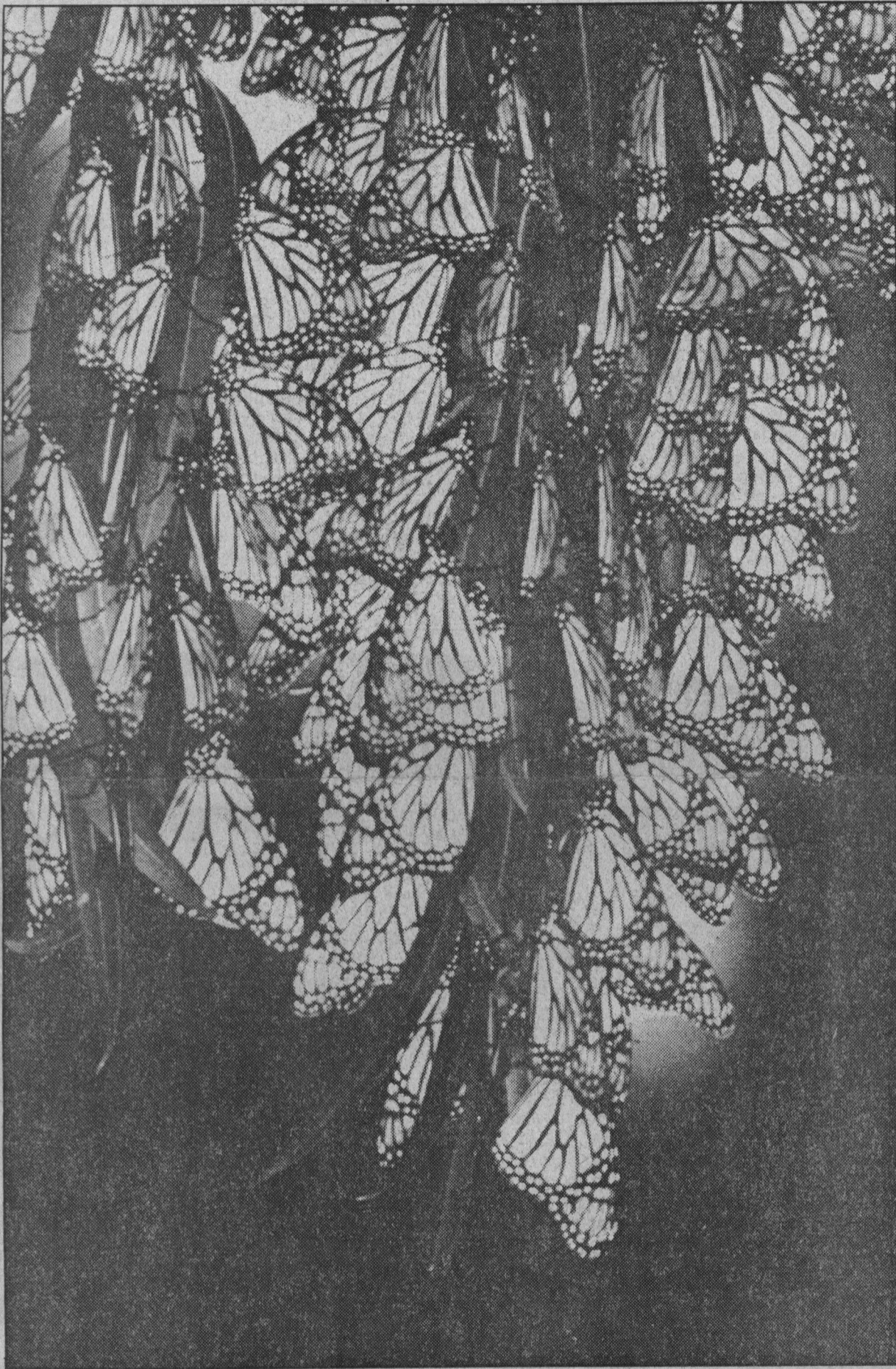


# PEOPLE



BY FRANS LANTING

Along the California coast this time of year, certain eucalyptus trees will be laced with orange-and-black monarchs.

## A Rain of Monarchs

Millions of butterflies make mysterious return to California

BY SYLVIA RUBIN

**N**o other insect in the world can pull off what the tiny monarch butterfly does each year when it migrates south for the winter.

Soaring along on wind currents, it sets off on a gutsy 3,000-mile, two-month journey that would clip the tail feathers off a starling. But when the monarch reaches its destination, it looks as fresh and dewy as the day it was born.

This is no ordinary butterfly. Some monarchs live for nine months, an eternity in the butterfly world. It is larger than most of its relatives, with a wing span of three inches, and is a feisty and brilliant navigator, traveling 80 miles a day, halfway across the country to a grove of trees it has never seen before.

All this from a creature that weighs less than a quarter of a teaspoon of salt.

How successive generations of monarchs find their way back to spots they know nothing about remains one of the great mysteries in entomology.

Like the swallows that come back to Capistrano, orange-and-black monarchs from throughout North America fly to California and to the remote mountains of central Mexico every fall. Migration begins in late September; by November 1, certain eucalyptus and cypress trees along the California coast will be laced with the brightly colored creatures.

The city of Pacific Grove, on the tip of the Monterey Peninsula, is perhaps the best-known spot for butterfly watching. Calling itself "Butterfly Town, U.S.A." Pacific



BY FRANS LANTING

A caterpillar with a future as a monarch munches on milkweed.

### Reason to celebrate

**P**acific Grove throws a party every fall heralding the return of the monarchs.

The town's annual butterfly parade, which is almost 50 years old, begins at 10:30 a.m. Saturday on Lighthouse Avenue, between Fountain Avenue and 17th Street. The parade features hundreds of schoolchildren dressed in colorful costumes. Kindergartners are always monarchs; the rest of the kids come dressed as clowns, trees, cookies, whales, Indians and other fanciful creations.

The parade is followed by a bazaar, sponsored by the PTA.

Note: Pacific Grove takes its butterflies seriously. The city will fine anyone caught harming the creatures \$500, the only city in the country with such a law.

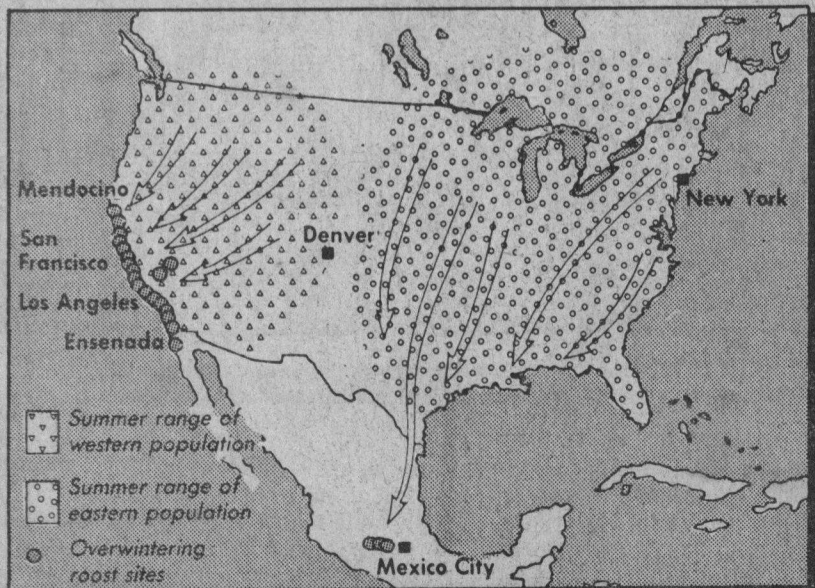
Santa Cruz butterfly lovers celebrate the monarch every year with a tongue-in-cheek theatrical show. The "Welcome Back Monarchs Day" celebration begins at 1:30 p.m. Sunday at Natural Bridges State Beach, sponsored by the Monterey Bay Natural History Association.

According to biologist John Lane, the celebration is a "low-key, small-town event which includes poetry readings, music, blessedly short speeches and a nearly death-defying flight from the trees by Monarch Man (usually a park ranger.)"

There is a \$3 day fee for use of the park.

See Page B5, Col. 2

### MONARCH'S MIGRATION PATTERNS



BY THE CHRONICLE

### Migration is endangered

**T**he monarch butterfly is not considered an endangered species, but international conservation organizations consider the migration of the monarch an endangered phenomenon.

Major spraying programs for mosquitos and biting flies in Florida, for example; the cutting of oyamel trees in Mexico, a kind of fir used to make cardboard boxes; and real estate development in California are threatening the monarch's habitat, according to biologists John Lane of Santa Cruz and Lincoln Brower of Florida.

September 11, Governor

Deukmejian signed AB 1671, which requires the Fish and Game Department to prepare an inventory of habitats critical for winter roosting of the monarch butterfly and to make recommendations concerning sites that should be considered for state acquisition.

There are perhaps 20 large winter roosting sites along the central California coast and several smaller sites. The bill, written by Assemblyman Byron Sher, D-Palo Alto, takes the first step toward saving the sites by identifying the areas that need to be protected.

# The Mystery of Fall's Monarch Migration

From Page B3

Grove prides itself on the yearly return of its little visitors. This Saturday, the city will sponsor its annual parade to herald the return of the monarchs.

Natural Bridges State Park in Santa Cruz is another large clustering site that can attract even more insects than Pacific Grove. As many as 200,000 monarchs will settle in one shallow eucalyptus canyon there, half the size of a football field, where they flutter about when the sun is shining, and fold up their wings and rest on the leaves of the trees when the fog rolls in.

"Children who come to this spot stop talking," says butterfly biologist John Lane of Santa Cruz. "The awe is real."

## In Flight

Like glider pilots, monarchs take advantage of rising columns of warm air to propel them to their destinations.

"Sometimes," says Lane, "they will stop and wait, nectaring on flowers and shrubs until the wind is just right, and then they just catch a thermal and glide. That's probably why they are in such good shape when they arrive."

They have few predators. Birds and other vertebrates stay away for the most part because of a built-in poison inside the monarch that makes the animals violently ill. One possible enemy is the car: The few monarchs that arrive at their winter sites damaged probably bounced off your windshield.

Many creatures in the animal kingdom migrate: Whales, eels, bats, sea turtles, salmon and many birds travel long distances between breeding and feeding areas. But the monarch is the only invertebrate to make a long-distance, two-way annual migration, says Lane.

This unexplained phenomenon, of great interest to scientists, is one reason the Mexican government has instituted laws to protect the monarch habitats. In California, Governor Deukmejian recently signed a bill that may provide habitat protection here.

## An X-Rated Winter

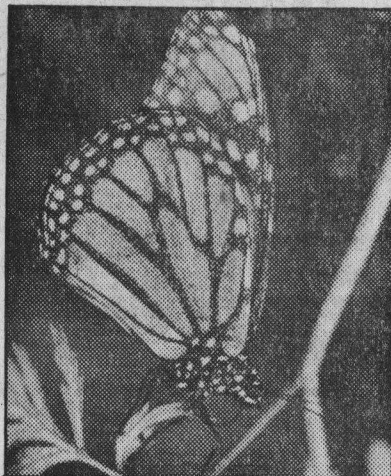
By November, the monarchs are settled into their winter homes, clasped onto the tree leaves, where they will stay until early February. They eat nothing, and drink only water and nectar, living off the fat they have stored from the summer.

In January, they mate:

"It's an X-rated month," says Lane. "They all get turned on at about the same time, and there is this incredible orgy, with butterflies falling out of trees and coupling on the ground."

By the end of February, the California trees are bare again, as the butterflies leave to begin the species' trip back north. However, hardly any of that generation make it all the way back to their birth place.

The northward migration is actually made by successive generations, Lane explains. Only every fourth to sixth generation of monarchs comes back to California or



BY FRANS LANTING

**Though the monarch isn't very helpful to ecology, it's a 'cultural enrichment,' says evolutionary biologist Lincoln Brower.**

Mexico.

After laying eggs on milkweed plants on their way north, the first generation soon dies. After about a week, those eggs hatch and the resulting butterflies, moving ever northward, lay eggs about three to five weeks after that. Successive generations are born through the spring and the early summer. They live for only six weeks repopulating the entire North American continent. The butterflies born in late summer, when the days are getting shorter, have the surprisingly long life span and are somehow genetically cued to make the trip back south, where their ancestors spent the winter.

How can they possibly find

## TO SEE THEM

Here is a list of spots to see the monarch.

Monarchs arrive in the greatest numbers in early November and stay through the winter. It is recommended that you telephone for a monarch update before visiting these areas:

Pacific Grove, Washington Park and the Butterfly Grove Inn, (408) 373-3304; Santa Cruz, Natural Bridges Beach State Park, (408) 423-4609; Morro Bay, Morro Bay State Park campground, (805) 772-7434; and Pismo Beach, Pismo State Beach north campground (805) 489-2684.

California. (Monarchs are also found in Australia, New Zealand, the Azores, the Canary Islands, and many Pacific islands.

In some areas north of Mexico City in the fall, the sky turns orange and black, as literally tens of millions of butterflies return to the forest. The Mexicans, who have been observing this phenomenon for centuries, have incorporated it into their mythology, and believe the butterflies are the souls of their dead children coming home. Anyone who has seen the clusters there comes away with a new sense of the wonders of nature.

## Beautiful Necklaces

"The trees in Mexico look like they are wearing a thick fur coat of butterflies," Lane says. "In California, I like to say that the trees look more like they are wearing beautiful necklaces and earrings."

Beauty, in fact, is all we have to thank the monarch for. As cross-pollinators, they aren't very helpful, nor do they make much of a contribution to the ecology.

Lincoln Brower, an evolutionary biologist based in Florida, one of the leading monarch experts in the world, compares them to an exquisite piece of music.

"What good is the monarch? Ask yourself what good is an art museum, or Mozart's music," he asks. "If the monarchs disappeared tomorrow, it would be like taking Mozart's clarinet concerto and destroying it so no one could ever listen to it again. It's a question of cultural enrichment."

trees they have never seen before?

"We don't know," Lane says. "They seem to follow some inner road map. There are theories that it has something to do with the earth's magnetic field or the position of the sun."

Some things, however, are known: The monarch that breaks out of its cocoon-like shell in the late summer in a back yard in, say, Cleveland — or anywhere east of the Rockies — winds up in Mexico. It's not that these butterflies are incapable of flying across the Rocky Mountains. They're tough enough; it's just that they don't see the point, preferring to get to Mexico via Texas. The monarch born west of the Rockies, however, will winter in