Where to See Monarchs in San Luis Obispo

Several stands of eucalyptus trees within the City limits act as over-wintering areas for Monarchs. During early morning, from November to March, they can be seen roosting in high branches. The following areas are good sites to see Monarchs:

Laguna Lake Park – Take the Madonna Road exit from Highway 101, the park is approximately 1 mile from the freeway. Follow the park road to the lakefront and turn right. Monarchs are found in the eucalyptus trees at the end of the lakefront road.

Cerro San Luis – Take the Fernandez Lane exit from northbound Highway 101, park in the lot at the entrance to Maino Open Space. Follow the trail to the east side of Cerro San Luis, a small population of Monarchs can be found the in the oak/eucalyptus woodland, under the white "M".

Lady Family Sutcliffe Cemetery– Take the Elks Lane/Prado Road exit from northbound Highway 101, follow Elks Lane north, the cemetery is located on the corner of the junction with Higuera Street. Monarchs can be seen in the stand of eucalyptus trees along the perimeter of the cemetery.

Apple Farm Restaurant – Take the California Blvd exit southbound on Highway 101, after two blocks, turn left on to Monterey Street, the address is 2015 Monterey Street. Monarchs can be seen in the riparian vegetation behind the restaurant.

Bowden Propterty – Upper end of Lizzie Street off Johnson Avenue. Monarchs can be seen in the eucalyptus trees across from the Old Adobe. A development plan is pending for this area, but it proposes to preserve the Monarch's roosting area.

City of
San Luis Obispo,
California

Monarch Butterflies

City of San Luis Obispo
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Monarchs

Anyone who has spent a winter on the Central Coast will be familiar with the spectacle of large colonies of Monarch butterflies *(Danaus plexippus)* hanging from the branches of eucalyptus trees like ornate chandeliers. This orange-winged Olympian of the insect world is one of the most conspicuous members of the Lepidoptera (that family of insects which includes moths and butterflies). People worldwide are familiar with the Monarch because of its unique attributes: it lives longer, travels farther, and has a wider distribution than any other butterfly on earth. The Monarch's winter residency in the San Luis Obispo area is just one stage in an amazing lifecycle, which involves three distinctively different body forms and a migratory flight of up to three thousand miles spanning several generations.

Milkweed Plant

Caterpillar

Life Cycle

During the summer months Monarchs can be found as far north as Canada, where they reproduce by laying eggs on milkweed plants. The tiny cone shaped eggs are laid on the underside of a leaf and the black and yellow striped caterpillars emerge 3-4 days later. The caterpillar feeds voraciously on the milkweed for approximately three weeks. During which time its body weight increases an incredible 2,500 times. While gaining nutrition from the milkweed, the caterpillar also concentrates toxins from the plant in its own tissues. These toxins, called carenolides, provide protection to the larva and adult butterfly from potential predators, such as birds, which find the toxins distasteful.

When the caterpillar is ready to pupate it leaves the milkweed plant to find a suitable spot to undergo the remarkable process of metamorphosis. Complete metamorphosis is the change in bodily form of an animal during normal development after the embryonic stage; common examples include the transition of a tadpole into a frog and of a maggot into an adult fly. When the Monarch caterpillar finds the right spot for its transformation, it weaves a small pad of silk underneath a leaf from which it hangs in the shape of a "J". The caterpillar then sheds its skin. The new skin beneath is very soft and once it dries it becomes the larva's chrysalis.

After about two weeks, the orange and black wings of the adult butterfly are visible through the transparent chrysalis. The outer casing then fractures and a wrinkled adult emerges; warmed by the sun, the adult pumps bodily fluids into its wings, making them rigid and suitable for flight. Once rested and unfurled the adult butterfly sets off in search of nectar and the life cycle begins again. The average life span for a summer emerging Monarch is about six weeks.

Chrysalis

Migration

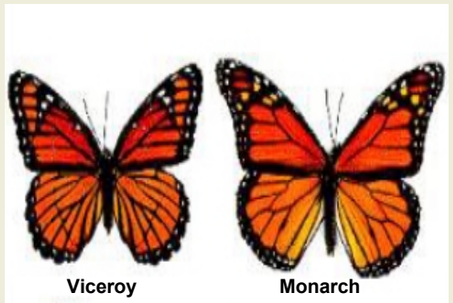
As fall approaches the newly emerging Monarchs start to behave differently from their summer ancestors. They do not reproduce. Instead they concentrate on feeding, storing large deposits of fat in their tissues. It is these individuals that will undertake the arduous migration south. In a good year, up to five million Monarchs migrate from southwestern Canada to the Pacific Coast of California and Mexico. The longest flight of a tagged Monarch is 1,800 miles from Ontario, Canada to Mexico.

Suitable over-wintering sites must have a specific microclimate to allow the Monarch to survive until spring. Ideally, the area should be damp so that loss of body fluids is minimized; have some shade to retain moist air; and have areas exposed to the warm morning sun as Monarchs are inactive at temperatures below 40°C. A southeast facing grove of mixed height eucalyptus trees is ideal. These small pockets of suitable habitat are essential to ensure the survival of the population throughout the cold winter months.

As spring approaches and days become longer and warmer, the Monarchs begin to mate again. The males and females follow the rejuvenating milkweed plants north, laying fertile eggs along the way. The offspring will continue the northward migration, and several generations later the Monarch population will return to the summer habitat that it left six months earlier.

Mimicry

The term mimicry refers to the resemblance of one insect (called the mimic) to another (called the model) so that a predator is deceived into confusing the two. This phenomenon was first described in 1862 by the British zoologist, Sir Henry Bates. Bates studied insects from the Amazon and found that many palatable species derived protection by virtue of their similarity to unpalatable species.



The Viceroy butterfly *(Limentitis archippus)* has evolved a very similar pattern of coloration to the Monarch. It is thought that the Viceroy is acting as a mimic, the similarity providing some protection from predators, such as birds, which often mistake the edible Viceroy for the inedible Monarch.

Threats to Monarch Butterflies

There has been a decline in the Monarch butterfly populations of North America in recent years. The primary reasons for this are thought to be: loss of over-wintering sites and summer migration grounds due to urbanization; use of herbicides to destroy milkweeds that compete with crop production and are noxious to grazing livestock; and the application of broad spectrum insecticides targeting crop pests which also kill Monarch larva. A new high-tech threat to the Monarch has arisen with the development of genetically engineered crops. Some scientific researchers believe that eating pollen from corn plants engineered to make their own pesticide can kill larva of Monarch butterflies.

The City of San Luis Obispo is committed to protecting local Monarch populations by preserving over-wintering and breeding habitat whenever possible.

Additional Information

Photo credits:
http://MonarchWatch.org/

More Information:
http://www.smm.org/sln/monarchs/
http://www.monarchlab.umn.edu/SO/so.html
http://www.learner.org/jnorth/spring2000/species/monarch/index.html