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Bay checkerspot butterfly reintroductions continue at Edgewood with positive results

Scientists, rangers and park supporters took another step towards bringing back the Bay checkerspot butterfly to its historic home at Edgewood County Park and Natural Preserve in Redwood City. “In addition to providing great recreational opportunities, San Mateo County Parks include acres of valuable habitat for flora and fauna,” said Jim Porter, Director of Public Works, which now includes Parks. “This is one of the many restoration efforts in our parks and the results let people see what the lands looked like before our area was developed.”



Efforts to restore the last remaining population of Bay checkerspot butterflies have been in place since the butterflies suffered a local extinction in 2002 due to a decrease in the number their host plant, dwarf plantain. Ecologist Dr. Stuart B. Weiss dubbed what happened to the Bay Checkerspot Butterfly as “drive by extinction” when his research showed how exhaust fumes (nitrous oxides and ammonia) from cars driving by on Hwy 280 actually act as a fertilizer on the grasslands. The fertilizer boost given to the non-native grasses, which do not normally grow well in the nutrient poor serpentine soils, allows them to out-compete the native wildflowers. In time, the wildflowers are reduced to such small numbers they no longer supported the butterfly.

The habitat is being restored through a rotational mowing program, and checkerspot host plant and nectar sources are abundant in the area once again. With adequate habitat in place, the US Fish and Wildlife Service granted a permit to transfer butterflies, in both the caterpillar and adult form, from a healthy population at Coyote Ridge to 15 acres of prime habitat at Edgewood.



An effort in 2007 was not successful due to very dry weather conditions and a small number of transferred caterpillars. While a setback, mowing continued to keep the site ready for the eventual butterflies’ home coming. In February 2011, more than 4,000 caterpillars were introduced. About 130 adults were counted by volunteer monitors during the flight season (March and April 2011), and about 2,000 caterpillars, offspring of those butterflies, were noted this winter. To further the odds of firmly

reestablishing this species, another 4,852 caterpillars were introduced February 2012.

Butterflies judge habitat quality by the presence of others. They need a critical mass to settle down and develop a sedentary tendency. Introducing too few butterflies may increase the likelihood that they will fly away looking for other individuals. More than 100 butterflies have been spotted already this year, a strong indicator of success.

To further increase the likelihood of success, additional adults were introduced Tuesday April 3, 2012.

“We are hopeful that all these positive signs mean the reintroduction will be successful over the long term,” said Sam Herzberg, Senior Planner for San Mateo County Parks.

The larvae were reintroduced into their historic home, in the serpentine grassland between the Serpentine loop and the Clarkia trails. The site can be observed when standing on the Serpentine loop, facing toward the freeway, and looking across the swale and upslope. The site is protected and not crossed by public trails. “An added benefit of the restoration is that the native carpets of wildflowers have been restored,” said Ranger John Trewin. “We ask people to stay on trails to protect the sensitive habitat but the views from those trails are spectacular. One day when the butterfly population multiplies and has a chance to reestablish itself over the next few seasons, visitors may be able to see adult butterflies fluttering about.”

“This has been an excellent example of successful restoration efforts reversing the damage done to a rare species,” said Superintendent Gary Lockman. This project has been a cooperative effort among scientists, San Mateo County Parks, volunteers and local funders. As our budgets are cut, these partnerships are invaluable.”

Partners of the San Mateo County Parks include: Creekside Center for Earth Observation San Mateo County Parks Foundation, United States Fish and Wildlife Service, Pacific Gas & Electric Company, the Jiji Foundation, and the Friends of Edgewood.