

## Checkerspot flying back to local park

By Dana Yates

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The checkerspot butterfly is flying back from the brink of extinction and making its home once again in Edgewood Park — a decade after it disappeared from the San Mateo County natural preserve.

“It’s a culmination of work since 2000,” said Julia Bott, executive director of the San Mateo County Parks Foundation.

The effort to restore the natural habitat for the butterfly was a slow process that required a bevy of volunteers to rid the park of invasive Italian rye grass and replace it with native plants that feed and shelter the insect. Years later, those involved in the effort are ready to celebrate its success and welcome back the black and orange checkered butterfly.

The work done at Edgewood Park around the disappearance — and return — of the checkerspot may help restore similar ecosystems around the world.

Bott helped with the process but points to ecologist Dr. Stuart Weiss as the catalyst behind the movement to save the butterfly.

Weiss first studied the Bay checkerspot butterfly in Edgewood Park as a Stanford

University undergraduate in the ’80s. He returned year after year to the little park on the western edge of Redwood City and east of Interstate 280. He counted butterflies by the thousands. In the late ’90s, there were approximately 9,000 Bay checkerspot caterpillars which roughly translate into 5,000 butterflies. Then in 1997, he saw the population collapse. By 2002, his practiced eyes couldn’t find a single one.

Ironically, the culprit responsible for the butterflies’ disappearance is the automotive catalytic converter designed to reduce air pollution. Rather than converting pollutants from cars into non-reactive, inert nitrogen, catalytic converters produce ammonia molecules which spew from exhaust pipes and drift on the wind to adjacent areas.

Ammonia acts as a fertilizer, encouraging Italian rye grass, a non-native weed, to grow in thick mats that prevent native plant seeds from germinating. Without sheltering plants and food, particularly the California plantain favored by the caterpillars, the Bay checkerspot butterfly population eventually succumbed.

The checkerspot is just one of many victims of nitrogen pollution of catalytic converters. Nitrogen is saturating ecosystems worldwide, largely due to the use of fossil fuels. It encourages the growth of invasive grass into California deserts and coastal scrublands, choking off floral diversity.

Unfortunately, said Bott, most people don’t realize scientists believe the threat of nitrogen pollution is comparable to that from global warming.

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