

## Palos Verdes Blue Butterfly Habitat Restoration Partnership

Palos Verdes/South Bay Audubon has partnered with Rolling Hills Preparatory School (RHP) to restore 10.5 acres of habitat for the Palos Verdes blue butterfly (PVB). PV/SB Audubon will be serving in an advisory role and the students at RHP will be doing most of the restoration. There are opportunities for members and friends of our chapter to be involved in the restoration as well. We have scheduled three Saturday volunteer days for Audubon members and friends. They are April 29<sup>th</sup>, May 27<sup>th</sup> and June 3<sup>rd</sup>. The volunteer days will run from 9:00 am – noon. Rolling Hills Preparatory School is located at 1 Rolling Hills Prep Way in San Pedro. We will meet in the main parking lot at 9:00 am and work until noon. Please join us for these volunteer days. If you can't stay for three hours, any help will be appreciated. Bring a pair of gloves if you have a pair, sturdy shoes and some water. Tools will be provided.

Our partnership has been a long time in the making. Initial meetings were held three years ago to work on some of the details of the partnership. A Memorandum of Understanding (MOU) was agreed upon and initialed by RHP and PV/SB Audubon. The MOU describes the responsibilities of RHP and PV/SB Audubon. RHP and PV/SB Audubon have worked with the U. S. Navy, the U. S. Fish and Wildlife Service and the Department of Education to get our partnership approved. Almost three years to the day after the MOU was initialed, we signed the MOU. The Reserve that we will be restoring was part of the Defense Fuel Support Point. The deeds for the property have been transferred to RHP. RHP will be responsible for ownership and management and will conserve the Reserve habitat in perpetuity.

The PVB will be incorporated into the science and horticulture curriculum. Students will learn about the butterfly, its habitat, its food plants and how to restore and maintain PVB habitat. Students will also monitor changes in the flora and fauna. They will also learn the hierarchy of organization in an ecosystem and learn how to identify and track changes to key components in an ecosystem community to the community level. The PVB is a federally-listed endangered species so the students will also learn about endangered species and the importance of the Endangered Species Act and how it relates to the PVB. The PVB was thought to be extinct in 1983, but was rediscovered in 1994 on the DFSP as Jess Morton wrote about in the last issue of Hummin'.

The PVB is a subspecies of the silvery blue butterfly. It was listed as federally endangered on July 2, 1980. Flight season for the PVB is late February – early May. Adult PVB have a life span of only 4 to 5 days. They are about the size of a quarter. There are two host plants for the PVB: deerweed (*Acmispon glaber*) and milkvetch (*Astragalus trichopodus*). Deerweed is found throughout the Reserve, but milkvetch is not present. These are early successional species that are adapted to thrive in disturbed habitat. In areas without disturbed habitat or active maintenance, coastal sage scrub or non-native species will tend to out compete the deerweed and milkvetch. As a result, active management of the Reserve will be required.

The numbers of PVB on the DFSP and the former Palos Verdes Naval Housing area have fluctuated since it was rediscovered in 1994. The highest estimate was 282 PVB in 2004. No PVB were recorded during the 2014 and 2015 surveys. The recent drought conditions have likely contributed to the decline. It is possible, if remotely, that the PVB may recover naturally. However, it isn't known exactly how long

pupae can survive in leaf litter. Given the decline in PVB at the DFSP and within the former Palos Verdes Naval Housing area, active reintroduction efforts may be required. There is a captive rearing program at Moorpark College in Ventura. PVB have been reintroduced with apparent success at the Linden H. Chandler Preserve in Rolling Hills Estates.

Our work in the Reserve will be guided by a Habitat Management Plan (HMP). The introduction of the vision statement contains this summary: "The goal for the Palos Verdes blue butterfly Reserve (Reserve) is to increase the abundance of the federally endangered Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*; PVB) through habitat enhancement and to sustain a robust, stable population through active habitat management." Our goals listed in the HMP include maximizing habitat availability for the PVB, actively managing the Reserve to promote further expansion of deerweed, continuing to monitor PVB in coordination with the surrounding land owners, minimizing unintended disturbance in the Reserve and maintaining coordination with the U. S. Fish and Wildlife Service and updating the HMP as appropriate.

Habitat restoration in the Reserve will be a long process. The first few years will require a lot of work to significantly reduce the non-native vegetation and establish a robust deerweed population either through the existing seed bank or by planting. In subsequent years, periodic maintenance and habitat disturbance will be required. RHP and PV/SB Audubon are looking forward to our partnership and we hope that you will be a part of our restoration efforts.