

Valley Elderberry Longhorn Beetle

The Issue

Survival of the valley elderberry longhorn beetle has been challenged by loss of habitat along rivers in California's Central Valley. The better news: The U.S. Fish and Wildlife Service has recommended delisting the insect as recent surveys have found it at 190 locations, a huge increase over the fewer than 10 locations reported at the time of listing in 1980.



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Natural History

This medium-sized beetle—it grows to about an inch long—is found only in California's Central Valley, from southern Shasta County south to Fresno County in the San Joaquin Valley. There it is dependent for survival on elderberry shrubs.

The shell-like wing covers (elytra) of females are dark metallic green to black with bright red borders, while the elytra of males are mostly red with four dark, oblong spots. Adults feed on elderberry leaves and perhaps flowers from March through early June. They mate during this time, and females lay eggs on living elderberry plants. When the larvae hatch, they bore into the center of elderberry stems, where they feed on pith for the next year or two. The larvae then enter a pupal state, remaining in a chamber inside the stem until they metamorphose into adults and emerge from mid-March to June.

Based on surveys of exit holes on mulberry stems through 2006, biologists reported the beetles at 190 locations within the Central Valley, up from 10 locations when the species was first listed. This increase was due primarily to stepped-up efforts to find the beetles. However, little information is available regarding population trends.

The main threat to the species' survival is loss of river-related (riparian) habitat. Between 1900 and 1990, agriculture and urban development claimed 96

percent of the southern portion of the valley's riparian habitat, 84 percent of the mid-valley's and 80 percent of the northern valley's (quantifying the resulting loss of elderberry shrubs in these areas is almost impossible).

Loss of riparian habitat has slowed during the past 25 years, in part because of protections provided for the beetle and other species listed under the Endangered Species Act.

This reduction in habitat loss is a benefit for all wildlife dependent on such lands and waters. Other threats include predation by two invasive insects—Argentine ants and European earwigs—and by birds and lizards. Little evidence exists for determining the level of threat posed by these creatures. Another likely threat to the beetles and to riparian habitat is the estimated 600 million pounds of pesticide active ingredients used yearly in California, including 15 pesticides that may jeopardize the beetle, according to a U.S. Fish and Wildlife Service assessment in 1999. The magnitude of the pesticide threat remains uncertain.

Listing

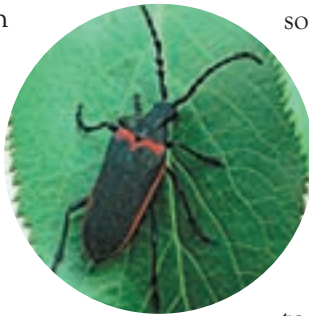
The Service listed this species as threatened in 1980, when biologists reported it from fewer than 10 locations along the America River, Putah Creek and Merced River in California's Central Valley.

Management

Since 1980, more than 50,000 acres of riparian habitat in the Sacramento and San Joaquin valleys have been protected or restored for the beetle. The Sacramento River, San Joaquin and Stone Lakes national wildlife refuges have acquired a total of 22,000 acres of existing and replanted riparian habitat on the three refuges. The U.S. Fish and Wildlife Service Landowner Incentives Program, done in cooperation with the California Department of Fish and Game, Ducks Unlimited and the U.S. Department of Agriculture Natural Resources Conservation Service,

Beetle

has helped protect habitat by working out agreements on private lands in which landowners receive financial assistance for three years in return for irrigating and weeding riparian plantings or vegetation in need of management, increasing the chances that native vegetation will establish on these sites. This program does not provide long-term protection, however. The U.S. Fish and Wildlife Service Safe Harbors Program also works with private landowners, encouraging them to enhance, restore and in other ways support beetle recovery on their land. To date, more than 11,000 acres at three sites have been enrolled in the Safe Harbors Program.



Local Contacts

National Wildlife Federation Northwest Natural Resource Center, 206-285-8707; Fish and Wildlife California/Nevada Operations Office, Endangered Species Program, 916-414-6464; California Department of Fish and Game, 916-653-4633.

Other Threats

The danger posed by pesticides still needs to be explored.

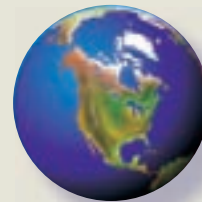
* The U.S. Fish and Wildlife *Federal and State Endangered and Threatened Species Expenditures* report incorporates subjective estimates provided by regulated entities without any independent verification and without effort to segregate Endangered Species Act expenditures from other related expenditures. However, for most listed species, no other funding data is available.

Because of the increase in the number of sites reported as occupied by the beetles, coupled with the reduction in riparian-habitat loss and the increase in protection and restoration of such habitat, the Service is considering delisting this species.

Funding

Funding from all government sources for valley elderberry longhorn beetle ranks the species number 87 out of 1,311 species, according to the U.S. Fish and Wildlife Service fiscal year 2004 report (the most recent available) to Congress, *Federal and State Endangered and Threatened Species Expenditures*.^{*} Total recovery funding for the beetle from all government sources that year was about \$1.5 million, with \$131,768 coming through the Service. “The limited amount of funding that Fish and Wildlife has available for this species is a sign of a problem that ripples throughout the agency’s recovery work,” says John Kostyack, director of Wildlife Conservation Campaigns at the National Wildlife Federation. “This budgeting represents a failure on the part of Congress to provide adequate funding to the one federal agency for which endangered species recovery is a priority. Current Fish and Wildlife Service funding for endangered species work often forces the agency to work on a shoestring budget.”

THREATS FROM GLOBAL WARMING



Global warming will jeopardize riparian habitat by reducing the mountain snowpack that feeds rivers and, similarly, by altering local rainfall, which could in turn affect the growth of the elderberry plants on which the beetles depend for survival.