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Least Bell's Vireo breeding records in the Central Valley following decades of extirpation

The Least Bell's Vireo was once a common breeding bird in the riparian forests of California's Central Valley. Approximately 95% of this riparian forest has been lost, and with it the breeding habitat for this chatty little bird. By the 1940's the vireo had been extirpated from the Central Valley. Its listing as federally endangered led to intensive recovery efforts in southern California where vireo numbers have increased in the past decade. Expanding that success into the Central Valley and establishing a sustainable population is a requirement for removing this from the endangered species list.

In 2005, PRBO biologists working at the San Joaquin River NWR discovered a pair of Least Bell's Vireos feeding fledglings, which represents the first documented case of breeding in the Central Valley in over 50 years. That same year a second successful nest was found and monitored. The following year, a single successful nest was found and monitored near the 2005 nest. In 2007, a single female returned, built a nest, and laid four eggs which did not hatch. No nests or individual were found in 2008-2009 despite extensive monitoring efforts.

Our findings highlight two very important facts for the recovery of the Least Bell's Vireo in the Central Valley: 1) vireos are capable of dispersing large distances (from southern California to the Central Valley) to breed in new areas and 2) the habitat created by restoration efforts on the San Joaquin River NWR provides suitable nesting sites for the vireos.

The dense shrubby vegetation preferred by the vireos tends to mature into taller forests with a less dense understory, which is less desirable. To maintain young riparian habitat for dispersing

vireos, land managers should: 1) restore new areas, 2) chose restoration designs that promote a thick understory, 3) actively manage habitat to promote understory growth (e.g. mowing, burning), and 4) restore natural processes that promote new vegetation growth (e.g. flooding, fire).

Key Points and Management Implications

- Least Bell's Vireos have been confirmed nesting in the Central Valley for the first time in over 50 years
- There were two successful nests in 2005, one successful nest in 2006, and one unsuccessful nest in 2007
- The vireos are capable of long distance dispersal from southern California population centers
- There have been an increasing number of vireo sightings outside of major breeding areas in southern California
- Riparian restoration efforts can create suitable habitat for this endangered species
- Management activities for this species include maintaining suitable habitat and restoring natural processes that promote new vegetation growth
- Restoration site selection and planting design will be most successful when undertaken as a collaborative partnership

Howell, C. A., J. K. Wood, M. D. Dettling, K. Griggs, C. C. Otte, L. Lina, and T. Gardali. 2010. Least Bell's Vireo breeding records in the Central Valley following decades of extirpation. *Western North American Naturalist* 70(1):105-113. PRBO publication #1685