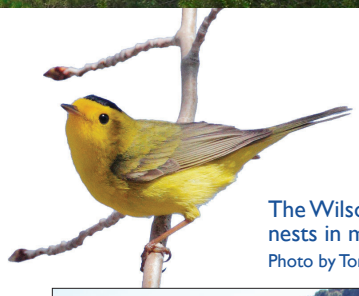
Support River Restoration

Science shows restoration works – for wildlife, nature, and people

Restoration works – for people and wildlife

Healthy forests on our rivers and creeks provide homes for wildlife, offer cool places for wildlife to escape the heat, increase water storage, decrease the risk of flood damage, and give us beautiful places to hike, bike, and enjoy nature. Unfortunately, many of these forests have been eliminated and are projected to suffer more in the future due to climate change. Restoring streams, including replanting trees, shrubs, and grasses, provides huge benefits for wildlife and for people. Support restoration: it works!



The Wilson's Warbler nests in moist woodlands.
Photo by Tom Grey.

Photo by Ryan DiGaudio/PRBO

You can help support restoration

People help make restoration successful. Here are things you can do:

- Support programs that fund habitat restoration.
- Fund the science that drives successful restoration projects.
- Approve regulations that make it easier to restore nature.
- Support policies that include restoration – in flood planning, urban development, and planning for climate change.

Wildlife Refuges – Year-round habitat for birds

Hundreds of thousands of birds that nest in Canada and Alaska spend their winters in California's Central Valley. Our research shows that restored forests provide important habitat for these songbirds during the winter.

Above: Fox Sparrow, a wintering migrant.
Photo by Tom Grey www.tgrey birds.com.

Success Stories

Restoring Rivers of Birds

People are restoring rivers throughout California. Our rivers are home to diverse bird communities, including many species that migrate thousands of miles to return to our riverside forests every year to raise their young. Research from the California-based conservation non-profit PRBO Conservation Science (PRBO) shows that restoration works.

On the Sacramento River, California's largest river, The Nature Conservancy and U.S. Fish and Wildlife Service, along with many partners,* embarked on a project to restore 100 miles of riverside forest. PRBO joined the team to ensure that the projects would provide the best possible habitat for birds. Bird numbers increased dramatically, approaching the numbers found in nearby undisturbed forests. These successes have led to new ideas about how to design the plantings of trees, shrubs, and grasses to help birds and other wildlife.

*Restoration partners on the Sacramento River: The Nature Conservancy, U.S. Fish and Wildlife Service, River Partners, U.S. Army Corps of Engineers, California Department of Fish and Game, California Department of Water Resources, California Department of Parks and Recreation, California Wildlife Conservation Board, and Sacramento River Conservation Area Forum.

To learn more about PRBO's river restoration science, contact Tom Gardali – (415) 868-0655 ext 381 – or tgardali@prbo.org. • Visit PRBO on the web at **www.prbo.org**.

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Return of an endangered species

In 2005, the endangered Least Bell's Vireo successfully nested in the Central Valley for the first time in 50 years! PRBO biologists, working with staff of the San Joaquin River National Wildlife Refuge and with River Partners, discovered a pair of the vireos feeding their young in streamside vegetation that had been planted just a few years earlier. Restoring our floodplains will help the recovery of threatened birds, keep common species common, and provide benefits to salmon, rabbits, beetles, and other wildlife that depend on floodplain forests. It may also reduce future regulatory conflicts, by aiding species recovery and keeping species from becoming listed in the first place.

Private landowners make a difference

And it's not just happening on public lands. Private landowners throughout California are engaging in projects that provide them with support to restore rivers and creeks on their property. Sally and Mike Gale live and work on a 600-acre cattle ranch, in Marin County, that has been part of their family since 1856. As stewards of the land, they noticed that the creek on their land had no plants on its bank and ran dry in the summer. They joined up with a student and community restoration team called Students and Teachers Restoring a Watershed (STRAW: www.prbo.org/straw) to prevent erosion, retain water, and provide habitat for wildlife by planting trees and shrubs. PRBO biologists have now documented 33 species of bird using the creek.

Success Stories

PRBO photos

Left: The Gale Ranch with riparian vegetation at lower left.
Right: Sally and Mike Gale.

Conclusion

Please help ensure we have clean water, healthy habitat, protection from flooding, and ecosystems that can withstand the increasingly negative impacts of climate change. You can help by supporting restoration projects, ensuring that funding exists for the science needed to guide and evaluate restoration, and supporting policies that make it easier for people to restore habitat.

The success stories above were documented in the following publications:

Gardali, T., A.L. Holmes, S.L. Small, N. Nur, G.R. Geupel, and G.H. Golet. 2006. Abundance patterns of landbirds in restored and remnant riparian forests on the Sacramento River, California, USA. Restoration Ecology 14:391-403.

Gardali, T., and A.L. Holmes. 2011. Maximizing benefits from riparian revegetation efforts: local- and landscape level determinants of avian response. Environmental Management 48:28-37.

Golet, G.H., T. Gardali, C.A. Howell, J. Hunt, R.A. Luster, W. Rainey, M.D. Roberts, J. Silveira, H. Swagerty, and N. Williams. 2008. Wildlife Response to Riparian Restoration on the Sacramento River. San Francisco Estuary and Watershed Science. Vol. 6, Issue 2 (June), Article 1.

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 70:105-113.

Humple, D.L., and G.R. Geupel. 2002. Autumn populations of birds in riparian habitat of California's Central Valley. Western Birds 33:34–50.

Latta, S.C., C.A. Howell, M.D. Dettling, and R.L. Cormier. 2012. Use of data on avian demographics and site persistence during overwintering to assess quality of restored riparian habitat. Conservation Biology 26:482–492.

Seavy, N.E., T. Gardali, G.H. Golet, F.T. Griggs, C.A. Howell, T.R. Kelsey, S. Small, J.H. Viers, and J.F. Weigand. 2009. Why climate change makes riparian restoration more important than ever. Ecological Restoration 27:330-338.

Seavy, N.E. and T. Gardali. 2012. Developing a riparian bird Index to communicate restoration success in Marin County, California. Ecological Restoration 30:157-160.

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PRBO Conservation Science

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