

Measuring Our Restoration Successes or Shortfalls:

Why Bird Monitoring is Important

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What is the ten-letter dirty word sure to clear a cocktail party and scare off funders from even the best written proposal? M.O.N.I.T.O.R.I.N.G. Yes, monitoring, and long-term monitoring in particular, is not sexy. However, second to putting water back into a dry stream, replanting those seedlings that could not regenerate on their own, or restoring natural processes to a damaged system, biological monitoring is the most important component of any stream restoration or habitat enhancement project.

Here in the Owens Valley, we are on the verge of a unique and extremely exciting opportunity to observe water return to 60 miles of the Lower Owens River. Through returned flow and land management, the goal of the Lower Owens River Project (LORP) is to create a “healthy, functioning Lower Owens River riverine / riparian ecosystem.” Due to the foresight of several entities involved, we are in a unique position to monitor the response of riparian breeding birds to these restoration and management activities, and to provide one measure of the success of reaching this goal. PRBO Conservation Science (PRBO), with generous support from California Audubon, Dmarlou Foundation, Los Angeles Department of Water and Power, National Fish and Wildlife Foundation, Owens Valley Committee and White Mountain Research Station, has collected three years of baseline songbird and vegetation data along the whole stretch of the LORP area.

We know from historical records that the Owens River once supported a host of riparian obligate or near-obligate bird species during the breeding season. These included the Willow Flycatcher, Bell’s Vireo, Yellow-billed Cuckoo, Yellow-breasted Chat, Yellow Warbler, Song Sparrow, Common Yellowthroat

and Blue Grosbeak to name a few. PRBO’s 2002 – 2005 baseline monitoring effort found that of these, only the Song Sparrow, Common Yellowthroat and Blue Grosbeak remain as breeders below the Los Angeles Aqueduct intake. The good news is that several other species (Yellow Warbler, Willow Flycatcher, Yellow-billed Cuckoo, Yellow-breasted Chat) continue to breed in other areas of the Owens Valley, thereby potentially providing source populations which could recolonize the LORP once riparian habitat begins to regenerate. And there are a host of other species (e.g. Marsh Wren, Ash-throated Flycatcher, Western Kingbird, Nuttall’s Woodpecker) that are currently breeding in the riparian vegetation that the Lower Owens River currently supports.

Birds are excellent indicators of restoration success or shortfall. Species such as Yellow Warbler and Song Sparrow respond very quickly to early stages of restoration – provided that early successional forbs and shrubs are available to provide nesting sites and cover from predators. As restoration progresses and the riparian system begins to mature, we would expect overall bird diversity to increase as canopy and cavity nesting species such as Bullock’s Oriole and Nuttall’s Woodpecker begin to occupy the site. We expect to see this linear progression of vegetation growth to occur on the currently dry reaches of the LORP. However on reaches that have main-

tained some water over the years, decadent canopy trees have remained but understory plants and vigorous canopies are somewhat lacking. In this scenario, we expect canopy, shrub and forb nesters to augment an already existing array of cavity nesters. As fields of bulrush and cattails are flushed out and replaced with flowing river water and streamside willows and forbs, birds such as Marsh Wren and Common Yellowthroat will probably decrease and be replaced by other species.

Restoration efforts in California’s Great Central Valley and on the tributaries of Mono Lake have resulted in an increase in the abundance of several riparian bird species and in the recovery of a few sensitive species which for decades were locally extirpated from those locations. Without monitoring programs in place, these successes would have gone unnoticed, and we might have asked ourselves: what was the point of all that money, time and effort? Were we successful? We would never be so careless with our own teeth, car, or schooling so why would we be with our restoration goals and dollars?

Once the LORP is implemented, we will be in place to compare future bird monitoring data to our existing three years of baseline data. By repeating our methods consistently over the long term, we will be able to provide the LORP process with one measure of how successful the rewatering and proposed land management activities are in reaching project goals. And in the same way that monitoring our health, our teeth, our cars and our education assists us in reaching our personal goals, the Lower Owens River and the birds that reside there will probably be better off for it.



Owens Valley Checker Mallow

Mike Prather



Common Yellowthroat

Peter Knapp