

Setting the bar for science

PRBO's Sacha Heath migrating on

by Lisa Cutting and Arya Degenhardt

The Mono Basin has a long and fascinating history of scientific investigation. From geologist Israel Russell in the 1880s to lunar studies by NASA in the 1980s with countless others in between, the Mono Basin has piqued the curiosity of many, and has become a hot spot for scientific research.

The Mono Lake Committee's grassroots beginning is steeped in the science and lore of the original Mono Basin Research Group (a contingent of adventurous undergraduate science students) and their ecological inventory of this mysterious landscape. As the story goes, after completing "The Ecological Study of the Mono Basin" and knowing what horrible fate the lake would suffer at the hands of excessive water diversions, members of the optimistic bunch banded together to found the Mono Lake Committee. They were science students, not non-profit experts, and they used what they knew to make historic changes for Mono Lake.

Thirty years later the legacy of scientific research at Mono Lake continues on, even growing in its strength and scope. The Mono Lake Committee maintains its commitment to science-based decision-making and depends on research to guide policy action.

During this time we've seen scientists come and go, many keeping connections for years beyond their fieldwork days. Sacha Heath, bird biologist for PRBO Conservation Science (PRBO) and long-time resident of the Mono Basin, is a stellar example of the new generation of scientists carrying on the spirit of the original Mono Basin Research Group. After ten years of research in the area she has decided to end her year-round position as Eastern Sierra Nevada Program Director and return to graduate school on the coast to pursue her doctoral degree. From Sacha: "For now, my path leads me away from the Mono Basin, but PRBO remains committed to continuing our long-term partnership with the Mono Lake Committee and others in the Eastern Sierra."

PRBO Conservation Science

PRBO has a long and diverse history of field research in the Eastern Sierra Nevada region, beginning with investigations of migrant passerines at Mono Lake in the early 1970s, and spanning multiple species and habitats to the present. Of special importance to Mono Lake are studies of California Gulls and the impacts that the changing lake level has on the nesting gull colony.

In 1998 Sacha extended that research and began the Eastern Sierra Nevada Program—expanding the scope of research to include a multitude of riparian songbird studies. The program



A day in the field—Sacha Heath out on Rush Creek.

has since grown to include investigations of birds in aspen, sagebrush, piñon woodland, and Jeffrey pine habitats. Sacha has not only carried on the tradition of scientific research, but has truly set a new precedent for using science to advise decision-making at the landscape level in the Eastern Sierra.

The Mono Lake Committee has directly benefited from Sacha's research and outreach efforts. With an office just around the corner, she has been available and willing to answer questions and explain complex ecological issues. Her willingness to attend numerous public meetings, host mist-netting demonstrations for the Mono Lake Committee's Outdoor Experiences groups from Los Angeles, and collaborate with other scientists to establish projects in the area have been invaluable.

We spoke with many of Sacha's colleagues—all of whom feel equally grateful for her ardent outreach efforts.

From Bureau of Land Management Wildlife Biologist Joy Fatooh: "Sacha and her crews have brought about an exponential increase in BLM's knowledge about birds on the public lands and how our management actions affect them; what's more, she has a particular dedication to making sure all possible landowners and stakeholders are involved, so the results are watershed-wide and landscape-wide. We've brought her in to design and implement studies to address the effects on birds of specific management actions. Between studies, she's generous with answers to our incidental questions—she has the answers we need and the diligently-gathered, expertly-analyzed data to support them."

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Science and education

Beginning in 1998, Sacha and her summer crews have worked across numerous watersheds throughout the Eastern Sierra monitoring riparian songbird habitat, collecting data, and synthesizing that data in order to inform future agency management and restoration efforts. All of this work has been done collaboratively with public land managers, conservation groups, and other researchers and educators. In fact, education has been a large component of the program—including both school children and the public.

From Dr. Connie Millar, Research Geneticist, US Forest Service, who observed Sacha working mist-netting stations: “Seeing her working with the public, her words were tender but clear—explaining details of each bird’s life history, its ecologic role and significance. Such a gift of knowledge and curiosity is without measure.”

Filling a need

In 2002 Sacha established a more permanent presence for PRBO by securing and operating an Eastern Sierra Field Office in Lee Vining. This year-round office further enabled PRBO to strengthen their working relationships with partnering conservation organizations and agency staff.

From Dr. Mark Hanna of the Los Angeles Department of Water & Power: “I believe Sacha has a unique ability to clearly place the current phase of restoration in context with the whole, showing how although the intensive monitoring has only been occurring since the late 1990s, restoration began when the first flows were released in the mid-1980s. She, along with her co-researchers, expanded the view of restoration from the ground to the air.”

As restoration at Mono Lake continued through the years, Sacha became interested in the restoration activities of the tributary streams and specifically how songbirds were responding to the recovery of those systems. Her monitoring program has included exploring long-term, community level bird population patterns and the relationship between these and Mono’s restoring streamside habitats. Sacha’s scientific contributions to the restoration program and the conservation issues of the Mono Basin have been a critical tool in guiding policy decisions and actions related to a wide variety of issues.

From Dr. David Winkler, Cornell University Professor and Faculty Curator of Birds: “In the minds of many of us, the Mono Basin has the potential of being a place where humans can interact with and learn from an unspoiled ecosystem while they act as its stewards. Sacha Heath embodied this dream. She always bases her research on questions of the strongest conservation concern, and she is tireless in her efforts to interpret her research and that of others to have the greatest impact on stewarding the avian habitats of the Eastern Sierra.”

The Mono Basin Field Station

It is a known and documented fact that the state and federal agencies in and around the Mono Basin have experienced

severe budget cutbacks in recent years. Among many other things, these cutbacks translate into diminished scientific-expert staff positions that have traditionally provided the data needed for land-management decisions.

In response, non-profit organizations have taken on some of these responsibilities. PRBO’s mission reads: “PRBO Conservation Science is dedicated to conserving birds, other wildlife and ecosystems through innovative scientific research and outreach.” From Ellie Cohen, PRBO Executive Director: “After a few years at the Palomarin Field Station Sacha started up field research programs on the east side of the Sierra, which have blossomed into numerous and invaluable conservation partnerships.” PRBO’s partnership with the Mono Lake Committee has been critical in establishing the Mono Basin Field Station in order to support research efforts in the area.

The legacy continues

Sacha has laid a solid groundwork for her peers to build upon. She will be returning this summer to smooth the transition as PRBO continues to maintain the seasonal research program and its office in Lee Vining.

From Sacha: “I have gained incalculable insights from the Mono Basin and all of its inhabitants. Due to the hard work of the Mono Lake Committee and the scientists before me, this special place will be there for my return well into the future. I like to think of being able to revisit our study sites years from now to ask even more questions: Has the bird community continued to change or benefit from restoration? Can we tie these changes to management actions guided by our past data? The work I have been a part of would not have been possible without the truly synergistic nature of PRBO’s relationship with the Basin’s land managers, educators, conservationists, and scientists. The climate of collaboration is such that there is an ongoing dialogue among us about how science can inform management decisions. And finally, the lone cowgirl story is a myth: I’ve been truly honored to have been able to work with so many talented and dedicated PRBO biologists and volunteers. If all goes well, you’ll continue to see their spring migration into the Basin for a long time.”

We wish Sacha the best of luck in her next pursuits, knowing that she will return often to her Mono Basin home.

From Dr. Connie Millar: “Beyond her tireless efforts in field science and her rigorous standards for analysis, Sacha brought enormous science-based wisdom to natural resource management issues in the greater Mono Basin. She has been able to view the big picture of science, policy, and society effectively—to reckon the needs of diverse communities without compromise. Sacha’s clarity of vision and adherence to the highest standards of ethics and science have been baselines for many of us, and we will struggle to maintain these levels in her absence.”

We will honor Sacha’s dedication to this place by doing just that, and hope that the scientists who follow in her footsteps will continue to do the same. ❖