

Klamath Bird Observatory



Advancing bird and habitat conservation through science, education, and partnerships

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Songbird Populations May Indicate Trouble in Northwestern Forests

Populations of many North American songbirds are declining, and in many cases we don't understand why—for example, whether the problem lies with reproductive success or in the survival rates of adults. Conservation efforts need this information to be effective, and bird banding stations can help fill in the gaps, providing insights into how demographics vary across space and time. A new study from *The Condor: Ornithological Applications* presents ten years of data from banding stations across northern California and southern Oregon and offers new hints on what's driving changes in the region's songbird populations.

The Klamath Bird Observatory's Sarah Rockwell and her colleagues used data collected at ten of the observatory's bird banding sites between 2002 and 2013 to estimate the abundance and reproductive productivity of twelve songbird species, all either of regional conservation concern or indicators of coniferous or riparian habitat quality. They found that three species (the Purple Finch, Yellow-rumped Warbler, and Dark-eyed Junco), all indicators of coniferous habitat, were declining across the region, while two (the Yellow-breasted Chat and Black-headed Grosbeak) were increasing, though the trends varied from site to site. While breeding productivity declined in three species, adult abundance was correlated with the previous year's productivity for only one species, the Yellow Warbler, suggesting that local productivity is not the primary culprit behind population declines.

"Before we can understand the impact of threats to bird populations, we first need to understand what's happening where," says John Alexander, the Executive Director of the Klamath Bird Observatory and a coauthor on the work. "This study presents trends from regional-scale monitoring and just begins to scratch the surface of understanding population dynamics, variation in demographic rates, and drivers of population change across our landscape, which is vital information for developing effective conservation plans. It also highlights concerns about forest-associated species in this region—the need to balance timber harvest, a mixed-severity fire regime, and endangered species management continue to present complex conservation challenges."

"We have been so lucky to consistently get awesome field crews—we host six to ten interns each year, and they travel all over the Klamath-Siskiyou bioregion, camping regularly throughout the field season. We have had interns from more than seventeen different countries, and they all receive extensive training and work very hard," adds Rockwell. "This work is so important. We need robust baseline data if we are going to be aware of any kind of population change, let alone be able to do something about it!"

Spatial variation in songbird demographic trends from a regional network of banding stations in the Pacific Northwest published in *The Condor: Ornithological Applications* on September 27, 2017, at <http://www.bioone.org/doi/full/10.1650/CONDOR-17-44.1>.

This News Release adapted from American Ornithological Society press release -- <https://americanornithologypubsblog.org/2017/09/27/songbird-populations-may-indicate-trouble-in-northwestern-forests/>

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About Klamath Bird Observatory: Klamath Bird Observatory advances bird and habitat conservation through science, education, and partnerships. We work in the Pacific Northwest and throughout the migratory ranges of the birds of our region. We developed our award-winning conservation model in the ruggedly beautiful and wildlife-rich Klamath-Siskiyou Bioregion of southern Oregon and northern California. Emphasizing high caliber science and the role of birds as indicators of the health of the land, we specialize in cost-effective bird monitoring and research projects that improve natural resource management. Also, recognizing that conservation occurs across many fronts, we nurture a conservation ethic in our communities through our outreach and educational programs. Visit Klamath Bird Observatory at www.KlamathBird.org.

About the journal: The Condor: Ornithological Applications is a peer-reviewed, international journal of ornithology. It began in 1899 as the journal of the Cooper Ornithological Club, a group of ornithologists in California that became the Cooper Ornithological Society, which merged with the American Ornithologists' Union in 2016 to become the American Ornithological Society. In 2016, The Condor had the number one impact factor among 24 ornithology journals, 2.654.

Image 1: Caption – This study shows Purple Finch population declines in the Klamath-Siskiyou Bioregion that appear to be even worse than broader declines seen in the Pacific Northwest; Purple Finch reproductive success also declining in the Bioregion. Photo Credit – James Livaudais; Image files – Purple Finch (c) Livaudais (72ppi 2.5xX).jpg, Purple Finch (c) Livaudais (300ppi 2.5xX).jpg