Survey says 'California's blackbird in sharp decline

June 19 2014, by Kat Kerlin

UC Davis staff researcher Robert Meese prepares to release a banded tricolored blackbird. He coordinated the 2014 Tricolored Blackbird Statewide Survey, which showed the birdsâ€™ population numbers are declining drastically. Photographed at Conaway Ranch, Yolo County, California, on June 16, 2014. Credit: Sylvia Wright

(Phys.org) —The population of California's iconic tricolored blackbird has suffered a dramatic decline in the past six years, according to a new survey coordinated by the University of California, Davis.

The 2014 Tricolored Blackbird Statewide Survey was conducted April 18-20 with support from the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and Audubon California.

The survey estimated that there are about 145,000 of these colonial songbirds living in the state—down 64 percent since 2008 when there were about 400,000 birds, and down 44 percent from 2011 when there were roughly 260,000 tricolored blackbirds. Extrapolations from nest estimates put the number of tricolors in the millions in the 1930s.

Except for a few hundred birds outside the state, nearly the entire population of tricolored blackbirds is found in California.

"It's California's blackbird," said UC Davis staff researcher Robert Meese, who has studied the birds for the past decade and coordinated the survey this year. "If we as Californians don't care about the species, we can't rely on any other state to come in and bail us out. It's our responsibility because it's our bird."

Despite an increase in the number of breeding locations surveyed this year, dramatic decreases in tricolored blackbirds were observed. During the three-day survey effort, 143 volunteers organized by 38 county coordinators surveyed 801 sites – up from 361 sites surveyed in 2008 – across 41 counties. Survey participants entered records of their observations into the Tricolored Blackbird Portal, developed and hosted by UC Davis.

"More than 90 percent of the entire population of tricolored blackbirds are found within California's borders, yet a bird that was once common is now a rare sight," said Audubon California conservation project manager Monica Iglecia, who provided survey coordination assistance. "This survey helps us not only get an accurate population estimate, it also tells us where we can focus our recovery efforts."

Where the birds are, and aren't

UC Davis staff researcher Robert Meese releases a banded tricolored blackbird. He coordinated the 2014 Tricolored Blackbird Statewide Survey, which showed the birdsâ€™ population numbers are declining drastically. Photographed at Conaway Ranch, Yolo County, California, on June 16, 2014. Credit: Sylvia Wright

The survey, conducted every three years, is the primary means by which the species' statewide abundance is estimated. This year's survey found that tricolored blackbirds are:

- Decreasing rapidly in the southern Central Valley, which had been where the vast majority of the breeding birds had been found (89 percent in 2011). Their numbers plummeted in Kern

and Merced counties. Only six were found in Fresno County. No birds were observed in Kings, Santa Clara and Sonoma counties.
- Appear to have suffered less in the Sierra Foothills, where the surrounding rangelands may provide greater numbers of insects upon which tricolor breeding depends. Relatively greater percentages of the birds were seen in Amador, El Dorado and Sacramento counties than in recent surveys.

Why is the tricolored blackbird in decline?

The survey data show that the tricolor is declining most rapidly in California's "dairy belt," in areas where triticale—a wheat-rye hybrid feedstock for dairy cattle—is grown. Tricolors historically nested in vast wetlands of the Central Valley, but for decades, the birds have established large nesting colonies in triticale. When these fields are harvested before young birds have fledged, thousands of eggs and nestlings are lost. If the crop harvest is delayed to accommodate the nesting birds in the fields, the triticale loses the nutritional value needed to feed the cattle. Efforts to compensate willing farmers for waiting to harvest until after the breeding season have resulted in protection of many breeding tricolor colonies, but losses to harvest continue.

Meese said another source of mortality is the shooting of birds in the Sacramento Valley after the breeding season. Under an exemption to the Migratory Bird Treaty Act, it is legal to kill red-winged blackbirds that are causing depredations to ripening rice, and thousands of them are shot in Sacramento Valley rice fields each year. However, due to their similarity in appearance, many of the blackbirds shot are likely tricolors, which are protected under the treaty.

But perhaps the biggest problem for the species is the chronic, low reproductive success of most colonies since 2007. Research by Meese has shown that the birds produce few offspring unless insect populations

surrounding their breeding colonies are high. Since 2007, there have been only a few locations in the Central Valley where insects are sufficiently abundant to support breeding by this insect-eating, colonial songbird.

UC Davis staff researcher Robert Meese takes trapped Tricolored Blackbirds to shade for banding. He coordinated the 2014 Tricolored Blackbird Statewide Survey, which showed the birdsâ€™ population numbers are declining drastically. Photographed at Conaway Ranch, Yolo County, California, on June 16, 2014. Credit: Sylvia Wright

The birds were also indirectly affected by this year's drought. In the San Joaquin Valley, water shortages resulted in the absence of some seasonally flooded wetlands during the spring and summer. This loss of

natural nesting habitat likely forced many birds to move into triticale fields, making them vulnerable to losses due to harvest.

Next steps

The information may inform conservation strategies by agencies, advocacy groups and donors regarding actions to take and where those actions are likely to make the most impact to aid in the birds' recovery.

"The reality is we have to get on the ground and start taking immediate action," said Meese. "If that process doesn't get started right away, we're going to lose these birds."

The CDFW provided funding for Meese to write a comprehensive report about the survey results, due later this summer, which will be posted on the Tricolored Blackbird Portal.

Provided by UC Davis

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