

Agriculture is very important to Long-billed Curlews in California's Central Valley

Dave Shuford

dshuford@pointblue.org

With the extensive loss of wetlands and grasslands in California's Central Valley from its conversion to one of the most important agricultural areas in North America, wildlife has had to adapt to a highly altered landscape. One of the species so affected is the Long-billed Curlew, the largest shorebird in North America and a species of continental conservation concern.

Although recent estimates are available for the size of the curlew's North American breeding population, little is known about its abundance and habitat needs at migratory stopovers and wintering areas. Preliminary surveys documented the Central Valley as the most important area in California to curlews in the nonbreeding season from early fall through winter.

After initial surveys of portions of the Central Valley in fall in 2007 and 2008, Point Blue Conservation Science and Audubon California coordinated a survey of curlews throughout the Central Valley in August 2009. The main goals were to document the size of the curlew population in this region and the habitats important to curlews at this season.

Observers recorded over 20,000 curlews in 195 flocks. About 93% of the curlews were in the central and southern portions of the Central Valley; many fewer were in the Sacramento Valley. From west to east in the Central Valley, curlews concentrated mainly in the western and central portions, areas extensively irrigated by flooding.

In early fall—the driest time of year—curlews were found primarily in irrigated alfalfa and irrigated pasture. There was a strong, positive relationship between curlew abundance by subregion of the Central Valley and the subregion's proportion of the entire valley's acreage of both alfalfa and irrigated pasture. Additional evidence suggests that curlews make more extensive use of other habitats in winter: rice fields in the Sacramento Valley after harvested fields are flooded in late fall and non-irrigated grasslands at the edge of the Central Valley or in smaller valleys within the Coast Ranges after the onset of winter rains.

In the future, irrigated agriculture is likely to face increased water costs driven by competing needs of an increasing human population and possibly drier conditions under a

changing climate. These threats might be offset if a program of economic incentives can be devised for farmers to maintain crops, such as alfalfa and irrigated pasture, that benefit them and curlews.

Main Points

Irrigated agriculture provides critical habitat for Long-billed Curlews in the Central Valley at the driest time of year.

It will be important to maintain extensive acreage of alfalfa and irrigated pasture in the future when demands for limited water will increase.

Economic incentives for farmers could ensure maintenance of crops and management practices that benefit both farmers and curlews.

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