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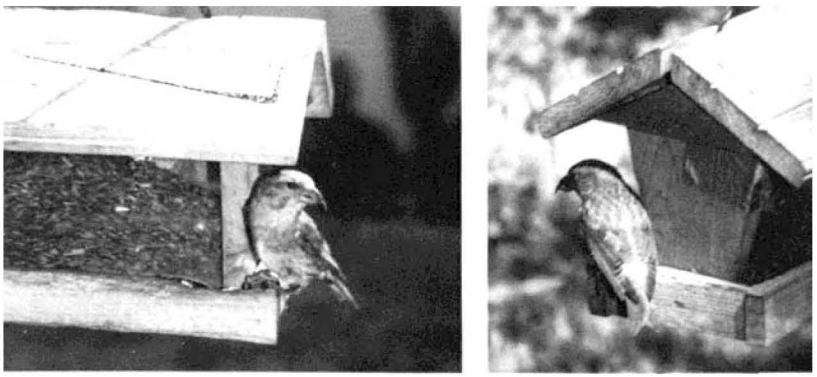
THE RED CROSSBILL INVASION OF OKLAHOMA DURING THE SUMMER OF 1996

BY BERLIN A. HECK

An invasion of Red Crossbills *(Loxia curvirostra)* into Oklahoma occurred during July and August, 1996. Five different sightings from Bartlesville to Broken Bow in eastern Oklahoma included a flock of approximately 25 birds in McCurtain County. This species has been observed in the state previously during fall and winter, but rarely in summer. Following is a summary of sightings.

Dates	Number	Location	Observer(s)
July 22	1	Okemah, Okfuskee Co.	Euelda Sharp (photo)
July 22-24	4 (1 imm. ♀, 2 unknown)	Warner, Muskogee Co.	Laura Hunnicutt
July 28-30	1 imm.	Sperry, Tulsa, Co.	Judy Kishner (photo)
Early August (2 days)	2 imm.	Bartlesville,Washington Co.	Ginny Roquemore
August 10-22	25 (mixed flock)	Broken Bow, McCurtain Co.	Berlin Heck, Jerry Sisler, Jim Norman

FEMALE RED CROSSBILL



Two views of female bird observed 22 July 1996 near Okemah, Okfuskee County, Oklahoma. Note large head, gray throat, short notched tail and crossed bill. Photo by Euelda Sharp.

All Red Crossbills seen in Oklahoma except one were standing on sunflowers *(Helianthus sp.)* while feeding on the seeds. The 25 crossbills at Broken Bow visited a cultivated stand of giant sunflowers each morning and afternoon until all the seed heads were empty, and were not reported thereafter. Photos from birds in Okfuskee and Tulsa counties are on file with the Oklahoma Bird Records Committee.

The first recorded invasion of Red Crossbills in Oklahoma began on 18 August 1950 when a small flock was seen in Frederick, Tillman County, southwestern Oklahoma (F.M. and A.M. Baumgartner, 1992, Oklahoma bird life, Univ. Oklahoma Press, Norman, P. 400). It was not until November of that year that the invasion began in earnest, when reports of sightings were received from many parts of the state. Since that time, Red Crossbills have been reported nearly every winter in Oklahoma.

Reports from neighboring states indicated that most had experienced a similar invasion of these birds in 1996, except for Arkansas, where none had been reported as of mid-September (fide, Helen Parker, Arkansas Subregional Editor, National Audubon Society Field Notes).

Ross Rasmussen, Texas Subregional Editor for National Audubon Society Field Notes received reports of a Red Crossbill seen 22 August in Gainesville, Cooke County, northcentral Texas, and six that were seen in Fort Davis, Jeff Davis County, southwest Texas, during August.

Eight reports of Red Crossbills from throughout the state of Kansas from 4 July to 9 August were received by Loyd Moore, Kansas Area Editor for National Audubon Society Field Notes. Most sightings comprised only one or two birds. He also received one report of a flock of 14 birds seen 17-22 July in Raytown, Missouri, a suburb of Kansas city on the Kansas line.

In New Mexico, there was an increased number of Red Crossbill sightings during the summer of 1996 within their breeding range according to Sartor Williams, New Mexico Regional Editor for National Audubon Society Field Notes. In addition, he reported extraordinary movement into the pinyon-pine association of the southern New Mexico mountains.

Dennis Lowery of the Arapaho National Forest, Fort Collins, Colorado, commented on the excellent crop of cones produced this year by lodgepole pine, Englemann spruce and Colorado blue spruce at high elevations in the Rocky Mountains. It is therefore unlikely that lack of food was a factor in movement during the summer of 1996.

The eastern mountain ranges of New Mexico and southeastern Arizona had unusually high numbers of Red Crossbills during the summer and into late September (fide, Bill Howe, United States Fish and Wildlife Service, Albuquerque, New Mexico).

Stephanie Jones, with the United States Fish and Wildlife Service in Lakewood, Colorado, reported that there was a huge eruption of Red Crossbills from June through September along the eastern front of the Rocky Mountains from Colorado Springs to Fort Collins, with birds moving into lower elevations in large numbers. The irruption also extended into northern Colorado, where there was a massive dieoff of Red Crossbills and a few Pine Siskins *(Carduelis pinus)* caused by a species of *Salmonella* bacteria. Mike Miller, of the Colorado Division of Wildlife in Fort Collins, said that several hundred dead Red Crossbills had been reported, but that the number could have been as high as several thousand.

The Red Crossbill is a specialized seed eater of conifers, which exhibit cyclic

production of cones in different regions of the county. Therefore, this bird has evolved into a nomadic species, moving in search of evergreen forests with suitable numbers of cones. An area supporting a large population of crossbills one year may contain few, if any, during subsequent years until the local cone production is again adequate to sustain another invasion.

Although most of the nomadic Red Crossbills reported in Oklahoma during the summer of 1996 were juveniles, there were a few adults, which raises the possibility of breeding birds. There is no record of the Red Crossbill nesting in Oklahoma, however. Due to the wide diversity of nesting dates from year to year for this species throughout its normal range, there is no reason to suspect that the birds seen in Oklahoma this summer were part of any nesting effort.

Throughout the range of Red Crossbills in the western and northern United States, seven "types" are identifiable, based on vocalizations and morphological differences. One additional type occurs in Newfoundland. Craig Benkman of New Mexico State University stated that the most reliable way to identify the types of Red Crossbill involved in an invasion is by analyzing a recording of the calls. Unfortunately, no recording was made during any Oklahoma sighting, but this information provides guidance for future encounters with nomadic Red Crossbills, when the use of a recorder should prove valuable in identification of type, and hence the probable geographic origin of these periodic wanders.

LITTLE RIVER NATIONAL WILDLIFE REFUGE, P.O. BOX 340, BROKEN BOW, OKLAHOMA 73728, 28 OCTOBER 1996.

STATUSES OF FOUR AVIAN SPECIES IN SOUTHWESTERN OKLAHOMA

BY JACK D. TYLER AND F. JANE BECHTOLD

A knowledge of the continent-wide distribution and abundance patterns of an avian species is of great value. They reveal not only range extent, but also locations of high density. Localized studies afford an opportunity to shed light on local population trends. Wardel (1981) suggested that within localized areas, biotic interactions such as competition and predation influence the details of species range boundaries, whereas on a larger scale, physiological tolerances for environmental characteristics such as climate and vegetation are the ultimate limiting factors (Wardel *in* Root, 1988). Two types of population surveys were used to extract abundance data and calendar dates for 13 counties within southwestern Oklahoma for the Scissor-tailed Flycatcher *(Tyrannus forficatus)*, Mountain Bluebird *(Sialia currucoides)*, Loggerhead Shrike *(Lanius ludovicianus)*, and Cassin's Sparrow *(Aimophila cassinii)*. The counties within the study area included all or part of Beckham, Caddo, Comanche, Cotton, Grady, Greer, Harmon, Jackson, Jefferson, Kiowa, Stephens, Tillman and Washita.

The first data set analyzed was the National Audubon Society Christmas Bird Count (CBC). The patterns of the CBC verify the presence of species and identify locations of populations. The counts are restricted to specific locations which require a minimum of eight hours during which all species with a 24 km (15 mile) radius are counted. The CBC data adequately represent the average abundance of most birds reported (Root, 1988). One must keep in mind, however, that the sites of