

### Red Crossbill *Loxia curvirostra*

Many members of the finch family migrate irregularly, as demanded by the irregularity of their food supply. The crossbills, with their unique specialization and dependence on conifer seeds, take this irregularity to an extreme. With only small areas forested in conifers, San Diego County cannot support a population of the Red Crossbill, so the species is a sporadic visitor here, though it has attempted nesting in the county at least once. Studies of morphology, genetics, and voice suggest the Red Crossbill, with its great variation across North America in size and bill shape, may consist of multiple cryptic species.

**Winter:** The winters of 1966–67, 1984–85, and 1996–97 saw the biggest incursions of the Red Crossbill known in the history of San Diego County. Thus the 5-year atlas period 1997–2002 began with the winding down of an incursion in which small flocks were seen through much of the county, such as 10 at the Vineyard Golf Course, Escondido (K11), 17 February 1997 (E. C. Hall). The Oceanside Christmas bird count yielded the maximum of 24 on 29 December 1996, and up to 10 occurred even at Borrego Springs (F24) that winter (M. L. Gabel, NASFN 51:119, 1997). The irruption of 1966–67 yielded up to 150 at Point Loma in November 1966 (AB 21:80, 1967), that of 1984–85, up to 25 there in March 1985 (AB 39:351, 1985).

The remainder of the atlas period was more typical. In the five winters following 1996–97 no crossbills were noted in San Diego County at all, except in 2000–01, which yielded four occurrences, three of them in conifer-wooded mountains, with a maximum of eight birds in Lower Doane Valley, Palomar Mountain State Park (D14), 22 December 2000 (P. D. Jorgensen).

**Migration:** The movements of the Red Crossbill are famously unpredictable, with little correspondence to the calendar. Nevertheless, in San Diego County, the birds seldom if ever arrive before late October. After larger invasions they may remain quite late in the spring, being recorded at Point Loma as late as 4 June in 1967 (AFN 21:542, 1967) and 3 June in 1985 (AB 39:351, 1985). In 1997 the latest report was of two near Descanso (O19) 13 May 1997 (R. A. Hamilton).

**Breeding distribution:** The crossbill's only breeding activity noted in San Diego County was at Point Loma in late March 1967, when some birds were paired, carrying nest material, and engaging in apparent courtship feeding. No fledglings were seen subsequently. The species occurs rarely in San Diego County's mountain forests in summer, and not only in summers following irruptions. The maximum number in such a role was up to 15 in



Photo by Anthony Mercieca

the Laguna Mountains in late July 1993 (G. L. Rogers, P. A. Ginsburg, AB 47:1152, 1993). From 1997 to 2001 the only such reports were from Middle and Cuyamaca peaks (M20), with one on 19 May 1998 and one or two 23–24 June 2001 (S. Peterson, D. Holway).

**Conservation:** The crossbills breeding in the southwestern quadrant of the contiguous United States have bills adapted to feed on the seeds of pines. Prolonged drought, as seen at the beginning of the 21<sup>st</sup> century, brings death to large numbers of pines by way of bark-beetle attack or forest fire. The Red Crossbill, being so specialized, is thus one of the most likely of the coniferous forest birds to suffer the effect of a drying climate.

**Taxonomy:** The Red Crossbill presents a taxonomic conundrum unique in North America. Various populations differ to a greater or lesser degree in size, bill shape, learned calls, genetic makeup, and specialization for certain conifers. The breeding ranges of these populations overlap to varying and still uncertain degrees. In spite of considerable study (Groth 1993, Benkman 1993), the proper interpretation and categorization of this variation is far from clear (DeBenedictis 1995). All but one of the eight specimens from San Diego County in the San Diego Natural History Museum, including three from the irruption of 1996–97, are of the medium-large size prevalent in the pine forests of western North America. That is, they are of size class III of Phillips (in Monson and Phillips 1981) or call types 2, 5, or 7 of Groth (1993), for which the oldest name is *L. pusilla* Gloger, 1834, or *L. c. bendirei* Ridgway, 1884. The exception is SDNHM 873, collected at Campo (U23) 6 March 1877. It has the very large bill identifying it as *L. c. stricklandi* Ridgway, 1885, which breeds in the mountains of mainland Mexico, north to southeastern Arizona, and in the mountains of northern Baja California.