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THE MIDSUMMER STATUS OF CERTAIN BIRDS IN THE SOUTHERN CALIFORNIA LOWLANDS

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The postbreeding season altitudinal migration of many of the lowland birds contributes a conspicuous part of the midsummer bird life of the mountain ranges of southern California. This up-mountain movement is discussed at some length by Grinnell in his "Biota of the San Bernardino Mountains" (Univ. Calif. Publ. Zool., 5, 1908, pp. 22-26); he attributes the movement to the diminishing food supply, caused by the drying up in the summer heat of the plant life that, either directly or indirectly, has furnished food for these lowland birds during the nesting season. He likens the period from July to October in the coastal lowlands to the winter season, as far as food supply for a number of the summer visitant and permanently resident species is concerned.

This condition was probably more pronounced in the past than at the present time, because of the changes that have been brought about by the agricultural and urban settlement of the greater part of the coastal lowlands, with the attendant irrigation and culture of a great variety of crops, orchards and shrubbery. Even uncultivated areas are, in many cases, grown up to alien plants that have been introduced by man. Exotic food supplies are now present for many of the birds and it takes only cursory observation to find some of the species present in the lowlands in considerable abundance at the very time that others of their race are moving up mountain to take advantage of the retarded season at higher elevations.

As an example, considerable areas grown up to tree tobacco (Nicotiana glauca) furnish abundant food for hummingbirds almost the year around. On July 22, 1928, in such an area, in the Fish Cañon wash, at the base of the Sierra Madre mountains, east of Monrovia, California, the late J. Eugene Law and myself found hummingbirds to be extremely abundant. Between daylight and 8 a. m. we were able to identify adult males of the following species: Black-chinned (Archilochus alexandri), Costa (Calypte costae), Anna (Calypte anna), Rufous (Selasphorus rufus), and Allen Hummingbird (Selasphorus alleni). At this time we found that even isolated plants of the tree tobacco along the Foothill Boulevard had their attendant hummingbirds. The Allen Hummingbird has been seen at my home as early as June 28, and by mid-July the Rufous and the Allen are to be found about the red flowers of the trumpet vine (Bignonia cherere) at the same time that others of their kind are frequenting the scarlet pentstemons of the high mountains.

Discussion of this subject with Mr. Law led me to make a series of observations at my home in Buena Park, California, during the summer of 1928. Four species

THE CONDOR

selected for observation were: Bullock Oriole (*Icterus bullockii*), Black-headed Grosbeak (*Hedymeles melanocephalus melanocephalus*), Black Phoebe (*Sayornis nigricans nigricans*), and Anna Hummingbird. On June 24, for one hour, 8-9 a. m., I stationed myself where I had a clear view of a group of fig trees, which at that time still had a few ripe figs of the first crop on them. During the hour eight Bullock Orioles were seen, four males, two of which were heard to sing, and two females, one of them feeding two juveniles that followed her about. No Black-headed Grosbeaks were seen during the hour of observation, but one had been seen earlier in the day. Two Black Phoebes were feeding about the barn, a short distance away, and one Anna Hummingbird was seen at the trumpet flowers near the house.

July 1, 8-9 a. m.; from the same observation point were noted one female and one juvenal Bullock Oriole, one Black-headed Grosbeak of undetermined sex, two Black Phoebes, and no Anna Hummingbirds. The first crop of figs was all gone and the real crop had not started to ripen.

July 8, 8:30-9:30 a. m.; no figs ripe; eight Bullock Orioles, two of them adult males; seven Black-headed Grosbeaks; two Black Phoebes; no Anna Hummingbirds. At this time the orioles and grosbeaks were abundant around mulberry trees at other places in the community. Two of the eight orioles were seen to feed on something in a patch of sweet corn.

July 15, 8-9 a. m.; figs not ripe; nine Bullock Orioles; sixteen Black-headed Grosbeaks "flycatching" for insects from the tops of large eucalyptus trees nearby; one Black Phoebe; one male Anna Hummingbird heard to sing three times during the hour, if the "scissors grinding" note of this species may be called a song.

July 29, 8-9 a. m.; figs and peaches ripening; nine Bullock Orioles; nineteen Black-headed Grosbeaks; two Black Phoebes at the barn; one male Anna Hummingbird at the fig trees and at least two others at the trumpet flowers. Other birds coming to feed on figs were: Arizona Hooded Oriole (*Icterus cucullatus nelsoni*), Western Mockingbird (*Mimus polyglottos leucopterus*) and the House Finch (*Carpodacus mexicanus frontalis*).

August 5, 8-9 a. m.; figs abundant; twenty-nine Bullock Orioles, two of them adult males; thirteen Black-headed Grosbeaks, two of them adult males and one a juvenile still being fed by a female; two Black Phoebes at the barn; several Anna Hummingbirds about the trumpet flowers. Arizona Hooded Orioles were at least twice as numerous as the Bullock Orioles on this date.

No further observations were made at this spot until August 26. On August 11, Black Phoebes were observed at Baldwin Lake, and on August 12 both Bullock Orioles and Black-headed Grosbeaks were seen at Twin Peaks, in the San Bernardino Mountains.

August 26, 8:45-9:45 a. m.; at the fig tree observation point; no Bullock Orioles; five Black-headed Grosbeaks; one Black Phoebe; several Anna Hummingbirds. Arizona Hooded Orioles were still abundant, and several Western Tanagers (*Piranga ludoviciana*) were seen. In other years the Bullock Oriole has been seen at this spot as late as September 21.

September 2, 8:10-9:10 a. m.; figs still abundant; five Black-headed Grosbeaks; one Black Phoebe; two Anna Hummingbirds, one a singing male and the other a female; Arizona Hooded Orioles and Western Tanagers present.

September 9, 7:55-8:55 a. m.; one Black Phoebe; one Anna Hummingbird; Arizona Hooded Oriole and Western Tanager present. In other years Black-headed Grosbeaks have been seen here as late as September 20, and I have one record for October 16. July, 1933

September 16, 8-9 a. m.; three Black Phoebes; three Anna Hummingbirds; Arizona Hooded Orioles still present.

September 23, 8-9 a. m.; one Black Phoebe; two Anna Hummingbirds. This was the last observation made.

To summarize the observations, Bullock Orioles and Black-headed Grosbeaks were present in considerable numbers during the midsummer period when others of their kind were in the mountains. But they left the lowlands at rather early dates, in spite of the still abundant local food supply. The figs often last well into October on these trees. The resident Black Phoebes remained quite constant in numbers during the period of observation, varying from one to three. The local pair had raised two broods of five young each earlier in the season. Grinnell observed that the early July birds seen moving up mountain were juveniles. The Anna Hummingbirds, not observed on July 1 and 8, were present in rather constant numbers on all the other dates; their food seemed to be mostly obtained from the red trumpet flowers.

The foregoing observations, supplemented by many more casual observations in other years, lead me to believe that the midsummer movements of such birds as the Bullock Oriole, Black-headed Grosbeak, Black Phoebe and Anna Hummingbird, in southern California, are in the nature of a postbreeding season dispersal, with local concentration where food is abundant, either in the coastal lowlands or in the mountains, rather than a definite migration into the mountains because of failing food supply in the lower regions.

Buena Park, California, April 27, 1933.