

Rufous/Allen's Hummingbirds in the Central Valley of California: Urban vs. Rural Occurrences During Fall

David Yee, 11707 N Alpine Rd, Lodi, CA 95240

Growing up in the rural community of Morada, northeast of Stockton, San Joaquin County, California, during the late 1960s and early 1970s, I remember having 4-5 hummingbird feeders actively visited by Rufous and Allen's hummingbirds (*Selasphorus rufous* and *S. sasin* - hereafter R/A; see discussion). Memory and some old field notes recall them being very regular during the late summer months.

After a 10-year hiatus when I was away at college and getting settled, I moved back to Stockton and started putting up hummingbird feeders again. From 1981-1996 I lived in urban Stockton, and Anna's (*Calypte anna*) and Black-chinned (*Archilochus alexandri*) Hummingbirds were regular visitors to my feeders while R/A paid only an occasional visit during early spring and the summer months. During some years R/A were absent all together at my feeders. As I remembered them being so regular in nearby Morada during my youth, I began to assume either their movement through the area had dramatically changed over a 20-year period or I had grossly misidentified R/A during those earlier years.

Then in the spring of 1996 my wife and I moved out to a rural area about 4 miles north of Morada. Putting up some hummingbird feeders, we were pleased that we were able to attract more Black-chinned Hummingbirds than we did while living in urban Stockton. We were also surprised to see good numbers of R/A visiting the feeders from July through September. Over the next 3 years the overall number of hummingbirds visiting our feeders steadily increased, including the number of R/A from July-September. During the month of August R/A were the most common hummingbirds at our feeders, with 10+ birds present at one time on many days. On the one hand I was happy to see that my observations during my formative years of birding were basically accurate. On the other hand I wondered if R/A truly avoided urban settings during their fall migration through the Central Valley, and if so why.

Since hummingbirds are one of our most beloved bird groups, are easily attracted to feeders, and usually allow close unobstructed observations, they are probably one of the easier bird groups for which we can obtain raw data. Even the most casual birder who regularly keeps hummingbird feeders usually delights in the kinds and numbers of hummingbirds that pay visits. And, while hummingbirds as a group give us some of our more difficult bird identification challenges, distinguishing *Selasphorus*-types from Anna's/Black-chinned types is usually pretty straightforward.

I decided to see if the miracle of the internet could aid in providing some of this raw data. In July of 2000 I sent out a request for hummingbird observations over two listservers; Central_Valley_Birds@yahoogroups.com and

SJBirds@yahoo.com. The former is sponsored by the Central Valley Bird Club and has subscribers throughout Northern California, with most in the Central Valley. The latter is sponsored by the San Joaquin Audubon Society and has subscribers primarily within San Joaquin County. The combined subscriber total for the two listservers at the time of my request was about 350. I requested the following: first and last dates of R/A sightings, increases in the number of R/A at one's feeders, negative sightings of R/A, and whether the observer lived in an urban or rural setting.

Between 6 July 2000 and 29 September 2000, twenty-seven individuals sent in various hummingbird observations from the Central Valley. The vast majority of the reports were from the vicinity of San Joaquin, Sacramento and Yolo counties, with one from Tehama County at the northern end of the Central Valley and several from Merced County to the south.

Taking into account that the data received was very raw indeed, a fairly revealing picture was painted. Twenty-four days of observation in urban areas produced approximately 20 R/A. During basically the same time period, 30 observer days in rural areas produced approximately 82 R/A (Table 1). Both urban and rural areas showed that the movement of R/A was strongest during the latter part of August, but the sheer volume of birds was substantially greater in the rural areas.

Table 1. Rufous/Allen's Hummingbird sightings, Central Valley, Fall 2000.

<i>Week</i>	<i>Urban Reports*</i>	<i>Birds</i>	<i>Rural Reports*</i>	<i>Birds</i>
July 1	1	0	1	1
7	0		1	1
14	2	0	4	9
21	0		0	
Aug 1	0		3	4
7	13	6	6	11
14	3	5	5	32
21	2	3	2	14
Sept 1	2	5	4	7
7	1	1	3	0
14	0		0	
21	0		1	3
TOTALS	24	20	30	82

*Numbers listed are observer days.

DISCUSSION

It has been long understood that identifying immature and adult female Rufous and Allen's hummingbirds to species under normal field conditions is virtually impossible. It has now been determined that even adult male Rufous Hummingbirds can show green on the back (McKenzie and Robbins 1999). Thus, only adult males with pure rufous backs can be identified as Rufous Hummingbirds under normal field conditions. It is now common to refer to the species pair as Rufous/Allen's hummingbirds, unless a pure rufous-backed adult male is observed. The vast majority of the birds reported for this paper were immature/female types. That being said, current understanding of the range and migratory routes of the two species suggests that most of them were Rufous Hummingbirds.

Rufous Hummingbird breeds in the Pacific Northwest from the California/Oregon border up to southern Alaska and east to Alberta and Montana, winters primarily in Mexico, and migrates throughout most of the western U.S. (A.O.U. Checklist 1983). Hoffman (1927) suggested that the spring migration of this hummingbird occurred primarily through the lowlands and that as a fall migrant it moved primarily through the high mountains. Extensive research in Arizona (Phillips *et al.* 1964) determined that the species was virtually restricted to the southwestern deserts during spring but followed the summit of the Rocky Mountains during fall. Phillips (1975) later determined that the bulk of the Rufous Hummingbird population migrated in an clockwise elliptical pattern to take advantage of flowering plants; moving west/northwest from wintering grounds in Mexico, passing through the lowlands of California during March/April onto its breeding grounds, then moving east/southeast through the Rocky Mountains during July/August back to Mexico. Grinnell and Miller (1944) had already documented that a certain percentage of the population moved through California during fall but also stated that the southward movement occurred chiefly along mountain ranges and made no references at all to fall transients in the lowlands of the state. Belding (1879) likewise recorded "a few spring sightings only" during an intensive study of the birds in Stockton, San Joaquin County in 1878.

I find it doubtful that Rufous Hummingbird was of "accidental" status in the Central Valley prior to the colossal work of Grinnell and Miller in 1944. More than likely they went undetected due to lack of observers. Since Grinnell and Miller, several significant works on the avifauna of California and other parts of the West (Garrett and Dunn 1981, Gilligan *et al.* 1994) have stated that though southbound Rufous Hummingbirds move primarily along mountain ridges, they also utilize the lowlands. However, I have yet to see a comprehensive review of the species' fall status in the Central Valley.

To find recent references on the fall status of Rufous Hummingbird in the Central Valley one has to refer to local checklists. At least 6 checklists that cover various regions of the Central Valley state that the fall status of the species ranges from uncommon to common (Reeve 1988, California Department of Fish

and Game 1991, Sacramento Audubon Society 1993, Beedy 1993, Manolis 1997, Yee and Holt 1997). This is a rather wide discrepancy in the status of the species in different parts of the region. Based on the results of this initial 2000 survey, I suggest that at least some of the variance among these checklists concerning the fall status of Rufous Hummingbird in the Central Valley is a result of a difference in status in urban areas versus rural areas.

One can only speculate whether R/A have always moved through the Central Valley "commonly" or whether this is a recent occurrence with a preference for rural areas. Phillips (1975) mentioned that during the course of studying the migration patterns of hummingbirds "the most striking fact that emerges...is the inadequacy of our present knowledge about hummingbird migration." The summer months in the Central Valley are very hot and dry. Historically, it is possible that the valley's native flowering plants were not in bloom to create a migratory fall route for R/A. With the advent of flowering exotic plants and the virtual explosion in maintained hummingbird feeders during the past 50 years, use of the Central Valley as a regular migratory route by southbound hummingbirds may be a recent phenomenon similar to the expansion of Anna's Hummingbird both in range and occurrence during winter (Ehrlich *et al.* 1988).

It is not apparent why R/A would have such a strong preference for rural versus urban settings during their southbound migration. However, it was interesting to note that included in the data received, Black-chinned Hummingbird showed a similar pattern of occurrence in rural/urban settings, while Anna's Hummingbird showed almost the exact reverse pattern.

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