

Eastern California Occurrences of the Golden-crowned Sparrow.—That *Zonotrichia coronata* is a common migrant along the eastern Sierras, is indicated by the following personally taken notes. The locality is 6700 feet altitude and just east of Sierra City, Sierra County. October 5, 1911, one immature taken and two more seen; October 6, half a dozen seen, two of which were adults; thereafter increasingly common until October 18 when they out-numbered *Zonotrichia l. gambeli* about two to one; thereafter decreasing in numbers till November 8, when one was taken. At this last date there was two feet of snow at this altitude, and open ground under heavy brush must have been difficult to find. In 1916 an adult female was taken September 23. Little time was available for collecting that year so that the single entry does not necessarily indicate any scarcity of birds. In the D. R. Dickey collection is an immature bird taken by L. M. Huey at Potholes, Imperial County, April 18, 1916. This is a short distance up the river from Yuma and is therefore practically on the Arizona line.—A. J. VAN ROSSEM, *Los Angeles, California, March 25, 1921.*

Sparrow Hawk Captures Swallow.—On April 26, 1921, at Stanford University, California, the following observation was made on a Sparrow Hawk (*Falco sparverius*). A number of Cliff Swallows (*Petrochelidon lunifrons*) were building, or repairing, their mud nests on the north side of the museum just under the eaves. The hawk was about one hundred yards away on the top of a young redwood tree. While we watched him he sailed gently down to one of the swallow's nests, passing over a group of about fifteen people, supported himself with one foot, hanging nearly upside down in the meantime, inserted the other foot into the nest, and extracted its owner. The captured bird was an adult Cliff Swallow. The nest was not very deep, and the opening was large. The swallow was building up the broken opening when attacked.—PAUL BONNOT, *Stanford University, California, April 28, 1921.*

Bubo virginianus occidentalis in California.—The Museum of Vertebrate Zoology has recently received as a gift from Mr. Carl S. Mueller, of Marysville, California, his collection of bird skins, a large proportion of them being specimens collected by himself in various parts of California. Included in this collection are two horned owls of particular interest as representative of *Bubo virginianus occidentalis* Stone, a subspecies not before recorded from California. These two birds, male and female, were taken at Shumway, Lassen County, on September 18, 1916.

Compared with specimens of *Bubo virginianus pacificus*, from the region to the westward, they are paler, more grayish in general coloration, and with much less admixture of reddish. They are also somewhat larger than the mode of *pacificus*. Compared with breeding examples of *B. v. pallescens* from the lower Colorado River and southeastern Arizona, these specimens of *occidentalis* are darker colored, they have rather heavily marked tibiae as compared with the frequently immaculate legs of *pallescens*, and they are of larger size.

Presumably *occidentalis* is the form of horned owl that breeds in the Modoc region of California, though breeding birds are lacking as yet to prove this. There are two young horned owls in the Museum collection from that part of the state which had been catalogued as *pacificus* but which are doubtless of the subspecies *occidentalis*. One was taken at the head of Pine Creek in the Warner Mountains, the other at the Scott Ranch, ten miles north of Alturas.—H. S. SWARTH, *Museum of Vertebrate Zoology, Berkeley, California, May 13, 1921.*

Calliope Hummingbird at the Flower Show.—Spring comes rather late in the Yosemite Valley; however, Calliope Hummingbirds arrived April 6, this year. For the first few weeks they spent their time on the north side of the valley among the early blooming manzanitas, and no birds were seen south of the river until May 14. On this date a female Calliope discovered the Flower Show in the Village.

This flower show is maintained at the Rangers' Headquarters, and though flowers may be scarce, there is always a fine floral display here. The Calliope was quick to recognize the value of the floral display, and from the day of her discovery she was a constant attendant. The "hummer" appeared not the least disturbed by the crowds of

people that gathered about the stand, but went on about her business of gathering food. She moved from flower to flower on the various shelves but gave special attention to the fiery-red stalks of the snow plant. It was noted that she was especially fond of the bright red flowers, such as *Silene californica*, *Zauschneria*, *Castilleja*, and *Pentstemon menziesii*.—C. W. MICHAEL, *Yosemite, California, June 2, 1921.*

Dipper Nesting in Santa Barbara County, California.—Jack Hawley of San Diego told me recently of a Dipper (*Cinclus mexicanus unicolor*) apparently nesting on a stream in Carpinteria, Santa Barbara County. I visited the spot on April 21 and saw the female enter the nest, which I found contained young about three days old. The nest is a little above where the stream emerges from the lowest ridge of the Santa Ynez range on the coast side, at an elevation of less than 500 feet. There is another pair farther up the same stream and another on the next stream, at this season, all presumably nesting.—RALPH HOFFMANN, *Carpinteria, California, April 23, 1921.*

The California Brown Pelican as a Navigator.—Along the coast north of San Diego the long line of bluff is of even contour, broken only by the typical sloughs which occur every two or three miles, but otherwise rises abruptly from the shore and to a height of from twenty-five to over a hundred feet. The prevailing west wind, striking this bluff, is deflected upward, and along this lane of ascending air the California Brown Pelican (*Pelecanus californicus*), in his southward migration, sails swiftly with outstretched wings and head folded back on his body.

The pelicans fly in line formation in small flocks of from five to twenty, and when wind conditions are favorable will often pass and disappear from sight without once flapping their wings. It is an interesting sight to hide near the crest of a bluff and watch them pass, and to note with what poise and little apparent effort they maintain their rapid flight, the only appreciable movement of the body being an occasional slight adjustment in response, no doubt, to the minor eddies and air currents. Occasionally a bird, feeling a desire for nourishment perhaps, which he may be carrying in his pouch for such an occasion, will raise his beak abruptly, his whole body will quiver in a momentary collapse, and then with a few quick wing-beats the bird regains his lost momentum and maintains his place in the line.

The rate of speed seems to depend directly on the velocity of the wind, and probably to some extent on the angle at which it strikes the bluff. The axis of the body is held at an angle with the shore line, with a slight deflection to windward. The phenomenon of the birds' flight is, of course, a process of volplaning down an ascending stream of air and maintaining a definite position relative to the ground. One is surprised, however, at the remarkable efficiency which they exhibit, evidenced by their high velocity in a very moderate wind, and the slight angle at which the body is held in relation to their line of flight. The position usually taken is, roughly, about 75 feet west of the crest of the bluff and about 20 or 30 feet above it. This position may vary from day to day, but at any given time one flock will follow another in very nearly the same line, the birds seeming to instinctively adjust their positions to obtain the maximum lift from the ascending air.

The Pelican is an adept navigator, the observations made above recalling to mind the common sight of the birds racing at express speed along the crest of the long rolling swells before they break on the shore, the case being practically parallel, since the wind striking the outer side of the swell is deflected upward, the angle of deflection increasing as the swell nears the shore. In this case, however, owing to the lesser height, it is necessary for the bird to barely clear the crest of the swell to obtain the desired reaction.

When one observes their apparently effortless and swift flight southward along this stretch of coast one is apt to speculate on how much of his journey the California Brown Pelican is able to make gliding "on the breast of the wind", and judging from observations in this locality I am confident that on an economy run down the coast, on a "miles per gallon" basis, our friend the pelican would be hard to beat.

We are accustomed to observing various birds taking advantage of ascending air currents in their casual flights, but a record of other birds taking such advantage