

FURTHER OBSERVATIONS UPON THE BIRD LIFE
OF DEATH VALLEY

By JOSEPH GRINNELL

Some three weeks were recently spent by Mrs. Hilda W. Grinnell and myself in the Death Valley region of Inyo County, California. More precisely, we were carrying on daily observations within the below-sea-level portion of the Valley from October 13 to 30, 1933. The following notes pertain to that restricted area exclusively, and they are selected for publication as being supplementary to what I have already recorded as a result of two preceding periods of field work there. (See Proc. Calif. Acad. Sci., ser. 4, 13, 1923, pp. 43-109.)

Anthony Green Heron (*Butorides virescens anthonyi*). Dried-up carcass of one, in juvenal plumage, at side of an irrigation ditch on Furnace Creek Ranch, examined on October 22. Evidently long dead, this bird was likely waylaid at the usual time of the southward migration of this species, in the latter part of August or early September.

Greater Yellow-legs (*Totanus melanoleucus*). On October 21, we heard and saw repeatedly one individual at an over-flow pond below (west of) Furnace Creek Ranch. This was in the forenoon, sunshine bright, and the bird, when routed from its stand in the shallow water by our too close approach, was loath to leave the vicinity. It would start off in ascending flight southward, its call resounding more and more distantly; but presently it would be back again at the pond.

Western Horned Owl (*Bubo virginianus pallescens*). On October 16, 17 and 21, in the night, and especially early morning, 5:00 to 5:30, at our camping place in a tract of mesquites two miles down the Valley from Furnace Creek Ranch, we heard the notes of two horned owls, deep-toned and higher-pitched—male and female, respectively (we assumed this, following L. Miller, Condor, 32, 1930, p. 291). These notes for the most part came from the darkly shadowed, cliffy walls of the Valley immediately to the eastward. But at least once, the notes came from down on the flat.

On the 19th, about 9:00 a. m., west of the Ranch a mile or so, close to —200 feet altitude, we saw a horned owl perched about 12 feet above the ground on a mesquite bough in the weak shade afforded by the sparse foliage of this tree. While we inspected it satisfactorily with the binoculars at about 200 yards range, it proved too shy to allow of closer approach.

Desert Horned Lark (*Otocoris alpestris leucolaema*). Four horned larks were come upon on October 24 in a tract of scattering salt-grass on strongly alkaline ground within one-fourth mile south of Surveyor's Well, —60 feet altitude. Two of these were shot, becoming nos. 63265-66, Mus. Vert. Zool.; both males, weights 24.5 and 23.3 grams, respectively; lean, the first although the larger of the two was "thin", almost emaciated; wing-lengths, 107.2, 101.4 millimeters. In color-tone, these fresh fall birds are ashier than any other examples of *leucolaema* I have seen from California; they most nearly match fall birds from Colorado, whence in migration they may have come.

We saw horned larks the past October in the bottom of Death Valley only sparsely: near Triangle Spring, along the upper part of Salt Creek, near B. M. —248 feet seven miles or so north of Furnace Creek Ranch, and within two miles west of the Ranch. Only from one to eight birds were seen at any one time, and nearly always they were in flight.

I now think I was likely mistaken in my 1923 paper (*op. cit.*, p. 74) in assuming the birds seen in 1917 and 1920 in early April to have belonged to the race

ammophila, which race is resident at higher levels in the surrounding country. Indeed, as far as I know, the two birds now recorded as *leucolaema* are the first horned larks to be collected in the below-sea-level portion of the Death Valley region and therefore positively identified; and the birds seen in April may well have been of the same migrant subspecies. I know of no evidence to indicate that any horned larks pass the summer, in other words, breed, in Death Valley.

Northern Violet-green Swallow (*Tachycineta thalassina lepida*). Four seen on October 21, about 11:00 a. m., in flight over and around the Furnace Creek Ranch wood-pile whence the powder post beetles were emerging. No other swallows of any kind were seen during our stay in Death Valley.

Woodhouse Jay (*Aphelocoma woodhouseii*). One heard and then watched on October 19, about 7:30 a. m., perched and flying along line of mesquites a mile or so west of Furnace Creek Ranch, close to —200 feet altitude. Probably an autumnal vagrant from the Panamint or other not far distant mountain range.

American Magpie (*Pica pica hudsonia*). First seen on October 21 at 7:30 a. m., about one-fourth mile south of Furnace Creek Inn: two magpies in company of eleven ravens working over a newly dumped pile of rubbish out on the wash-fan. A boy we talked with said he had seen magpies in the vicinity only for the preceding four or five days. Thereafter we saw magpies almost daily; but the invasion of Death Valley by the species this year showed no sign of reaching the proportions recorded for the fall of 1919 (*op. cit.*, p. 74). All the evidence shows that magpies are quite irregular in their visitations so far south. On October 25 we saw one in the north end of the Valley, west of Triangle Spring. On the 28th, west of Furnace Creek Ranch below one of the overflow ponds, one was watched at close range as it worked energetically upon the desiccated carcass of a Great Blue Heron.

Western American Crow (*Corvus brachyrhynchos hesperis*). Seen several times on, or close to, Furnace Creek Ranch, but never more than two of them at one time. Status in Death Valley as an individual vagrant thus confirmed.

Arizona Verdin (*Auriparus flaviceps acaciaram*). [For nomenclature, see Grinnell, Condor, 33, 1931, pp. 166 ff.] Our finding of this species in Death Valley added a new species to the list of birds known from there, and a record station for California considerably to the north of the previous one. In the lines of mesquites and occasional screwbeans leading down west from Furnace Creek Ranch nearly to the edge of the "borax flat" (down to about —240 feet altitude) we heard or saw one to three individual verdins each day we looked especially for birds there.

Two specimens were taken, nos. 63267-68, female immature (weight 6.2 grams) and male adult (6.5 grams), taken respectively on October 21 and 22. On the latter date, at 8:10 a. m. when the adult male was shot, it was alone in a large thrifty screwbean and was carrying a feather in its bill. Soon we located the nest, of characteristic construction, 7 feet 10 inches above the ground in a mass of spiny dead twigs at the end of a branch from a screwbean and meagerly shaded by living branches and foliage roundabout. Feathers, mostly of the down type, of Desert Quail were sticking to the twigs around the downward directed opening into the nest. We saw no other verdin in the near vicinity and found no other verdin's nest anywhere in Death Valley, though when we became aware of the presence of the birds we kept looking for nests.

This now well known habit of constructing special "winter nests" has been interestingly described by Gilman (Condor, 4, 1902, p. 88) who says, in part, of the verdin: "Its range is easily determined by the great number of nests seen. A peculiar feature is the building, by both species, of winter nests in which to roost at night.

These nests are built in the fall and early winter and a male and a female nest are usually found near together, probably [built by] mated birds. They seem to have no idea of the conservation of heat or of energy by having a nest 'built for two', but go about making two [such] roosting places."

The fact that we did not find more nests, even though an estimated number of at least seven individual birds was checked, led us to think that these individuals had but lately arrived in the Valley. My visits of 1917 and 1920 had furnished no evidence of its presence then.

The only preceding published record of the verdin for Inyo County, is from Resting Springs where "a male was shot by Mr. [Frank] Stephens February 13, 1891" (Fisher, N. Amer. Fauna, No. 7, 1893, p. 142). This is within the drainage basin of the Amargosa River, but some fifty miles southeast of the sink of Death Valley. The species has been recorded regularly much farther to the southward, along the Mohave River as far down its course as Yermo.

During a week's stay at Shoshone, in the valley of the Amargosa "River", May 8 to 15, 1917, T. I. Storer (MS in Mus. Vert. Zool.) did not find any verdins among the birds then present there. However, Mr. M. French Gilman tells me that quite recently he saw the unmistakable nests of verdins in screwbean trees at Shoshone. It would appear that there has been a recent northward invasion, or possibly re-invasion, by this species, perhaps along a route approximating the lower course of the Mohave River which, though its "sink" is now in Soda "Lake", if of sufficient volume would join its waters with those of the Amargosa River and flow into Death Valley. (See U. S. Airway Map Upper I-11.)

Desert Bewick Wren (*Thryomanes bewickii eremophilus*). Although I did not find this wren at all in Death Valley in the springs of 1917 and 1920, it proved to be of fairly common occurrence in October of 1933. In the mesquite tracts in the vicinity of Furnace Creek Ranch, we checked from one to five individuals in each of six censuses of two to three hours duration. One specimen was taken October 21, no. 63270, ♀ immature, weight 9.3 grams; this is definitely of the subspecies *eremophilus*, which is known to breed in the Panamints and other nearby mountains. On October 23 and 25, one individual each day was noted in mesquites at Triangle Spring, in the north end of the Valley.

Western Mexican Bluebird (*Sialia mexicana occidentalis*). A bright-plumaged male, seen at 9:00 a. m. on October 28 in company of Audubon Warblers at edge of the "athel" plantation on Furnace Creek Ranch, was the only member of the thrush family we met with outside of Western Robins. The scarcity of berry-eating birds in Death Valley seems likely traceable to the total absence of mistletoe there, on either mesquite or screwbean.

Black-throated Gray Warbler (*Dendroica nigrescens*). One seen and shot (no. 63274, ♀ immature, weight 9.8 grams) in mesquite a mile or so west of Furnace Creek Ranch, about —200 feet altitude, on October 21. This was the only warbler detected in the fall outside of the common and wide-spread Audubon, and an occasional Yellow-throat on irrigated ground at the Ranch.

English House Sparrow (*Passer domesticus domesticus*). Furnace Creek Ranch now covers far more acreage than it did in 1917 and 1920. Although the cottonwoods which were then many, and some of them large, are now gone, there is much more arboreal growth as represented by lines and tracts of athel trees, a kind of evergreen tamarisk (*Tamarix articulata*) planted for shade and for fire-wood. Also there is now an extensive plantation of date-palms, in addition to the old Washington palms, tallest of all, which mark the site of the ranch from afar. All this has meant

shelter and doubtless also food in increasing amount for the English Sparrows. Although it is now more difficult to find them than in the previous years specified, I believe there are many more individuals present, in the aggregate.

The present superintendent of the Ranch, who has brought to marketable success the "Death Valley" brand of ripe dates, told me that he loses a good deal to the "sparrows". From my observations, I judge these "sparrows" to comprise mostly the English, although certain native birds may figure also. I saw the "Englishers" at pendant stalks of dates, and the gullets of the three birds I shot this year on the Ranch, each was distended with pulp of ripe dates mixed with broken pieces of powder post beetles.

Actual counts of birds on Furnace Creek Ranch, pencil-checked in one hour on each of two days, October 16 and 22, were 16+ and 17+, respectively. It was astonishing how quickly every bird, when once realizing it was being watched or stalked, could vanish—melt away through the trees without a chirp.

One afternoon at 4:00 we visited the Ranch wood-pile. The tiers of dry mesquite gave forth sound as of gentle rain—sound from the gnawing of innumerable larvae of powder post beetles. And here upon our arrival were about a dozen English Sparrows, in company of Audubon Warblers, a Say Phoebe, and a Shrike, catching the emerging adult beetles. The sparrows would often fly up from perches on the wood-pile and catch the beetles in flight. One shot with the aux, and the birds scattered, the sparrows in diverging courses, silently, in the direction of the palms and athels, not one to be seen again around the wood-pile the same evening. All the other birds, however, were back again beetle-catching within a very few minutes.

We had an ornithological surprise at Triangle Spring, October 23 at 11:00 a. m., when a pair of English Sparrows suddenly appeared in a nearby mesquite. The male was shot, proving by skull-character to be a bird-of-the-year; the female flew off in southward course and was not seen again. This point is 27 miles air-line up the Valley from the Furnace Creek Ranch colony, with territory of extremest desert type all the way between. This illustrates, perhaps, proneness on the part of first-year birds to scout out, even at much hazard, new territory. Certainly nothing in the vicinity of Triangle Spring could have been permanently attractive to these birds.

This year, four English Sparrows were collected in Death Valley, nos. 63275-78; two of them are adults, male and female; two, immature males. These I have carefully compared with samples of populations from elsewhere in the United States, and from the Hawaiian Islands, New Zealand and England—without finding any, appreciable to me, features of difference such as might have conceivably developed under the extreme climatic conditions of the Death Valley region. The freshness of the plumage in these four specimens makes them more significant for color comparisons than the samples I collected in the springs of 1917 and 1920 (see *op. cit.*, pp. 86-88). It is true that they are whiter ventrally than birds in corresponding plumage from elsewhere; but the latter birds are all probably town-taken and more or less soiled. The Death Valley birds are clean and of "pure" colors.

It would appear, then, that we must continue to wait for results from this "experiment in Nature"!

Thick-billed Red-winged Blackbird (*Agelaius phoeniceus fortis*). On October 23, at a bluff-side seepage within a mile south of Triangle Spring, four red-winged blackbirds alighted in some mesquites and one of them was shot. At Triangle Spring a lone male came toward evening of the 23rd and again next morning at

about 7 o'clock, seemingly circling down out of the sky, and hesitatingly but yet with an appearance of certainty going down through the concealing mesquite and arrowweed to the water. Maybe he knew this as a place to get "sweet" water to drink—or do passing birds "sense" the presence of water? A group of five red-wings foraged in the mesquites about this spring for a time on the 24th. One was seen to disentangle and eat several of the web-caterpillars such as were almost completely defoliating the mesquites in the north end of Death Valley at this time.

Red-winged Blackbirds were also noted at Surveyor's Well, —60 feet altitude, along Salt Creek at two points, and in flocks daily on and west of Furnace Creek Ranch. It is now to be regretted that I did not take more specimens; I supposed them to be all of the race *nevadensis* to which race belonged all in the series taken in April of 1917 and 1920 (*op. cit.*, p. 78). The one saved, from the group of four near Triangle Spring, no. 63279, an immature male, I can only identify as of the subspecies *fortis*. And this arouses the suspicion that transient or wintering representations of the latter subspecies, which breeds in the Rocky Mountain region, may regularly reach the extreme southeastern parts of California.

The specimen in question provides measurements as follows: wing, 123 mm.; culmen, 23.7; bill from nostril, 17.2; depth of bill at base, 11.4. It exceeds in depth of bill any example I have examined from the breeding range of *nevadensis*.

A selection from the pencil-checked censuses of birds made by Mrs. Grinnell and myself will probably be of interest in comparison with the spring censuses published in my 1923 paper.

West from Triangle Spring across upper course of Salt Creek at about —80 feet; salt-grass, arrowweed, *atriplex canescens*, mesquite-crowned sand-dunes; October 25, 7:25 to 9:30 a. m.; air quiet, sky partly overcast. About 3 miles covered. Killdeer 3, Horned Lark 2, Magpie 1, Raven 2, Pipit 1, Shrike 1, Red-winged Blackbird 3, Sage Sparrow 2. Total 8 species, 15 individuals, in a bit over two hours. From my notes: Everything was astonishingly tame. The lone pipit tagged us for some distance. Then the shrike appeared and flew about us, seemingly trying to alight on Mrs. G. and then on me! Then the shrike took after the pipit, with possible malevolence, pursuing it zigzag low over the ground, the pipit however easily holding its distance. When the shrike gave up, the pipit turned and followed the shrike back, and alighted on the hard-caked, "self-rising" ground near where it did, on a meager arrow-weed. Company was sought, whoever it might be!

West from Furnace Creek Ranch, down to about —250 feet; through tracts of arrow-weed around overflow ponds and elsewhere, and along lines of mesquite nearly to edge of borax flat; October 21, 7:40 to 10:30 a. m.; day clear and not uncomfortably warm up to latter hour. Not over 4 miles covered, entirely off the Ranch. Marsh Hawk 1, Prairie Falcon 1, Desert Quail 20+, Coot 1, Killdeer 1, Greater Yellow-legs 1, Say Phoebe 3, Magpie 1, Raven 9, Verdin 2+, Bewick Wren 3, LeConte Thrasher 5, Robin 3, Western Gnatcatcher 2, Audubon Warbler 5, Black-throated Gray Warbler 1, Western Yellow-throat 1, Red-winged Blackbird 1, Green-backed Goldfinch 1, Gambel White-crowned Sparrow 1+, Western Savannah Sparrow 4 [one shot is *Passerculus sandwichensis alaudinus*], Song Sparrow 3 [one seen plainly was of *Melospiza melodia fallax* persuasion]; unknown 7 [too distantly or indistinctly seen to be sure of]. Total, 22 species, 77+ individuals, in close to 3 hours.

Furnace Creek Ranch, B. M. —178 feet; around edges of the sprinkled golf course, along lines of the quick-growing evergreen tamarisks along irrigation ditches; entirely on the Ranch; October 22, 4:30 to 5:30 p. m.; day clear, still a bit too warm for comfort even so late as 4:30. Cooper Hawk 2, Killdeer 3, Mourning

Dove 2, Red-shafted Flicker 2, Marsh Wren 5, Robin 6, Pipit 129+, Shrike 1, Audubon Warbler 5, English Sparrow 17+, Red-winged Blackbird 40+, Meadowlark 36+, Savannah Sparrow 2, Gambel White-crowned Sparrow 8+, Song Sparrow 3, unknown 4 [two of these flew up together from rank grass near where red-wings were going to roost—notes strange to me—I ventured to guess “bobolinks”!]. Total 15 species, 265+ individuals in one hour.

To sum up: In 1923 I listed 124 kinds of birds whose presence one or more times in the below-sea-level portion of Death Valley had been established on good evidence. E. L. Sumner, Jr. (Condor, 31, 1929, p. 127) added the Golden Eagle, an individual of which species was seen by him on December 27, 1928, “perched in a dead tree by Bennett’s Wells.” In the present batch of notes there are added to the preceding records, six kinds, namely, Anthony Green Heron, Greater Yellow-legs, Western Horned Owl, Woodhouse Jay, Arizona Verdin, and Thick-billed Red-winged Blackbird. The total list of birds now known from the floor of Death Valley thus numbers 131.

Museum of Vertebrate Zoology, Berkeley, California, November 26, 1933.

COMMENTS UPON SYSTEMATICS OF PACIFIC COAST JAYS OF THE GENUS *CYANOCITTA*

WITH ONE ILLUSTRATION

By JAMES STEVENSON

During my study of the crested jays (*Cyanocitta stelleri*) carried on through the past two years, several special problems have arisen concerning the distribution of Pacific coast races. The descriptions of new forms from Oregon by Oberholser in 1932 have, in particular, stimulated my close attention to the crested (Steller) jays of the northwestern United States. In addition, the ranges given in the latest edition of the American Ornithologists’ Union Check-List (1931) do not conform, in some cases, to the conceptions stated in other recent literature. In the present paper the author seeks to revise the concepts and ranges of the subspecies inhabiting northwestern North America. Particular emphasis is placed upon distribution in British Columbia, Washington and Oregon.

Two publications during the past thirty years have given special consideration to the systematics of Pacific coast crested jays. Walter K. Fisher (Condor, 4, 1902, pp. 41-44) discussed the ranges of subspecies occurring between Alaska and California, giving a careful analysis of coloration. Joseph Mailliard (Condor, 22, 1922, pp. 127-133) studied the jays of northwestern California and likewise discussed color in detail. A minute study of coloration as a requisite of subspecific analysis is not given in the present brief paper. Colors given here in quotation marks conform to plates in Ridgway’s Color Standards and Color Nomenclature, 1912. Wherever feasible the specimens examined were recently collected birds in fresh fall plumage. The practice of using such skins reduced to a minimum the possibility of discoloration by fading and abrasion.

The species *Cyanocitta stelleri* inhabits areas, principally mountainous, of western America from southern, coastal Alaska, south to Nicaragua. Races of the species are, for the most part, resident where found. The present paper will consider only five subspecies, as follows: *C. s. stelleri*, *C. s. carlottae*, *C. s. annectens*, *C. s. paralia*,