

cent examples: the writer saw detached pairs of Black Swifts in Kearsarge Pass at an altitude of about 9000 feet, on the 5th day of July, 1913; and a company of forty birds very much at home in the basin of the Little Yosemite River below Nevada Falls, on the 16th of June, 1914. Indeed it is probably only because this stretch of coast above Santa Cruz offers essentially the conditions of cold and moisture

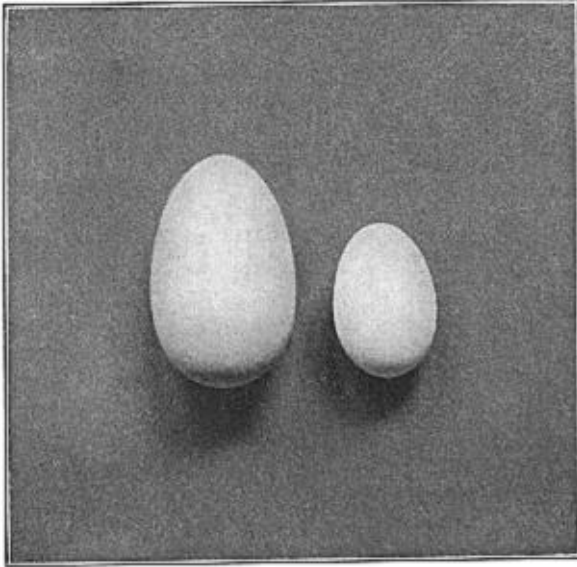


Fig. 8. EGGS OF BLACK SWIFT (THE LARGER) AND WHITE-THROATED SWIFT; BOTH NATURAL SIZE

found elsewhere only at higher altitudes that the birds have descended to this station. Moreover, the birds, although regularly breeding, are very scarce at Santa Cruz. Mr. Vrooman has never seen the large flocks which are commonplace to experienced mountain students. Ten or a dozen birds at most are as many as he ever saw at once, and these probably represented the entire population of Santa Cruz County. Otherwise he has never secured tangible evidence of the nesting of above three pairs in one season.

The egg taken on June 22nd measures 1.18x.73 inches, and is the eleventh

of this Santa Cruz series. Nos. 1 to 7 inclusive were secured by Mr. John E. Thayer. The only other perfect egg extant is in the possession of Mr. H. F. Bailey, a close personal friend of Mr. Vrooman; while the discoverer himself retains two broken specimens. To A. G. Vrooman of Santa Cruz belongs the exclusive and distinguished honor of bringing this rare egg to box; and my hat, for one, is off to him for a pretty piece of work.

Santa Barbara, California, July 5, 1914.

THE KERN REDWING—*AGELAIUS PHOENICEUS ACICULATUS*

By JOSEPH MAILLIARD

WITH SIX DRAWINGS

SOMETHING over a year ago the sight of a couple of specimens of redwings from east-central Kern County, California, created in my mind the desire to obtain sufficient material from that locality to compare critically with other forms of *Agelaius*. Finally, last spring, unable to go myself, Mr. Adriaan van Rossem was commissioned to do the necessary field work,

the area selected for his objective being that lying along the southern side of the South Fork of the Kern River, Kern County, California, and also what is known as Walker Basin, between the town of Caliente and the above named river.

Although the expedition was delayed in arriving at the main collecting ground, and consequently the number and stage of plumage of the individuals collected were not up to the desired mark, both are sufficient to make a fair comparison with the nearest forms, the series being composed of twenty adult males and eleven females. Three males were kindly loaned me by Dr. Grinnell, of the California Museum of Vertebrate Zoology, bringing the number of adult males examined to twenty-three. All these specimens were taken too late in the spring to be in very good plumage, and the wings and tails were sadly abraded, while the edging of the feathers was fast being worn away; but the measurements of the more permanent parts being the greatest factors in making comparisons in this instance, the condition of the plumage is of minor importance.

Agelaius phoeniceus aciculatus, new subspecies

Kern Redwing

Type.—Male adult; no. 7593, collection of J. & J. W. Mailliard; Isabella, Kern County, California; May 30, 1914; collected by A. van Rossem.

Subspecific characters.—Similar to *Agelaius phoeniceus neutralis*, but of larger size, feet averaging somewhat larger; but chiefly characterized by a longer, and comparatively more slender bill than any other form of this genus in the United States.

Cotype.—Female adult; no. 7594, collection of J. & J. W. Mailliard; Isabella, Kern County, California; June 1, 1914; collected by A. van Rossem.

Measurements in millimeters.—

	Wing	Tail	Culmen from base	Width bill at base	Depth bill at base	Tarsus	Middle toe without claw
Type, ♂ adult	125.3	93.5	27.6	9.6	12.7	30.3	23.3
21 adult males.....	Min.	83.6	25.1	9.1	11.1	28.8	21.9
	Max.	131.1	98.8	31.4	10.1	13.7	24.4
	Ave.	126.2	92.4	27.2	9.7	12.4	23.1
Cotype, ♀ adult	115.4	78.0	23.1	8.3	10.3	25.8	20.6
11 adult females....	Min.	111.4	72.8	21.2	8.0	10.3	19.0
	Max.	115.5	78.3	23.9	9.0	11.6	21.4
	Ave.	113.9	76.3	22.9	8.2	11.0	20.3

Range.—So far this form has only been found in east-central Kern County, California, in the Walker Basin, just north of the town of Caliente, and on the South Fork of Kern River, between Isabella and Onyx, thus probably being restricted to a very small range.

Remarks.—The length of a skin is not of much value unless specimens are so prepared as to approximate fairly closely the original flesh length, or unless this measurement is used only in comparing a number of skins put up by the same person. In this particular instance 31 skins of male *A. p. neutralis* were compared with 20 skins of *A. p. aciculatus*, and the result showed an average length of 211 mm. for the former and 221 mm. for *aciculatus*, with a similarly proportionate difference among a number of females compared under like conditions. These measurements approximate those of *A. p. fortis*, which is supposed to be the largest form of *Agelaius*.

The wing and tail measurements of *aciculatus* indicate greater length than any other United States form, but the plumage was so badly worn and abraded at the late date at which the specimens were collected—last of May and first of June—that they are not of sufficiently definite value in the determination of comparative size. The greater size of *aciculatus* seems to be more a matter of length of actual body than of comparative length of bill and tail.

As far as coloration and markings are concerned this form seems to be between *neutralis* and *nevadensis*, both racially and geographically, and appears to have been developed by some unknown factor in the small area it must occupy among the foothills of the southern Sierra. Specimens of *Agelaius* taken at Buena Vista Lake, thirty or forty miles west of this area, and across the plains, are indistinguishable from the general run of *neutralis*, while the form on the east is *sonoriensis*, and that on the northeast is Grinnell's new form, *nevadensis*.

The average and the maximum measurements of the culmen (from base) and of the middle toe (without claw) of both male and female *aciculatus* are greater than any similar measurements given by Mr. Ridgway in his *Birds of North and Middle America* for any subspecific form of *Agelaius*, as well as

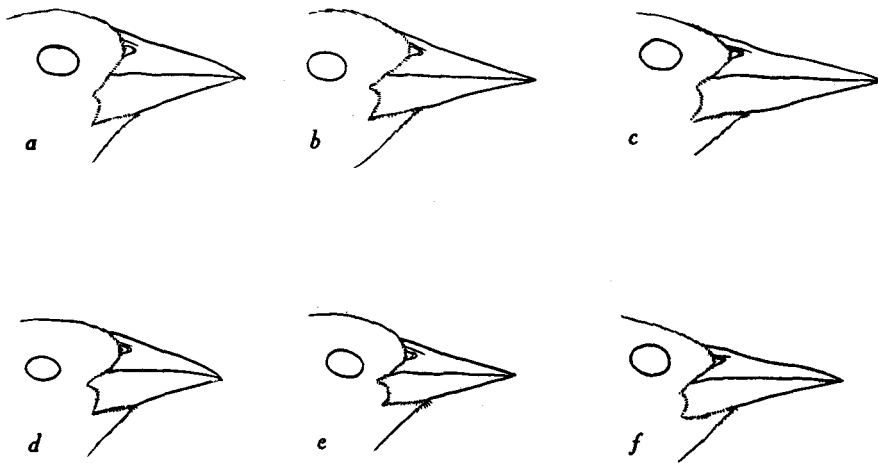


FIG. 9.

- a. *Agelaius p. neutralis*, ♂ ad., no. 7508, coll. J. & J. W. Mailliard; culmen from base 23.2 mm., depth of bill 13.6, width of bill 10.0.
- b. *Agelaius p. nevadensis*, ♂ ad., no. 8806, Mus. Vert. Zool.; culmen from base 23.6, depth of bill 11.7, width of bill 9.7.
- c. *Agelaius p. aciculatus*, type, ♂ ad., no. 7593, coll. J. & J. W. Mailliard; culmen from base 27.6, depth of bill 12.7, width of bill 9.6.
- d. *Agelaius p. neutralis*, ♀ ad., no. 7520, coll. J. & J. W. Mailliard; culmen from base 20.4, depth of bill 10.1, width of bill 8.0.
- e. *Agelaius p. nevadensis*, ♀ ad., no. 8807, Mus. Vert. Zool.; culmen from base 20.6, depth of bill 8.9, width of bill 7.5.
- f. *Agelaius p. aciculatus*, cotype, ♀ ad., no. 7594, coll. J. & J. W. Mailliard; culmen from base 23.1, depth of bill 10.3, width of bill 8.3.

Note: The individuals were selected for the above drawings as being nearest to the average measurements of the forms designated.

greater than any I have come across elsewhere, or taken myself. While personally opposed to such extreme subspecification as is sometimes indulged in, and which necessitates a well-trained expert to make determinations, this case seems so obvious to the ordinary observer that I do not hesitate to present it to the ornithological public.

San Francisco, California, October 26, 1914.

THE STATUS OF THE ARIZONA SPOTTED OWL

By H. S. SWARTH

(Contribution from the Museum of Vertebrate Zoology of the University of California)

SINCE my description several years ago of *Strix occidentalis huachucae* (Univ. Calif. Publ. Zool., vol. 7, 1910, p. 3), I have been constantly on the lookout for opportunities of examining additional specimens of this race, but until recently was unaware of the existence in collections of any examples of the Arizona subspecies other than the single bird that served as a basis for the characterization of the form. A short time ago Dr. Louis B. Bishop informed me that he had in his possession three skins taken in southern Arizona, and he most generously proffered the loan of these specimens in case I was desirous of making comparisons with the type, or with other pertinent material. This opportunity was eagerly grasped, the more so that there happened to be available in the several collections on deposit in the Los Angeles County Museum of History, Science, and Art, a number of skins of the California form, *Strix occidentalis occidentalis*, affording an excellent chance for a critical study of these two subspecies. In fact it is doubtful if such an extensive series of these owls has ever before been gathered together at any one point.

Of the Arizona bird I have before me the type of *huachucae*, from the Huachuca Mountains, and Dr. Bishop's three specimens, a pair of adults and a juvenile male, collected by H. H. Kimball, in the Santa Catalina Mountains, July 7, 1906. Of the southern California subspecies, *S. o. occidentalis*, there are available skins of eleven adults and one juvenal, and a mounted pair of adult birds. The two series afford a quite satisfactory basis for comparison.

In general it may be said that the three additional examples from Arizona bear out most of the characters originally ascribed to *huachucae* from the single specimen serving as the type. Judging from this material the Arizona race, as compared with typical *occidentalis*, is somewhat paler colored. The brown body color of the whole bird is of a lighter tint, while on the individual feathers the brown colored portion is diminished in area, and the white portion correspondingly extended.

The California series shows but little variation, the birds being uniformly quite dark and heavily marked, while spring specimens show an almost inappreciable amount of fading, as compared with freshly molted fall birds. That there is slight change in the color of the feathers through fading is doubtless largely due to the manner of life of these birds, they being habitually frequenters of the darkest, shadiest canyons, avoiding bright light at all times.

Of the Arizona birds, the single adult female is slightly darker than the