

of variation in widths and lengths amounts to 11 and 20 mm., respectively. The measurements of the longest egg were 100 x 65 mm., and those of the shortest 80 x 56 mm. The widest egg was also the longest, but the narrowest measured 95 x 54 mm. Eggs in the same clutch did not show great variation in shape or measurements. One notable exception to this occurred in a clutch of four eggs, the individual measurements of which were as follows: 82 x 59; 87 x 59; 82 x 59; and 100 x 65 mm. It is interesting to note that the last-mentioned egg, an abnormally large one, hatched along with the others.

#### LITERATURE CITED

BENT, A. C.

1925. Life histories of North American wild-fowl. Bull. U. S. Nat. Mus., no. 130: 209.

WILLIAMS, C. S., AND MARSHALL, W. H.

1937. Goose nesting studies on the Bear River Migratory Waterfowl Refuge, Utah. Journ. Wildlife Managt., 1: 77-86.

*Bear River Migratory Bird Refuge*  
*Utah*

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## RECORDS FROM THE TUCSON REGION OF ARIZONA

BY GEORGE MIKSCH SUTTON

THE writer spent a delightful month (May 16 to June 16) in the spring of 1940, becoming acquainted with the birds of south-central Arizona. In the present paper are listed some of the species noted during the earlier part of this period in the immediate vicinity of Tucson (from May 16 to 19) and in the Santa Rita Mountains, south of Tucson (from May 20 to June 4). Mr. Allan R. Phillips has been good enough to assist in choosing from the writer's extensive notes those data that appear to be deserving of publication at this time, as well as in checking carefully the subspecific identifications of all specimens collected.

Blue-winged Teal, *Querquedula discors*.—Adult male seen flying across an open field in farmlands south of Tucson, May 16. Adult male seen at Binghamton Pond, near Fort Lowell, May 17.

Lesser Yellow-legs, *Tringa flavipes*.—One seen at close range at Binghamton Pond, May 18. The few published records of this species from Arizona are all fall records.

Elf Owl, *Micropallas whitneyi whitneyi*.—Noted repeatedly in oak and other deciduous woodland in Madera Canyon in the Santa Rita mountains at from 4000 to about 5000 feet, May 20-25. Several breed-

ing specimens were taken. The stomachs of these were invariably (and exclusively) filled with middle-sized, hairless caterpillars. Neither Mrs. Bailey ('Birds Recorded from the Santa Rita Mountains in Southern Arizona,' *Pacific Coast Avifauna*, no. 15, 1923) nor van Rossem ('Notes on Birds in Relation to the Faunal Areas of South-Central Arizona,' *Trans. San Diego Soc. Nat. Hist.*, 8: 121-148, 1936) lists the Elf Owl from the Santa Ritas.

Nighthawk, *Chordeiles minor*.—A single male was seen about Mt. Wrightson (in the Santa Rita Mountains) each evening from May 26 to 30. It spent the day high on a rocky ledge (at about 8800 feet) and flew about at nightfall, booming intermittently.

Broad-tailed Hummingbird, *Selasphorus platycercus*.—An almost-finished nest was found on a horizontal pine bough about fifteen feet from the ground on the east side of Mount Wrightson (at about 8000 feet elevation), May 27.

Red-shafted Flicker, *Colaptes cafer* > *auratus*.—A breeding male Flicker taken at Little Shot Spring in the Santa Rita Mountains, June 3, has a touch of red at either side of the nape; one yellowish rectrix; and one yellowish secondary in each wing. Finding this trace of *auratus* blood in a region so far removed from 'the East' is thought to be worthy of note.

Arizona Sulphur-bellied Flycatcher, *Myiodynastes luteiventris swarthi*.—This noisy, noticeable bird was fairly common in the Santa Ritas, among sycamores. Nine pairs were encountered—eight in Madera Canyon (from 4000 to about 6000 feet elevation) and one at Bog Spring. A bird was seen carrying nesting material, May 21. At Bog Spring, June 1, a pair which must have had a nest close by screamed and struck at the writer repeatedly.

Arizona Crested Flycatcher, *Myiarchus tyrannulus magister*.—Breeding pair noted repeatedly May 20-June 3, in sycamores and willows along the bed of Madera Canyon, at about 4000 feet elevation. Mrs. Bailey (1923) did not note this species during her stay in the Santa Ritas.

Western Flycatcher, *Empidonax difficilis*.—A nest with four fresh eggs was found in the bank beside the trail to 'Old Baldy' (Mt. Wrightson) in mixed oaks and pines at about 6500 feet elevation, June 3.

Coues's Flycatcher, *Myiochanes pertinax pallidiventris*.—Nest with three fresh eggs collected June 3 on the east side of Mt. Wrightson at about 8400 feet elevation. The nest was on a horizontal pine bough, about fifteen feet from the ground, and only ten or twelve feet from an occupied nest of the Western Tanager in the same tree.

Olive-sided Flycatcher, *Nuttallornis borealis*.—A female specimen (fat; ovary not enlarged) taken at about 8400 feet on the east side of Mt. Wrightson, May 28, is very small (wing, 99 mm., tail, 61). Zimmer ('Studies of Peruvian Birds,' Am. Mus. Novit., no. 1043: 13, 1939) has rather conclusively shown that two races of this species are not recognizable, and the capture of this small bird in Arizona probably should be regarded as additional evidence of range in size within the species as a whole rather than as a casual westerly occurrence of the eastern race '*cooperi*.'

Northern Violet-green Swallow, *Tachycineta thalassina lepida*.—A breeding male, taken May 30 on the east side of Mt. Wrightson (at about 8600 feet), is curiously colored, the entire upper parts being so dark and so little glossed with green and violet as to be almost blackish. The sides of the face and under parts are white, as in normal specimens. All the plumage of the back and upper rump is faintly barred. The writer has not encountered a comparable case of melanism anywhere among the Hirundinidae.

Bank Swallow, *Riparia riparia*.—On May 17 two very fat female specimens were taken from a flock of about sixty birds that circled over Binghamton Pond. The following day a few Bank Swallows were seen circling northward, four miles northwest of Tucson.

Cliff Swallow, *Petrochelidon albifrons*.—A single female taken at Binghamton Pond, May 17, being too white on the forehead as well as rather large for *P. a. tachina*, represents the northeastern race, *P. a. albifrons*. The wing measures 108 mm.; the tail, 48.

Purple Martin, *Progne subis subis*.—A male Martin taken at Binghamton Pond, May 17, represents this large northern race. Its wing measures 146 mm.; its tail, 74. A female taken at the same time (and apparently from the same flock) is small (wing, 135; tail, 71) and, though dark-throated and dark-breasted, represents the breeding race, *P. s. hesperia*.

Mexican Brown Creeper, *Certhia familiaris albescens*.—Noted frequently in the Santa Ritas—in the oak woods of Madera Canyon (at about 4500 feet elevation) as well as in conifers at higher elevations; on the east side of Mt. Wrightson; and in Florida Canyon. Full-fledged young were seen several times—first in Madera Canyon, in oaks, May 22. On Mt. Wrightson (at about 8000 feet) a nest containing well-developed young was found under a slab of pine bark, May 30.

Great Basin Hermit Thrush, *Hylocichla guttata polionota*.—As was strongly suspected by van Rossem some years ago ('Notes on Birds in

Relation to the Faunal Areas of South Central Arizona,' Trans. San Diego Soc. Nat. Hist., 8: 141, 1936), the Hermit Thrush breeds in the Santa Rita Mountains. The writer encountered several pairs at from 5000 to 7500 feet in and about Madera Canyon, and collected three males—one at Bog Spring, May 25; one at Little Shot Spring, where a nest with two eggs also was found, May 31; and one at Bog Spring, May 31.

These three birds are large for *polionota* (all have exactly the same wing and tail measurements—wing, 102 mm.; tail, 76.5), the average of twelve males from the White Mountains, Inyo County, California (the type locality) being: wing, 98.6; tail, 73.8 (see Grinnell, Condor, 20: 89, 1918). But they certainly cannot be called *auduboni*, for they are too gray above for that race, especially on the crown. In the light of this and other recent discoveries it would appear that *polionota*, far from being the local race that Grinnell considered it to be, is in fact a wide-ranging, southern Rocky Mountain form, the White Mountains birds representing only a fractional western part of the subspecies as a whole.

Azure Bluebird, *Sialia sialis fulva*.—On May 26 a breeding pair was encountered among pines, at about 8500 feet elevation, on the east side of Mt. Wrightson. The male was taken. This record appears to be the first for the Santa Ritas since the taking of the type series by Stephens in 1884.

Plumbeous Vireo, *Vireo solitarius plumbeus*.—A nest with three fresh eggs was found in a slender sycamore, near the bed of Madera Canyon at about 4500 feet elevation, May 24.

Audubon's Warbler, *Dendroica auduboni auduboni*.—A single male collected May 21, in oaks in Madera Canyon, represents this Pacific Coast race. It was the only one of its species seen that day and the last seen during the writer's stay. Its wing measures 75 mm.; its tail, 62.8.

Black-throated Gray Warbler, *Dendroica nigrescens*.—Common in scrubby woodland about Madera Canyon. At Bog Spring a stub-tailed juvenile female, not long out of the nest, was taken June 1.

Grace's Warbler, *Dendroica graciae*.—A stub-tailed juvenile male, just out of the nest, was taken near Little Shot Spring, June 3.

Red-faced Warbler, *Cardellina rubrifrons*.—Noted in the higher parts of the Santa Ritas, especially in the vicinity of Little Shot Spring and on the east side of Mt. Wrightson. At the latter place every aspen copse visited by the writer sheltered a pair of these handsome birds. A nest with small young, found May 29 (at about 8000 feet

elevation, on the ground in a low bank, under aspens) apparently represents an exceptionally early breeding date for the species.

Painted Redstart, *Setophaga picta picta*.—Common in the Santa Ritas. A dark juvenile male with full-grown flight feathers was taken in Madera Canyon as early as June 1.

Western Tanager, *Piranga ludoviciana*.—A nest with four eggs was found in a pine on the east side of Mt. Wrightson, at about 8400 feet elevation, June 3. This nest was in the same tree as a Coues's Flycatcher's nest that contained three eggs.

Lazuli Bunting, *Passerina amoena*.—A single male was noted at Bog Spring, May 25. It sang loudly and constantly all morning, behaving very much as if advertising or defending a nesting territory.

Pine Siskin, *Spinus pinus pinus*.—Although Swarth ('A Distributional List of the Birds of Arizona,' Pacific Coast Avifauna, no. 10: 51, 1914) calls the Pine Siskin "common in winter in the higher mountains of southern Arizona," he does not name the Santa Ritas among the ranges in which it has actually been found. Mrs. Bailey (1923) does not mention the species. On the east side of Mt. Wrightson the writer saw it repeatedly from May 26 to 30, collecting a breeding female (with distinct brood-patch) May 26, and a breeding male (with greatly enlarged testes) May 28. These are not long-winged enough for *S. p. macropterus*, the Mexican race. They measure: male—wing, 73.8 mm., tail, 48; female—wing, 73, tail, 48. A nest containing young, found May 28 high in a pine at about 8200 feet elevation, could not be examined closely. It was about sixty feet from the ground.

Red Crossbill, *Loxia curvirostra*.—Flocks of Red Crossbills were seen repeatedly in conifers on the east side of Mt. Wrightson from May 26 to 30, and at Armour Spring and in Florida Canyon on May 28. They kept high in the trees most of the time and were hard to collect. Five specimens were taken, four males and a female. All these were fat; all had been gorging on small, pale green larvae which must have been found on the conifers; all were molting more or less extensively; and none showed the slightest sign of sexual activity.

A male in mixed plumage, taken May 29, certainly is very close to the Mexican race, *L. c. stricklandi*. Though not quite so heavy-billed as two males in the Cornell University collection from Las Vigas and Mt. Orizaba, Veracruz (its bill-depth being 11.2 mm.) it is, nevertheless, a very large bird (wing, 99; tail, 58).

Two stubby-billed, red-plumaged males, taken May 27 and 28, also approach *stricklandi* in bill-size (bill-depth 11 and 11.2), but they are definitely small for that race (wing, 93.5 and 94.8; tail, 53.5 and 59).

They might be placed between "*grinnelli*" and *stricklandi*, or between *benti* and *stricklandi*, but it appears to be impossible, even with a good series of specimens at hand, to decide exactly what the differences between *benti* and "*grinnelli*" are!

A subadult male and an adult female taken May 28 are the slenderest-billed examples of the five, and compare very favorably with seven toptotypical *benti* (from Grafton, North Dakota), courteously lent by the Museum of Zoology of the University of Michigan. They measure, respectively: wing, 93.3 and 90.2; tail, 56.5 and 53; bill-depth, 10.5 and 9.2.

Spurred Towhee, *Pipilo maculatus montanus*.—Noted daily in the Santa Ritas from May 23 to 30, but found to be much commoner in the evergreen-oak thickets high on the east side of Mt. Wrightson than anywhere in the low Upper Sonoran Zone of Madera Canyon. Young just out of the nest were noted May 30.

Scott's Sparrow, *Aimophila ruficeps scotti*.—A juvenile female, with full-grown flight feathers, was taken in Madera Canyon (at about 4000 feet elevation) on May 23.

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## FURTHER ADDITIONS TO THE LIST OF BIRDS KNOWN TO BE PARASITIZED BY THE COWBIRDS

BY HERBERT FRIEDMANN<sup>1</sup>

IN the past four years, a number of new or interesting host records of the various cowbirds have come to my attention, which may now be added to previous compilations (The Cowbirds, 1929; Auk, 48: 52-65, 1931; Condor, 35: 189-191, 1933; Ibis, ser. 13, 4: 340-347, 1934; Wilson Bulletin, 46: 25-36, 104-114, 1934; Auk, 55: 41-50, 1938).

I am indebted to Mr. W. E. Unglish and Mr. H. R. Eschenberg of Gilroy, California, for a number of interesting records mentioned below.

### *Molothrus bonariensis* (Gmelin). SHINY COWBIRD

To the 158 species and subspecies of birds listed as victims of the various races of the Shiny Cowbird, we may now add five more, bringing the total up to 163. These hosts involve three races of the Shiny Cowbird, as follows:

#### 1. *Molothrus bonariensis bonariensis* (Gmelin). ARGENTINE SHINY COWBIRD

*Pachyramphus polychopterus spixii* (Swainson)

*Paroaria coronata* (Miller)

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