NOTES ON SOME BIRDS OBSERVED IN THE VICINITY OF COLUSA, CALIFORNIA

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

DURING the period from February 20 to March 6, 1923, the writer, in the company of Major Allan Brooks, was occupied in an ornithological study of a portion of the Sacramento Valley centering at Colusa. Our headquarters were part of the time in Maxwell and part of the time at Judge F. W. Henshaw's houseboat on Butte Creek, about 3½ miles northeast of Colusa. From these points we made excursions over portions of Colusa, Glenn, and Sutter counties, keeping mostly to the lowlands.

The purpose of this contribution is not to present a complete list of the species of birds identified in the region, but merely to put on record some occurrences of land birds, general knowledge of which will amplify or modify previously published conceptions. Opportunity is also taken to give some seemingly new facts, or at least information of corroborative value, in the natural history of some of the species.

Otocoris alpestris merrilli. Dusky Horned Lark. Two races of horned lark were met with, the Ruddy (*Otocoris alpestris rubea*), widely distributed in pairs along country roads and over the "goose grounds"; and the Dusky (*O. a. merrilli*), which we found in flocks in the rice country two to five miles east of Norman, Glenn County. Of the latter race I took six specimens (nos. 43650-55, Mus. Vert. Zool.), February 21 to 27, and Major Brooks obtained others. We were able to distinguish *merrilli* up to 50 yards, by large size combined with dark gray rather than bright reddish color. The behavior of the two races was, at this season, altogether different. *Merrilli* was in flocks of a dozen to twenty, the individuals unattached to any one locality but circulating freely over large territory; and only the winter call-notes were heard. *Rubea* was in solicitous pairs with the interest of each pair centered on some definite section of road or dike-top; the male in song, frequently going aloft to indulge in the characteristic song flight. The examples of *merrilli* dissected proved to have been eating rice grains. Also the birds watched were seen gleaning the rice from the ground in the unharvested fields.

Pica nuttallii. Yellow-billed Magpie. This bird has so generally been cited of late years as a "vanishing race" that we were rather surprised to find it anything *but* vanishing in the Colusa district. In the territory within seven miles north from the town of Colusa and five miles east, the magpies or their conspicuous nests were in sight most of the time from the roads we traversed. On February 26 I counted as many as 16 of the birds scattered about in and around one farmyard where they were consorting with the pigs and chickens. I asked timidly at the house if I might shoot one of the magpies "for a specimen," and received a most cordial response. "Kill them all—if you can; they steal the eggs and kill the young chickens; they take the feed we put out for the chickens and hogs." One shot, however, put all the birds on their guard; we profited little by lying in wait for them after they once suspected our intent.

Many magpies were foraging in the newly sown grain fields. The stomachs of four of the birds shot there were all filled with sprouting barley; but birds shot elsewhere had been feeding largely on ground beetles. For the most part, the magpies were quiet while foraging; only occasionally would the weakish, un-jay-like chortle be heard.

Not more than two nests were seen in any one tree, and the nest trees were widely scattered. The nests were situated high in sycamores, valley oaks, cottonwoods, or large willows, trees which were leafless at the season of our visit; and so the nests

were visible for long distances. The birds were about the nests in some cases, and building operations were under way. As a rule, however, the breeding cycle was still scarcely begun; and this conclusion from field observations was confirmed by the dissection of the specimens collected.

Toward evening of the day we arrived on Butte Creek, March 1, magpies began to file past over the fields bordering the riparian timber, all going in one general southerly direction. They were traveling in slow-moving scattered companies within half an hour before sunset. I began to count individuals; in one flock there proved to be 78, in another 23, in another 102—and these of a "vanishing" species! The birds proved to be going to a regular roost located in a dense willow patch surrounded by open fields.

Three nights later Major Brooks and I repaired to the vicinity of this magpie roost with the intention of making an accurate census of the birds as they arrived. We concealed ourselves behind the weeds on a levee three hundred yards or so off, in such a position that we could see the birds above the horizon against the bright evening sky. But the magpies proved impossible to count. A flock would arrive with every appearance of being about to settle in the willows; just short of actually alighting the whole lot would swerve off and settle on the open ground or in the top of one of two oak trees that stood apart in a field near-by. Other magpies would arrive and either join those on the ground, below the horizon line, or alight in the oak tree, or else make an independent feint at entering the willows. Presently the whole aggregation would take wing toward the willows only to veer off at the last moment—save for two or three very bold birds which did alight on the taller willow tips; and presently these few would drop down out of sight. Subsequently, after another period of quiescence on the ground and in the oak trees, possibly to see what would happen to the first adventurers, further feints and milling about took place; only now more and more of the birds would disappear in the willows. Meanwhile other parties were arriving from afar. At about "half dusk" no more birds came, and all had vanished into the willows. There had been some noise intermittently, but now all was perfectly quiet. Major Brooks and I could only make an estimate of the total number, based on our several incomplete counts. We agreed on 400 as the minimum number of Yellow-billed Magpies which sought this one roost; and we further believed that this number of birds convened from a wedge-shaped territory to the north not more than six miles in radius from this roost. If this was close to the truth, the nesting population of the territory in question was about ten pairs to the square mile.

Later that evening we tried to get some of the birds by seeking them in their roost, but failed utterly. After being once settled for the night they refused to be routed out. The willows formed a veritable jungle. When a bird was disturbed it would abruptly fly up far enough to clear the willow tips and immediately drop down again into the tangle. Even when a gun was fired, all the birds sat tight.

In their choice of roosting site, in their manner of going to roost, and in their way of staying under cover after having once settled, the magpies probably follow instincts which long racial experience has proved to insure the safest mode of behavior.

When magpies gather together their flight formation is loose; the birds string out, and individuals frequently lag far behind or go off on their own. The silhouette of a bird in flight is unique. The long tail, in side view, gives the effect of a rudder. This is explainable, as Major Brooks pointed out to me, by reason of the special structure of the central pair of tail-feathers. These do not lie flatly side by side in the spread tail, but are rolled down at their edges and superimposed or, in cross-section, concentric. A conspicuous terminal streamer is thus formed, in side view somewhat like that of a Pomarine Jaeger, only, in the case of the latter bird, it is by a twisting of the feather that the effect is accomplished.

On the evening of March 5 our friend Sam Lamme, keeper of Judge Henshaw's houseboat, helped us to "work a shot," in the phraseology of the old-time market-hunter. We had observed that the magpies were accustomed to alight regularly on a certain oak tree in their line of flight. A mere ghost of a blind was constructed of weeds, and, partially concealed in this, the collector lay perfectly still until a goodly number of the birds had arrived and perched, when 'pot-shots' were taken and all the specimens we wanted obtained. The secret of this method was simply to remain rigidly motion-

less until the moment of shooting, and then to keep further quiet until the excited flock circled again into range, showing concern for fallen companions. But "simply" involves a degree of fortitude beyond the endurance of most persons—considering hungry mosquitoes and legs "gone to sleep."

Fresh colors in the brightest males of our specimens proved, by use of Ridgway's Nomenclature (1912), to be as follows. Bill aniline yellow; bare skin below eye lemon chrome, this also tingeing some skin on side of forehead and a bare strip back from gape; iris sepia; feet and claws black. The females were very slightly duller. In some of the brightest-plumaged males the skin of the whole head underneath the feathers was tinged with yellow; and there was a spot of the same color in a concealed fold of the conjunctiva anterior to the pupil of the eye. Whether or not this extension of the yellow was a concomitant of the oncoming breeding season, I do not know.

Of the series of specimens taken, 19 were weighed. Eleven males weighed 162.5 to 188.6 grams, averaging 176.3 grams; eight females weighed 126.0 to 153.2 grams, averaging 142.4 grams. Thus, on the basis of weights, the sexual difference in size is so great that individual variation does not completely bridge the gap between; the largest female is still decidedly smaller than the smallest male.

Agelaius phoeniceus californicus. California Red-winged Blackbird. A considerable series of specimens taken showed this to be the subspecies resident in the Colusa district. Sequestered males were shot from the tule tips, where already, February 24 to March 4, they were posted, part of each day, over their chosen nesting preserves. The females were still altogether in flocks, and most of the males were; or, perhaps, all the males were in flocks a large share of the time. These flocks, numbering up to 2000 (estimated) individuals each, foraged far and wide over the rice country. Specimens dissected had their gullets full of whole rice grains; and we were quite ready to believe what Sam Lamme told us, that the blackbirds inflict vastly more real damage upon the rice industry than do the ducks. The damage done by ducks to the rice has been purposely exaggerated in the effort to get legal approval of shooting them beyond the bag and seasonal limits.

On the Sutter County side of Butte Creek, out in a large dense tract of dry tules, was a Red-winged Blackbird roost. Along toward sundown flock after flock, from various directions, would come in to this roost, until Lamme's estimate of "millions" appealed to us as not much of an exaggeration. From the time the birds began to gather, about an hour before sunset, until dusk began to settle, we would be aware of a swelling volume of sound like the roar of a distant waterfall—the aggregate effect of thousands of blackbird voices. The birds left early in the morning with far less obtrusiveness; they would be gone before we realized it.

I heard one note or sound new to me, given by apparently one single individual in each flock no matter what its size, when passing overhead, in straight-away flight. This sound was a low-pitched rattling whistle, or series of whistles, seemingly synchronous in rhythm with the successive series of wing-beats. As this sound was heard from flocks consisting only of males, as well as from mixed flocks, I inferred that only a male bird produced it. In quality it was in no way similar to any of the regular call-notes or songs of *Agelaius* known to me. I do not find this phenomenon recorded in Dr. Arthur A. Allen's exhaustive study of the eastern red-wing (abstract Proc. Linn. Soc. New York, nos. 24-25, 1914).

Passerculus sandwichensis savanna. Eastern Savannah Sparrow. Two examples, nos. 43704, 43705, both males, from a point three miles east of Norman, Glenn County, taken February 21, 1923; weight in each case, 20.6 grams. These, by their large size, thickish bill, and heavy markings, differ from the prevalent *alaudinus* and coincide with the race summering in southeastern Alaska. This race is so very close to Eastern *savanna* that no one has as yet proposed to call it by a different name, although a sequestered habitat is occupied.

The above two birds were in a field of last year's unharvested rice, along with great numbers of the Western Savannah Sparrow (*P. s. alaudinus*). No. 43705 I shot from among the Westerns by distant selection on the basis of evident larger size. A few other large-sized birds were seen but not taken. No. 43704 was given up by a Sharp-shinned Hawk (*Accipiter velox*). I saw the hawk go after the bird, dashing

this way and that close to the ground among the standing clumps of dry rice, finally disappearing. I approached the spot, but before I got within gun range, the hawk rose. I fired a load of 6's for luck, and saw the sparrow fall while the startled hawk flew off. Marking down the place I retrieved the sparrow. Dissection showed several minute claw punctures in its thoracic region, and the lungs were full of clotted blood. Death had evidently been instantaneous, though the bird before skinning showed not a mark of injury.

Junco hyemalis connectens. Cassiar Junco. One specimen taken, no. 43713, Mus. Vert. Zool.; shot by Major Brooks March 1, 1923, from a scattering flock of Sierra Juncos in riparian growth along Butte Creek, about three miles northeast of Colusa. This is a male showing very well all the characters of the birds included under the above name by Swarth (Univ. Calif. Publ. Zool., vol. 24, 1922, pp. 243-253). The race breeds in the Cassiar district of British Columbia, and the present specimen furnishes the first information we have indicating that the race winters, in part, at least, in California.

Melospiza melodia fisherella. Modoc Song Sparrow. This race of song sparrow proved to be wintering commonly in the Colusa district. There were many individuals in the dead unharvested rice, consorting there with Savannah sparrows. Eight specimens were preserved for the Museum of Vertebrate Zoology, nos. 43722-29, and Major Brooks took five others, all from the vicinity of Norman, Glenn County, and Maxwell and Butte Creek, Colusa County.

Melospiza melodia merrilli. Merrill Song Sparrow. Four specimens taken: No. 43717, in rice field three miles east of Norman, Glenn County, February 22; no. 43718, in tules five miles east of Maxwell, Colusa County, February 23; nos. 43719-20, in riparian tangle along Butte Creek three miles northeast of Colusa, March 1 and 3. Many other dark song sparrows were seen, most of them doubtless belonging under the foregoing name.

In trying to identify the puzzling array of song sparrows collected in the Colusa district, I thought it might be worth while to reëxamine the type of *Melospiza fasciata ingersolli* Mcgregor (described in Bull. Cooper Ornith. Club, I, March 15, 1899, p. 35). This is now in the collection of Dr. J. Dwight, Jr., housed in the American Museum of Natural History, New York City; and through the kindness of Dr. Dwight it is at hand for purposes of comparison.

The bird in question now bears in addition to McGregor's original label, the Dwight collection label on which is written "*Melospiza melodia morphna.*" I wish to point out that if this type specimen does properly belong to the Rusty Song Sparrow, then the name for the latter will not be *morphna* [of Oberholser] but *ingersolli*; for McGregor's name has, at the very least, two weeks' priority over Oberholser's (the name *morphna* being proposed as a substitute for *guttata*, preoccupied, in the Auk, XVI, April, 1899, p. 183).

My own present conclusions, however, are that the type of *ingersolli*, a fall bird from Battle Creek, Tehama County, is nearest to *merrilli* of Idaho, just as are the four Colusa district birds above specified, and also a good many other fall and winter taken specimens from California in the Museum of Vertebrate Zoology. The dark brownish tone of coloration and the relatively slender bill distinguish it from most specimens of *M. m. fisherella*; and the somewhat longer wing, less bright or rusty tone of color, and the tendency to blackish shaft-streaking both above and below, separate it from the average of *morphna*.

Melospiza melodia morphna. Rusty Song Sparrow. I refer to this subspecies two specimens: one taken by Major Brooks March 4, and no. 43721, Mus. Vert. Zool., taken by me March 5; both collected close to Butte Creek, three miles northeast of Colusa.

Melospiza melodia mailliardi. Modesto Song Sparrow. Found only in the riparian and tule associations along Butte Creek, in Colusa, Sutter, and Butte counties. This was, of course, the only race of song sparrow resident in the region; specimens taken the first week of March showed the beginning of breeding activity—which was not the case with any of the other races. I obtained a series of fourteen specimens, nos. 43730-43, Mus. Vert. Zool.; and Major Brooks took in ten others.

The mean of the entire series shows closer resemblance to typical *heermanni* of the extreme upper (southern) end of the San Joaquin watershed than to any other

named race of song sparrow. Indeed, from a conservative point of view, no special violence to the facts would be done by calling the breeding song sparrows of the entire San Joaquin-Sacramento basin from Fort Tejon to Battle Creek (outside of the Suisun marshes) *heermanni*, just as Ridgway once decided (see McGregor, Bull. Cooper Ornith. Club, I, 1899, p. 35). There are minor differences, however, which to me seem significant enough to warrant calling the breeding birds from about Stanislaus County north to Shasta County by a different name, *mailliardi* (Grinnell, Univ. Calif. Publ. Zool., vol. 7, 1911, p. 197). As intimated above, *mailliardi* is more nearly similar to *heermanni* than to *maxillaris*. It is identical with *heermanni* in shape of bill and in general size; but it has heavier, blacker streaking, on an average, with paler, less brownish 'ground color' above.

Melospiza lincolni gracilis. Forbush Sparrow. Two specimens (nos. 43744-45) taken at Butte Creek, three miles northeast of Colusa, March 2 and 5. Weights: ♂, 16.4 grams; ♀, 14.5. Other *lincolni*, probably of this race, were seen in the same neighborhood.

Pipilo maculatus oregonus. Oregon Towhee. One specimen taken, no. 43749, Mus. Vert. Zool.; shot by Major Brooks, February 26, 1923, from a thicket of small valley oaks near the Sacramento River seven miles north of Colusa. This is a female and shows throughout the characters of extreme *oregonus*, as compared with all the other races of spotted towhees in California. This is but the second known occurrence of 'good' *oregonus* in California (see Pac. Coast Avif. no. 11, 1915, p. 132). The birds in both cases were doubtless vagrants, representing no general migratory movement.

Telmatodytes palustris plesius. Western Marsh Wren. Found only in the little dry tule patches here and there in the rice country within five miles east of Maxwell. Three specimens taken: Nos. 43760-61, Mus. Vert. Zool., and one in Brooks collection, February 20 and 23. This race of marsh wren is evidently a regular winter visitant in the Sacramento Valley, of the same status as the Modoc Song Sparrow with which we found it invariably associated.

Telmatodytes palustris paludicola. Tule Marsh Wren. Just one example of this race obtained, by Allan Brooks near Butte Creek, March 2 (now in Brooks coll.). This is a female weighing 8.7 grams as against 10.2 grams for a female *plesius*. The bird was undoubtedly a vagrant.

Telmatodytes palustris aestuarinus. Suisun Marsh Wren. The marsh wrens plentiful in the tules of the Butte Creek territory, in eastern Colusa and northwestern Sutter County, were already, March 2 to 6, showing signs of breeding. The five specimens taken belong to the subspecies *aestuarinus* (Swarth, Auk, xxxiv, July, 1917, p. 310), the known breeding range of which is now carried far north through the Sacramento Valley.

Baeolophus inornatus inornatus. Plain Titmouse. One (no. 43762, male) of several specimens of Plain Tit taken near Sites, Colusa County, February 28, has in its tail a 'permanent' bend to right. The bend begins about halfway and becomes so pronounced that the shafts of the feathers within one-quarter inch of their tips form an angle of fully 40° with the axis of the body. As in another case of the sort already recorded (Grinnell, Auk, xxxviii, 1921, p. 130), the bird was doubtless accustomed to roost in a cavity of cramped dimensions; also the bird evidently pivoted always from left to right in settling for the night. I thought I might have found a direction of pivoting characteristic for the species, and so looked over our collection. But of the three examples showing definite 'permanent' tail-bends two are right-hand and one is left-hand. The direction of pivoting is thus more likely a matter of habit on the part of the individual, or perhaps of circumstance concerned with the shape of the tree cavity in relation to entrance.

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