

that both of these methods are present in the evolution of bird-song.

In the case of some birds like the Mockingbird, the Starling and the Chat, mimicry has become an integral part of the vocal courtship. Birds like the Catbird and Shrike are obviously making use of mimicry in the improvisation of their songs. Mimicry is less evident, but is occasionally to be detected, in the songs of the Brown Thrasher and Solitary Vireo, as well as in the notes or songs of many other birds, especially in the group of Warblers.

Our greatest avian musician, the Hermit Thrush, is an improviser or inventor of the first rank, and, although some of his notes may have had their inspiration in the songs of other birds, he appears to be entirely original. The Hermit's near relative, the Olive-backed Thrush, on the other hand, shows but little variation in his song. He appears to be neither an improviser nor a mimic.

Witchell¹ mentions over a score of British birds where he has observed mimicry, and, from my own studies, I am convinced that mimicry among our American birds is more common than is generally supposed. It follows, therefore, as a minor corollary that, while sight records are worthless unless the observer is known to be accurate, records by hearing alone, even if the recorder is an expert, may be worthless, owing to this prevalence of mimicry. Above all, one should beware of the mimicry of that specialist, the European Starling.

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NOTES ON THE BIRDS OF WALLOWA COUNTY, OREGON.

BY IRA N. GABRIELSON.

DURING the past four years field supervision in the rodent control work of the Biological Survey has taken me at various times into Wallowa County, which is the northeastern county of Oregon. This county has now been visited at practically every season of the year and notes have been taken on the birds seen

¹ *Op. cit.*, pp. 159-229.

while there. The results of these observations, together with a few other records contributed by Mr. Stanley G. Jewett, form the basis of the present paper.

Wallowa County is one of the most interesting counties in a very interesting State. It is typically a mountain county, the Wallowa Mountains being a spur of the Rocky Mountains and containing Rocky Mountain forms rather than those of the Cascades. This Rocky Mountain fauna penetrates several counties of northeastern Oregon, and it is more typically found in this than in any other.

The arable land of Wallowa County lies largely in the valley of the Wallowa River, which flows from its source in the Wallowa Mountains in the south-central portion of the county in a general northwesterly direction. The main chain of the Wallowa Mountains rises abruptly on the south of this valley. Entrance to it is by railroad through the canyon of the Grand Ronde to the point where the Wallowa enters it, and then following the Wallowa River up through the valley. To the north of this valley is considerable open country of rolling hills, which originally was mostly bunch-grass country. These hills reach a general altitude of approximately 5,000 feet. To the north lies a big rather flat timbered country known as the North Woods, the Wallowa Valley being thus completely encircled by timbered country.

On the east side of the county is the deep canyon of the Snake River, paralleled a few miles to the west by the canyon of the Imnaha. The Imnaha flows into the Snake River well toward the northern end of the county and its mighty canyon is unnoticed only because of its nearness to the far greater one cut by the Snake River through these mountains.

The lower belt of timber is composed largely of yellow pine, while farther up on the mountain, spruce, fir, and lodge-pole pine predominate. Between the canyons of the Imnaha and the Snake is a high, more or less open ridge with large open thickets of lodge-pole pine, and it is here that the Franklin's Grouse and the Mountain Sheep are making their last stand in the state of Oregon.

The elevation of this county varies from 2,700 feet at Wallowa to nearly 10,000 feet in the higher peaks of the main Wallowa Range. This range of mountains is rugged in the extreme and it is carved into many deep canyons by various streams. In the

higher parts of the range are found many lakes, which form the head-waters of the various creeks and rivers originating in the district. The Minam River for a long distance forms the western boundary of the county. It originates on the western slopes of Eagle Cap, while one of the forks of the Imnaha rises on the eastern base.

While my notes are incomplete on migratory birds, particularly Ducks, Shorebirds, and similar forms, they are probably reasonably complete as far as breeding birds are concerned.

The 1910 A. O. U. 'Check-List' and its Supplements have been followed as to nomenclature, except that some later subspecific names are used.

Mergus americanus. MERGANSER.—This bird is a fairly common resident. I have noted one or more from the train in traveling up the Wallowa River, on every trip that I have made into the county. It is more abundant along this river in the winter months when little flocks of from three to five or seven are seen at frequent intervals in the more open stretches of the river.

Anas platyrhynchos. MALLARD.—Ducks have not been noted frequently in this county. There are few or no ponds on the lower flats, but flocks of Mallards have been noted on March 7, 1920, and February 10, 1921, in flood water pools near Enterprise.

Nettion carolinense. GREEN-WINGED TEAL.—One pair noted near Enterprise, February 20, 1919.

Clangula (sp.?). GOLDEN-EYE.—Golden-eyes have been noted on several occasions on Wallowa Lake, but whether the American or Barrow's could not be determined.

Gallinago delicata. WILSON'S SNIPE.—Single individual noted in the town of Wallowa, February 10, 1921. Ground was deeply covered with snow and the creek fed by a warm spring had kept open a piece of meadow land where this bird was feeding.

Actitis macularia. SPOTTED SANDPIPER.—This Sandpiper was noted on numerous occasions along the Wallowa and Imnaha Rivers, and a pair was seen at Lick Creek Ranger Station, July 27, 1920.

Oxyechus vociferus. KILLDEER.—This is a very common bird in this county. I have noted it on every trip after the first of March until late in October. It is very common throughout the valley, and on June 20, 1919, I found it at Memaloose Ranger Station at an altitude of 6,600 feet.

Colinus virginianus virginianus. BOB-WHITE.—The Bob-white has been introduced and is quite common in the Imnaha Canyon, where I noticed it on June 23, 1919, and May 25, 1921.

Oreortyx picta plumifera. PLUMED QUAIL.—This bird was noted in the Innaha Canyon on May 26, 1922. Comparison with specimens from the coast district of Oregon indicates that Quail of this district are of this subspecies, although they are possibly introduced.

Lophortyx californica (subspecies?). CALIFORNIA QUAIL.—According to S. G. Jewett, this bird was introduced into Wallowa County in 1912. It is now quite common in the Wallowa Valley, having been noted at various places between Enterprise and Wallowa. Introductions have served to badly mix up the Quail of this genus in Oregon.

Dendragapus obscurus richardsoni. RICHARDSON'S GROUSE.—This is a common Grouse throughout the entire mountain district of the county, although not exceedingly abundant anywhere. I have noted it on every visit to the timbered sections. A female with five young was seen near Memaloose Ranger Station, June 22, 1919.

Canachites franklini. FRANKLIN'S GROUSE.—S. G. Jewett reports that one was taken at Lick Creek Ranger Station in 1912. Forest Supervisor N. J. Billings, of the Wallowa Forest, has informed me that he has seen this Grouse at Memaloose Ranger Station, and the fire guards and rangers in the Lick Creek district have reported it as being present on numerous occasions. In the summer of 1920, shortly after my visit into the district, a fire guard caught two young ones in his hands.

Bonasa umbellus umbelloides. GRAY RUFFED GROUSE.—The Ruffed Grouse of this district are not typically *umbelloides*, but seem to be nearer that than any other subspecies. They are very common in the valley and are found in some numbers high up in the canyons. This is perhaps the most common Grouse of the district at this time.

Pedioecetes phasianellus columbianus. COLUMBIAN SHARP-TAILED GROUSE.—The Sharp-tailed Grouse was formerly an abundant bird, but now it has nearly reached the vanishing point. Mr. Jewett saw one on February 19, 1919, within the city limits of Enterprise, and I saw two on February 27, 1920, within a block of the high school building. These birds evidently stayed in that vicinity, as I saw them again the following day and once later.

Phasianus torquatus. RING-NECKED PHEASANT.—This bird, commonly known as the China Pheasant or "Chink," has been successfully introduced into Oregon over a wide territory. It is exceedingly abundant in the Blue Mountain district. Umatilla, Union, and Wallowa Counties probably have the largest Pheasant population of any of the counties in the State. It is a wonderful game bird, but there is considerable complaint from farmers regarding the damage it does to cultivated crops.

Zenaidura macroura marginella. WESTERN MOURNING DOVE.—This bird is as abundant here as it is elsewhere in eastern Oregon. It is found everywhere through the cultivated districts and in some numbers in the mountains. I noted it particularly at Memaloose Ranger Station, an altitude of 6,600 feet, on June 20, 1919.

Cathartes aura septentrionalis. TURKEY BUZZARD.—A Turkey

Buzzard was noted at Enterprise on June 25, 1919, and at College Creek Ranger Station in the Imnaha Canyon on May 26, 1921. It is not so abundant in Wallowa as it is in some other eastern Oregon counties, although it has been noted at other dates than those given above.

Circus hudsonius. MARSH HAWK.—A Marsh Hawk was noted at Wallowa Lake, April 12, 1919, and one individual at Enterprise, March 7, 1920.

Accipiter velox. SHARP-SHINNED HAWK.—One individual was noted near Enterprise, February 19, 1919; and two in Imnaha Canyon, May 26, 1921.

Accipiter cooperi. COOPER'S HAWK.—One was shot near Wallowa, May 24, 1921.

Buteo borealis calurus. WESTERN RED-TAIL.—The Western Red-tail is the most abundant large Hawk in the county. It has been noted at Wallowa Lake, April 12, 1919; Memaloose Ranger Station, June 20, 1919; Enterprise, March 3, 1920; Wallowa, March 10, 1920; Lick Creek Ranger Station, July 26, 1920; and at Wallowa, July 22, 1921.

Buteo swainsoni. SWAINSON'S HAWK.—One noted at close range at Wallowa, July 21, 1920. This bird was carrying a freshly killed *Citellus* in his claws as he flew slowly by and alighted on a telephone pole.

Archibuteo lagopus sancti-johannis. ROUGH-LEGGED HAWK.—Two Rough-legged Hawks were noted on February 10, 1921, one at Wallowa and the other near Enterprise. They are probably quite abundant in the county, but this was my only winter trip into the district.

Aquila chrysaetos. GOLDEN EAGLE.—The Golden Eagle is very common in the Wallowa country. It has been noted at Enterprise, February 24 and 25, 1919, and May 25, 1921, and in various other parts of the county. On February 25 one flew very close over the automobile in which I was riding.

Falco mexicanus. PRAIRIE FALCON.—One noted at Wallowa on May 24, 1921, and a pair about a high cliff between Enterprise and Imnaha post office on May 25, 1921. These birds acted as if they had a nest on the cliff, but the rocks were too high and too much broken for us to discover it from the ground.

Falco columbarius columbarius. PIGEON HAWK.—A small Hawk sitting in a large tree alongside the road allowed a very close approach. When killed it proved to be a male Pigeon Hawk of the above subspecies. This bird was taken near Enterprise, April 11, 1919.

Falco sparverius phalaena. SPARROW HAWK.—The Sparrow Hawk becomes abundant in this county during the summer as it does in all other parts of eastern Oregon. During July and August it can be seen everywhere on the telephone posts along the roads.

Otus asio macfarlanei. MACFARLANE'S SCREECH OWL.—Mr. Jewett reported one from the head of Sheep Creek, September 1, 1919. I have several times heard Screech Owls calling at Enterprise, Wallowa, and along Bear Creek, but have never seen one or succeeded in taking one. Specimens from this country which I have seen are *macfarlanei*.

Bubo virginianus (subspecies?). HORNED OWL.—A *Bubo* is very common in Wallowa County. I have never killed one and have not been able to see any specimens, so I am not certain as to the subspecific identity.

Glaucidium gnoma pinicola. ROCKY MOUNTAIN PIGMY OWL.—There is one specimen in the Jewett collection taken at Wallowa, February 28, 1919. I have several times heard them calling about the town of Wallowa, but have never seen one. Ridgway ('Birds of Middle and North America,' Vol. VI, pp. 779-792) recognized several races of Pigmy Owls not included in the 1910 Check-List. If he is followed it appears that three of these races are found in Oregon although he gives records of only two. Ten specimens in the Jewett collection from various parts of the state are at hand. The one from Wallowa is identical with two from Boise, Idaho, all three of which fit perfectly Ridgway's description *G. g. pinicola*. One from Klamath Falls and one from Grants Pass—both in southern Oregon—are referable to *G. g. californicum*. Two from Netarts on the Tillamook County coast are apparently typical *G. g. grinnelli*. One from Eugene appears to be closer to *californicum* than to *grinnelli*, while one from Roseburg is very similar to the Netarts *grinnelli*. It is probable that in this district (Umpqua Valley and southern Willamette Valley) the two forms intergrade, but more material than is available to me at this time would be necessary to determine this point.

Ceryle alcyon caurina. NORTHWESTERN BELTED KINGFISHER.—The Kingfisher is one of the common birds of the county and particularly of the Wallowa Valley section. It has been seen on every visit and is one of the most conspicuous forms along the rivers, creeks, and lakes of the county.

Dryobates villosus monticola. ROCKY MOUNTAIN Hairy WOODPECKER.—This is the most abundant Woodpecker of the county. It is found everywhere from the bottom of the Wallowa Canyon to timberline. I have never made a visit without noting this bird.

Dryobates pubescens homorus. BATCHELDER'S WOODPECKER.—This bird is as rare in Wallowa County as the preceding form is abundant. I have only seen two individuals, one at Enterprise, February 19, 1919; and one at Wallowa, February 23, 1919. Both were in a clump of willows that lined the border of the Wallowa River at these points.

Xenopicus albolaryvatus. WHITE-HEADED WOODPECKER.—This very curious Woodpecker is sparingly found in the mountainous sections of the county. One was noted at the entrance to Hurricane Creek Canyon, flying about a large dead pine, on March 7, 1920. Two were seen near Stanley Ranger Station, July 22, 1920.

Sphyrapicus varius nuchalis. RED-NAPE SAPSUCKER.—My only record of this species is at Wallowa Lake on April 12, 1919, when two individuals were noted.

Sphyrapicus thyroideus. WILLIAMSON'S SAPSUCKER.—This beautiful Sapsucker was noted at Stanley Ranger Station on July 22, 1920, and at Lick Creek Ranger Station on July 27 of the same year.

Phloeotomus pileatus abieticola. NORTHERN PILEATED WOOD-

PECKER.—The Pileated Woodpecker is fairly common for so large a bird. It has been noted at various times in the mountain districts, and one individual was seen in the edge of town at Enterprise on March 7, 1920. All of the other records are in the mountain district, but not high up. They were noted at Wallowa Lake, in the breaks near Bear Creek, and the Imnaha Canyon.

Asyndesmus lewisi. LEWIS'S WOODPECKER.—A common bird in the Wallowa Valley, also in the Imnaha Canyon. In its habits it reminds me a great deal of the Red-headed Woodpecker of the East, and it is commonly found along the fence posts and telephone poles and works from one to another in the same fashion as its eastern relative.

Colaptes cafer collaris. RED-SHAFTED FLICKER.—The Red-shafted Flicker shares with the Rocky Mountain Hairy Woodpecker the distinction of being the most abundant Woodpecker in the county. It is, however, far more conspicuous in the cultivated districts. This species is one of the three or four most common and conspicuous birds of the valley district and is to be seen everywhere. It is also common in the higher mountain district, but in these places hardly so abundant as the Hairy Woodpecker.

Chordeiles virginianus hesperis. PACIFIC NIGHTHAWK.—A common summer resident of Wallowa County. I have seen it well up in the mountains and of course it is very common in the valley districts. One of the most interesting bird experiences that I have had, has to do with this bird. On the night of June 23, 1919, near the Imnaha postoffice, hundreds of Nighthawks flew about over the Imnaha River at sun-down. There were such great numbers of them that the booming noise produced by their wings was almost continuous. I have never seen so many Nighthawks in one place as there were here at this time.

Chaetura vauxi. VAUX'S SWIFT.—Mr. Jewett reported seeing two on Big Sheep Creek on August 31, 1919. I saw two on the forks of the Imnaha on July 28, 1920, and several of them at College Creek Ranger Station, May 26, 1921.

Selasphorus platycercus. BROAD-TAILED HUMMINGBIRD.—One individual was noted along the railroad near Enterprise on July 27, 1921. Mr. Jewett and I watched it for some time as it flew about from flower to flower.

Selasphorus rufus. RUFOUS HUMMINGBIRD.—The Rufous Hummingbird was noted at Enterprise on May 25, 1921, and in Imnaha Canyon on May 26, 1921.

Stellula calliope. CALLIOPE HUMMINGBIRD.—This is a common Hummingbird of the mountain districts of Wallowa County. I have seen it on every trip into the mountains.

Tyrannus tyrannus. KINGBIRD.—The eastern Kingbird is fairly common in the county. It is quite abundant in the Imnaha Canyon and I have in addition seen it at Wallowa and Enterprise on the 24th and 25th of May, 1921. As with so many other eastern birds it enters this county by way of the canyons of the Snake and Imnaha Rivers.

Tyrannus verticalis. ARKANSAS KINGBIRD.—This bird is much more abundant than is the Kingbird, and is one of the most conspicuous summer residents of the county. At Wallowa on May 24, 1921, I saw a nest with four well-grown young, conspicuously located on the cross-piece of a rather low telephone pole, directly in front of a residence.

Sayornis sayus. SAY'S PHOEBE.—One pair noted at Enterprise, February 28, 1920.

Nuttallornis borealis. OLIVE-SIDED FLYCATCHER.—The Olive-sided Flycatcher is abundant in the higher mountain districts of the county. To me it is one of the most typical of mountain birds, and its wild, free call notes seem to be decidedly appropriate to the rough country which it inhabits in this district.

Myiochanes richardsoni richardsoni. WESTERN WOOD PEWEE.—This is one of the most common of all the smaller Flycatchers of the district. I noted it nesting in the Wallowa Valley and also saw it at Lick Creek Ranger Station on July 27, 1920. It is very common in the Wallowa Valley.

Empidonax trailli trailli. TRAILL'S FLYCATCHER.—Small Flycatchers of this genus are very common in this district. However, one killed at Stanley Ranger Station, July 22, 1920, is the only one I can positively identify.

Otocoris alpestris arcticola. PALLID HORNED LARK.—This subspecies of Horned Lark is a common winter visitant. While here these birds mingle with the Dusky Horned Larks, which are year-around residents. They were noted commonly during my visit in February, 1919, and also in 1920, and could easily be picked out by their larger size and paler color.

Otocoris alpestris merrilli. DUSKY HORNED LARK.—This is a very abundant resident of the county. It is found throughout the summer in the Wallowa Valley and in the hills adjacent to it, and in winter the immense flocks of this species and the Pallid Horned Lark form the most conspicuous bird life of the open country. They are sometimes present in flocks of tens of thousands, roaming over the open parts of the county.

Pica pica hudsonia. MAGPIE.—The Magpie is a common bird of the Wallowa Valley.

Cyanocitta stelleri annectens. BLACK-HEADED JAY.—This Jay, which indicates the Rocky Mountain character of the fauna of this district, is very abundant, both in the fir thickets that are found along the Wallowa River, and in the mountain country. Winter and summer alike its top-knot can be seen peering down at one through the branches of the trees. Like all Jays it is exceedingly curious and at the same time shy. It can be a decided nuisance at times when one is trying to see other species of birds. When attempts are being made to "squeak" birds it is one of the first to respond and the last to leave.

Perisoreus canadensis capitalis. ROCKY MOUNTAIN JAY.—This bird is common throughout the mountain sections of the county. It has

all the characteristics of other Jays of the group and is known by the name of "Camp Robber" or "Whisky Jack" in this district, as its relatives are elsewhere.

Corvus corax sinuatus. RAVEN.—One individual noted at Wallowa, March 9, 1920, and a pair near College Creek Ranger Station, May 26, 1921. This pair probably were nesting on the cliffs along the Imnaha, as they were seen several times during the day and again the next morning.

Corvus brachyrhynchos hesperis. WESTERN CROW.—The Crow is not so abundant in this district as in other parts of Oregon, but it is present in large enough numbers to be seen on practically every visit to the county.

Nucifraga columbiana. CLARKE'S NUTCRACKER.—The Nutcracker is one of the most conspicuous and abundant birds of the mountain country. It is found wherever suitable conditions prevail and, while I have noticed it at the mouth of the canyons where the streams break out into the Wallowa Valley, I have never noted any of them in the valley, even in the most severe weather.

Dolichonyx oryzivorus. BOBOLINK.—Mr. Jewett noted the Bobolink in the Wallowa Valley on July 12, 1912. These birds are now well established in fields adjacent to Wallowa and in July, 1920, and July, 1921, I noted a number of individuals. This is one of the eastern birds which is apparently moving westward and is becoming well established in Oregon, not only in this valley but in other localities.

Agelaius phoeniceus neutralis. SAN DIEGO RED-WING.—Great flocks of migrating Blackbirds are present late in February and early in March, and smaller numbers nest in suitable localities throughout the county. I have noted nesting birds in the small swamps near Enterprise, May 25, 1921; and one at Wallowa, May 24, 1921, and July 21, 1920; and in the Imnaha Canyon, June 23, 1919, and May 26, 1920. Suitable territory for Red-wings is not extensive in Wallowa County and therefore this is not a common nesting bird.

Sturnella neglecta. WESTERN MEADOWLARK.—Meadowlarks are an abundant species of the valley. They are also quite common in the higher mountain sections. I doubt very much whether any other bird exceeds them in abundance. A few may winter, as I have seen individuals on February 10, at Wallowa, at which time there was no evidence of any migratory movements.

Icterus bullocki. BULLOCK'S ORIOLE.—Not very abundant. Individuals were noted at Imnaha post office, June 23, 1919, and May 26, 1921; and a pair at Wallowa, May 24, 1921.

Euphagus cyanocephalus. BREWER'S BLACKBIRD.—A very common migrating bird and a quite common summer resident. Flocks of young ones were very much in evidence in July, 1920, during my visit to the county.

Herperiphona vespertina californica. CALIFORNIA EVENING GROSBEAK.—The Evening Grosbeak is a common bird of the mountain districts. I have found it on every trip into the mountains in all parts of the county.

Specimens agree very closely with those from the Warner Mountains, Lake County, which have been described by Grinnell as *H. v. californica*.

***Pinicola enucleator montana*.** ROCKY MOUNTAIN PINE GROSBEEK.—Two individuals, neither one of them with rosy plumage, were noted near the edge of town of Wallowa, March 1, 1919. One was shot and is now in S. G. Jewett's collection.

***Carpodacus cassini*.** CASSIN'S PURPLE FINCH.—One of the most abundant and familiar birds of the mountain districts. I have seen them feeding commonly with the Crossbills and Grosbeaks around salting stations in the mountains.

***Carpodacus mexicanus frontalis*.** HOUSE FINCH.—Not very common in Wallowa County. I saw one single House Finch in front of the hotel at Enterprise, February 21, 1919, and have noted them at Enterprise, April 15, 1921; and Wallowa, July 21, 1920.

***Loxia curvirostra minor*.** CROSSBILL.—Common resident of the higher mountain country, and in some winters abundant in the Wallowa Valley. I saw considerable numbers of them in February, 1919, between Wallowa and Enterprise.

***Leucosticte tephrocotis littoralis*.** HEPBURN'S ROSY FINCH.—A very abundant winter resident of the open country north of Enterprise and Wallowa. I have seen them in large flocks on some days, while on others I have traveled for hours without seeing any. They were particularly abundant in February, 1919, and February and March, 1920.

***Astragalinus tristis pallidus*.** PALE GOLDFINCH.—An abundant resident of the county in the winter. Small compact flocks are common along the heavily timbered bottom of the Wallowa River, while during the summer they are present everywhere in the county.

***Spinus pinus*.** PINE SISKIN.—The Pine Siskin is another very abundant resident bird of the district.

***Plectrophenax nivalis nivalis*.** SNOW BUNTING.—A common winter resident. These, with the Rosy Finches and the immense flocks of Horned Larks, comprise the great bulk of the winter bird population of the open country of Wallowa County.

***Poocetes gramineus confinis*.** WESTERN VESPER SPARROW.—Very abundant summer resident of the Wallowa Valley. Also one of the common summer residents of the Innaha Canyon.

***Passerculus sandwichensis nevadensis*.** NEVADA SAVANNAH SPARROW.—A quite common resident of the Wallowa Valley.

***Chondestes grammacus strigatus*.** WESTERN LARK SPARROW.—A number of them were noted in the Innaha Canyon on May 26, 1921. This bird does not seem to be so common in Wallowa County as in other parts of eastern Oregon.

***Zonotrichia leucophrys leucophrys*.** WHITE-CROWNED SPARROW.—This Sparrow was found breeding commonly around Stanley Ranger Station, July 22, 1920, and Minam Lake in July, 1921.

***Spizella monticola ochracea*.** WESTERN TREE SPARROW.—A con-

siderable flock was found in the edge of town at Enterprise, February 18, 1919. It is my only record for the county.

***Spizella passerina arizonae*.** WESTERN CHIPPING SPARROW.—An abundant summer resident throughout the county.

***Spizella breweri*.** BREWER'S SPARROW.—I was surprised to find this bird to be a common resident in the scattering bunches of sage-brush on the ridge between the Innaha and Snake Canyons. It was common on the southern slopes which had a scattering growth of sage-brush, at Memaloose Ranger Station, and also near the Lick Creek Ranger Station. It was also a common resident of the Innaha Canyon.

***Junco hyemalis connectens*.** SCHUFELDT'S JUNCO.—This is the breeding form of the Junco in this district. It is a very abundant species. Specimens from Enterprise have been identified by Dr. H. C. Oberholser.

***Junco hyemalis montanus*.** MONTANA JUNCO.—A number at least of the winter birds of Wallowa County are of this subspecies. They are much grayer than the summer breeding bird. Winter specimens from Wallowa in Mr. Jewett's collection are clearly *montanus*.

***Melospiza melodia montana*.** MOUNTAIN SONG SPARROW.—An abundant permanent resident found both in the valley and in the mountains in numbers wherever suitable nesting sites prevail. This Song Sparrow is also a common winter resident of the Wallowa Valley.

***Melospiza lincolni lincolni*.** LINCOLN'S SPARROW.—Mr. Jewett noted them at Aneroid Lake, August 22, 1912. There were several pairs noted on July 26, 1921, near a sheep camp about 12 miles north of Wallowa.

***Passerella iliaca schistacea*.** SLATE-COLORED FOX SPARROW.—This bird is common about Enterprise in migration in April and is a familiarly common breeding species of the mountain districts. I found it common about Memaloose Ranger Station, June 20 to 22, 1919; about Stanley Ranger Station, in July, 1920 and 1921; and at Minam Lake, July, 1921; and on the head-waters of the Innaha, in July, 1921.

***Pipilo maculatus montanus*.** SPURRED TOWHEE.—A summer resident bird recorded from the ridge between the Snake and Innaha Canyons, June 20, 1919; and from the Innaha Canyon, May 26, 1921.

***Zamelodia melanocephala*.** BLACK-HEADED GROSBEAK.—This bird is not so common in Wallowa County as in other parts of eastern Oregon. My only record is of one individual, a male, seen at the Innaha postoffice, June 23, 1919.

***Passerina amoena*.** LAZULI BUNTING.—A very common summer resident of the Wallowa Valley.

***Piranga ludoviciana*.** WESTERN Tanager.—A very common summer resident of the mountain districts of the county. In May, 1921, great numbers of these birds in migration were present around Wallowa. I have never seen any species more abundant through the trees and bushes, except in some of the Warblers in migrations in the Mississippi Valley.

***Petrochelidon lunifrons lunifrons*.** CLIFF SWALLOW.—Common summer resident of the county. In the Innaha Canyon on June 23,

1919, I found a considerable colony with their nests plastered on a large cliff. At Wallowa on May 24, 1921, and near Enterprise, May 25, 1921, I saw two colonies with their nests built on the sides of the buildings as is usual with these birds in eastern states.

Hirundo erythrogastra. BARN SWALLOW.—Common summer resident of the Wallowa Valley.

Tachycineta thalassina lepida. NORTHERN VIOLET-GREEN SWALLOW.—Common summer resident both in the mountains and valley.

Riparia riparia. BANK SWALLOW.—Mr. Jewett reports Bank Swallows from Minam, July 12, 1916.

Stelgidopteryx serripennis. ROUGH-WINGED SWALLOW.—I found Rough-winged Swallows to be abundant about Wallowa and around Bear Creek in June, 1919, and quite common in the Imnaha Canyon, June 23, 1919, and May 25, 1921.

Bombycilla garrula. BOHEMIAN WAXWING.—Bohemian Waxwings had always been a rather rare and unusual bird in my experience until I first visited the Wallowa Valley on February 18, 1919. During the two weeks following this date while I remained in the county, I saw literally tens of thousands of these Waxwings. Every place we went in the wooded portions of the valley there were great flocks feeding on the various berries and seeds that had remained on the trees. Again, in February, 1921, I saw the same sight. They were, in both of these months, by far the most abundant bird in the district. I have not seen them in Wallowa County at any other time.

Bombycilla cedrorum. CEDAR WAXWING.—A common summer resident of the county. A nest with three nearly fledged young was noted in Wallowa, July 21, 1920. A flock of several hundred was noted on June 23, 1919, feeding in a cherry orchard near the Imnaha post office. A small flock, evidently of wintering birds, was noted at Lostine, February 20, 1919, in company with a much greater number of Bohemian Waxwings.

Lanius borealis. NORTHERN SHRIKE.—One individual noted at Wallowa, February 28, 1919.

Vireosylva gilva swainsoni. WESTERN WARBLING VIREO.—A very common summer resident of the Wallowa Valley and of the creek bottoms in the mountains.

Lanivireo solitarius cassini. CASSIN'S VIREO.—Noted at Lick Creek Ranger Station, July 27, 1920, and in the Imnaha Canyon, May 26, 1921.

Vermivora celata lutescens. LUTESCENT WARBLER.—One noted at Lick Creek Ranger Station, July 27, 1920.

Dendroica aestiva aestiva. YELLOW WARBLER.—A very common breeding bird of the Imnaha Canyon and less common along the Wallowa River in the main valley.

Dendroica auduboni auduboni. AUDUBON'S WARBLER.—Common breeding bird of the mountains.

Oporornis tolmiei. MACGILLIVRAY'S WARBLER.—Several noted on the College Creek Ranger Station, May 26, 1921.

Icteria virens longicauda. LONG-TAILED CHAT.—A common bird in the Imnaha Canyon. Noted on June 23, 1919, and May 26, 1921. This is another bird that finds its way into the county through the canyons of the Snake and Imnaha Rivers.

Setophaga ruticilla. REDSTART.—Mr. Jewett reports one from Minam, July 12, 1916.

Cinclus mexicanus unicolor. DIPPER.—An abundant resident of all the mountain streams of the district. One of the most interesting sights from the Railway train on a trip up the Wallowa Canyon is to see the Dip-pers fly back and forth across the river and to watch their activities.

Dumetella carolinensis. CATBIRD.—Mr. Jewett reports Catbirds from Enterprise on July 13 and 14, 1916. I have seen them in Wallowa, July 21, 1920, and at Imnaha postoffice, July 23, 1919. The Catbird seems to be an increasingly common bird in northeastern Oregon.

Salpinctes obsoletus obsoletus. ROCK WREN.—I found the Rock Wren to be fairly common in the Snake River Canyon, June 20, 1919. I also saw several in the Imnaha Canyon, May 26, 1921.

Troglodytes aëdon parkmani. WESTERN HOUSE WERN.—Noted only two in the county, one at Lick Creek Ranger Station, July 27, 1920, and one at Imnaha postoffice, June 23, 1919.

Nannus hiemalis pacificus. WESTERN WINTER WREN.—Noted in the timber along the river at Wallowa, February 28, 1919, and in similar places near Enterprise, March 6, 1920.

Certhia familiaris montana. ROCKY MOUNTAIN CREEPER.—A common bird in the timbered sections of the county. It has also been noted along the Wallowa River, at Enterprise, on March 7, 1920.

Sitta carolinensis nelsoni. ROCKY MOUNTAIN NUTHATCH.—One individual noted along the river near Enterprise on March, 7 1920, is the only record that I have for the county, but it is undoubtedly much more common. Specimens in the Jewett collection are clearly of this form.

Sitta canadensis. RED-BREASTED NUTHATCH.—A common species in the mountain sections of the county.

Sitta pygmaea pygmaea. PYGMY NUTHATCH.—An abundant resident of the yellow pine districts in the mountains.

Penthestes atricapillus septentrionalis. LONG-TAILED CHICKADEE.—Abundant throughout the county wherever suitable conditions are found.

Penthestes gambeli gambeli. MOUNTAIN CHICKADEE.—Abundant in the mountains throughout the year and fairly common along the Wallowa River in the valley during the winter months.

Regulus satrapa olivaceus. WESTERN GOLDEN-CROWNED KINGLET.—An abundant winter resident of the Wallowa Valley.

Regulus calendula calendula. RUBY-CROWNED KINGLET.—Noted at Stanley Ranger Station, July 22, 1920, and at Lick Creek Ranger Station, July 26, 1920.

Myadestes townsendi. TOWNSEND'S SOLITAIRE.—Abundant in the Wallowa Valley in winter. Less common in the mountains during summer.

Hylocichla guttata auduboni. AUDUBON'S HERMIT THRUSH.—One was found at Lick Creek Ranger Station, July 27, 1920.

Planesticus migratorius propinquus. WESTERN ROBIN.—A very abundant summer resident throughout the county.

Ixoreus naevius meruloides. NORTHERN VARIED THRUSH.—A common bird of the mountain districts of the county. It is particularly abundant about Stanley Ranger Station and adjacent districts.

Sialia mexicana occidentalis. WESTERN BLUEBIRD.—A fairly common migrant and summer resident, particularly of the Wallowa Valley and Innaha Canyon.

Sialia currucoides. MOUNTAIN BLUEBIRD.—An abundant summer resident of the mountain districts.

Portland, Oregon.

EXTENSION OF RANGE OF THE ROBIN AND ARKANSAS KINGBIRD IN OKLAHOMA.

MARGARET MORSE NICE.

WITHIN the last fifteen or twenty years Robins have been extending their breeding range westward in Oklahoma, and more recently Arkansas¹ Kingbirds have been moving eastward. Since little has been published on the ornithology of this State it is difficult to get definite dates especially in regard to the first nesting of the Robin in various localities; but, thanks to the courtesy of several correspondents and also of the United States Biological Survey who kindly sent me copies of migration records and reports of their investigators in this region, I have been able to gather a number of facts. (Unless otherwise stated my authority is that of the Biological Survey reports.)

The earliest record of the Robin in the State is given by W. W. Cooke² who found it a winter resident in 1883-4 in Caddo in southern Oklahoma; this is still its status in Bryan County. The first mention of its breeding was made by Mr. E. A. Preble who in 1892 stated that it "breeds sparingly" in Pittsburgh County in eastern Oklahoma. In central Oklahoma, in 1890, Robins were transients only at Fort Reno (J. C. Merrill), but now are common

¹ While conforming to the A. O. U. Check-List in the use of this name we contend that Western Kingbird is in every way more appropriate.

² 'Auk,' 1914, XXXI, p. 493.