

EARLY AUTUMN BIRDS IN YOSEMITE VALLEY

By JOSEPH MAILLIARD

THIS YEAR (1917) it was the writer's pleasant fortune to pass six weeks amid the peace and beauty of the wonderful Yosemite—peaceful because past the season of turmoil of the falling waters—always beautiful and wondrous. It is true, the present writer had but just returned from a long and painful journey to the very portals of that unknown collecting ground from which no ornithologist has ever brought back notes; his steps were slow and feeble and his limits much restricted, both geographically and topographically. But he was able to pass at least a part of each and every day in active search for feathered friends, and in setting down the names of the ones that proved to be "among those present", while at no hour were both eye and ear totally oblivious. These six weeks of observation extended from August 18 to September 29.

As the Yosemite Valley is such an interesting locality, and as but little seems to have been written upon its bird life save in a more or less incidental or casual way—and that principally of the spring or early summer time—an account of some of the birds steadily looked for and noted during a fairly long period in the early fall should be of some value. It must be borne in mind, however, that the following notes apply only to the "floor" of the valley, which extends from a couple of miles below (west of) Yosemite Village to the Happy Isles and up Tenaya Canyon as far as Mirror Lake; the latter is but a hundred feet or so above the floor proper, not enough difference in elevation to cut any figure, and connected with it by a comparatively gentle slope.

A mere list of the birds would likely prove unattractive to a majority of our readers. Yet a list has its uses as a means of recording the presence of certain birds in definite localities at certain times; it is not only of assistance to the student of bird migration but is of value, as well, to persons who may cover the ground in the future, and of interest to those who have been over it in the past. For these reasons a list will be found at the end of this article, giving those birds noted that are not mentioned in the lists of Yosemite birds to which the writer has access. These are as follows:

- 1893. Emerson, W. O. Random Bird-notes from Merced Big Trees and Yosemite Valley. *Zoe*, iv, July, 1893, pp. 176-182.
- 1904. Widmann, O. Yosemite Valley Birds. *Auk*, xxi, January, 1904, pp. 66-73.
- 1911. Grinnell, J. Early Summer Birds in Yosemite Valley. *Sierra Club Bulletin*, viii, June, 1911, pp. 118-124.

There are two or three other short articles about Yosemite birds but hardly to be called lists, and about every variety of bird touched upon is included in the three papers named.

So many people are familiar with the Yosemite Valley that it seems unnecessary to describe it here at any length; but for the benefit of those who have not had the opportunity to visit the spot it may suffice to say that it is a part of the valley of the Merced River, up whose narrow canyon for the greater part of its 79 miles a railroad parallels the stream. The grade is so comparatively gentle, in spite of the hilly country through which the river flows, that the track bed is never more than a few yards, or at most a few rods, from the water. At the terminus of the railway the canyon becomes more rugged and the grade stiffens, while the stream is broken into short cataracts and low falls, continuing this way, while a highway takes the place of the railroad, for about

ten miles. Then it broadens out and its floor stretches from west to east longitudinally with but little slope for some six or seven miles, with a width of from one half to one and a half miles, making the "floor" of the Yosemite Valley. This floor is beautifully diversified by groves of cedar, yellow pine, Douglas fir, silver fir, and golden oak, interspersed among which are little meadows covered with green grasses, strawberry plants and wild flowers, and graced by the presence of scattered deciduous trees, the principal of which is the mountain black oak. In places are bushes of blackberry, choke cherry and "cascara sagrada", upon the berries of all of which certain birds love to feast.

There is nothing in the way of topographical troubles to prevent the birds of the plains and foothills from winging their way unobstructed into this valley, whose elevation is only about 4000 feet. Were there a continuation of their accustomed food all the way up the river canyon probably most of the lower level varieties of birds would be found in the Yosemite in summer. The sides of the valley, however, are wonderfully abrupt, and present a great barrier to egress in a lateral direction, while upstream the valley narrows and divides into canyons which quickly mount to vastly greater altitudes. As might be expected under such conditions this valley is a meeting place for some of the forms from both lowland and highland. This the writer has found to be a fact in the fall season and it is reasonable to suppose that the early springtime would also show such intermingling. Yet some varieties that one would naturally look for in this valley are either seldom seen, or absent altogether. For instance, the nearly ubiquitous California Jay (*Aphelocoma californica*) seems to shun the spot, only one having been recorded during the six weeks of observation and none mentioned in the lists given above. Yet, in some localities, it frequents much higher elevations, proving that it is not the altitude that deters this species from occupying the floor of the valley.

Bird life in the fall season is very far from being evenly distributed over the valley. In a few limited areas a number of individuals may be seen in a short while, yet there are vast spaces where a person might wander around for a long time without seeing a single bird, and only hearing an occasional distant note. That is to say, this is the case at the time of year concerned in this article, from mid-August to October 1. Judging from the stories of people who have spent some time in the valley, and have taken a passing interest in its bird life, there must be many more birds in evidence in the nesting season. In fact old nests were found in places that were absolutely without bird life in the autumn time. Even then there must be large spaces in the forest that have few avian visitors, and for some unknown reason this seems to be the rule all along the Sierras, though it would seem proper to assume that where there are plenty of trees there must be plenty of insects, and that certain of the insectivorous birds would keep pace with the food supply. On occasions, the writer has wandered along through the woods and meadows for as much as an hour and a half at a time, covering say three miles of territory, even in the early morning on beautiful days, before catching sight of a single bird, and hearing during that time but little other than the distant call of a woodpecker. Late in September, however, there was such an influx of Red-breasted Nuthatches (*Sitta canadensis*) that no one could travel far without hearing the queer little indescribable notes of these diminutive but very busy bodies. Upon their first arrival (that is, in increasing numbers, about the middle of September) they were seldom actually seen, but later they were often met with feeding near the

ground on the trunks of oak trees, or performing gymnastic feats among the lowest branches. Although mentioned in Grinnell's list (not in Emerson's or Widmann's) this species is deemed rather rare by some of the valley people, and its appearance in numbers seems to indicate one of those waves that occasionally sweep over this country, of unknown origin or purpose.

The Mountain Chickadee (*Penthestes gambeli gambeli*) was another bird that appeared in numbers as the time for colder weather approached, and in similar manner was at first more frequently heard than seen, but later on was often noted feeding low down in friendly flocks with the nuthatches. One morning just such a combined flock was feeding along through the woods, as is its wont, when it came to a beautiful little glade whose sole avian occupant at the moment was a male hummingbird, probably *Selasphorus rufus*. One of the Mountain Chickadees worked its way from branch to branch until it drew near the dead twig on which was perched the hummingbird, where upon it made a most vicious assault upon the innocent hummer and, not satisfied with driving it away from its own particular perch, kept returning to the attack every time its victim settled down again, repeating these assaults until finally the poor hummingbird left the glade in disgust.

For noise and size the Northern Pileated Woodpecker (*Phloeotomus pileatus abieticola*) is the most conspicuous bird in the valley. When one of these birds taps upon a dead limb it is no gentle imitation of a tap. It is the real thing! And when he calls he *calls*. Everybody in the neighborhood knows it, but he doesn't care. "No shooting allowed"—and he knows it. There is a tall pine tree with a dead top, just on the edge of Yosemite Village, which seemed to be a favorite point of vantage for a pair of these woodpeckers. They were often to be seen flying into or out of this tree or noticed chasing each other about its top, undisturbed by the people and automobiles below them, although one usually associates this bird with deep woods uncontaminated by the presence of mankind. The description of this species given in the "Handbook of Birds of the Western United States" by Florence Merriam Bailey, is a good one, and very much to the point. There were several pairs in the valley, each of which seemed to have a favorite spot in the woods, and in or near which it might almost always be found and even quietly approached to within a fairly close distance, close enough to notice many of the birds' habits, some of which seemed almost to take the form of *antics*—such as chasing each other about for no apparent reason, in a manner that looked very much like play. Yet this may, perhaps, have been the case of a young one pursuing its parent in the endeavor to induce it to produce some food. It was not always possible to distinguish between a full-grown youngster and an adult female, especially as this was in the moulting season.

A good example of this sort of thing was the case of a young Water Ouzel (*Cinclus mexicanus unicolor*) which was seen one afternoon chasing its parent up the apparently perpendicular cliff of the upper Yosemite Falls—just where the fall would have been had the water supply kept up. In this case the youngster, which seemed as large as the parent, was very persistent in its efforts, continually pursuing the older bird either by climbing or running along ledges, though occasionally taking to flight, and always begging for food. The parent kept dodging behind rocks and into crevices, frequently turning and expostulating with the youngster whenever overtaken. This proceeding was kept up for a long time, until at last both birds got so far up the cliff as to be

invisible in the gathering dusk against the dark background of the moist rock wall. This species is following the example of the Black Phoebe (*Sayornis nigricans*) and is taking to building its nest on the timbers under bridges. In the Yosemite two cases of this sort occurred in the past nesting season. The rumble and jarring of the great stream of automobiles together with their strident honking seemed to have no effect in deterring these avian architects from taking advantage of such sheltered spots, nor even in disturbing their serenity.

The Water Ouzel, or Dipper, is rather common in the valley and in fact all along the Merced River from its sources in the higher Sierras down to where broken water ceases as the stream nears the lowlands. Several were noted from the car windows of the passing train far below the Yosemite Valley, and it has been variously reported from the very highest Sierras. It is never tame enough to permit very close approach, and yet sufficiently so to be easily seen and watched. A number of visitors to the valley have remarked upon its interesting habit of walking under water on the bottoms of the streams, and have seen it close enough to notice some of its other peculiarities, such as its funny ways of "bobbing", and its manner of dodging around amid the spray of the waterfalls. The song of the Ouzel was not heard until the last days of September, by which time the birds seemed to have gotten through with their family cares and the troubles of the moulting season and once more to feel like expressing their happiness in song. A pleasant little song it is.

The tamest birds in the valley were the Western Robin (*Planesticus migratorius propinquus*), Black-headed Grosbeak (*Zamelodia melanocephala*) and Western Tanager (*Piranga ludoviciana*). While the robins were probably the most fearless of these three varieties, there were times and places when the other two almost allowed themselves to be stepped upon. Robins breed in numbers in the valley, and become as sociable as they are in the eastern states.

Families of Black-headed Grosbeaks would gather on the ground where a little hay had been scattered and become so busy picking out the grains from the dried stalks of oats, wheat or barley that they would permit a person to approach within a couple of yards before troubling to get out of the way. Even then they would sometimes take only a few steps to one side and assume an injured expression. Instances were related of how they had flown on to camp tables when the owners were at meals, and had gotten away with the butter! In fact, from tales that were told, it would seem that butter was one of their favorite articles of diet.

Western Tanagers also nest to some extent in the valley. They were occasionally seen in August, but grew more and more numerous, evidently gathering from far and wide, as the berries of the "cascara sagrada" became ripe, upon which they regaled themselves seemingly almost to the point of bursting. At the foot of a cedar tree close to the writer's tent in Camp Curry was one of these bushes covered with fruit, near which many people passed in the course of the day along one of the camp avenues. Almost touching the bush was a round table three or four feet in diameter, and beside it a rustic rocking chair. In spite of people passing, tanagers would drop down from the cedar tree, even when the chair was occupied, and if the occupant kept still and was apparently indifferent to their actions, would go so far as to alight on the table. Had there been sufficiently strong light, good snap shots could have been taken of birds feeding inside of six feet, but it was too dark under the trees.

The Green-tailed Towhee (*Oreospiza chlorura*) may possibly breed to a small extent in the valley, but if so it seemed to be rather shy in August, and certainly very silent. None was encountered until September 5, although one or two were reported as seen on the edge of the meadow just across the road from Camp Curry several days before this date. After this they increased in numbers, and in favorite spots—notably at the eastern end of Sequoia Lane—one might see eight or ten inside of a couple of hundred yards. About a quarter of a mile west from the end of this lane was a hedge of choke cherries, loaded down with fruit, alongside of a fence. As this ran north and south, with open fields on each side, it received all the sun there was, and seemed to be the most attractive place in the valley for some varieties of birds, among which were the Green-tailed Towhee and the Sacramento Towhee (*Pipilo maculatus falcinellus*).

In this hedge were also some cascara bushes, and near one end was a watering trough that was constantly overflowing. Some trees were scattered along while parts of the hedge were quite thick, and taking it altogether more individual birds were seen here than in any other place in the whole valley. Band-tailed Pigeons (*Columba fasciata*) and Western Robins often crowded on the cherry bushes, already loaded near to the breaking point with their brilliantly colored fruit; and late in September shelter was sought therein by flocks of Thurber Juncos (*Junco hyemalis thurberi*) and Gambel Sparrows (*Zonotrichia leucophrys gambeli*) as they gathered from the higher ranges, while at all times was this hedge used as headquarters by numbers of Western Chipping Sparrows (*Spizella passerina arizonae*), as well as by the towhees mentioned above.

The juncos bred to some extent throughout the valley, but at first were only seen occasionally—a family here and there among the camps, where they would come around looking for table scraps, and be very friendly. The juvenal plumage of the younger members was especially interesting. Well along in September the numbers increased rapidly until there were several flocks in the valley like those we are accustomed to see during the winter season near the coast; but whether or not they were all *thurberi* remained unproven.

Both Widmann and Grinnell mention the White-crowned Sparrow (*Zonotrichia leucophrys leucophrys*) as occurring in the valley. Probably both writers referred to the higher elevations around the valley, as none were noted by the writer upon its floor although W. L. Dawson records one nest found June 10, 1914, at 4000 feet altitude, on the banks of the Merced River (CONDOR, xviii, January, 1916, p. 28). The Gambel Sparrow (*Zonotrichia leucophrys gambeli*), however, was identified (the first time seen, and one taken) on September 18, and rapidly increased in numbers after that date until there were several good-sized flocks, presumably all of this form.

Another spot much favored by birds was the edge of the meadow just across the auto road from Camp Curry, where a few bunches of bushes and small trees gave good shelter, and from there across the road two or three hundred feet to the LeConte Lodge where larger trees, such as oaks and conifers, seemed to be a popular feeding ground. The bird life around here was second only, numerically, to that in the choke cherry hedge spoken of above, some being in evidence there at any time of day. The writer's first observations were made here on the morning of August 19, when Western Chipping Sparrows (*Spizella passerina arizonae*), House Finches (*Carpodacus mexicanus frontalis*), Black-headed Grosbeaks (*Zamelodia melanocephala*), California Yellow Warblers (*Dendroica aes-*

tiva brewsteri), Western Warbling Vireos (*Vireosylva gilva swainsoni*), and Willow and Green-backed goldfinches (*Astragalinus tristis salicamans* and *A. psaltria hesperophilus*), with a hummingbird or two, were feeding, singing, or just enjoying life about the trees and bushes. The last observations were made on the morning of September 29 at the same spot, when the make-up of the feathered assemblage was quite different. On that last morning there were noted two Western Yellowthroats (*Geothlypis trichas occidentalis*), four Lutescent Warblers (*Vermivora celata lutescens*), several Western Chipping Sparrows, Gambel Sparrows, Mountain Chickadees, Red-breasted Nuthatches (*Sitta canadensis*) and some Audubon Warblers (*Dendroica auduboni*), these latter having appeared in the valley September 20, in company, as is often the case, with Western Bluebirds (*Sialia mexicana occidentalis*).

On August 19 the Calliope Hummingbird (*Stellula calliope*) had already taken its departure, and but few representatives of the hummingbird group were seen during the subsequent period of observation, the Anna Hummingbird (*Calypte anna*) being the only one positively identified. Several of these were noted at various times, and the others met with were probably *Selasphorus rufus*, but this was not proved. Through the courtesy of Mr. H. M. Albright, Assistant Director of National Park Service, and Mr. W. B. Lewis, Supervisor of Yosemite Park, the writer was permitted to collect specimens of birds difficult of sight identification, but no hummingbird except the Anna was procured, though others were seen.

Thanks are due to the two above gentlemen for their permission to procure specimens for identification, and to Chief Ranger Townsley and his assistant rangers for their courtesy and aid in making these observations worthy of record.

Vaux Swifts (*Chaetura vauxi*) would occasionally appear from nowhere and career around in rapid evolutions, but never a swallow was seen, all having taken their departure prior to August 19. Nor were any of the White-throated Swifts found on the lower levels, though reported as very numerous among the higher cliffs.

While the Cabanis Woodpecker (*Dryobates villosus hyloscopus*) was quite common along the river, the Willow Woodpecker (*Dryobates pubescens turati*) was seen only once. Where there were large oak trees out in meadows the California Woodpecker (*Melanerpes formicivorus bairdi*) was very much at home; yet, strange to say, among the oaks growing on the talus, even on the north side of the valley where the full force of the sun was felt, he was seldom seen.

The Blue-fronted Jay (*Cyanocitta stelleri frontalis*) is a very common bird in the valley, but does not seem to be as bold there as it is in other places, in spite of the numerous camps and accompanying temptations to pilfer and make trouble. Although a few were seen wandering around rather disconsolately in places from which camps had just been removed, and acting as if they had lost their last means of support, they seemed on the whole to be rather suspicious and wild—just the opposite of what one would suppose the effect of non-molestation and association with human beings would be—and utterly lacking in their usual audacity.

One of the sources of amusement during the writer's stay were the comments of tourists concerning an Eared Grebe (*Colymbus nigricollis californicus*) that had taken up its abode on Mirror Lake, and had become so tame as to approach within a few yards of visitors. It was usually spoken of as a "duck" or a "mudhen", and once or twice was mistaken for a fish as it was seen in pursuit of its

finny prey under the clear water—and it really did look a bit like a clumsy fish as viewed from the rocks above the water's level. This bird would come so close to shore as to enable one to see with the naked eye that the bill was *depressed* (that is, broader than high) instead of *compressed*, thus identifying it as the Eared Grebe. When first seen, August 21, there were just about enough of the remnants of the nuptial plumage, a few of the yellow silky feathers on the side of the head still extending far below the level of the eye, to determine the species at close range without the aid of the bill. Some of the younger tourists amused themselves by throwing bits of rock at the bird—which they did *not* hit! Before the missiles neared their mark it was performing submarine evolutions in plain view of its audience. This grebe was seen a few days later on, but apparently left Mirror Lake early in September.

An effort was made to note the times of departure of some of the summer visitants, but the sudden absence of a bird is much more difficult to determine than its presence. The Calaveras Warbler (*Vermivora ruficapilla gutturalis*) breeds in the valley, but was scarce at the end of August. It was also difficult to distinguish in the bushes and trees from the immature Macgillivray Warbler (*Oporornis tolmei*) and from the Lutescent Warbler. The last specimen taken of the Calaveras Warbler was on September 16, and the last bird was seen on September 26, of which latter there was some slight doubt as to identification.

The Lutescent Warbler was first seen September 18, after which its numbers increased slowly until the 26th when a small wave of migration reached the valley, the eastern end of Sequoia Lane being especially popular as a feeding and resting place. While no attempt at estimating their numbers was made, they were in evidence all around the observer, probably seventy-five being noted that morning. The next day, however, a tramp over the same ground showed but few individuals remaining, not a dozen being seen during the whole day. On the morning of the 29th, the day the writer left the valley, four were seen, so some were still there.

A close watch was constantly kept up for anything new, but it was not always possible to identify everything that was caught sight of. For instance, near noon of September 14, two sparrows, apparently *Passerculus*, were seen to fly out of the meadow grass into a small willow bush near the bank of the river just below Yosemite Village, but diligent search failed to bring them into view again. But one *Passerculus* was taken, and this was on September 27, in the willows still farther down river. It proved to be *Passerculus sandwichensis nevadensis*, Nevada Savannah Sparrow, evidently a wanderer from the east side of the mountains. No other Savannah Sparrows were noted.

Another wanderer was a Brewer Sparrow (*Spizella breweri*) which was taken among some Western Chipping Sparrows. There may have been more of these about, but it was impossible to pick them out among the latter.

The Lincoln Sparrow (*Melospiza lincolni lincolni*) has been recorded from the valley, but it was rather a surprise to find there the Forbush Sparrow (*Melospiza lincolni striata*) also, a bird associated with the humid coast belt as a winter visitant. Two of these were taken, one on September 15 and the other on the 18th.

Along the river are ideal spots for song sparrows, yet but three were seen during the six weeks of observation, and only one taken, on September 27, which proved to be a visitor from the eastern side, this form having been described from Honey Lake under the name *Melospiza melodia fisherella*, by Oberholser (Proc. Biol. Soc. Wash., xxiv, December, 1911, p. 251).

Another surprise, and rather an exasperating one on account of not having had a sufficiently good view for positive identification, was the sight of a small flock of Red-winged Blackbirds flying up river on September 3. The writer was occupied with some efforts at photography at the moment, and just happened to turn in time to see a flock of some twenty or thirty individuals as it was swiftly disappearing around a bend in the river. There was time enough to notice the shoulder patches, which seemed to be red and *white*, and the supposition that they were Tricolored Blackbirds (*Agelaius tricolor*) was all but confirmed by their manner of flight, which is particularly rapid and what might be called more "businesslike" than that of the other red-wings.

The foregoing notes have been selected for an article as probably being the most interesting among the writer's observations, and have been strung together without any attempt at system, as one thing seemed to lead to another in the author's mind, the main idea being not to tire the reader. Appended is a list of birds noted that have not heretofore been recorded from Yosemite Valley—that is, from the floor of the valley—to the author's knowledge.

Eared Grebe (*Colymbus nigricollis californicus*). One seen on Mirror Lake, August 21, and a few days after.

Great Blue Heron (*Ardea herodias herodias*). Tracks noticed in river mud on several occasions, and one individual seen September 28, at Mirror Lake.

Marsh Hawk (*Circus hudsonius*). One seen September 26.

Cooper Hawk (*Accipiter cooperi*). Two seen September 21 below the village.

California Pigmy Owl (*Glaucidium gnoma californicum*). Heard first time at daybreak September 8, but frequently heard at any time of day later in the month. None seen.

Red-breasted Sapsucker (*Sphyrapicus ruber ruber*). An immature bird seen August 28. Five or six seen at various times. Two taken.

Lewis Woodpecker (*Asyndesmus lewisi*). One noted September 22, and either same one or other single individuals seen at various times.

Vaux Swift (*Chaetura vauxi*). One or two often seen, and quite a flock at times.

Anna Hummingbird (*Calypte anna*). Several individuals noted at different times, mostly immature. One taken.

Arkansas Flycatcher (*Tyrannus verticalis*). One seen in El Capitan Meadow September 2 and 3.

Hammond Flycatcher (*Empidonax hammondi*). One taken September 23. There may have been others, but not easily identified among other *Empidonax*, especially immature birds.

California Jay (*Aphelocoma californica californica*). One seen near Lost Arrow camp on September 25.

Tricolored Red-wing (*Agelaius tricolor*). A small flock, apparently of this species, seen September 3.

Nevada Savannah Sparrow (*Passerculus sandwichensis nevadensis*). One taken September 27, and possibly two seen a short time previously.

Gambel Sparrow (*Zonotrichia leucophrys gambeli*). First noted September 18. Increased in numbers daily until quite large flocks had gathered.

Brewer Sparrow (*Spizella breweri*). The only one identified was taken on September 18.

Modoc Song Sparrow (*Melospiza melodia fisherella*). A song sparrow easily identified as being of this form was taken on September 27. Only two other song sparrows seen in the six weeks observation, and their subspecific rank remained unknown.

Forbush Sparrow (*Melospiza lincolni striata*). Several Lincoln Sparrows seen at different times after September 18. Of three taken, two proved to be *striata* and one *lincolni*.

Lutescent Warbler (*Vermivora celata lutescens*). First one seen and taken on September 18. Increased slowly in numbers after that date until September 26, when a small migratory wave appeared. The next few days not many were seen.

Rock Wren (*Salpinctes obsoletus obsoletus*). One seen August 31; heard once or twice afterwards.

Western House Wren (*Troglodytes aedon parkmani*). Common but not very numerous. Last one seen September 15.

Western Gnatcatcher (*Poliophtila caerulea obscura*). The only one seen was taken September 25.

Western Bluebird (*Sialia mexicana occidentalis*). A complete family of Western Bluebirds lived in front of Camp Curry, but the species was seldom noted elsewhere. A small flock, in company with Audubon Warblers, was seen on September 20 near the foot-bridge west of Yosemite Village, but it did not stay long.

APPROXIMATE DATES OF DEPARTURES

Black-headed Grosbeak (*Zamelodia melanocephala*). None seen after September 20.
Lazuli Bunting (*Passerina amoena*). Very scarce toward the end of September; an immature taken September 28.

Western Warbling Vireo (*Vireosylva gilva swainsoni*). Numerous during latter part of August, but disappeared before middle of September.

Cassin Vireo (*Lanivireo solitarius cassini*). Numerous at first, gradually growing scarcer, but a few still in valley on September 28.

California Yellow Warbler (*Dendroica aestiva brewsteri*). Disappeared early in September.

Golden Pileolated Warbler (*Wilsonia pusilla chryseola*). Last noticed September 22.

Western House Wren (*Troglodytes aedon parkmani*). Last one seen September 15.
San Francisco, November 1, 1917.

A NOTE ON THE TRACHEAL AIR-SAC IN THE RUDDY DUCK

By ALEXANDER WETMORE

IN A PAPER published recently¹ the writer described a peculiar air-sac in the male Ruddy Duck (*Erismatura jamaicensis*) that was developed from the trachea, and was capable of inflation through a slit behind the larynx until it formed a pronounced swelling on the neck. The dissections on which these observations were based were made in the field in the summer of 1915, and during the following winter. Other observations on this peculiar development were made in the summer of 1916, but through the writer's absence in the field it was found impracticable to include them in the paper quoted, which was then in press.

On May 29, 1916, and on subsequent dates several adult Ruddy Ducks were captured alive in shallow ponds in the marshes at the mouth of Bear River, Utah. These ducks often were found in narrow channels that, though two feet deep or more, were barely wide enough to allow a boat to pass. As we came down these narrow runs the ducks swam on ahead until finally they came out into ponds where the water was not more than six or eight inches in depth. When closely pressed these birds chose to dive rather than attempt a laborious effort at flight. Under these conditions it was often possible to capture them alive and uninjured. In the clear water they could be seen swimming rapidly, both feet stroking vigorously together, with wings held close at the sides and the head turning quickly as they sought an avenue of escape.

On examining the males I was surprised to find that normally the tracheal

¹ On Certain Secondary Sexual Characters in the Male Ruddy Duck, *Erismatura jamaicensis* (Gmelin). Proc. U. S. Nat. Mus., vol. 52, Feb. 8, 1917, pp. 479-482.