

SOME STUDIES OF THE AMERICAN DIPPER OR WATER OUZEL.

BY CLYDE E. EHINGER.

FOR years one of the writer's most cherished ambitions in the avian field, has been to obtain a practical first-hand acquaintance with that unique water sprite, the Dipper or Water Ouzel. This consuming desire was chiefly excited by reading in John Muir's work 'The Mountains of California,' the chapter on the Water Ouzel. There may be chapters on the life and habits of a bird that are as gripping and couched in as beautiful and fitting language as that, but I must say that it has not been my good fortune to discover such a one. It is in very fact an avian classic and deserves the widest reading.

In the winter of 1922 my wife and I made a journey to the Pacific Coast. Among other stops made on this trip was a visit to Yosemite National Park. While traveling along the Merced River, just before reaching the El Portal entrance to Yosemite Valley, we had our first view of the Water Ouzel in the rapid currents of the river. Upon reaching our quarters in the Sentinel Hotel, in Yosemite Village, we were delighted to see Ouzels in the same river, from our window.

Our next Ouzels were found in the cold streams flowing through the ranch owned by a friend, Mr. S. Edward Paschall, about twenty-five miles from Seattle, Washington, where we remained more than three years, building a cabin of our own near these streams.

The winters of 1922 and 1923 were not remarkable for the number of Ouzels seen or songs heard, but the fall and winter seasons of 1924 and 1925 were unusually favorable for observing the bird, owing to the heavy rains which resulted in the highest water known there in years; and made possible the greatest salmon run within the memory of the present inhabitants. These swollen streams made fine spawning beds for the salmon, and their eggs offered great attraction to the Ouzels because of their fondness for this kind of diet. In many places the salmon eggs could be seen in great masses along the bottom of the streams.

For those not acquainted with the habits of the salmon it may be well to explain that they seem to make every effort to go as far up the streams as possible for their spawning, and that no adult salmon,—male or female—ever returns to salt water. All die at or near the site of the spawning beds. This creates a condition that demands a proper disposal of enormous quantities of dead fish. The small group of people on this ranch property found it necessary to bury—during this one season—more than five hundred salmon, averaging somewhere in the neighborhood of ten pounds each. But for frequent freshets which carried large numbers of the dead fish back to salt water, the task of disposing of these large numbers within a comparatively small area in the ranch property, would have been very much more difficult.

For the sake of greater accuracy, I may state that the site of these observations was mainly on or near "Hidden Ranch," Kitsap County, Washington; at a point about midway between Kitsap and Wildcat Lakes, some two miles west of the village of Chico, which is situated on Dye's Inlet of Puget Sound. Here in a small valley was the junction of two clear streams: one, Lost Creek, having its source in the Blue Hills, the other, Wildcat Creek, whose source was Wildcat Lake. The confluence of these streams was on the Hidden Ranch property, and formed Chico Creek which was in close proximity to the Ranch houses. It was here that my many hours of intensely interesting observations were spent which form the basis of this paper.

The literature concerning this bird seems scanty when it is realized that its striking peculiarities and interesting history have, in the main, been known for a considerable period. In this connection it seems worth while therefore to allude to a recent illustrated popular article in 'Nature Magazine' of September 1928: 'The Bird of Spray and Water—The diving Thrush Who Nests Near Falls and Rapids.' by Frank H. Knowlton. Among other interesting features of this paper, the ancient lineage of this bird is stressed and in a somewhat detailed way brought down to the present time. The beautiful illustrations which accompany it were made by William L. and Irene Finley, those intrepid and tireless expositors of the outdoor life of America. This article is a fine example of popularization of the best type, by such universally recognized scientists.

'The Auk' of April 1927, contains a paper on 'Some Observations On the Water Ouzel' by A. H. Cordier M.D., a valuable experience with a pair of nesting Ouzels in Colorado, touching upon some of the mooted points concerning these birds, and seems to present some real contributions to the discussion concerning the structure and movements of the eyelids and the nictitating membrane.

In 1924, the year of the big salmon run in Hidden Ranch Valley, the Ouzels first appeared on September 8, the earliest record for this location. This early appearance may have been due to the enormous salmon run. It was a common sight to see the Ouzels eating the salmon eggs, and this was evident throughout the season.

Perhaps it may be well to pause here and consider the accusations brought against these birds, of eating fish fry, salmon, trout and other fish spawn. As to salmon eggs our observations prove without question that the Ouzels are fond of them, but they did not show any tendency to *confine* themselves even largely to this food, and because of their solitary habits and absence of gregarious tendencies, this seemed to us negligible.

In his book 'The Wonder of Life,' J. Arthur Thomson comments on the prodigious waste of eggs of fishes; and adds: "If the eggs of fishes, mainly laid in the open water, all came to maturity, the ocean would be a solid mass in a few years. In a single herring 47,000 eggs were counted, in a cod 6,000,000 in a turbot 9,000,000, in a ling 28,000,000."

After the Ouzels' arrival in September this season, the birds might have been seen every day, and usually repeatedly, if the observer was in near proximity to the streams, a fact that our ranch owner declared unparalleled both in length of stay and frequency of song. The birds sang more or less all through October and November and increasingly as the season advanced.

During the season of 1924-5, I made many and very copious notes, but it seems wise at this time to give only my most significant ones, and I will begin with December 3, 1924.

On this date I had a fine sight of the Ouzel and observed him running up the steep bank for some six or more feet and disappearing under a mass of over-hanging sod and roots remaining for perhaps three or more minutes, when he would reappear and descend to the water's edge, only to repeat the manœuvre.

December 7: Saw two Ouzels together for the first time, observed them repeatedly. Heard several beautiful "whisper songs."

December 9: Again saw two Ouzels together and listened once more to a very sweet subdued song.

December 11: The pair of Ouzels were again together and one was distinctly heard singing near Mr. Paschall's house, while we were at the top of Flett trail—a distance of more than 150 yards.

December 16: Had a fine view of an Ouzel standing breast-deep in the icy water and singing for some time.

December 20: Two Ouzels were seen at the confluence of the two creeks, one, standing on the frosty shore, sang for a prolonged period without cessation. The temperature at this time was 18 degrees.

December 25: On Christmas day the Ouzel was singing with what seemed unusual energy, and with a sweetness quite in harmony with the day.

December 29: The Ouzel was heard singing in Wildcat Creek while I was standing on our front porch quite 200 yards distant.

January 3, 1925: The Ouzel was singing on a log overhanging the water, back of the Nicholas cabin, a fine example of a typical Ouzel song, little or no bobbing while he sang. When he preened his feathers and spread his tail I noted the white under feathers.

At this time I saw a movement which had been noted before but never so conspicuously as then observed: One of the birds spread both wings to their full extent and stood for some time in this position. My associate, Mr. Paschall, counted slowly, one hundred while it maintained this attitude before the wings were lowered. Being at very close range noted particularly the winking of the white-edged eyelids and the flash of the third lid or nictitating membrane. When the bird was facing me the winking seemed simultaneous with both eyes; when but one eye was turned toward me the nictitating membrane *seemed* to flash out from different portions of the eye and at times as though it came from the outer canthus.

January 4: This morning for the first time I saw three Water Ouzels together. They were rather close to each other, some 20 or 25 feet distant, and I examined them leisurely, both with and without a field glass. One of them began to sing while I was

observing them, and continued in somewhat subdued tones for perhaps three minutes while the other two were feeding quietly in the shallow water. The flashing of the white eyelids and the nictitating membranes appeared almost uncanny, and at times followed each other with great rapidity.

January 5: Today I saw the Ouzels repeatedly. Several times I observed large salmon swimming in rather shallow water in close proximity to the birds without their paying the slightest attention to them, though they were showered with water thrown by the fish in their frantic efforts to surmount the strong rapids and jutting rocks. Watched the birds eating salmon eggs for several minutes.

January 6: For the second time saw three Ouzels together, one was singing a superb "whisper song," and once more saw the Ouzels devouring salmon eggs. The large size of these eggs made them easily seen when standing as close as I was this morning.

January 6, P. M. In listening to the Ouzel this afternoon as he sang from his favorite perch, back of the Nicholas cabin, I observed what I had previously noted, a peculiar snapping or cracking note—like a bill snapping—interspersed with his other notes. It did not appear to mar the song in the least, but it was still quite noticeable.

January 7: Today again saw what had been noted before, that the Ouzels take an elaborate bath, fluttering their wings most vigorously and showering water all over themselves, occasionally preening and adjusting their wing feathers. Have twice observed two birds doing this simultaneously, their whole attention being given to this matter for some time. Why a bird that lives most of its day in or under the water should find need for taking an elaborate bath seems a little strange, unless perchance the seeming bath should be but *oiling* the feathers rather than cleansing them.

January 8: In the afternoon two Ouzels were seen below Mr. Paschall's house, one of them sang a most bewitching song. Was impressed with its resemblance to the nightingale as given on one of the Victor records. There was, however, a marked difference in the phrasing and the tempo. There were no long pauses between the phrases and the tempo was more rapid, though not in the least hurried.

In the late afternoon again found one of the birds singing at the foot of the steep bank where they had previously been seen to disappear under the shelving sod and roots. The query now arose: "Is this also the *nightly* roosting place?" A little careful investigation confirmed this fact as two of the birds at dusk, retired under the cover and did not reappear.

January 12: This morning could hear the Ouzel singing from our front porch. From the direction of the sound the bird was again singing in Wildcat Creek. Later found him at his favorite singing spot delivering himself with unwonted fervor, as though the bright sunshine gave him an added stimulus. The song was rendered while standing breast deep in the stream. The notes were interrupted at times to plunge his head under the water for food, but the song was quickly resumed without shaking the water from his head.

January 14: An Ouzel was found singing from his favorite log. On returning to the spot shortly afterward he was still singing, but with greater volume and richer tones, than had been heard heretofore. As I entered the woods-path after leaving the spot, I was startled to hear several clear whistled notes which caused me to pause and turn my head to see if someone was not whistling for me, but discovered that I was hearing only some of the clearer whistled notes of the Ouzel's song.

Later in the day heard once more some of the clucking and snapping notes, also detected some burred notes something of the character of the Pine Siskin's. There was much in the song of the Ouzel which reminded me of the Mockingbird, though none of the sudden changes of pitch of that bird of the south, nor was it as powerful as the Mocker's song.

One thing that characterizes the Ouzel's song is its perfectly fluent character.

January 16: While watching the Ouzel I was suddenly made aware of sharp "Jigic, jigic" alarm notes, and on turning found there was a second bird some sixty feet up the stream. One of the birds almost immediately began to sing very sweetly and continued for several minutes, then suddenly a second song was uttered and I realized that I was hearing my first Ouzel duet. This did not cease for several minutes, neither bird making the

slightest break. Then one ceased, but only for a short time when the duet was resumed. Both birds continued to sing as I slowly walked away. In crossing the bridge over Wildcat Creek, I could still hear both singing, and saw that a third bird was near the bridge in the creek.

January 20: Found two Ouzels below the log—which has now become to us the “singing log,” since it was so frequently resorted to as the “singing site.” The birds were close together, and as the song ceased, each began “jigic”-ing which only ceased when they began devouring salmon eggs and caddis worms. Watched them for some time feeding, resting, or just curtsying and blinking at each other. At times they would pursue each other up and down the stream for short distances but always returning to the spot where I first found them. Finally they flew down the stream to a stretch of swift rapids where they settled in the water and allowed themselves to be swept along with the current for a time, but often facing about with a swift movement and disappearing beneath the water for a few seconds, to reappear with food in their bills. Then one of them stepped to the water’s edge not twenty feet from where I was standing and began singing. Was impressed—as I had been many times before—with their indifference to the presence of human beings in close proximity.

January 21: Saw two Ouzels at different points in Chico Creek. One was in the swift current at the curve below Mr. Paschall’s house where the water was most turbulent,—owing to the very high stage following the heavy rains of the past few days. As this was close to the supposed roosting place and it was nearing dusk I tarried for almost half an hour to see if the bird retired there for the night. Witnessed a superb exhibition of skillful manœuvering in rough and swiftly-moving water. I was tempted to applaud some of their specially dextrous displays, but found this difficult while holding an umbrella to shield myself from the heavy rain that was falling.

January 23: Found an Ouzel on my first trip of the day down the valley. He was sitting on the end of a stick which was anchored in the middle of the stream. I awaited to hear if he might favor me with a song, when I detected a song coming from further down the stream. As I was not able to locate an Ouzel with my

glass, made up my mind the singer was down at the bend of the stream possibly at the foot of the roosting place. I hastened to the bridge and as I walked cautiously up the incline covered with a heavy frost, I could hear that the song came from the site of the roosting place, but suddenly it ceased and I beheld two Ouzels struggling in the water as they were carried rapidly down the stream by the swift current. They were engaged in a fierce combat. They were carried down some fifty feet when they became disengaged and flew swiftly down the stream, one in close pursuit of the other. In a few moments they came up in rapid flight, one close to the other and one singing at the top of his voice. They had scarcely passed out of sight when one returned, flying close to the water, and passed under the bridge upon which I stood. My attention was directed upstream by hearing a series of the characteristic "Jigic! jigic"! from the Ouzel and saw two of the birds coming down the stream, flying close together both uttering their call notes. Just before reaching the bridge one dropped into the water, the other alighting immediately below the bridge. The bird above the bridge very soon flew down to the other and began a series of movements which seemed to me to represent mating antics, which were continued as they went gradually farther down, part of the time walking in the shallow water close to the shore. At times they would take short flights but always kept close together.

Unless close to the birds, I have always found difficulty in determining the sex by their size and plumage. Naturally we presumed the bird which sang was the male. Having heard two of them singing, the inference was that they were two males. What more natural, under the circumstances, than to conclude we had seen the two males scrapping for the favor of the lady Ouzel. Just one lurking suspicion remained, which though possible is not probable. Might the *female Ouzel sing* occasionally? I have several times in my life been surprised to find a female of a species singing which I had never suspected of doing such a thing, and so far as my knowledge extended the books did not credit them with having the power of song. For example, the female Warbling Vireo and the Blue-headed Vireo sing as does the female Cardinal occasionally. I am not contending on such evidence, that the female Ouzel sings, but merely speculating as to the possibility.

Suffice it to say that these and similar antics repeated at different times, gave rise to the belief that this must undoubtedly be the beginning of the reproductive cycle.

A typical incident of the kind was noted on February 6. A smaller and lighter colored bird—which I believe to have been a female—was observed spreading and fluttering her wings and closely following the bird which was singing. At times she would run rapidly toward him, with head lowered, wings extended and in rapid motion. These charging motions were repeated again and again, the male however, apparently giving but scant heed. It seemed quite obvious that the advances—at the time—were mainly made by the female, although the male gave vent to ardent bursts of song when the female flew to or past him. It seemed as though the little lady gave expression to her feelings chiefly by means of muscular movements and attitudes while her admirer expressed his passions by means of sweet melodies.

Later in February, I repeatedly saw the two Ouzels retire to the roosting place in the steep bank, the male usually singing a few vesper strains before and after the female had retired.

February 12: At 5 P.M. saw one of the Ouzels at the fork of the streams in the rapids. This presented an unusual opportunity of observing the crystal combing of the water over his head and back as he reached under the surface for food morsels. This phenomenon is so inseparably associated with the Dipper that one can hardly think of him without recalling it. From very necessity he usually faces up-stream and the cowling of a graceful, transparent film of water results, the more noticeable because it is so frequently repeated, and often retained for some moments. On two occasions at least, a pair of birds was observed in the morning *coming from their roosting site.*

Joseph Grinnell has most fittingly characterized this bird in the following short sentence: "This one-time land bird, relative of the Wrens and Thrushes, has taken to living *about* and *in* and *under* the water."

How a bird with scarcely any structural marks of an aquatic, can have acquired such a mastery of a medium to which it would appear to be so ill adapted, is one of the wonders of bird life. Lacking the foot of a swimming bird yet progressing skillfully

in and under the water; minus the bill of the typical water-feeder, nevertheless capturing its food in and under the water with an ease which seems little short of miraculous.—This is indeed almost incredible! With the wing of a land bird, yet always showing the greatest reluctance even temporarily to abandon the water, building a nest unlike most water birds, in a situation unusual for either land or water birds and finally possessing a song of the highest type known.—What a bundle of contradictions!

John Muir says of the Ouzel's song: "What may be regarded as the separate songs of the Ouzel are exceedingly difficult of description because they are so variable and at the same time so confluent. Though I have been acquainted with my favorite ten years, and through most of this time have heard him sing nearly every day, I still detect notes and strains that seem new to me. Nearly all of his music is sweet and tender, lapsing from his round breast like water over the smooth lip of a pool, then breaking farther on into a sparkling foam of melodious notes, which glow with subdued enthusiasm, yet without expressing much of the strong gushing ecstasy of the bobolink or skylark.

"The more striking strains are perfect arabesques of melody, composed of a few full, round, mellow notes, embroidered with delicate trills which fade and melt in long slender cadences. In a general way his music is that of the streams refined and spiritualized. The deep booming notes of the falls are in it, the trills of the rapids, the gurgling of margin eddies the low whispering of level reaches, and the sweet tinkle of separate drops oozing from the ends of mosses and falling into tranquil pools.

"The Ouzel never sings in chorus with other birds nor with his kind but only with the streams. And like flowers that bloom beneath the surface of the ground, some of our favorites' best song-blossoms never rise above the surface of the heavier music of the water. I have often observed him singing in the midst of beaten spray, his music completely buried beneath the water's roar yet I knew he was surely singing by his gestures and the movements of his bill."

This singing of the Ouzel amid the deafening sounds of rushing waters was observed in our various mountaineer outings, and never more markedly than at the Olympia Hot Springs of Washing-

ton State, where Boulder Creek poured its turbulent waters through the gorges and thus silenced the songs of the Ouzels.

It was at this point that our first Ouzel's nest was discovered and here we saw both Ouzel parents feeding their young in the nest which was located under the flume that supplied power to a saw mill.

Bradford Torrey in his 'Field-Days in California,' says: "There is no California bird, not even the big Vulture (Condor), that I have been more insistant upon seeing than the Water-Ouzel. There is none to which so romantic an interest attaches. And it may be added there is none which has cost me so many steps.

"It is a bird of mountain cañons not of their precipitous rocky sides, like the Cañon Wren, but of their hurrying brooks and especially of their water falls. Technically as men take account of such things, it is a "land-bird" as under the *same* ruling the Snipe and the Wood-cock are *water birds*. But the bird does not know it. Where there is no water look for no Ouzel. As well seek the Kingfisher, another "land-bird" in the desert, or the Humming bird where there are no blossoms." x x x Torrey found much difficulty in getting his first sight of the Ouzel, and when he finally accomplished this, he quaintly remarks: "There they stood, each on a boulder, gesticulating and scolding, and to my delight one of them presently dropped into the pool and swam across it. And now my attention was caught by the fact that every time either of them bobbed up and down they winked! For an instant his dark eye flashed white! The effect was weird, I may say comical. A most extraordinary trick it surely seemed, the reason or motive of which I must leave for others to conjecture. For myself, I do not wonder that John Muir, in his prose poem upon the Water Ouzel,—one of the most supremely beautiful chapters ever written about any bird,—makes no allusion to this habit. It would have been a jarring note. I looked—laughed, till at length the birds flew to the cascade wall, stood there for a minute or two, side by side, still bobbing and winking, and then vanished up stream."

For a beautiful apotheosis of this weird yet charming bird I cannot refrain from calling attention to the following by Stanton Davis Kirkham, from his work 'In the Open':—"Who can hear the

wild song of the Ouzel and not feel an answering thrill? Perched upon a rock in the midst of the rapids he is the incarnation of all that is untamed, a wild spirit of the mountain-stream, as free as a rain-drop or a sunbeam. . . . This bird, more than all others, embodies the wild. In him the spirit of the mountain finds a voice." . . . And from his 'East and West': "To me, the most truly sylvan voice is that of the Ruby-crowned Kinglet, while the wildest note that Nature utters through the throat of a bird is the song of the Water Ouzel."

My friend of Hidden Ranch, Washington, a birthright Quaker, has most beautifully put on record through a letter written to his sister living in the East,—the wonderful influence a bird such as the Ouzel may have on one's life. The following extract from this letter reads thus: "Does thee ever grow weary and (for a moment) despondent? Does the sky ever seem (for a moment) hopelessly overcast? Do people ever (for a moment) seem cold or selfish? Does life ever seem troubled? If so thee needs the Water Ouzel. Recently it rained and was dark. (Except for having lost step I would not have known of either rain or darkness.) Then the Ouzel sang and in an instant all was changed. There stood the bird in mid-stream; stood on a submerged rock or pebble, rushing water on all sides; rain falling, and all that. Out of the small throat came contentment, and cheer, and an overflow of spirits; every note (as John Muir truly says) born of running water; high (but soft) sounds; the sparkling of rapids and the contact of pebbles with each other; the melody of Canary and Thrush and Sparrow blended."

Keokuk, Iowa.