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The Water Ouzel, (*Cinclus mexicanus unicolor*), is one of the most interesting western birds. Its rhapsody of song, its mode of living and feeding, and its artistry in nest building, are equally attractive to the observer.

This short-tailed, slate colored bird, somewhat smaller than the robin, has such strange habits that scientists have given it an individual family name - Cinclidae, or Dipper. Here is a bird that will perch in a tree and warble a melody equal to that of any thrush, and then will dive head first into water 6 to 10 feet in depth, walk around on the bottom a minute or so feeding, fly out of the water into the air and warble again from the tree. That is just what the Water Ouzel will do.

The birds are classed as perching birds, yet they are equally at home in the water, where they obtain their food of aquatic insects, mollusks and larvae; and under the protection of a cascade or waterfall they usually nest and raise their young. The birds do not have webbed feet, but can dive into or walk under water, and swim on or under water with the greatest of ease and rapidity, using their wings as paddles. Then with these same wings they can fly through the air at a terrific speed. The birds are able to hold themselves well to the ground when under water feeding; also, their vision is excellent under clear water. Often I have watched the birds, when feeding under clear water, run along on the bottom with great speed for ten feet or more after some aquatic insect before making a final capture. They generally use their wings to help them along.

I have been by turns amazed, entertained and instructed by the marvelous intelligence and mechanical skill of the Ouzel in the construction of nests. Today their nests to me are an even greater wonder than when I first saw one over thirty-five years ago. The mechanical skill involved in the design and construction is beyond my comprehension. Nor am I alone in this thought, for a nest we have under glass in the Giant Forest Museum commands more attention and admiration from the thousands of visitors than any other one specimen of the 2000 in the exhibit. Of the twelve nests that I have examined, never have I found one where the birds had used poor judgment in the selection of a site or erred in their architectural design and structure down to the smallest detail. Some say this is instinct, but to me it is instinct governed by a Higher Intelligence.

The birds are truly of the mountain, being seldom found elsewhere. Their range extends over the mountains of western North America from Alaska to Central America; but they are not abundant anywhere. They nest among the rocks of the swift running streams and frequently under waterfalls. In this locality the birds nest between the altitudes of 1,500 to 10,500 feet and from April to July, according to the elevation. The structure is made up in two parts, a housing for the nest and the nest within. The exterior is manufactured from green moss collected from the rocks; and the interior is usually of pine needles or coarse grasses. The nest is placed on rocks close to swift dashing water where it will be kept wet by spray, thus keeping the moss green throughout the period of occupancy; while the inside compartment being built up of coarse, loosely laid material prevents mould from moisture. The exterior shell is round or oval in form, and about ten inches across at the base and seven inches high; and except for the small door on one side is completely covered over with a closely woven matting of moss one inch in thickness. The cup-shaped nest within is about six inches across, and one and one-half inches deep. The eggs of the Ouzel are pure white, about one inch long and three-quarters of an inch thick, and three to five in number.

I longed to know just how the Water Ouzel constructed its nest, but not until May 2, 1902, was I able to gratify my wish. At that time I was camped on the Marble Fork River in Sequoia National Park, elevation 5,100 feet, when I noted a pair of the birds darting back and forth through a thin sheet of water that poured over a fall in the river and formed a swirling pool in a white marble basin some ten feet below. By wading and crawling in under the fall, I found a nest had just been started on a moss-covered shelving rock about four feet back of and beneath the falling water, and I decided to watch the procedure of construction thereafter until completed. I made a trip to the nest every third day up until the twenty-seventh day, when I found the nest completed in every detail and one egg in it. Eggs were deposited in the nest thereafter every other day until five were laid. Never could I make a trip to the nest without the birds detecting my presence, which greatly annoyed them as was demonstrated in their zit, zit, zit, scolding notes as they fluttered about my head.

This is how the Ouzels built their nest: The birds began by digging a small excavation down through the moss to the rock; from this they rolled the moss out on all sides so as to form a compact ring ten inches across and one and one-half inches thick. The uprooted moss in the ring was then woven and tied in with the growing moss upon which it was lying, thus forming a solid anchorage for the foundation. Using a portion of this ring for a threshold, next a circular, upright arch ring for the door was built which gave a round opening four inches across. This ring was made up of a round closely woven roll of moss one and one-half inches in thickness and thoroughly anchored at the base to the foundation ring. To this structure bits of moss were added day by day to build up the side walls and roof. In this work the birds always first attached their new material to the inside of the shell or wall, then pulled it over tight and firmly wove it into the outer surface of the wall, thus preventing a collapse of the roof structure. By the twenty-first day the birds had completed the exterior shell and started to build the nest within. For this interior only dead yellow pine needles were used; and the entire structure was completed in every detail, and one egg deposited therein, within a period of one week.

As only whole pine needles were used, it was interesting to note the tactics the birds used in order to get them safely through the waterfall. As a preventive measure, the birds carried but one needle at a time and grasped it in their beak by the larger end, so that it extended backwards along side of and against the body when flying. Both birds seemed to share equally in the nest building.

After all the eggs had been deposited, I decided to remain away; but after a lapse of some five weeks, being overcome by anxious desire to know the result of the hatch and to see the young birds, I decided to take just one more look. This trip proved my undoing, for it resulted in heavy persecution for both the parent and young birds and almost cost the lives of the latter, as will be shown.

I had crawled in under the fall and stood within about four feet of the nest when five baby Ouzels poked their fuzzy heads out of the door of their nest, blinked their eyes and looked at me. They showed no evidence of fear. I admired the situation for a few minutes only, and had just turned to go away, when all of a sudden one of the parent birds came dashing through the fall and buzzed frantically about my head, all the while uttering shrill zit, zit, zit, scolding notes of anger and fear. At this behavior on the part of the old bird, all five of the young birds scampered pell-mell from the nest, went head over heels down the wet slick rocks, where they were caught by the fall and dashed into the swirling pool below. At this I dashed out from under the fall and jumped into

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the lower edge of the swirling pool in an effort to save the birds from immediate drowning, or to prevent their going further down over the rapids, which would have resulted in sure death. Upon my arrival I found the fledglings being carried about by the current close to the bottom, but all the while they were flapping their little pin-feathery wings and working their feet in a desperate but unsuccessful effort to rise to the surface.

When I had succeeded in rescuing two of the birds and inclosed them in my hat, one of the parent birds, which was fluttering over my head, happened to see one of the young floating near and dived into the pool after it; and by swimming close in front of it steered the fledgling down current to shore, where it scrambled up over the wet slick rock to safety. Then a second bird was espied and brought to shore safely by the same method. Apparently, the fifth bird had been drowned, for it had given up the struggle and was lying motionless on the bottom in the center of the pool about six feet under water; but when I dove down and brought it to the surface and held it by the feet, head downward, allowing the water to run out of it, it soon revived. The longest period that I have noted a Water Ouzel staying under water of its own accord is sixty-two seconds; but this young bird was totally submerged for at least three minutes. I kept the young birds in my hat for about one hour, in order to let them warm, for they were chilled from their cold bath; after which I carried them back and put them gently into the nest whence they came, and a few minutes after I had come from under the fall I noted one of the parent birds dart through the water to rejoin her much disturbed offspring.

The Water Ouzel's nest is one of the cleanest and most sanitary of any bird that I have seen. It is perhaps less likely to be discovered by enemies than the nest of any other bird. The nests are often occupied for several seasons, but in so doing the birds always replace the interior nest with new material, but use the same exterior housing. What a strange place for the young birds to develop; and how interested they must be when first they come to realize from their doorway the strange wilderness world of their surroundings. But the waterfalls and cataracts are their inspiration, and the mountain solitude is all that is needed to make the birds content.

The Ouzel is the most cheerful of any bird that I have seen. Never yet have I seen one downcast or despondent. I often wonder why this is so, for many times in winter the bird is hard pressed for food when there is heavy snow on the ground and the streams ice bound. But song never ceases. Even storms are his delight, if only his beloved stream is at hand. And what a charming picture he makes as he stands on some rock or cake of ice in midstream, bobbing his body up and down as if he were making a series of curtesies before diving into the water. Or what an emblem of purity he represents when perched on some tree during a snow storm, still warbling his sweet melody.

Summer and winter are alike to this hermit bird of mountain solitude. Always happy, up and down the stream he goes singing his way over the waterfalls and cataracts which glisten in the sunlight of God.