lower branches she dropped down behind the trunk and flew to cover up the creek.

This nest was made in a crotch of an oblique part of the tree, somewhat separated from the main portion, furnishing a most exposed site. The nest in the preceding season had been lined with bark and binder twine, most of which yet remained. A few downy owl's feathers had been added to make the structure habitable, and there the climber found three eggs. As there was water below the nest I had to jump a portion of the stream to receive the eggs; and as usual in such instances, my elation at finding the products of this second Bubo overcame my ordinary caution and I landed one foot plump into the freezing water. The second set was soon placed in safety, however; the height of the nest was thirty-eight feet from the water. It is interesting to note that during all the proceedings incident to our spoilation of this nest, the head of the family sat quietly in an adjacent thicket, and was not observed until we were about to leave the place.

The eggs of the first set varied in incubation from fresh to abundance of blood. Two of them had been clawed by the heavy feet of the sitting bird, but the claw mark of one came in such position, being about the middle of one side, that it could be used for the drill hole. The other showed three claw perforations, and only one of them could be hidden by the drill. The eggs of the second set were fairly fresh, one showing some blood. It is evident that setting or incubation begins with the laying of the first egg.

This paper should properly end here, but the peculiar part of the record is yet to come. Of course I visited all the old nests along the creek bottom until I reached home, but found no more owl's nests. It is needless to look for hollow trees in these bottoms, for none of the trees grow large enough to have a cavity that will contain a Horned Owl crosswise. The foregoing applies merely to the cottonwoods and aspens of the creeks, not the pines of the mountains. But this is not the peculiar thing I meant to mention,

Upon our arrival at home, my wife with proper curiosity desired to see the products of the day's outing, Having learnedly told her on previous occasions that owls' eggs are always white, I unpacked the two sets and spread them out before her.

"Why, I thought you said they were white," she exclaimed.

"They are," I averred. "Don't you call that white?"

"Of course not," she replied, with a smile at my apparent ignorance of colors "Can't you see that they are green?"

And sure enough, Mr. Editor, those eggs of the Western Horned Owl have a decided greenish tinge. They are really not white at all.

The Bullock's and Arizona Hooded Orioles.

BY J. F ILLINGWORTH, PALO ALTO, CAL.

OF ALL the birds that visit Southern California in the spring the orioles are certainly the most interesting. Every bird lover knows what a thrill of pleasure passes through him as he notes the first return from the south. Usually the Bullock's Oriole (*Icterus bullocki*) arrives in Los Angeles Co. several weeks before the Arizona Hooded Oriole (*Icterus cucculatus nelsoni*). From my migration notes for the last four years Bullock's arrived March 19 to April 10 and the Arizona Hooded from April 4 to May 1, but usually the latter came late in April. The males of both varieties precede their mates by about two weeks, and the nest is commenced shortly after the arrival of the females. The adult Bullock's Orioles generally give theirs a firm support between two or more small branches, or place it in a crotch so as to lessen the danger from the winds. It is interesting to note that the young birds are much less skillful

in nest building than the adults. The materials used are not only different but the nest is quite often swung loosely to the twigs above, so that it is at the mercy of every wind. The material used by the young birds for the construction of the nest is mostly coarse vegetable fibre and they seldom line their first home. The older birds, however, discover that twine, horse-hair etc. make a much stronger and neater wall for their home and also that fluffy chicken feathers and bits of cotton batting are excellent lining. They are quite expert in concealing their nest by bringing down green leaves and tying them about the outside. This is so well done that to a casual observer it would appear only as a thick bunch of foliage. The older birds often do most excellent weaving and I have taken one nest composed entirely of horeshair, the sides being as smooth as a piece of camel's-hair goods. This nest is heart-shaped and has a circular opening at one side of the top, which has a diameter of only 1.65 inches, hardly large enough to admit the birds. The nest is four inches deep and four inches across inside, and is lined with soft chicken feathers and cotton batting. The quills of the feathers are pushed through the sides of the nest so that they will keep their places.

Until the season of '97 I have never known the Bullock's Oriole to use palm-fiber in the construction of its home, but I found a nest May 11, 1897 in a peach tree, composed entirely of this fiber. It was well lined with chicken feathers and placed between several small branches. A pair of Bullock's Orioles built a nest this year in an almond tree near the porch, and I had an excellent opportunity to watch them while they were at work. The place chosen was in a wide fork between four small branches. Both birds worked on the nest and as soon as they had loosely formed the walls or framework, one of them worked inside and the other outside. The latter would bring a horse-hair or a piece of twine in its beak and pass the end through the wall of the nest to his mate inside who took the end and passed it out again through another place. In this way the nest was soon woven quite smooth and looked as if it had been made with a darning needle by hand. This nest is very peculiar in shape, the sides being woven to the surrounding twigs which makes the opening at the top very large and causes the nest to look like a double one. The opening is six inches long and three inches wide and the nest is five inches deep inside. It is difficult to find two nests of the Bullocks' Oriole alike in shape or material, as they use almost anything they can find in the way of fiber.

The nests of the Arizona Hooded Oriole on the other hand are very much alike, and I have never found one made of other material than the palm-fiber. The locations, too, are similar, a tree with large leaves being usually selected and a favorite position is under the broad, corrugated leaves of the palm. These form an excellent shelter from both rain and sun. They drill holes through the thick leaves with their sharp, slender beaks and tie the nest to them with palm-fiber. Often the nest is hung between several leaves such as those of the fig tree, when holes are cut and the palm-fibers laced in and out through them, thus drawing the leaves together to form the outside of the nest. The leaves not only aid in the nest structure but also form the best possible concealment.

An average nest of Arizona Hooded Oriole is 3.50 inches deep and 2.50 inches wide inside measurements, while the outside is about four inches deep and four across. Nests of both the Bullock's and Arizona Hooded Orioles are frequently taken possession of by House Finches, sometimes even before the orioles have finished them, but more often after they are deserted. When the House Finches take possession of the nest they re-line it with

their own characteristic building material.

The orioles are very beneficial to the horticulturist, although they eat some early fruit such as berries, cherries etc., but no fruit man will begrudge them these if he thoroughly understands their habits. The chief food of the orioles consists of insects and injurious caterpillars, and I have often watched them while they were searching among the branches for this latter food. They are particularly fond of a small green caterpiller that destroyed the foliage of the prune trees a few years ago. The orioles are often seen in the berry patches but they are usually in search of insects as is proven by the examination of a great number of stomachs.

Notes on Some Little-known Birds of Southern California.

BY EDMUND HELLER.

Colymbus auritus. Horned Grebe.

A few were seen on a small lake near Riverside in the winter of 1893. One of these was secured. None have been observed there since.

Sterna forsteri. Forster Tern.

Found common at Elsinore Lake, June 2, 1896. Said to breed by a local collector.

Hydrochelidon nigra surinamensis. Black Tern.

Observed at Elsinore Lake, June 2, 1896. Less common than the Forster Tern, but also said to breed.

Steganopus tricolor. Wilson Phalarope.

One specimen obtained at Riverside in the winter of 1891.

Totanus flavipes. Yellow-legs.

Noted twice at Riverside during the fall migration.

Totanus melanoleucus. Greater Yellow-legs.

A common migrant at Riverside.

Lophortyx gambeli. Gambel Partridge.

Found fairly common in May, 1896, at Warren's Wells, a small station on the Mojave Desert at the south-eastern base of the San Bernardino Mountains.

Melopelia leucoptera. White-winged Dove.

While at Warren's Wells the miners told me of a white-winged dove which occured at Twenty-nine Palms, a station some thirty miles farther east. From their description I judged it to be this species. If correct future exploration should prove its presence, which would make an addition to the list of California birds.

Haliæetus leucocephalus. Bald Eagle.

I was assured by a local collector, that a pair of Bald Eagles had nested for a number of years near Elsinore Lake.

Dryobates scalaris bairdi. Texas Woodpecker.

Several collected at Warren's Wells on the Mojave Desert in May, 1896.

Dryobates scalaris lucasanus. Saint Lucas Woodpecker.

Found common at Whitewater at the head of the Colorado Desert in May, 1896. One secured at Riverside in April, 1895.

Harporhynchus bendirei. Bendire Thrasher.

Found fairly common in May, 1896, at Warren's Wells, where this species was more numerous than *H. lecontei*, which also occured. Specimens were secured.