

ers in the Deep Creek country of western Utah, by suddenly taking wing and making voice, actually stampeded a herd of cattle which he was driving. Mr. Nelson and others tell me that in the Tintic Range, in early March, he has seen companies estimated at "several hundred."

The eggs of different sets vary considerably in size. Mr. Gale's Colorado sets measure respectively (Set 1) 1.37x.90, 1.36x.89, 1.32x.89; (Set 2) 1.34x.90, 1.37x.91, 1.39x.92 inches. Major Bendire's Oregon sets are smaller, measuring: (Set 1) 1.22x.95, 1.20x.90; (Set 2) 1.26x.95, 1.30x.92 inches. The four eggs in my first set are elongate-ovate in shape; the ground color is of the clearest pale green, covered with small flecks and spots of lavender and brown. These small spots are distributed over two-thirds of the largest ends of the eggs, the pointed ends being almost the plain ground color. There is no tendency to a wreathing of the markings, nor is the primary greenish ground hidden to any extent by the minute spots. The eggs are rather thin shelled, smooth, glossy and closely grained and measure 1.39x.99, 1.38x.98, 1.38x.97 and 1.34x1.00 inches. The first three eggs are of the elongate type while the fourth is more obtuse and broader, as will be seen by



The Woodpeckers of the Upper Salinas Valley.

BY CHAS. S. THOMPSON, PASO ROBLES, CAL.

[Read before the Northern Division of the Cooper Orn. Club, Jan. 6, 1900.]

FROM the northern boundary of San Luis Obispo County south to the source of the Salinas River, the country is known as the upper Salinas Valley. It is rolling, and white oaks of two species are the most plentiful trees in the hills, while cottonwoods are the characteristic trees of the river bottom. With such a combination it is not at all strange that woodpeckers are plentiful both as regards numbers and species. In three seasons' collecting in the upper Salinas Valley I have taken the eggs of five species of woodpeckers,

the measurements. Taken altogether I consider the eggs, as seen reposing in their cumbrous nest bed of juniper bark strips, with a framing of matted juniper (*Juniperus occidentalis*) twigs, a very beautiful type of birds' egg. The one egg taken March 23 measures 1.3394 inches.

On March 31, 1900, my same collectors found a nest containing three young birds about three days old. The parent was easily caught by hand and placed on the edge of the nest while he examined the nestlings. She remained there the whole time, thus evincing a wonderful example of maternal love for her offspring. The nest, young and parent were collected April 13, the male parent being shot on returning to the nest. On examination by the writer, the throat of the adult bird appeared to protrude to a great degree and on opening the bill it was found to be literally packed with the small seeds of the pinon pine, carefully cleaned from the shells, and no doubt intended to be exuded for the benefit of the young, which were very fat and evidently thriving on the diet. All of the above sets, nests and birds taken by my collectors in Utah this year are now in the collection of Miss Jean Bell of Ridley Park, Pennsylvania.

as follows:—Gairdner's (*Dryobates pubescens gairdnerii*) Nuttall's (*Dryobates nuttali*), Californian (*Melanerpes formicivorus bairdi*) and Lewis's (*Melanerpes torquatus*), besides the Red-shafted Flicker (*Colaptes cafer*). Of the six species all but the Red-breasted Sapsucker (*Sphyrapicus ruber*) are residents, both winter and summer. The sapsucker, however, is seen only during the winter and is never common. Cabanis's Woodpecker (*Dryobates villosus hyloscopus*) may also be found here sparingly, but as I have never yet seen it, I shall

not include it in this paper.

I have taken eggs of all the resident species and all of them breed abundantly. The first, Gairdner's Woodpecker, hunts a mate about the first of April, and by the first of May the nest hole is finished and egg-laying commenced. The nest hole is generally dug in dead and well rotted trees, from two to twenty-five feet from the ground. Cottonwoods are the favorite trees but occasionally willows and even fence-posts are favored. In the posts the nesting sites are very low,—two to four or five feet from the ground. A nest found on May 18, 1898 was only two feet from the ground and the hole was about eight inches deep, so that the bottom was not more than sixteen inches from the ground. This nest contained three young just hatched and one infertile egg. On the other extreme, a nest found in May, 1897, was twenty-five feet from the ground in a dead cottonwood and contained nothing, although the hole had been dug for three weeks and the birds had occupied it all the time.

Another nest found May 2, 1897 contained five fresh eggs. The entrance was about fifteen feet from the ground in a cottonwood stump. The hole was ten inches deep and the female did not leave until I had nearly chopped open the cavity. Last season I took two sets, $\frac{1}{3}$ and $\frac{1}{6}$. The set of six was taken May 1 from a hole four feet from the ground in a cottonwood fence post. After I had enlarged the entrance I saw a bird at the bottom and instantly took it to be a young one, but on investigation I found it to be a female. She would not leave her eggs and I had to remove her while she pecked at my fingers, drawing blood at every blow. I put her in my pocket and felt amply repaid by finding a set of six fresh eggs. The set of three eggs was taken May 3 from a hole eight feet up in a dead cottonwood. The eggs were almost fresh and the female was incubating. This little woodpecker makes more

nests in a season than it can use in five, and these extra holes, which are generally shallow, are resorted to by bluebirds, wrens and swallows. The male digs the extra holes while the female is incubating. The male is quite fearless and will allow a person to approach very close to him and will often make for other woodpeckers who visit his locality, in an endeavor to drive them away.

Nuttall's Woodpecker (*Dryobates nuttalli*) is next. I did not observe this species breeding until 1899 when I took five sets of eggs. It is very similar to Gairdner's Woodpecker in habits, laying from three to five eggs. The species is an early breeder and begins laying about the 15th of April or even earlier. A set of five taken on April 20 were very slightly incubated and were taken from a hole about seven feet up in a live alder tree. The male bird was on the eggs and left only after I had commenced chopping. The cavity was about one foot in depth. On the 22nd of April I took two sets of eggs of this species, one of three and one of five. The set of three was taken from a nest thirty feet from the ground in a dead cottonwood and the eggs were slightly incubated. The female was on the nest and the male was near by drumming on a dead limb. When I came back in the afternoon I found the birds had commenced another nest a few feet from the one I had robbed.

The set of five was taken from a hole in a cottonwood stub twelve feet up and were well incubated. One of the eggs of the set is remarkably long and narrow. The next day, April 23, I took another set of eggs of this species. The hole was twenty feet from the ground in a dead cottonwood, and the female flushed when I struck the tree. The nest contained three fresh eggs. My fifth set was taken May 1 and consisted of four eggs, which have little, rough knobs on them, much after the style of lumps on some cormorants' eggs. Incubation had commenced and the fe-

male had to be removed from the nest which was in a live cottonwood seven feet up, the cavity being nine inches deep. My observations on this species tally closely with those of Gairdner's Woodpecker.

The Californian Woodpecker (*Melanerpes formicivorus bairdi*) is the most abundant species on the list and frequents the oaks more than the cottonwoods. The species also pecks holes in houses and fills them with acorns. It has apparently found out that redwood cornices are easier to work on than oak trees. The Californian Woodpecker mates very early and must rear at least three broods in a season, for I have found their eggs in April badly incubated, and again found young late in August. The male bird does most of the work of excavation and the nests are nearly always in living white oaks, where they are difficult to reach, but dead cottonwoods are used occasionally. From three to six eggs are laid, generally four or five, and both sexes incubate, the eggs hatching in about two weeks, which is the incubation period of most of the woodpeckers of this locality. Gairdner's Woodpecker requires twelve days as I found out by observation.

A set of five Californian Woodpecker's eggs taken April 23, 1899, were in a hole in a cottonwood twenty-seven feet up. The male was setting and I almost caught him, but as it was he sat on a limb of the same tree and surveyed me. These eggs were fresh and of a delicate pinkish tinge before blowing. Another set of four taken the same day from a nest fifteen feet up in a dead cottonwood were badly incubated. May 1, I took a set of six eggs of this species from a hole twenty feet up in a living white oak which were badly incubated, but by the use of pancreatin I saved them, much to my satisfaction, as I have never taken another set of this size.

Lewis's Woodpecker (*Melanerpes torquatus*) is found only among the oaks and it generally nests at great distances

from the ground. A set of five taken April 27, 1899 were in a hole of a white oak. Lewis's Woodpecker is a shy and retiring bird and seldom utters its peculiar cry, which in no way resembles the note of our other woodpeckers. This bird flies like a crow and is difficult to secure with a gun. The eggs are four or five in number and resemble those of the Red-shafted Flicker very closely. They vary much in shape, some being similar in this respect to eggs of the Mourning Dove. Lewis's Woodpecker is known as the "Crow Woodpecker," "Black Woodpecker" and by the juveniles as the "Floating Dish-rag," but where the latter name comes from I am at a loss to know.

Our last breeding woodpecker is the Red-shafted Flicker (*Colaptes cafer*), known as the Yellowhammer and also as the Highholder. The species is plentiful at all seasons of the year and in the fall and winter they are sometimes found in quite large bands feeding upon the ground. They eat berries and other vegetable food, and in the summer injure considerable fruit, but in this depredation they have for company both Lewis's and the Californian Woodpeckers. The flicker also eats a great many ants as do all the woodpeckers, for nearly every oak tree has an ant's nest in or near it and the ants make life miserable for the collector.

The Red-shafted Flicker lays from five to seven eggs, the latter being the largest number I have ever found in a nest. The eggs vary greatly in size. Incubation begins with the laying of the first egg and a set of seven which I have, varied from fresh in two eggs to half-hatched in another. The nests are usually not far from the ground, 25 or 30 feet being the limit, while most of the nests are but ten or fifteen feet high. The excavation varies in depth from nine or ten inches to two feet and I found a nest over three feet deep in a fence post, where the birds had only stopped digging when they lost their

bearings and punctured the side of the stump.

Nest building commences the last of March and full sets of eggs may be found by April 15. A set of five taken April 16 were slightly incubated and were fifteen feet from the ground in a cavity in a cottonwood tree. By the first of May this pair of birds had excavated another shallow nest and the female laid five more eggs in a tree not ten feet from the one containing the first nest. The birds are devoted to their eggs and may sometimes be caught on the nest. Two or three broods must be reared in a season as fresh eggs may be found as late as June.

I had a queer experience with a Western Bluebird (*Sialia mexicana occidentalis*) while examining a nest of this flicker. On April 23, 1899 while collecting, I noticed a dead cottonwood in the middle of a field and no other trees within 200 feet of it. As I had just taken several sets of various woodpeckers' eggs from similar situations, I thought I would examine this tree. I pounded on the tree with my hatchet, when out flew a flicker from a hole twenty-five feet up. All the bark was stripped off the tree and it was perfectly smooth and shaky as well, but I managed to "shin up," during which operation I partly dislodged a snag which projected from one side of the tree. I chopped open the flicker's nest but found it empty and as it was al-

most dark I decided to start for home, when I saw a pair of bluebirds flying about excitedly, but finally both disappeared.

Then I thought they probably had a nest in the tree and began to examine the various cavities but without result. Remembering seeing a hole in the end of the snag I had partially dislodged, I pulled it out of the cavity which held it and started down the tree. When I reached the ground I began to enlarge the entrance to the hole in the snag when the female flew from the hole and I was soon in possession of six eggs. This shows the solicitude of the bluebird for its eggs. The nest was composed entirely of cottonwood fibers.

The last on the list of our woodpeckers is only a winter visitant,—the Red-breasted Sapsucker (*Sphyrapicus ruber*.) They arrive about the middle of October and remain with us until March, but are not plentiful at any time, and I have never seen more than three or four in one day. They are very shy and when once shot at will not allow a person to approach close enough to shoot again. Many trees are attacked by these birds, the live oak, cottonwood, sycamore and barberry seeming to be the favorites. The bird also eats ants and insects and sometimes indulges in berries. In conclusion, we probably have as large a list of resident woodpeckers as any similar region in California, as conditions are favorable for the woodpecker tribe.



Nesting of the Mexican Wild Turkey in the Huachuca Mts., Ariz.

(*Meleagris gallopavo*.)

BY O. W. HOWARD, FT. HUACHUCA, ARIZ.

[Read before the Southern Division of the Cooper Orn. Club, Jan. 31, 1900.]

EARLY in the spring of the present year while walking down the wagon road in one of the main canons of the Huachuca Mountains I was very much surprised as I glanced at the opposite hill-side to see a fine large Wild Turkey walking around, feeding under some oak trees. He (to

all appearances a gobbler) was fully as large, if not larger, than any domestic bird I had ever seen. Either he was not aware of my presence or else my presence did not disturb him, for he was in plain sight and not more than fifty yards distant.

I watched the bird for two or three