

She descended involuntarily to the earth. A shout of joy arose from every member to celebrate the end of a perilous but successful day. The eggs were well advanced in incubation; the average measurement was 2.03 inches. The reader's attention is called to the similarity of this nest to that described by Mr. Peabody in the November number of the CONDOR, 1907.

*Littleton, Colorado.*



NEST AND EGGS OF PRAIRIE FALCON, IN RECESS IN FACE OF SANDSTONE CLIFF

### NESTING NOTES ON THE LUCY WARBLER

By M. FRENCH GILMAN

**T**HIS trim little gray warbler with chestnut rump and crown patch (*Vermivora luciae*), might properly be termed the Mesquite Warbler, as his favorite shelter, home and playground seem to be furnished largely by the mesquite, and insects about the bloom of the tree loom large on his daily menu. It is very numerous about the mesquite groves and other growth along the Gila river bottom and seems to be the only warbler nesting in this locality.

The few notes here presented were made during the seasons of 1908 and 1909 at points along the Gila river in Arizona. Observations were made at Blackwater, 1362 feet elevation; Sacaton, 1275 feet; and Agua Caliente, 380 feet elevation. At the latter point, about 100 miles down the Gila river from Sacaton, I spent two weeks last April and found the Warblers more plentiful than at the other places mentioned.

The Warblers appeared at Blackwater and Sacaton, both seasons, the last of March, and soon began nesting. The full quota of birds seemed to arrive at once; as the first day I saw any—March 29—they were apparently as numerous as at any time afterwards. They are very active little sprites, flitting about usually in the extreme tops of the trees, whether mesquite, cottonwood or willow. They are most numerous in groves of mesquites not far from water, tho this may be from the fact that more trees and other cover are found not far from the river.

They utter a cheerful little call note, and during nesting, a rather pleasing song which recalls, without really resembling, that of the Yellow Warbler. The song has the effect of impressing the idea of extreme heat upon the listener, the same as that produced by the noise of the cicada on a hot, breathless day.

In nest-building the female seems to do all the work, her mate sometimes accompanying her on trips to and from the tree, but more frequently flitting about the tops of adjacent trees, occasionally uttering his little warble. One pair I watcht had a nest in a Texas Woodpecker hole in a palo verde tree about 15 feet from the ground. The female brought material to the nest three times in two minutes, then a seven minute interval, followed by two trips in three minutes. The male accompanied her on two trips and then made himself scarce. He indulged in no singing and both birds were silent, tho in many cases one or both birds gave the call note at intervals.

Shyness about the nest seems to be a characteristic of these blrds. It was rarely I could see the bird leave the nest when approacht, and only two nests were discovered by flushing the female from the tree. In one case I brusht against a mesquite stump that had been cut back and had started a new growth, and the bird darted out so near the ground that I did not think much about a nest. But force of habit made me look carefully and a nest was discovered only 18 inches from the ground. By carefully concealing myself and waiting, the birds would return to the nest; but sometimes quite a wait was necessary.

The male birds were erratic in their behavior about singing. I found that they did more singing during nest-building than after completion or during incubation. They took good care not to sing in the nest-tree, preferring to confine their performances to trees some distance away. The male would frequently meet me several rods from the nest and flit from tree to tree singing at short intervals. Once I made a complete circuit of the nest tree and he accompanied me the entire distance. This was an exceptional case of course. While going from tree to tree and singing, the bird usually tried to keep hidden as much as possible and was rather successful in the effort. In about half of the cases coming under my observation the male bird sang somewhere near the nest. In the other half no song was heard, and in some instances no sound at all.

In three cases only, did the parent birds show what might be called the proper amount of solicitude when the nest was approacht. Some of them seemed rather touchy about their nests, leaving them if the nest were toucht even so lightly. The first nest I found was easy of access and I put my finger on the rim in order to depress it sufficiently to look inside. A later visit showed the nest deserted, tho it was about completed at my first trip. Another nest had one egg when found and was not disturbed other than by looking into it, but another visit showed it deserted. It may depend on the individuality of the bird, as another nest found containing one egg was not deserted, tho I had to enlarge the opening in order to see into it. Another incomplete nest was cut into and upon concealing myself the bird went on with her work. A later visit showed three eggs. It is either the personal equation, or else some other disturber visits the nest after the first time.

Four general types of nesting sites were noticed, in the following order of frequency: in natural cavities, under loose bark, in woodpecker holes, and in deserted Verdins' nests. Of 23 nests observed, 12 were in natural cavities, 4 under loose bark, 4 in woodpecker holes, and three in the Verdin's nests. Natural cavities were of various kinds. Some were where a limb had been broken off; others in the crack made by a large branch splitting from the trunk; and again a decayed spot furnished a sufficient hollow to conceal the nest. In all cases the site was in a sheltered or protected position; that is, the trunk leaned enough to shade the entrance from above. A mesquite tree was usually selected, tho others were taken. Of the nests observed, 15 were in mesquites, 5 in palo verde, 2 in ironwood, and one in catsclaw. And speaking of ironwood, I have the most profound respect for the perseverance, endurance and bill-power of the little Texas Woodpecker who drills his nest hole in one of these trees. After cutting into one with a pocket knife, I am willing to give him all possible credit.

The nests were usually not far from the opening of the cavity, three or four inches in most cases, tho exceptions were noticed. One nest was in a deep crack about seven inches from the entrance, and another was six inches deep. The woodpecker hole chosen must have been incomplete as the Warblers nest was only three inches below the entrance. The Verdins' nests used were male winter nests re-lined to suit Mrs. Warbler, and were about six feet from the ground.

Usually a tree standing out by itself was selected, and in no instance was the nest found in a thicket or dense grove. One bird had the home in a dead palo verde, the only dry tree I saw so used. Generally the home tree was not far from water, tho some nests I found were two and three miles from a drink.

The nests were small and compact and well hidden in their cavity. Only twice did protruding material betray the location. In one case nesting material protruded from a woodpecker hole, and the other was a bulky nest that showed from each side of a split branch. This last nest I thought must belong to a House Finch, but investigation showed warbler ownership. Nests were made of bark, weeds, and mesquite leaf-stems, and lined with fine bark, horse and cow hair, a few feathers, and sometimes a little rabbit fur. The site averaged six and one-half feet from the ground, the lowest being 18 inches and the highest 15 feet.

The earliest completed nest found was April 10, and the latest, May 15. Complete sets of 3, 4, and 5 eggs were found. In June and July, family groups of the Warblers were seen about the mesquite trees, tho at the present writing, July 16, the groups seem to be breaking up and scattering.

*Sacaton, Arizona.*

## NOTES ON SOME BIRDS OF KERN COUNTY

By HARRY H. SHELDON

A MINING trip last summer (1908) took me into a region where I found bird life to be exceptionally interesting, for the reason that the country was in two district faunas. A desert-like country abruptly cut into by a mountain range caused the desert and mountain species to mingle in peculiar association. The notes obtained were mostly taken at random as I had but little time to devote