

above the ground. The birds entered these boxes thru small holes in the bottom which seemed hardly large enough to admit the body of the bird, and an amusing thing to me was to see the little fellows with great bunches of nesting material in their beaks working like troopers and never stopping at the entrance hole but fairly diving up thru it; if it's possible to dive *up*.

I inquired of some of the linemen as to whether or not the English sparrow had been seen in Tucson in previous years and could learn of only one pair which had nested in one of these same boxes the previous year. I am quite sure this is the first record for Tucson, for in eight seasons' collecting in Arizona I stopped at Tucson each year and would hardly overlook a bird so conspicuous. The same season (1904) I saw a single pair of the sparrows at Tombstone, Arizona, and Mr. F. C. Willard also saw a pair of the birds at Tombstone, being the first record for that town. I do not know of any other records for Arizona tho the birds may be common in some of the northern towns.

One would naturally think from the notes gathered that the English sparrows are gradually closing in on southern California and that before many moons we can expect to see them in the streets of Los Angeles. Should this come to pass there will be a good chance for the Cooper Club to do some missionary work by taking steps to keep this pest from multiplying. The house finch, or linnet, seems to take the place of the English sparrow in this locality and is also considered a pest, but holds no comparison in that regard, to the English sparrow. I fear the house finches would not last long if the sparrows once got a good start.

Los Angeles, California.

The Calaveras Warbler in Western Washington

BY C. W. AND J. H. BOWLES

THE Calaveras warbler (*Helminthophila rubricapilla gutturalis*), altho a rare summer resident, is of rather more general distribution than even a seasoned observer would at first be led to think. Their extreme shyness makes it almost impossible to get more than an occasional glimpse of the birds as they dodge into cover, and only the singing of the males gives the bird student any definite idea of their whereabouts. They make their first appearance in the vicinity of Tacoma early in the third week of April, and by the third week of May all the migrants have passed northward and only those intending to raise their young are to be found.

The males, during the first sunny days after their arrival, seem almost too full of the joy of living to contain themselves. At this season only they are not particularly shy, and they have a very pleasing habit at times while singing, that I have seen in no other warbler, namely, that of hovering thru the air for a distance of fifteen or twenty yards. The manner of flying at these times is very slow and closely resembles that of one of the marsh wrens, but the beak is turned upwards and the feathers on the swelling throat separate until it seems almost certain that the bird will sing himself into some serious bodily mishap.

Like the hermit warbler, a bird of the higher altitudes in the mountains of California, the Calaveras warbler, on reaching the cooler climate of the northwest,

is to be found as a rule only on the driest prairies. Here the birds frequent the scattered clumps of young oaks and fir trees that have reached a height of some three or four feet, and which border the large tracts of dense fir timber. It is a noteworthy fact that, while these birds are not often to be found more than a hundred yards outside of the forests, they are seldom or never seen inside of the dividing line where the heavy timber meets the prairie. Also they do not encroach upon the hillside territory of the lutescent warbler, which bird in turn does not appear on the prairies but confines itself to the brush-covered uplands.

The nest, besides being rare, is exceedingly difficult to locate, so much so that nine seasons of field work have yielded us only five sets of eggs. The male never sings anywhere in the vicinity of the nest, and the female covers her eggs until forced from the nest by the intruder.

The site chosen is usually at the base of a very young oak, or fir, tho on one occasion we found one built under some blackberry vines at the base of a large fir stub. The nests are sunk well into the ground or moss, and are so well concealed as to defy discovery unless one flushes the bird. They are well made, being composed of a quantity of fine strips of bark and fine dead grass, the lining consisting of very fine dead grass, horse-hair and an occasional feather. The external dimensions of a typical nest are three inches wide by two inches deep; internal dimensions one and three-fourths inches wide by one and one-fourth inches deep. In appearance, as might be expected, they are almost counterparts of nests of the Nashville warbler, taken by us in eastern Massachusetts.

The number of eggs to a set is almost invariably four, one set of three fresh eggs being taken which was probably incomplete. This seems at variance with the sets taken in California, where the majority appear to consist of five eggs. There are two distinct types of markings. In one the ground color is a dull white heavily sprinkled all over with five dots of reddish-brown, distributed rather more thickly around the larger end. The other type has the same ground color, but is much more sparingly dotted and has large blotches such as are sometimes termed "flowers" of reddish-brown. These two types are practically indistinguishable from sets of the Nashville warbler in our collection.

In shape they vary from rounded oval to ovate oval. There is a slight variation in size, the eggs of the largest set in our collection are .65x.50, .67x.50, .65x.49 and .65x.49 inches, and the eggs of the smallest set measure .62x.49, .62x.50, and .62x.49 inches.

It seems almost certain that two sets of eggs are laid in a season, altho few of the birds in the northwest appear to have any fixed time for nesting. The earliest date on which we have taken eggs was May 25, when incubation was about a third advanced. The latest was June 24, on which date a nest containing fresh eggs was taken.

When flushed from the nest the female instantly disappears, and only returns after a considerable interval of time. Then she approaches with the greatest caution, ready to dart away again at the first movement of the intruder. In this connection the male has a very curious and amusing habit. If he sees her after she leaves the nest, instead of joining her and consoling her in her misfortune, he promptly gives chase in the most furious manner, driving her from bush to bush as if she had wilfully deserted their treasures.

Tacoma, Washington.