This season (1906) has been remarkable for large sets. Out of 10 sets observed in this locality 5 have been of 4 eggs, 3 of 3 and 2 of 2 eggs, all being first sets except 1 of 3 and 1 of 2. Two sets of 3 each were taken by Mr. B. Carpenter from the same nest, which is unusual, evidently the product of the same birds. If undisturbed the first of the two sets would undoubtedly have been 4 eggs instead of 3, as in the second set taken a short time later one egg was very much more advanced in incubation than the others. In one set of 4 one egg is very much smaller than the rest and is unmarked.

Escondido, Cal.

The Oberholser Vireo

BY JOSEPH GRINNELL

IN THE CONDOR for September, 1905, pages 142 and 143, Dr. L. B. Bishop described a new race of the Hutton vireo, naming it *Vireo huttoni oberholseri*. I must confess that I very much doubted the existence of any such race. This impression was based wholly upon "geographical reasoning," for I had never seen any Hutton vireos from San Diego County, whence came the type of Bishop's *V. h. oberholseri*. I had closely compared my Pasadena series in various plumages with specimens from the vicinity of Monterey, the type locality of *V. h. huttoni*, without detecting any decided phylogenetic differences; and I reasoned that the very short distance, 130 miles, and general faunal similarity precluded the existence of another distinct subspecies in San Diego County. That good evidence is now at hand proving to my own satisfaction the existence of a race in southern California, differing appreciably from that found around Pasadena and northward, only goes to show that one must not depend too much on "geographical reasoning"; it *may* be at fault under the best of circumstances.

I have before me a male vireo taken at Escondido, San Diego County, California, March 27, 1906, which shows the precise characters pointed out by Dr. Bishop in his description of *V. h. oberholseri*. Among my series of 47 skins of *V. h. huttoni* taken from Los Angeles County to Siskiyou County there is not one from which this specimen is not easily distinguishable. It is more leaden-hued instead of greenish dorsally, and ashier ventrally. Pasadena birds show a very slight tendency in this direction as compared with Monterey specimens so that intergradation is probable.

I am indebted to Mr. James Dixon for the privilege of examining this bird and also a nest and set of three fresh eggs taken with it. A description of these latter is apropos. The nest was located fifteen feet from the ground in the upper foliage of a small live oak growing on a hillside about 150 yards from the big reservoir near Escondido. The nest is very bulky, being composed externally of a prodigious quantity of a pale-green fibrous lichen, which is the material invariably chosen for outside lining by the Hutton vireo, according to my experience. This material is in greater quantity and looser texture than is ordinarily the case with the Hutton vireo. As usual the nest is suspended by opposite rims from a V-shaped forking of twigs and surrounded by leaves and staminate flowers of the oak. The lining is of fine round grasses and bits of plant down. The nest is 1⅝ inches in internal diameter, by 1½ inches in inside depth; externally 3½ by 3

inches. The eggs are ovate in shape, clear white in ground color, with a wreath about the large end of each of rather bold spottings of chestnut, hazel and vinaceous-cinnamon. These markings are more distinct, and therefore more conspicuous, than in any eggs of *V. h. huttoni* I have ever seen, tho this may not necessarily be a subspecific trait. The eggs measure, in hundredths of an inch, .70x.53, .70x.53, and .69x.54.

I find no difficulties in the way of recognizing three forms of the Hutton vireo in California; namely: *Vireo huttoni huttoni* CASSIN, which is the form locally common west of the Sierras from Redlands (*fide* Bishop, *l. c.*) to the Siskiyou Mountains at the extreme northern border of the State (See ANDERSON and GRINNELL, Proc. Ac. Nat. Sc. Phila., Jan. 1903, page 12); *Vireo huttoni oberholseri* BISHOP, so far definitely determined only from Witch Creek and Escondido, San Diego County; and *Vireo mailliardorum* GRINNELL, from Santa Cruz Island (CONDOR V, November 1903, page 157).

Throop Polytechnic Institute,
Pasadena, California.

Observations on the Notes and Ways of Two Western Vireos

BY ANNA HEAD

TO the readers of THE CONDOR who enjoyed Mr. Finley's beautifully illustrated article on the Cassin and the warbling vireos in the May, 1903, number, a few stray notes on points about the details of their domestic life may not be without interest.

My first nest of *Vireo gilvus swainsoni* was shown me by the father, whose pretty habit of singing constantly in the neighborhood of the nest, while doubtless encouraging to his patient wife, is really dangerous to the safety of the family. There was a tall pear tree just out of bloom, which shaded my cabin. Here I found the dainty structure, one of the prettiest nests I have ever seen, not excepting that of the Anna hummer. The bird had carefully matched the pale greenish white coloration of the under side of the young pear leaves, weaving into the very open fiber of the nest bits of lichen and the greenish hanging moss which thrives in the moist air of Mendocino County. It was very deep and narrow, almost like an oriole's, and hung from the twigs near the end of a branch about fifteen feet from the ground. When the female flew off, the male came and chased her on again with harsh scolding notes. They also have a very soft, confidential note that sounds like "prit-prit." When the female is sitting and hears the male approach, she gives a low but harsh sound like "ca-a-a-a." This is a good sign to find a nest by, but it cannot be heard unless one happens to be quite near. The male, when approaching, utters a rapid sputtering or pattering note, very different from his true song, which is a warble consisting of three accents, with short notes interspersed, and ending in a cheerful rising inflection.

I watched another nest which swung only about six feet up in an alder, and here I found that both male and female shared in the duties of incubation. The female would raise her head prettily and listen as the song of the male came nearer, but only slip off when he was ready to take her place. The bough swayed so that it seemed that the eggs would roll out; but I suppose the loose, elastic structure of the nest held them in.