

not spread more than a foot and a half or two feet from the stem, and about six or eight feet from the apex. It was suspended among some dead twigs near the trunk and hidden by the surrounding dense foliage.

It was beautifully made, pyriform in shape, with the small end downwards, about six inches long and five inches through at the thickest part. The cup was very deep and the rim very much contracted enclosing a spherical space with a small opening at the top. The material used in construction was moss, fur, and silky, fibrous substances woven compactly together. The lining was of ~~moose hair and feathers from the northern spruce grouse~~ (*Canachites canadensis labradorius*, Bangs). Some of these latter were woven into the rim, the

stems firmly secured and the free tips curling inwards until they met, thus forming a curtain over the contracted opening and completely enclosing the interior. A very warm house was the result.

The number of eggs was *eleven*, incubation slightly advanced. Ground color, light buff almost white with numerous fine, pale, brown spots, so pale as to be indistinguishable, thickest near the larger end. The effect is as if a fine layer of dust had settled on the eggs. As to size, not having any calipers or other means of measuring them accurately, I can only state in a general way that they resemble in shape the eggs of the California bush-tit, but are considerably larger.

Notes on the Black-throated Gray Warbler.

BY C. W. BOWLES, TACOMA, WASH.

IT seems rather superfluous to write anything more about *Dendroica nigrescens*, as it has been written up several times, but there may be no harm in having descriptions from different points of view. Its habits seem to me about the same as the combined habits of the black-throated green and prairie warblers of the Eastern states. Like the former, it likes tall trees (with a preference for conifers) to climb around and nest in, but it wants them well scattered, so as to have plenty of light and air and to give bushes a chance to grow if they do not grow too thickly, so that it can build in a bush if it happens to feel that way. Like *discolor* they prefer high and dry places but do not seem to object if a swamp or river is nearby, if the ground beneath the nest is dry.

On the line between Oregon and California, about thirty miles east of the coast, it seems to prefer oak trees in the spring because of the small green caterpillars that are very numerous on them and which are devoured on all occa-

sions. One female must have eaten nearly half its weight of them (from three-fourths to one and one-half inches long) while its nest was being taken, so that it is difficult to understand how it could hold them all, unless their digestion is as rapid as that of the genus *Pulex* (sometimes called flea.) Two pairs that were watched while building had the same way of going about it. The male followed the female very closely, scolding almost continuously, or perhaps making suggestions, as she did not seem to mind it and gathered materials and acted very much as if he was not there. This continuous scolding generally seems to indicate nest-building and is apparently the only direct method of finding the nest. After the eggs are laid the male is never near while singing and their skill in reaching the nest without being seen can only be accounted for on the principle of the survival of the fittest, for if they were any less careful they would certainly be exterminated by Steller and California jays and

crows. One pair of California jays seemed to have located every nest that was being built in a gulch where they were building their own nest, but as this included a hen-house, and they made the rounds every morning to collect rents, the female was finally caught by a miner's wife and the male suddenly fell dead after inspecting a black-throated gray's nest, which had just been completed and would not have

the nest while it is being examined. It was six feet up in a manzanita bush in a patch of bushes of the same variety about three acres in extent. May 14, 2 p. m., three eggs but no birds in sight but eggs were warm, as is usual when the nights are very cold with all birds that I have noticed. May 15, 6:45 a. m., four eggs and female setting. This nest was near the house so the transit telescope was brought to bear on it



PHOTO BY C. W. BOWLES

NEST AND EGGS OF BLACK-THROATED GRAY WARBLER

been found if he had not gone to it.

A nest was found May 11, 1901 at 10 a. m. by following up the violent scolding of the male. It was about three-fourths finished, having no lining and the frame work hardly finished. At 4:30 p. m., it was finished but the birds had disappeared. When first found the birds were very tame making no complaints, and staying within six feet of

about fifty feet away and the birds watched as often as possible till May 20. The general policy of this bird and all others noticed, was to disappear completely and silently when anything of any kind came in sight, until after they became more or less accustomed to my visits, so that finding the nest by flushing the bird would be almost impossible, as they were rarely seen leav-

ing and would not have been noticed when they were seen, if the exact location had not been known. The nests were always so thoroughly concealed that it was impossible to photograph them *in situ* as there was never any point of view that two whole eggs could be seen from.

May 15 she flushed and disappeared while ten feet distant, and by means of the transit, was seen to return about two minutes later, but there would have been no reason to suppose that there was a bird or nest anywhere around if it had not been previously located, and considerable clipping was necessary to make it possible to see it from a distance of fifty feet. She usually sat very deep in the nest with only the beak and tail showing above the edge, but at the slightest sound, she stood up in the nest and looked all around, sliding out on the opposite side from anything that appeared, like the shadow of a falling leaf. May 17, 8 a. m., female setting and passed the time eating caterpillars while the nest was being examined. She did not go over five feet from it this time, till I left when she followed for about twenty feet, and kept almost within reach, watching me very closely with the intense manner that anyone would unconsciously assume if trying to identify a bird that is difficult to see but likely to be lost altogether if any noise is made—as if she were trying to identify *me*. When she started back, I stopped, but she went to the nest not having made a sound all the time.

The male was usually singing or chipping not less than fifty yards away, but May 20, he returned silently and renewed his attentions in the way that I supposed only preceded the egg-laying period, but the female showed no signs of any eggs forming, when dissected. The black patch on the throat of the male was divided by a horizontal white line so it was considered necessary to collect them both, but it is a custom that never seems to develop

toleration, and it seems to be more distasteful each time, but my ornithological apprenticeship, for about the first eight years, was strictly of the opera glass order in the case of insectivorous and song birds. One day a collection of skins was examined for the first time; about three out of four of the common birds were recognized, the most complete and mortifying failure being that of a yellow warbler,—of course the labels were not looked at purposely. In clear weather, I could without any glass distinguish the colors of the flags of the Weather Bureau, on Blue Hill, from Clarendon Hills (in Massachusetts) a distance that must be quite five miles, which is a long way in that hazy atmosphere, but for some reason I can never be sure of the exact colors of a bird that is not familiar to me, in the constantly changing light and shadow that it passes through, especially on very bright days when the eyes are more or less dazzled, and it seems to me perfectly possible that staring at green leaves so long and fixedly as is often necessary may make colors seem different from what they really are.

Black-throated gray warblers do not object to human association at all; one nest was fifteen feet up on an oak branch, directly over a trail that was used at least six times a day by people going for mail, and generally much oftener. It cannot be for protection from jays etc., for obvious reasons. The male and female seem much more dependent on each other when in trouble than birds usually are. They hop about the branches always within four or five feet of each other, looking everywhere for the nest. The female does not usually begin to complain till after about five minutes; and as the male is usually too far away to hear her faint chipping, she has to go after him, as his louder song is nearly always audible. One female that was followed for considerably over one hundred yards, flew rapidly and almost silently from tree to tree till about fifty yards from the mate

when she began chipping violently. He immediately stopped singing and flew to her and both disappeared—they are almost impossible to follow as a rule. On returning to where the nest had been, both were there, searching everywhere within thirty feet, and always keeping close together, stopping occasionally and looking at each other and chipping exactly as if asking questions about it. The female of one nest gave up looking for the male and staid around waiting for him. In half an hour or so, he returned without singing till about thirty yards away, when the song was entirely different from any that I have ever heard from this or any other kind of bird. It was on the principle of a yellow-throated vireo or a scarlet tanager; but the quality of a blue-headed vireo in addition, making a very strong and rich song. It was just about sunset and he evidently did not suspect danger, so possibly the nest might be located by listening for this song towards evening, but I never heard anything like it afterward. When he arrived they had a hurried conversation in very low but earnest "tsips," on the branch where he first appeared, she having flown to him immediately, evidently explaining everything, before he started to investigate.

A most noticeable characteristic of the birds of southern Oregon is their perfect self-possession. There is no wild, noisy exhibition of fear or despair, and they never become "rattled" or confused. When anything unusual happens, there seems to be a very brief and usually silent period of careful thought and then the decision is methodically carried out. Every crevice in

the bark and every bunch of moss is carefully searched and if the nest and eggs were placed anywhere within ten feet of its original situation, they would certainly be found, but I never thought of trying this to see what the birds would do.

The nests were from three feet and three inches to twenty-five feet from the ground, oaks seeming the favorite in southern Oregon and fir near Tacoma. The usual situation is in a small clump of leaves that is just large enough to almost completely conceal the nest, and yet so very small that a crow or jay would never think of anything being concealed in them. They probably nest higher still, but of course are more difficult to find.

Fresh eggs were found from May 14, to June 24 and there was no reason to suppose that more than one set was laid. As the eggs from Tacoma are very much larger than those from Oregon, it is possible that the birds may vary in the same way that the Parula warbler does on the Atlantic coast. Tacoma eggs average .83x.63 inches and Oregon eggs varying from .62x.48 to .72x.52 inches. The nests externally are about 3x2 $\frac{3}{4}$ inches and internally 1 $\frac{3}{4}$ x1 $\frac{3}{4}$ inches in diameter and depth. They are composed externally of grass and weed-stalks that must be several seasons old, (being bleached and very soft) moss and feathers; and lined with feathers (one had evidently been lined from a dead Steller jay), horse, cow and rabbit hair or fur, and sometimes the very fine stems of the flowers of some kind of moss. The male has never been seen to assist either at nest-building or incubation.

Nesting of the Little Flammulated Screech Owl on San Gorgonio Mountain.

BY M. FRENCH GILMAN, BANNING, CAL.

JUNE 3, 1894 stands out in my note book as a red-letter day. On that date in company with my friend, Nathan Hargrave, I was birds-nesting on Raywood Flat about 7500 feet

of the way toward the summit of San Gorgonio peak, some 11,900 feet high. Those who have hunted for birds nesting in deserted woodpeckers' holes know the labor and disappointment en-