

BASKET MAKERS.

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Does the bird build its nest by instinct or does it exert a reasoning power? Why doesn't the Vireo build a nest like the robin? The Vireos build basket nests; why is it that all vireo nests are similar? A young vireo that has never built a nest will make one as his parents before him did. He undoubtedly has the instinct to make a basket nest and does not know how to make any other. But we often see nests that are poorly built and this shows that young birds are not as skilful as older ones.

Are birds influenced by the sense of the beautiful in making their nests? Do the vireos adorn their nests with lichens to make them attractive, or to make them invisible among the leaves and limbs, or just because they find the lichens handy to build with? Many people have argued that the birds are influenced principally by one of these factors, but I see no reason why all these different things do not influence the bird as it would influence us if we were to build under similar circumstances.

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Imitation is perhaps the strongest factor in the life of the chick from the time it leaves the shell till it is a full grown bird. Nest building like singing may be largely by imitation and the lasting impressions in a bird's life must be during the first few weeks of its existence. Experiment shows that a baby linnet brought up by a titlark took all the notes from that bird and even though placed in the company of other

linnets later, he did not sing as they sang. This law among birds that makes the earliest impressions the habits of after life would make a strange bird world if revoked. If the nestlings did not learn the songs from their parents, what a grand medley we would have, robins singing like wrens and larks like sparrows, till we could no longer tell birds by their songs.

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It is largely this habit of imitation in the bird that prompts him to adorn his nest with lichens and to build a home that blends so closely with the surrounding branches. Some people would have us believe that the bird has reasoned it out and builds in this way to protect his nest from enemies. The Rufous Hummingbird is accustomed to see the lichen-covered limbs of the trees, and when it builds, it collects these lichens and shingles its home with them. Out of fifty nests of the Rufous Hummer, all were built after the same manner. But the Black-chinned Hummer of Southern California generally builds in the sycamores and oaks. The leaves of the sycamores are light colored and have a fine yellow down on one side. The bird selects this down and builds its home entirely of it, so it is light yellow and can hardly be seen among the leaves surrounding it. *(The nests of the two hummers)* are very different in appearance but the fact that both nests are protectively colored is from the use of handy material rather than the result of the birds seeking certain things for the purpose of protection.

Too abrupt - bring in idea of connecting thoughts of basket makers

The last week in April before the trees were well leaved, I heard the call of the Warbling Vireo. "See here! See me!" and a moment later, "See here! SEE here! See me!" he said from the hillside, and I went up to look at him. He sang for me within a few feet. He had just arrived from the South and he was hungry,-- no time to bother with people. He jumped from limb to limb looking, always looking for food. The singing was spontaneous, thrown in for every worm he found. There was no mate about; she had likely not arrived yet. He intended to keep on singing till she did come. I had been watching and waiting for the vireo because I wanted to ^{watch} study ~~him build his basket nest~~ his method of nest building and get his picture, so I ^{observed} watched him closely during the weeks that followed.

It is very likely that both this vireo and his mate had built nests before, for they built such a pretty one. It was not a hap-hazard site they selected. They searched for positions and studied different places. Then at last they decided upon a hazel bush. Both began work and they worked independently, each hunting moss and fibres and weaving them in to his own satisfaction. Although they worked according to their own ideas, each was satisfied with what the other did. When it came to decorating, I think it was the wife who shingled the outside of the home. She perhaps had more taste than her husband.

The vireos built their nest with a purpose for it

was entirely shielded by leaves. You couldn't see the nest from the front; it was roofed over with a big hazel leaf and in hot or rainy weather, the mother had this canopy over her head. It was even more useful when the young were hatched for both mother and father were away at times hunting food and then the nestlings were protected by the leaves. Each time the mother had to reach under and raise the roof to feed her bantlings.

In order to get some pictures, we tied a string to the branch that held the basket nest and anchored it two feet nearer the ground. When the mother returned with a worm and dropped from the upper branch where she always lighted to the limb where the nest was hung, she fluttered in the air trying to light on her accustomed perch. She looked puzzled and went back to try it again, but when she put her feet down to light, there was no perch. Then the father came and he did the same thing. There was no alarm. They looked at each other a few minutes and talked, and then the mother dropped to the nest and fed her children. She saw me lying in the grass and scolded mildly for my impudence. But she straightway forgot the nest had been lowered, for when she came back she missed the limb again and tried to light where the nest had formerly been. Then to be sure she was not dreaming, she lit near the foot of the branch and hopped along till she came to the nest.

Once the mother came with a triangular piece of food in her bill that looked as if it might be from the back of a

beetle. She thrust it into one open mouth, but the chick could not swallow it. She watched him a moment and then took it and thrust it into another mouth. This chick had the same trouble, but she flew away leaving it there. And all the time the young bird sat there with the food bulging out of his mouth. Several times he tried to swallow it, but there was no use; it was too big and unyielding. When the mother came again and saw the food still in his mouth, she tried another chick with it, but he could not get it down. She had to try several times before she seemed to realize that the bite was too big, and then she dropped it over the nest edge.

Just across the ravine from our vireo's nest a pair of Cassin Vireos had a home, and all but one of the young birds had left the nest. This last chick kept calling for food, so we put him on the hazel limb beside our nest. Then we waited developments, half expecting the mother to knock him headlong when she returned. The minute the new bantling heard her coming, open popped his mouth, and as he stood between her and the nest, the mother couldn't resist, ^{and} but gave him the mouthful. But the next time she came, she stepped right over him as if he were only a leaf, and she did the same every time after, paying no attention whatever to him, so we had to return him to his own home where he was cared for by his own parents.

While the vireos were in the midst of household affairs, we found an Oriole building its basket nest in a weeping

willow that stood in the chicken yard. Last year the nest was swung in the very top branches, but this year they built among the leaves beside the chicken house, twelve feet up. We tied a rope up near the base of the limb and drew it tight from the fence so when the mother returned with food for her young, she found her house had sunk four feet nearer the ground. Then we set a step-ladder up so we could look into the basket.

I never saw birds more in love than the orioles were. We watched them from the time they were first mated. They were always together in the trees about the orchard. Beyond the chicken yard was an old deserted cabin. A part of the window had been broken out, and the pair often sat there on the sash. Sometimes they hopped in and sat on the table inside. I didn't know at the time, but I think they were attracted by the reflections in the glass. The female would flutter before the glass and then light in the broken pane and look about with the most mysterious expression.

I never saw a pair of birds with such a mania for windows.
Just at the side of the house were three large cherry trees with wide-spreading branches reaching almost to the windows. When the dark shades were drawn, the windows made a very good mirror. One day when the pair of orioles were playing about the cherry trees, I saw the female light on a low branch in front of the window. Then in a few moments she flew down and lit on the sash. The next day I saw both the orioles at the window. The male sat near on the branches and the female

on the sill. As I watched, she fluttered up against the window trying her best to hang on, till she slipped down to the bottom. Then she turned her head and watched in the glass. The more she looked the more excited she seemed to get, and she fluttered against the glass till out of breath. Then the mate flew down beside her. Time after time the birds were seen at the window. Had the lady, like Narcissus, fallen in love with herself, or was curiosity leading her on? I never saw a pair of birds with such a mania for windows. I thought the male would hurl himself at the one he saw in the window, but contrary to my expectations, he took the picture as a matter of course. He sat on the sill or perched nearby on the branches while his wife, so intent with the bird in the glass, flew against the window, but never accomplished anything but to slide to the bottom.

I fear she would have gone insane flying against the window had the nest building and family cares not taken her away. But I don't believe there was a day unless it was after the mother began setting that the pair did not appear at the window. The bird in the glass house had a great fascination, and the window itself was streaked and spotted by the feet and bills of the orioles.

One day I saw a streak of orange and black flash into the cherry tree beside the willow. It was a male oriole, but

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not the guardian of the nest, for he was a more deeply marked bird, an older oriole, for the plumage of the males grows deeper in color and more striking as they advance in years. But the new arrival had hardly lit when there was a flash of color and the father of the nestlings darted at the intruder like a little fury. Through the branches, under trees, over the barn and across the orchard the righteous pursuer and invidious pursued darted. A father bird has the right to the trees about his home. This tradition is sacred in bird life, and no matter how large and strong the meddler, he cannot long stand the affront of an engaged father.

We set one camera on the top of the ladder pointing at the nest and draped it with willow branches. The mother would peek in from the back door and then edge slowly down the long braids of the willow limbs to thrust a morsel in the mouth of a clamoring baby. The father fed occasionally but he often paused on a dead limb over the chicken house. We placed another camera here on the top of the old house and hid it under a green cloth and branches, and in this way got some snaps of him. While we were waiting during the afternoon for chance shots at the birds, I heard the challenging call of the other male oriole down at the other end of the orchard.

During the next day we watched about the oriole's nest,, both the birds were feeding the young and the male was

not any wilder than the female. As the day wore on, the male seemed to be doing most of the feeding, for the visits of the mother were less frequent. *P* The nest was made almost entirely of horse-hair and the orioles knew just how to use the material for it was woven so that the sides bulged out with the constituency of a ~~huller~~ ~~bulker~~ ball. But horse-hair is often dangetous to birds. I saw the father almost get caught in one of the hairs. When he went to feed the young, he put his head through a loop in one of the hairs and when he started to leave he twisted the noose about his neck. He jerked back several times to no avail, and then fortunately turned back the same way and the noose slipped over his head, ruffling his feathers, and he was free. Had he not made the right turn, he would surely have hung himself. I know of several cases where birds have been hung in this way. Horse-hairs and strings are comparatively new things in bird architecture and often cause trouble, just as in their rapid flight a bird in the city often strikes a telephone wire and is killed by the foreseeof the blow.

The following day I again saw the flash of the intruding black and orange and the accustomed hot chase through the orchard. In the afternoon I noticed that the young orioles were fed entirely from the bill of the father. The mother came only once, but she did not bring food. She sat about in the cherry tree for a while and flew to the branch over the nest,

*Break
in thought*

but did not go near her children. It seemed to me this was rather negligent of the lady of the house, but the father was doing well. He returned every few minutes with food, so the children had their meals.

Next morning, the mother did not appear ^{at all} ~~once~~ about the home, and I became suspicious. We watched during the whole afternoon just because our curiosity was aroused, but she did not appear once. The father was alone. That night a heavy rain blew up. The three young birds were partly feathered and we feared the father would not hover them. When we went out with a lantern, our expectations were realized and we tried to tie a roof over the nest. In the morning, the young birds were dead for the water had run down the branches and chilled them to death. The father was there with food, but to no avail. And the mother, where she was I do not know,

During the nesting period, a heavy rain creates havoc among bird homes. I've seen half a dozen different families of young birds killed by a heavy shower. And how many more there must be that we do not see. If the nest contains eggs or very young birds, the mother will hover them and protect her babies from the water. But when the birds are half feathered out, she in many cases no longer hovers them, as in ordinary circumstances they keep themselves warm.

I have never known just what to think of this ^{mother} ~~pair~~ of

*who deserted her young children
the mother's desertion*

orioles, but I know from experience that birds are often fickle. I know of an instance where a newly mated pair of orioles were living about a grove of trees and the male bird was in such fine plumage that a collector shot him for his cabinet. The next day the female appeared with a new husband who was as bright and fine looking as the bird she lost the day before. At the first chance this male was also shot, partly, it was said, because he was such a fine bird and partly to see if the female would find another as readily. Two days later she appeared with a third husband who went the way of the two former ones. The female then disappeared for a few days but returned again with a fourth suitor. These two began building in a eucalyptus tree and soon had a family of young birds. This may be a remarkable case of wooing and winning, for I can't see where this supply of male birds came from unless the widow oriole was breaking up other families.

OUT

In the South where the fan-leaved palm grows abundantly, the oriole builds in complete protection from sun and rain. It makes a nest entirely of the fibres that hang from the leaves, and they tie ^{the} ~~their~~ ^{are tied} nests in the center on the under side of one of the fans.