

NOTES ON THE NESTING HABITS OF THE GOLDFINCH

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NESTS

The nesting season of the goldfinch is later than that of most of our familiar birds. In the Douglas Lake region the nests are built during the latter part of July. According to most observers, the female does most of the actual work of construction, though the male stays near and encourages her. The nests are placed between five and fifteen feet from the ground,* some distance from the

*Of the three nests observed, one was 10½ feet from the ground in an Acer rubrum tree, one was 5½ feet from the ground in a Quercus borealis, and one was 6 feet up in an Alnus incana.

trunk of the tree, and usually at a place where forking provides two or more supporting twigs. The nest rests on and between these twigs, the material is woven around them, thus fixing the nest securely on the swaying bough. The

Materials materials consist of fine inner bark of woody stems, some shredded grass blades of former seasons, a few fine root fibers, mixed with the pappus of some of the Compositae. Clumps of the pappus of Cirsium, Senecio, and Lactuca were easily identifiable. Besides being woven in with other materials in the bulk of the nest, it largely composed the lining. Two small lepidopterous wings were also found in the sample examined. The finished nest is most attractive in appearance, shapely, dainty, soft, yet firm and well fastened to its supports. Measurements taken of

Size two nests were practically the same, showing an outside depth of four and three-fourths inches, an outside diameter of four and one-fourth inches, an inside depth of two and one-eighth inches, and an inside diameter of two and one-fourth inches.

BEHAVIOR

Egg laying On July 28, the date of the discovery of the nest just outside the door of House 18, State Street, a female flew to a newly completed nest, closely followed by a male. She kept up a continuous chippering in phrases of three to five syllables, sometimes ascending in pitch, sometimes descending--Chree Chree Chree. After the departure of the male her chattering went on and attracted the attention of all passers-by. At four o'clock in the afternoon the nest was found to contain one egg. The next morning at five o'clock the female began her chatter again and kept it up much of the time for the next two days.

Incubation She left the nest rarely after the second day. She became comparatively quiet late in the third day and at this time the male was observed bringing her food. At his approach she fluttered her wings while he regurgitated what appeared to be material at least partially digested. It was light in color and seemed to be of the consistency of mush. From seven to eighteen mouthfuls constituted a feeding. The male, though he did not spend much time in the tree, must have been in the vicinity. The female would begin calling and usually within fifteen seconds his cheery call would be heard and he would very soon appear. Occasionally when he did not answer, she would wait patiently for a half hour before calling again. Only rarely could his

call be heard, heralding his approach, unless she had first called. The female in the second nest observed was very shy and flew from the nest whenever it was approached. She flew twenty or thirty feet away, making no sound. Five eggs were present in each nest, bluish white in color, on August 1st. The second nest was visited two or three times a day for the next ten days. On August 11th, fourteen days after the laying of the first egg, the female remained on the nest until the writer was within six feet. She then flew off, alighted only a few feet away, and uttered calls of distress, Bee Bee', accenting the second syllable, or Vee' Vee' Bee'. Two young birds fully hatched and a third half out of the shell were found. The next day there was only one egg not hatched. A blind was erected. The work took about an hour. The blind was entered, and within two minutes the male bird came and fed the young and busied himself about the nest. The female fluttered about within a short distance of the nest, but could not bring herself to get on it. She was greatly disturbed by the presence of the blind and gave little cries of wee wee or weep weep, prolonged and ascending, curiously resembling the call of the canary. In the evening, eleven days after the laying of the last egg, there were five young, very tiny, weak, and naked save for a very few yellowish hairs on the head, shoulder, and tail region. The youngest bird was measured on August 14, at the age of two days. Brief visits on the 15th, 16th, and 17th showed marked growth.* Pin feathers one-eighth of an inch in

Hatching

Care of
young

*For these three days the nest was used for other purposes and was not available to the writer for observation.

length had appeared on the wings of the older birds, while the smallest showed them half as long. On August 18th the young birds were found waiting to be fed, heads extended well over the rim of the nest and mouths wide open. The eyes were open for the space of one millimeter. The male came and fed the young by regurgitation, feeding one, then another impartially. Some were apparently satisfied, but others were eager for more. Immediately after the feeding, the young birds assumed an attitude that facilitated the taking of excretions by the parent. The change of position on the part of the young, seemed to be as instinctive as the extending of the head for stringing down food. After an interval of a half hour they showed indications of desire for food. First one head, then two or three, would be lifted, open mouthed, wave weakly about, then sink down against the wall of the nest, snuggling against the soft lining. The male came again in fifty minutes, fed all the birds, and swallowed the feces. The female accompanied him. She fed two of the young, then sat a few inches distant while the male completed his work. The parents then flew from the nest together. During this season of caring for young, males and females were daily seen together swaying in the tops of Lactuca canadensis and Lactuca sagittifolia plants,

feeding on the ripe seeds, which evidently constitute a large part of their diet. Occasionally they might be seen on the stalks of Verbascum thapsus, seemingly gathering a few insects, as there were no seeds present. The mother stays with her young but little of the time, brooding them for short intervals. On August 19th the outside of the nest was found to be badly soiled, probably by the droppings of the parent birds as they sat on the rim of the nest. Twenty-four hours later the nest was found to be in a very filthy condition on the outside, though clean inside. Whether this condition is intensified by the throwing out of the excreta found in the nest could not be determined by the writer. The parents swallow the feces of the very young, at any rate. The nest becomes misshapen and hardly habitable. The nest at Duncan Bay had broken down and had really turned wrong side out, the sides stringing down the tree for 2 days a distance of several inches. Five young birds, almost ready to fly, were found clinging together on the bottom of the nest, evidently unconscious that their shelter had fallen away from them.

Deterioration of nest.

8
2
7
5

GROWTH OF YOUNG Plumage

When first hatched, the young birds have very little covering. Only a few sparse, fine hairs, yellowish in color, could be discerned on the head, back, and the region of the tail. At the age of two days, the down, still sparse, showed a yellowish gray color, and was found in queer little tufts on the head, back, thighs, and tail region. At the age of four days, pin feathers, gray in color, appeared on the wings and tail. At seven

2
30

days, the pin feathers on the wing were bluish gray in color, tipped with light. A little fan-shaped row of pin feathers formed a tiny tail, while another row extended down the back. On August 22d, the last day on which observations were made, the oldest bird, now aged eleven days, had smooth olive brown plumage on its head and back, rump showed a tawny brown, under tail coverts were yellow, as were the sides of the throat and breast. The tail feathers were black, edged with white, wing primaries were black edged with white, while the wing coverts were black edged with yellowish white. The change in size is as remarkable as that of the plumage. In six days, a young bird had more than doubled in extent and had increased almost 100% in some other measurements.*

Size

Age	2 days	8 days	12 days
Length	39 mm.	63 mm.	80 mm.
Tail	0 "	2 "	13 "
Bill	6 "	7 "	8 1/4 "
Bill-Gape	6 1/2 "	8 "	10 1/2 "
Eye Diameter	0 "	2 1/2 "	3 1/4 "
Extent	36 "	80 "	150 "

Calls

Both parents and young are silent much of the time.

The male's call could be heard as he came, but for the most part he made no sound while at the nest. The young birds at the age of ten days gave a few faint "cheeps."

This is in marked contrast with the behavior during the

egg-laying season.

SUMMARY

The nest of the goldfinch is built late in July and is placed between five and fifteen feet from the ground on a swaying limb. It is constructed of fine inner bark, fine root fibers, grass blades, and pappus of the Compositae. The inner depth and diameter are about two inches.

The eggs number from four to six, five being the usual number, and are a very pale blue in color. The female begins incubation about the time of the laying of the second egg. During this time she is fed by the male on regurgitated food. The period of incubation is eleven to fourteen days.

The female is more wary than the male. She is assisted by the male in caring for the young, and does little brooding on the nest.

The young are fed on regurgitated food at periods varying from forty-five to seventy minutes. (These intervals are noticeably longer than when the young are fed on insects as is the case with many of our common birds.) The feces of the young birds is taken and swallowed by the parents. The nest, however, becomes exceedingly filthy on the outside.

From the appearance of a twelve-day-old bird, the writer believes that the young leave the nest about the fourteenth day. The plumage is of such a character that the identification of young goldfinches should be easy.