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AN EXPERIMENT WITH A RUFIOUS HUMMINGBIRD

(WITH TWO PHOTOS)

By A. DAWES Du BOIS

SOME YEARS ago, while making a nest-study of a Rufous Hummingbird (*Selasphorus rufus*), I took occasion to play a trick on my diminutive friend, in order to watch her reactions to a new experience. It was in a forest, in the Rocky Mountain region of Montana. The nest was conveniently situated for observation and I had been stationed near it for many days, sometimes for long periods, so that the bird had ceased to show any agitation at my presence. On July 22, while the parent bird was away, I covered the nest with a small thin sheet of cotton batting which was very light in weight but rather tough in texture because of a slight sizing on one side. It completely covered the top of the nest, hiding the 5-day-old nestling from view.

When the bird returned she alighted on top of the cotton, hesitated a little, and began tucking the edges of the cotton into the rim of the nest. She then stretched herself lengthwise, humped up her back, and kicked vigorously backward, in an evident effort to tear a hole through the cotton; but her small weak feet were of no avail in this endeavor. She repeated the tucking process and sat for a few minutes on the nest, with the cotton between her and the young, tucking it in only occasionally. Then she left the nest. While she was away I doubled back one end of the cotton, uncovering perhaps a third of the nest opening. She had left at 5:30 and at 6 o'clock she returned to the edge of the nest, fed the young through the open space, and sat on the nest, pushing the cotton down and forward as much as possible out of the way and again trying to tuck it into the nest wall, both inside the rim and outside among the lichens.

When she voluntarily left again I removed the cotton and substituted a circular piece of white mosquito netting just large enough to cover the top of the nest. After some time the bird returned; she hovered with vibrating wings above the nest, going back and forth to examine the situation, and then alighted quickly on the edge of the nest and fed the nestling, briefly, by regurgitation, through the meshes of the netting. After the feeding she sat on top of the netting but did not try to tuck it in. It did not project much beyond her body. She may have thought this a rather unsatisfactory method of brooding; at any rate she soon left the nest, going to a dead twig in a nearby birch where she sat

quietly. At a little before 7 o'clock she was still there, preening and scratching herself and leaving the problem of the netting to me, so I removed the netting and left for the day.

It seemed remarkable that the bird had made no effort to remove these light obstacles from the top of her nest, and, in order to determine whether she might change her tactics, I repeated the cotton experiment on July 24. The cotton completely covered the nest cavity. Without alighting on the nest, the

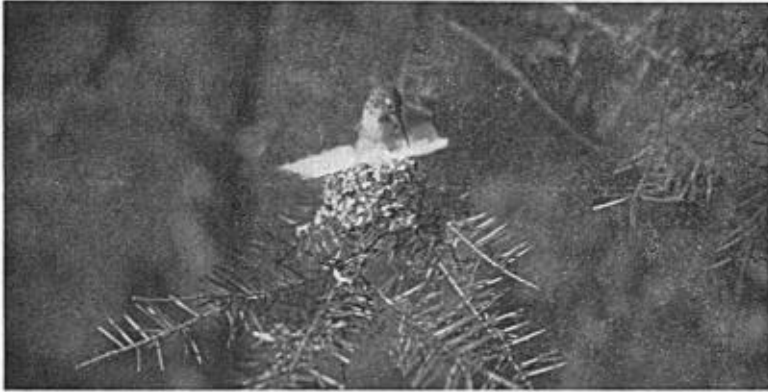


Fig. 46. RUFIOUS HUMMINGBIRD ENDEAVORING TO TUCK THE COTTON INTO THE NEST RIM.



Fig. 47. RUFIOUS HUMMINGBIRD DROPPING THE SHEET OF COTTON AFTER PULLING IT FROM THE NEST.

hummer flew over the cotton and tried to pull it off. She lifted one end of it but it fell back. She flew at it again and this time succeeded. She lifted and pulled it from the nest and let it fall on a bough nearby. After thus removing the obstacle she went away, presumably for food or water, for she returned in

four minutes to feed and brood the nestling. While she sat on the nest I saw her, at one time, peering over its edge at the piece of cotton below.

I was not quite certain whether she had lifted the cotton with her bill or her feet; so the cotton was replaced for another trial. She repeated her method of attack. She hovered over the cotton, trying to lift it with her bill, but she could lift only one end. It stuck to the nest and the force which she was able to exert at the tip of her long bill was not sufficient to dislodge it. Failing thus to remove it, she alighted on the edge of the nest, where she stood poking and pushing at the cotton, protruding her tongue into it, and trying to roll its edges into the nest. Next, she sat in the middle of it and tried to tuck it in, around her body, lifting and pulling the edges up and over toward her. She did not try to tuck it into the outside of the nest wall as in the first experiment, but she finally went through the kicking performance previously described and, after a short period of this work, left the nest. She soon returned, however, to repeat the same methods and to leave again. Having returned for the third time she perched on the edge of the nest and tried, apparently, to insert her bill through the cotton covering; meanwhile the nestling's head was visible to me through a small space, on my side, where the parent bird had previously lifted the cotton. She failed to pierce the cotton and went away and I removed the covering. I do not know where she was, perhaps on a twig nearby, but she did not return while I was there, though I waited for some time. She was on the nest, however, when I visited her again in the evening.

After two more days, with some compunction, I once more subjected the hummingbird to the same ordeal. It seemed probable, in the light of previous experience, that a short time would suffice to secure a better photograph. But the hummingbird made no effort whatever to remove the cotton or to tuck it in. For an hour and a half or more she stood on top of it, with untiring patience, doing nothing more than to shade the young nestling when the sun shone on the nest. This she continued to do until I finally relieved her of the nuisance.

Springfield, Illinois, February 16, 1923.

MORE NOTES FROM SASKATCHEWAN

(WITH TWO PHOTOS)

By H. H. MITCHELL

THE following observations may be of interest as a continuation of some few notes, together with a brief description of the province, which appeared in the *Condor*, *xxi*, 1919, pp. 222-225. Outside of the records noted from the Big River district is one of importance that came to hand later. This record is placed at the end of the list below. During the season of 1921, from May 12 to July 22, I again visited the Cypress Hills, but this time confined my collecting to the northern parts where the country is well wooded, largely with coniferous trees, in sharp contrast to the bare southern slopes some thirty miles to the south.