

NOTES ON BEHAVIOR OF NESTING COOPER'S HAWKS

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The Cooper's Hawk, *Accipiter cooperii*, was once one of the more abundant diurnal birds of prey in Central New York State. In recent years, however, there has been a precipitous drop in observations of this species. The Cooper's Hawk has not been reported as a nesting bird in the Ithaca, New York region for several years. Thus, the discovery of an active nest virtually within the city limits of Ithaca was attended with considerable interest not only because of the scarcity of the birds but also because of the convenience of the nest for frequent observation.

My attention was called to the nest on the morning of April 30, 1966 by the distress calls of one of the hawks. This was followed by a spectacular defensive display as the bird screamed repeatedly from nearby trees and flew in circles over the nest site. Without the cries of the adult I would certainly have missed finding the nest; yet this was the only time in the several months of observations that the parents made any protest to my intrusions. Even when the young were banded the adults did not appear.

Inspection of the nest over the next several days indicated that incubation was already underway, as one of the adults usually flushed as I approached within 10 yards of the tree. The two adults could be distinguished from each other because one bird was brown—apparently still in immature plumage. Although the pair of hawks were never seen together for comparison, the brown bird appeared to be smaller and, thus, was probably the male.

Located in a large pine some 35 feet from the ground, the nest was built next to the tree trunk on several limbs which grew out on the same horizontal plane. The nest tree was located within mixed deciduous-conifer woods on a ridge overlooking Fall Creek and Forest Home Drive in Ithaca. Some 20 yards north of the nest was a half-acre pine plantation which, in turn, was bordered on the north by a dairy farm.

Incubation continued throughout May, but, since I did not climb to the nest, I did not learn how many eggs were in the clutch or the certain date of hatching. The first signs that hatching had occurred, were noted on June 2 when, for the first time, small droplets of white excrement were observed in the area surrounding the nest. Since no appreciable rain fell in June these droppings became one of the notable features of the nesting and eventually extended some ten or more feet from the tree. The excrement was, in fact, one of the few signs that the nest was active as bones and feathers of prey were not seen under the nest during the first month after hatching. The young were not visible, except when being fed, until the third week.

Attempts to observe the adults caring for the young were not rewarded until June 18, when I observed the presumed male (the brown

bird) return. He did not bring prey but, instead, hopped onto the nest to brood. On the morning of the 19th, I was more fortunate as the female was observed returning with prey. From my place of concealment I was able to observe only one fledgling, but it was obvious that there were more as she offered food to something in the opposite side of the nest. In feeding she tore pieces of flesh from the prey (which I could not identify) and gave this to the young. She remained at the nest for 15–20 minutes.

During the third week after hatching the presence of a second nestling was confirmed. The young hawks had become more active and frequently came to the edge of the nest to flap their wings and “slice” (defecate). Unfortunately, I never again was able to observe the adults feed the young.

On June 30, Dr. Walter Spofford banded the young which by this time were already “branchers”. The fitness of this latter term remains indelibly impressed in my mind as I remember Dr. Spofford’s frustrated attempts to shake the young birds from their refuge at the tips of the branches. We were pleased to find yet a third youngster that had been missed in my counts.

After banding, two of the young hawks were returned to the nest and the third was placed in another tree. A check that evening revealed two birds at the nest, but the third, which was recognized as the “runt” of the family, had disappeared. Over the next several days one or two hawks were generally seen at the nest but the third remained hidden. Finally on July 3, all three birds were found again; one flew from the nest and the others were found in trees nearby—including one perched in a small pine 5 feet off the ground. The missing hawk was found in a somewhat higher tree under which were droppings, feathers and bones. Apparently it had been hidden in this one location for some time and the parents had been feeding it there.

My observations on July 4 revealed that the two larger birds were back at the nest which indicated that the youngsters had gained the agility to move from near ground level to the nest. Over the next several days the young remained near the nest, but were rapidly gaining confidence in their ability to fly and generally didn’t hesitate to fly considerable distances.

In the period between July 7 and July 14, the youngsters developed a regular schedule of activity. Checks during the day indicated that the birds were ranging some distance into the surrounding woods as they were rarely seen near the nest. However, every evening that I inspected the locality between 7:00 and 7:30 (EDT) the hawks could be found in the nest tree. They were using the nest as a feeding platform and on several occasions the youngsters could be seen standing there butchering prey. Now, for the first time a few bones and feathers were noted under the tree. An adult was seen at the nest on one of the evening inspections

and this indicated, as expected, that the adults were still supplying the food for the young. Trips to the area later than 7:30 found the nest tree vacant, and checks at dusk revealed that the young hawks did not return for the night, although it is difficult to establish whether this was natural or due to my presence in the vicinity.

On July 14 all three young birds were seen at the nest, and this was the last time any of the young were seen there. The next day the three were seen near the pasture north of the nest; this, in turn, was the last time I saw more than one bird at a time.

Sightings of single birds occurred on July 16 (a young bird sitting in a tree with prey), on July 22 (one hawk flying) and at this writing, the last hawk was seen on August 6. This latter bird was probably a youngster but it was concealed somewhat by branches. A thorough examination of the woods on August 6 and 7 revealed several fresh excrement splashes and the remains of a kill thus confirming that the hawks were still active in the area.

Apart from my interest in the rearing of the young, I tried to determine what effect these raptors had on the local birds and mammals. Naturally, considerable interest was focused on the prey of the hawks, but such information turned out to be most difficult to obtain for remains of prey were very scarce and usually unidentifiable. The remains of a Starling, a Common Grackle and a Red Squirrel were found under and on a leaning log on June 2, and remains of chipmunks, a Blue Jay and a Robin were found at other times. I searched the forest floor within a three hundred yards radius of the nest over the course of several months but except for the prey already mentioned, only occasional single feathers were found, and it was impossible to determine whether these came from prey or were simply lost in molt. It is possible that these hawks, contrary to usual practice, perched high in the trees while plucking their prey and the feathers drifted down over a considerable distance.

Although these hawks undoubtedly made large numbers of kills to maintain themselves, there was no detectable impact on the local wildlife. A pair of Crested Flycatchers raised a family very close to the hawk's nest and were seen there all summer long. Blue Jays were abundant in the nearby pine forest and a Scarlet Tanager sang all summer from the tip-top of a tree immediately below the ridge. Wood Thrushes, Catbirds, Robins, Rose-breasted Grosbeaks, etc. were plentiful; this seems to have been a vintage year for Veerys. Large numbers of squirrels were seen near the nest.

The only birds I thought might have been affected were Red-winged Blackbirds. Early in the summer there were several pairs in the pasture north of the nest but they had completely vanished by late June. Since a red-wing out on a meadow might be easy prey, it is tempting to speculate on their fate, but the dry summer and mowing operations may have been the major factors in their disappearance.

The fortuitous circumstances that led me to discover the nesting Cooper's Hawks coupled with the realization of how easily I might have missed this opportunity have given me cause to consider how one might be alerted to the presence of these birds when they don't make a conspicuous display. Perhaps I can demonstrate the problem of finding the hawks with several points: (1) The area around the active nest has two other probable old nests indicating these raptors may have nested here undetected in past years—all this in a populated area only about a mile from Sapsucker Woods Sanctuary. (2) Although I often flushed the adults from the nest itself, I only saw them about a half-dozen times anywhere else but at the nest and these were always quick glimpses of the birds flying away. Most of these sightings I might have missed if I hadn't already been looking for the birds. (3) The hawks only called two or three times in the several months I searched the woods. (4) Finally, one may consider the virtual disappearance of the young once they stopped returning to the nest. I do not wish to infer from this that the Cooper's Hawk is really a common bird that is simply very shy, but it seems likely that for every nest discovered there must be some reasonable number that are missed.

After careful consideration of this problem I have come to feel that the most conspicuous clue to the presence of these birds, in lieu of seeing or hearing them, is their characteristic excrement which is widely observed throughout the nesting area. Descriptions comparing this material to whitewash are most appropriate as it does look as if someone spilled whitewash on the ground. Sometimes the size of the "wash" is rather large, but more often there are only a few drippings on the trees, vegetation, rocks or ground. This is probably due to the excrement striking branches and splattering. The "whitewash" color and the fact that it almost never contains dark or lumpy material distinguishes this excrement from that of large passerine birds.

In addition to the whitewash, observers should be alert to the presence of kills or piles of feathers. As mentioned earlier, however, I do not regard these to be as useful as the excrement because dead bodies of prey are seldom seen unless you virtually step on them while the "wash" is conspicuous at considerable distances. Finally, one should be alert for the presence of molt feathers from the hawks themselves.

Of course, such indirect sign is no replacement for the satisfaction of seeing these handsome birds, but the judicious use of such clues may at least indicate the best areas in which to look and, in turn, more frequent observation of hawks may give us a better understanding of the real status of the birds of prey in New York State.

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