

THE GOSHAWK (*ASTUR ATRICAPILLUS ATRICAPILLUS*)
NESTING IN WISCONSIN.

BY O. J. GROMME.

Plates II-IV.

In their 'Birds of Wisconsin,' Kumlien and Hollister considered the Goshawk "a rare summer resident at an early day," and state that there were no positive breeding records for Wisconsin, although the species perhaps bred in the northern portion of the state.

In his pamphlet on the 'Birds of Oconto County,' August Schoenebeck states that he found four nests but gives no data.

In view of the foregoing the following observations upon a nesting pair in Wisconsin will warrant publication.

On May 10, 1934, a letter from Mr. Francis Zirrer of Birchwood, Wis. stated that he had under observation a nesting pair of Goshawks and on May 16 Mr. Walter Pelzer of the Milwaukee Museum staff and I arrived at the home of Mr. Zirrer. He lives about seven miles out of Birchwood in Rusk County in the heart of a great expanse of second growth timber consisting of maple, birch and other characteristic flora which has replaced the original pine forest.

The nest was located on the property of Fire Warden De Jung, who, with Mr. Zirrer, assured us of their hearty co-operation and assistance in making our observations and photographs. It was indeed gratifying to meet men whose sympathies were with, instead of against the Hawks and who guarded their secret jealously, lest some Hawk-hating neighbor sneak in and kill the "hen hawks."

Mr. Zirrer found the nest during the winter of 1932 and being impressed by its large size kept it under observation. In the spring of 1933 a pair of Goshawks took the nest over and he watched the birds from the time they laid their eggs until the day the last of the three young left the nesting tree. He does not positively know whether or not the Goshawks used this nest previous to 1933.

Our first visit to the nest was one of reconnaissance. Much to my amusement, one of the party had provided himself with a stout club. The wisdom of this seemingly unnecessary precaution was, however, impressed forcibly later. Mr. Zirrer was alone on all former visits to the spot and although he did not go near the nest tree he was invariably attacked with great vigor by the adult female. The fact that there were four of us probably made her shy, as she made several half-hearted stoops and retired to a perch at a safe distance.

The nest was a very bulky affair built entirely of sticks and resting in a crotch against the main trunk of a large live yellow birch. It was built at a height of about 35 feet from the ground and the tree trunk at the nest measured about 14 inches in diameter.

At a distance of about 25 feet to the south stood another giant birch which was very conveniently placed for the building of an observation platform. The foliage growth had been considerably retarded by prolonged drought, making overhead photographic light available for nearly eight hours per day. After two hours of strenuous and back-breaking work, Pelzer had erected a perfectly safe and solid platform. During the building operations the adult birds remained away and made no protest.

Work was done quietly lest the suspicions of neighbors and passersby be aroused, as the nest was situated not far from a traveled road.

In order to obtain an unobstructed view of the nest from the blind, it was necessary to remove one of the large limbs which formed the nesting crotch and accordingly Pelzer climbed the tree. Then his troubles began. The old bird, which up to this time had remained comparatively quiet, decided that it was time to get to business. Pelzer was well below the nest, encumbered with a saw, hatchet and other paraphernalia and was trying to get a secure hold when the onslaught began. With a savage cry and vigorous strokes of her powerful wings, the bird gained terrific momentum and came down to her target like an airplane in a full power dive. She gave her victim a thump on the back that could be heard for some distance. Becoming bolder because of his inability to fight back, and with deadly deliberation, she whacked him again and again. Any man with less nerve would surely have gone down under the terrific pounding and cutting up. During her onslaughts all the raptorial savagery and wicked intent was manifest in her shrill savage voice. It is hard to imagine more pent-up fury and power in any being of her size. From the view-point of one protected by the blind and to those on the ground, the event was highly dramatic. When the nest level was reached and sawing began, the young squealed defiantly and the old female came to the defense with renewed vigor. But she quit the fight as suddenly as she began and work proceeded. The nest contained the hind quarters of a squirrel from which the hair had been plucked.

Being impatient for a first-time close-up view of the normal activities at the nest, my companions left me to spend the remaining hours of the afternoon in the blind.

The nest was a substantially built affair, measuring approximately six feet to the extremities of the outer straggling branches used in its construction, the largest of which were not over half an inch in diameter. It was neatly and evenly cupped and lined with smaller twigs. Around its edge



Milwaukee Pub. Mus. Photo.

GOSHAWK, NEST, AND YOUNG.
FEMALE SCREAMING AT THE CAMERA.



Milwaukee Pub. Mus. Photo.

UPPER: GOSHAWK AT NEST.

LOWER: SCREAMING DEFIANCE.



Milwaukee Pub. Mus. Photo.

UPPER: GOSHAWK FEEDING YOUNG.

LOWER: STARING AT BLIND; DISTURBED BY NOISE OF MOTION PICTURE CAMERA.

and facing inward were a few small, green balsam sprigs which lent an appearance of artistry and color.

The interior of the nest was as neat as a pin and excrement was evidently ejected high over its edge as very little appeared on the rim, but the ground and foliage below were considerably whitewashed. There were four downy young, one of which was decidedly smaller and weaker than the rest. The tips of the dark flight feathers were just visible beyond the woolly grayish-colored down of the wings of the two larger.

Mr. Zirrer observed both adults together in the neighborhood of the nest until April 4. After that he saw only one and upon all occasions the tail of the other projected over the nest edge until after May 4 when he again saw both adults away from the nest. He assumes that during the thirty day interval the eggs were undergoing incubation. Judging from the size of the young his calculations that they hatched on May 4 are probably correct.

The young spent their time sprawled in awkward positions or peering over the nest edge. At times they sat back on their haunches quite erect, resting upon their pods and heels with feet straight out before them, with only the knuckles of their partly-closed toes touching the nest. For a time the youngest lay with its head hanging limply over the nest edge and I thought it dead. A slight noise below brought it to attention and its awakening was accompanied by a tiny call which sounded exactly like the deflating of a toy balloon whistle. Since the completion of the blind at noon, the adult female only had appeared in the neighborhood of the nest and her alarm call or "battle-cry" as we chose to call it, was the only vocal note uttered up to that time. It could be described as an up-scale slurring of two notes resembling the word "gyp" with the accent on the last syllable and repeated in rapid succession.

At 4:40 P. M. the female suddenly appeared very close to the nest, called excitedly and dove at the blind but did not strike it. This demonstration brought the three larger young to their feet. Even with the aid of their wings, which they used as crutches, they had difficulty in maintaining their balance, and one or the other frequently toppled over. They pecked at each others' bills as if hungry. At 5:00 P. M. the call of the female changed to a clear, short down-scale note, slurred as from "do" to "la" and had an impatient appealing quality to it; it was uttered at intervals of one second. It later became apparent that this call, given by the female when on guard near the nest, was an appeal to her mate for food. A Blue Jay uttered its usual call at the same time and but for the slightly higher pitch of the Jay, the resemblance was indeed striking. To an inexperienced ear, the call of the Goshawk could probably be confused with the "te'ur" of the Red-shouldered Hawk. The young, which were probably hungry, all

faced the source of the call expectantly and answered in almost the same pitch and tone but with much less volume.

At 6:00 P. M. we descended from the blind and returned to Birchwood for the night. Up to that time neither adult had appeared at the nest. At 10:00 P. M. a terrific downpour of rain and hail caused us to spend an anxious night, lest the old birds, having been frightened by the blind, might not have returned and the young might perish from exposure.

On May 18 we were at the blind at 8:30 A. M. and, to our great joy and relief, the old bird left the nest at our approach and the bobbing of downy heads over the nest rim gave evidence that all was well.

Immediately after my companions left, both birds called. A White-breasted Nuthatch in a business like manner inspected the nesting limbs, unmindful of the young or old birds only a short distance away.

At 10:30 the female adult appeared without warning. Her back faced the blind as she quietly inspected the young. The latter made little fuss and judging from their bulging crops, had evidently been fed at an earlier hour. Photography was almost forgotten in contemplation of her broad, powerful shoulders and general beauty of form. A slight noise brought her head directly over her shoulder with a lightning-like motion and a fierce unblinking reddish eye gazed steadily at the peep-hole in the blind for fully a minute. Being out-stared by the large, unblinking camera lense, she faced the blind defiantly, uttered her alarm call and held her ground in spite of the noise of the camera. Upon this occasion no food was delivered to the nest and after leaving she called continually from one point.

Her call was answered by the mate in a slightly higher pitch.

At 10:45 intense activity of the young heralded the arrival of the old female. She brought the hind-quarters of a red squirrel, which was held firmly in her left foot. In a very business-like and rapid manner she vigorously tore away bits of flesh and served them to the young one at a time. The feeding was accompanied by considerable vocal activity of the young. While they were thus occupied, the old female would take an occasional hurried mouthful. So engrossed was she in this occupation that no attention was paid to lens adjustments made with the hands in plain sight. The male flew closely overhead excitedly but did not appear at the nest. Finally, the female departed taking the remaining food with her.

The young watched passing birds with intense interest and at all slight sounds on the ground they would peer steadily over the nest edge. Today the tiny tail-feathers are peeping through the down of the largest young.

By this time it became quite apparent that when away from the nest the female did most of her calling from one spot at a distance of about 100 yards. She was observed to have a regular perch about twenty feet above ground in a small tree, from which point of vantage she had an almost un-

obstructed view of the forest floor. No human could approach without being observed.

At 2:40 the female came to the nest without food, inspected the young and called at intervals. The bold Nuthatch went about his business less than four feet away from the calling bird. It was 4:25 and since 2:50 P. M. neither adult had been at the nest. This was evidently a quiet time of the day for the birds. At 5:00 P. M. they were left to themselves.

We decided to return to Milwaukee with plans made to come back on a later date.

On May 26, accompanied by Mr. Warren Dettmann of the museum staff, we returned to the nest site. Although the sun was low at 4:00 P. M. we decided to try for some more pictures. The bird was undemonstrative and precautions on our part were foolishly cast aside. I had climbed half way to the blind when excited "look outs" were called from the ground but came too late. A fist thrust out to divert the aim of the adult female was dodged deftly by a mere flip of a wing and she struck a blow that made my senses reel. It felt like a crack across the head with a heavy whip. Fortunately she did not return to the attack. Upon all other occasions she struck for the shoulders or back. Considerable pain and bleeding made a rapid descent advisable. Inspection disclosed eight deep scalp wounds, one of them just above the right temple and dangerously close to the eye. She had evidently taken hold with both feet as she struck and dragged her hind claws about four inches. From that time on, all ascents into either tree were made with the head well protected by heavy burlap or a sheepskin-lined leather helmet. When a turban-like affair made of loose burlap was used, she struck more lightly and seemed to sense the danger of entangling her claws in the loose-meshed cloth. The helmet she struck with full force. Little wonder that a victim has small chance when once caught by such talons. Work was abandoned for the day.

On May 27 we found that the young had grown considerably and the dark shoulder tracts gave them a mottled appearance. The nest had recently been decorated with some green maple sprigs. At 9:50 the male bird glided past at a point below the blind, just skimming the forest floor. The female, which had been perching close by, went down and they met in the air but whether or not food was transferred on the wing could not be seen. The speed with which they can fly through such dense foliage is nothing short of remarkable. When viewed from above, the pure white under-tail coverts can be distinctly seen, giving the appearance of two white outer tail feathers of half length.

The female dove at the blind several times and alighted in the nesting tree and other trees close by but did not come to the nest. Since our arrival neither adult came to the nest, and the young lay perfectly flat and quiet.

At noon we absented ourselves and upon returning at two o'clock found the young squabbling over the bones of the hind leg of a rabbit, upon which one of them nearly choked before finally getting it down. Judging from the few appearances at the nest while under observation, the feeding is done during the early and late hours.

This morning (May 28) at daylight Mr. De Jung concealed himself at a point of vantage and kept the birds under observation until we arrived. Very early one of the adults brought what he thought to be a red squirrel to the nest but that was all. From that time until 12 o'clock there was no activity. The sudden, sharp whistling of the young made known the nearness of the adult female. She answered with three short calls and appeared at the nest carrying a small twig in her beak. Upon leaving, she flew straight at the blind and "zoomed" up and away. When an adult flew by, its movements could be traced by the eager following look of the youngsters, which at such times invariably whistled expectantly. They did not excrete as frequently as when younger.

It was 2:30; no food had been delivered to the nest since early morning and the young showed evidence of hunger. The adult female left her customary perch and flew down the woods, uttering her "battle cry." The nestlings seemed to sense alarm as they did not answer. Frequently they answered her alarm call perfectly.

During the past few days the weather was extremely warm and work in the blind for more than a few hours at a time was unbearable. On May 29 it was excessively hot at 3:00 o'clock. The old bird peered at us over the edge of the nest where with outstretched wings she was shading the young. She refused to budge while the ascent was made to the blind and our final photographic work was done, as it was necessary that we return to Milwaukee.

The next day the blind was removed and the return of this pair next year will be eagerly awaited at which time we hope to start work during the period of incubation and follow through the entire nest history.

In a letter Mr. Zirrer informed me that on June 15 all the young were perched in the limbs above the nest and on June 18 they had moved to the nearby trees and remained in the immediate neighborhood of the nest until June 24.

Milwaukee Public Museum.