

Strife over a nesting site between Downy and Red-headed Woodpeckers.—On April 24, 1956, a pair of Downy Woodpeckers (*Dendrocopos pubescens*) began construction of a nest approximately 20 feet from ground level in a dead lombardy poplar in a woodlot in St. Paul, Minnesota. The woodlot, some 4.5 acres in extent, is composed primarily of boxelder (*Acer Negundo*) and lombardy poplar (*Populus niger* var. *italica*) with an understory of gooseberry (*Ribes* sp.), honeysuckle (*Lonicera* sp.) and common lilac (*Syringa vulgaris*). The nest was successfully established and was occupied until May 18.

On that date, at 2:30 p.m., a Red-headed Woodpecker (*Melanerpes erythrocephalus*) was first observed in the woodlot. This woodpecker flew to a poplar tree about 10 feet from the Downy Woodpeckers' nest. It was immediately harassed by both Downys which flew close by in sweeping dives, emitting loud, scolding cries as they approached within four or five feet of the Red-headed Woodpecker. After several minutes of this fluttering, during which time the latter remained stationary, the Downys flew to nearby trees. One perched on either side of the *Melanerpes*, but not between it and the nest. The Downys shook their heads vigorously in an up-and-down motion in the direction of the intruder and continued their loud cries. The Red-headed Woodpecker seemed to ignore their defensive behavior and flew to the nest entrance. It began to enlarge the entrance hole immediately, and, after several minutes, could place its head and shoulders within. At this point the owners' display increased in intensity. They flew at the intruder with their fluttering dives, approaching more closely until they were diving to within six inches of their adversary. After several of these close dives, the Red-headed Woodpecker would leave the nest entrance momentarily and fly directly at the Downys. The latter would fly away at its approach, and were chased until they were 20 to 30 feet from the nest tree. The intruder would then return to the nest entrance and continue the enlarging process. The Downys came back to within 10 feet of the nest tree, and resumed their fluttering dives, gradually working closer until they were again diving to within six inches of their adversary. At this point the intruder drove them away from the nest tree again and the entire process was repeated. This procedure took place four or five times from 2:30 p.m. to 3:50 p.m., at which time the Red-headed Woodpecker discontinued enlarging the entrance to the nest and flew out of sight toward the east.

Immediately upon departure of the Red-head, the male Downy returned to the nest. He appeared very cautious, and several times partially entered the nest before finally going inside. He then cleaned the nest of the debris caused by the enlarging processes. During this time his mate sat in a tree about three feet from the nest.

After a period of about 10 minutes, the Red-headed Woodpecker returned to the nest. As he approached, the male Downy left the nest, possibly warned by his mate which emitted the chirping cry when their adversary came into view, and the entire process as outlined above was repeated. After approximately one-half hour of work on the nest entrance, during which the Downys were driven away several times, the Red-head again voluntarily left the nest, and flew directly to an oak tree approximately 400 feet east of the Downy Woodpeckers' nest. It was met at the oak tree by its mate, which had not been noticed previously. Both then flew to the Downy Woodpeckers' nest.

During the Red-head's absence, the male Downy Woodpecker had again cleaned the debris from the nest. However, at 4:45 p.m., when both male and female Red-headed Woodpeckers returned to the nest, the Downys left the area without an attempt to drive the intruders from the nest, and were not seen near the nest thereafter.

It is not known if the Downys had a clutch of eggs in the nest, but their long period of tenancy indicates that they probably were in the process of incubation. The Red-

headed Woodpeckers were still in possession of the nest during the first week in June when observations in the woodlot were terminated.

A Downy Woodpecker nest, newly constructed, was found on May 24, approximately 450 feet from the other Downy nest. Since Downy Woodpeckers were not noticed using the woodlot previously, it is believed that this was a re-nesting attempt by the pair ousted by the Red-headed Woodpeckers.—R. G. SCHWAB AND J. B. MONNIE, *Department of Entomology and Economic Zoology, University of Minnesota, St. Paul 1, Minnesota, June 24, 1958.*

Pilot black snake and nesting Pileated Woodpeckers.—In May, 1957, I observed a pilot black snake (*Elaphe obsoleta*) which remained close to the nest of a pair of Pileated Woodpeckers (*Dryocopus pileatus*) over a period of five days. The nest was 40 feet from the ground in a dead stump in a swamp, near Seneca, Maryland, and contained small young, as judged by the behavior of the parents and the *chrr* notes which attended their visits.

Pilot black snakes are effective predators of nestling birds. This fact may be illustrated by the following examples: 1) On June 15, 1952, I killed one of these snakes as it was leaving the nest of a Catbird (*Dumetella carolinensis*). The snake's stomach contained four well-feathered young catbirds. 2) Hoyt (1957. *Ecology*, 38: 246-256) cites the experience of Rhein, who took films of a pilot black snake as it climbed a tree trunk and entered the nest of a Pileated Woodpecker, from which it was later removed in the act of swallowing the well-developed young. Having seen Rhein's film, I was startled on May 18 to discover that a 5-foot black snake was at a level with the nest of the Pileated Woodpeckers. The snake disappeared into a crevice behind and above the nest entrance. When its head reappeared in a small hole 10 minutes later, the male woodpecker also had its head out, directly below that of the snake. The two heads were about three feet apart. I now heard *cuk, cuk's* as the female Pileated Woodpecker alighted on a nearby tree, flew to the entrance, and then entered after her mate flew out. The snake withdrew from sight during this change-over. Two inches of its head and neck emerged from the same hole 15 minutes later, but the female woodpecker remained out of sight.

I watched the nest hole for 30 minutes on May 19. The snake put its head out the small hole for a few minutes during this time. My next visit was on May 23. The sun was coming out after three days of cold, wet weather, and the pilot black snake was partly stretched on a broken limb where I had first seen it on May 18. On May 23 the male woodpecker had his head and neck well out as if trying to see the snake a foot away and around the curvature of the stump. Neither animal appeared to be excited. The snake moved with great slowness, taking 28 minutes to descend to the ground where it disappeared in the vegetation before I could catch it. Subsequent observations indicated that the Pileated Woodpeckers were successful in raising their young.

It was not apparent that the snake could have entered the nest hole of the Pileated Woodpecker. One or the other of the parent birds was always inside. This continuous attendance on small young is, in my experience, common to other species of woodpeckers. The situation is different when the young are more developed. Parent birds then spend more time collecting food and, in the case of Pileated Woodpeckers, the nest may be visited only at intervals of 30 to 60 minutes. The pilot black snake might be more dangerous at this later period which was, I believe, the one photographed by Rhein. One can only conjecture why the snake was in the stump. It may have been laying eggs, or simply resting over a period of cold weather without primary interest in the young Pileated Woodpeckers stirring within their nest a few feet away.—LAWRENCE KILHAM, 7815 Aberdeen Road, Bethesda, Maryland, January 14, 1959.