

## NOTES ON THE RESPONSE OF SMALL BIRDS TO THE PRESENCE OF A COOPER'S HAWK AT WINTER BIRD FEEDERS

by William E. Davis, Jr.

On December 12, 1995, at 9:50 AM, at my home in Foxboro, I noticed small birds flying in all directions away from my bird-feeding stations. On closer inspection I observed a female, subadult Cooper's Hawk on the ground under a forsythia bush, subduing a European Starling it had just caught. The hawk was present at the feeders for more than five hours. It fed continuously on the starling until 11:20 after which, for twenty-five minutes, it stood quietly on top of the remains. It recommenced feeding, and from 11:45 to 1:50 it intermittently fed on the starling. The hawk moved to a perch about eighteen inches above the kill at 1:50 and was still perched there at 2:55, when observation was interrupted. The bird was gone at 3:30.

This field note describes my observations of birds which came into the feeders (Figure 1) during the five hours that the hawk was present and, for most of the time, was actively feeding on the starling and was highly visible.

All birds had left the vicinity of the feeders after the initial intrusion (except the starling). After approximately twenty minutes birds began to return to the feeders and adjacent ground, and I recorded ten Dark-eyed Juncos; one male and one female Northern Cardinal; and one each of Black-capped Chickadee, Tufted Titmouse, and American Tree, Song, and White-throated sparrows at this time. These birds foraged in a normal manner, mostly on the ground, and gave no obvious indication that they were aware of the feeding hawk except that the cardinals had fully erect crests throughout, and no birds foraged under the umbrella of the forsythia bush (Figure 1).

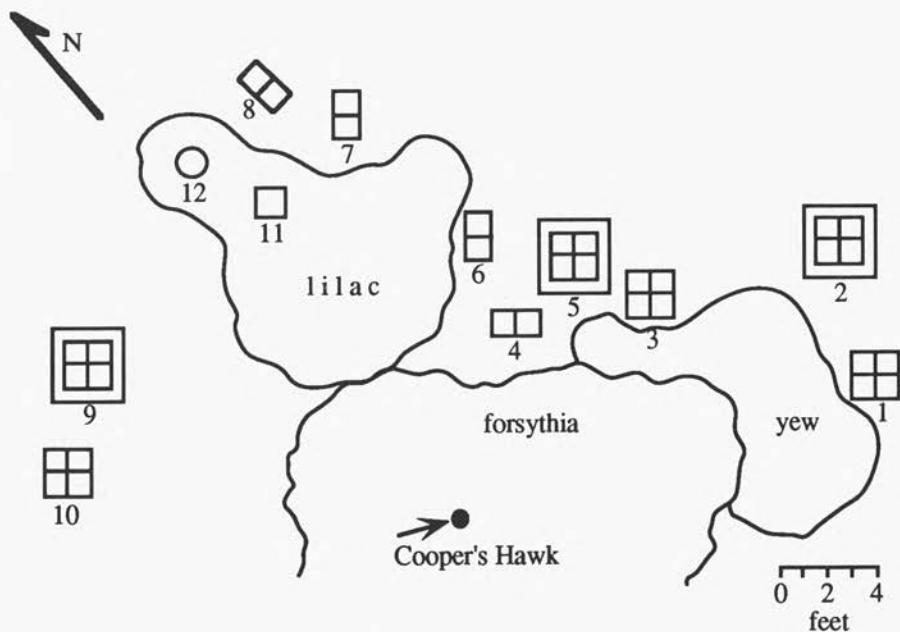
At 10:15 a chickadee perched in the forsythia within four feet of the feeding hawk. I have previously observed that chickadees are among the first birds to return to bird feeders when an accipiter is present, and I have observed chickadees making close approaches to feeding or perching hawks. This is surprising because, although they may be too small to be a major prey item for accipiters, they may be taken if the opportunity arises (John Fuller pers. comm.). Susan Smith (pers. comm.) suggested that the chickadees that closely approached the hawk were probably young, naive birds.

At 12:04 three Blue Jays made a brief appearance. Blue Jays are perhaps the most wary of the passerines that frequent the feeders. They are usually present throughout the day but made very infrequent appearances during the hawk's stay at the forsythia. At 12:20 four House Sparrows flew into the top of the forsythia within four feet of the hawk and watched it, but left without foraging. House Sparrows were not present in normal numbers during the hawk's visit. At 12:04 a female Red-bellied Woodpecker foraged at the hanging wild bird feeder and

showed no obvious concern for the hawk's presence.

A census from 1:45-1:55 tallied twenty-seven juncos, sixteen Mourning Doves, one Blue Jay, one chickadee, two female and one male cardinal, and one each of House, Tree, Song, and White-throated sparrows. These birds foraged in a normal manner, mostly on the ground, but stayed outside the umbrella of the forsythia and the number four feeder. Mourning Doves foraged on feeders number three and six, twelve feet from the feeding hawk. At 2:43 four House Finches joined other foraging birds.

The hawk, while perching above the kill, watched the foraging birds. It bent its head back to watch a junco that landed four feet above it in the forsythia, and turned its head to watch a Mourning Dove, which lit eight feet from it in the adjoining lilac (Figure 1). At no time during observation did it attack a second bird. The hawk's leisurely feeding pattern and the fact that it left parts of the starling carcass intact (wing bones connected to the wishbone) or uneaten (both legs) suggests that it may have been well fed. Cooper's Hawks can eat a starling-size prey in a few minutes and may eat legs and feet (pers. obser.).



**FIGURE 1.** Figure 1 shows the locations of the feeders on the ground (#s 1, 3, 4, 6, 7, 8, and 10), the platform feeders (four feet above the ground) (#s 2, 5, 9), and the two hanging feeders (#11 wildbird food, #12 sunflower seed). The platform and ground feeders are two or four-cell Potter traps used for capturing birds for banding. Wild bird seed was concentrated in the trap feeders but was also scattered on the ground throughout the area.

The birds using the feeders, except for jays and House Sparrows, appeared to forage in a normal way, even when the hawk was actively dismembering the starling. In experiments with well-fed and "sharp set" (hungry) captive Red-tailed Hawks, Frances Hamerstrom found that small passerines can distinguish between well-fed and hungry hawks, as evidenced by a substantially greater mobbing response to hungry hawks (Hamerstrom 1957). She also found that the presence of a hawk does not guarantee a mobbing reaction (there was no mobbing of the Cooper's Hawk at my feeders). Hamerstrom's experience also indicated that hawks on low perches (as was the case with the hawk at my feeders) elicited far less mobbing. The combination of the Cooper's Hawk being well fed and on the ground or a low perch may have signaled relative safety to the foraging birds, although no bird foraged within eight feet of the hawk. When I returned to see whether the hawk was still present at 3:30 I could tell at a glance that the hawk was gone. Juncos and other birds were foraging under the forsythia umbrella within two feet of where the hawk had been. That no birds foraged under the umbrella while the hawk was present strongly suggests that they were continually aware of its presence.

#### References

Hamerstrom, F. 1957. The Influence of a Hawk's Appetite on Mobbing. *Condor* 59:192-194.

**WILLIAM E. DAVIS, JR.**, contributes frequently to *Bird Observer*. He is professor of science at the College of General Studies at Boston University.