AN INVASION OF GOSHAWKS¹

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The 1972 fall flight of raptors over the Duluth, Minnesota flyway was unusual in the magnitude of the Goshawk (*Accipiter gentilis*) migration. By the end of November, 5352 had been tallied, a total that dwarfs any other Goshawk count in the 23-year history of hawk migration censuses taken on the Duluth flyway. Previously the high counts for this species were 333 in 1962 and 715 in 1963. One can appreciate the magnitude of the 1972 invasion when one notes that these totals were surpassed in a single day several times.

The flight started early with five Goshawks seen during the first week of September. Between the years of 1951 to 1972 only nine of this species had ever been censused this early. By the end of September, Hawk Ridge observers had seen 88 Goshawks, and on October 1 it was exciting to count 99. It almost was with awe, however, that we finished October 8 with a day's count of 618. We tallied on that day almost as many as in the entire 1963 season, the year of our previous highest count.

A count of 333 on October 11 ushered in a fantastic week: 740 on the 12th, topped by 777 on the 13th, and then an all-time high of 984 on the 14th. Although we saw only 99 on October 15, on the 16th we had a count of 757 and on the 17th, 218. The 18th showed a drop to 64, and after that date along with deteriorating weather the daily totals showed a steady decline. The seven-day total (October 11-17) of 3908 Goshawks, probably was as high a Goshawk count as has ever been made in the United States.

We are without the evidence necessary to validate our conclusions as to the cause of this migratory eruption, because none of the 382 Goshawks trapped were wearing bands and so their place of origin could only be guessed. However, circumstantial evidence was such that we felt quite confident that the flight was initiated by a poor food supply rather than high reproduction.

Only about 15% of the Goshawks trapped at the station (bander David Evans) were immatures. While most of these had empty crops, few were excessively thin and it was more their actions rather than their physical condition that influenced our thinking. For instance, as many as three or four birds would fight over a single pigeon, fighting even though human observers would be only a few feet away; a trapped bird after being banded, weighed, and measured, returned to kill and eat the same pigeon he previously had been caught on. A bird with a heavy crop (believed to have been full of rabbit) still attempted to add a pigeon

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to its seemingly ample food supply. We had had reports early in the flight that certain Canadian areas were heavily infested with ticks and that this infestation seemed to be affecting grouse and rabbit survival in the area. A lynx invasion in northern Wisconsin and Minnesota may also be correlated with the same factors that could at least in part explain this unusually large Goshawk flight.

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