1987, Yahner and Scott 1988). Both of these factors have become serious obstacles to songbirds, hampering breeding efforts in extremely fragmented nesting habitats of the midwest (Brittingham and Temple 1983, Robinson 1992).

Attempts have been made not only to identify predators of songbird nests but also to assess the degree of impact predation has on songbird breeding efforts. Research has identified members of the corvid family (jays and crows), grackles (*Quiscalus spp.*), a variety of mammals (e.g. raccoons, opossums, mice, chipmunks, squirrels), and snakes (e.g. black rat (*Elaphe obsoleta obsoleta*) and black racer (*Coluber constrictor*) as potential threats to eggs and nestlings (Ricklefs 1969, Wegner and Mirriam 1979, Angelstam 1986, Martin 1987, Shaffer 1991, Andren 1992).

A Predator's View

Current theories suggest that many nest predators are generalists/omnivores, opportunistically robbing nests as they are encountered (Andren et al. 1985, Angelstam 1986). To actively search for nests would cost most predators more energy than they would ultimately gain. It is believed that although nutritious, eggs and nestlings comprise only a small percentage of a predator's total food consumption; possibly being as low as one percent in some incidences (Angelstam 1986). Theoretically, there should be little evolutionary benefit to specializing with a specific nest searching strategy as nests are often irregularly distributed over an area due to avian territoriality and are only available during a small window of time over the course of the year (Smith and Shugart 1987).

Though nests are probably not being expressly targeted by predators in most cases, increased predator densities often resulting from the animals' ability to easily penetrate fragmented woodlots and/or concentrate search efforts along forests edges can directly reduce songbird breeding success (Angelstam 1986, Andren and Angelstam 1988, Andren 1992).

Andren and Angelstam (1988) suggested that the frequency of nest predation by a particular species would be proportional to the relative abundances of this species within the fragment. In theory, potential predator species found in high abundances should be exerting the most pressure on songbird breeding efforts. Their research supported this hypothesis (Angelstam 1986, Andren 1992).

The Research

During the spring and summer of 1993, I was involved in part of a long-term project at Hawk Mountain Sanctuary in Pennsylvania investigating the effects of forest fragmentation on songbird reproductive success. The project entailed monitoring Ovenbird (*Seiurus aurocapillus*) breeding success over several years in both fragmented landscapes and large tracts of forest. This species is being studied because it has been identified as being sensitive to habitat fragmentation (Porneluzi et al. 1993).

In addition to monitoring breeding success, we attempted to discern whether a relationship existed between potential predator abundance and songbird breeding success in relation to forest size. Specifically, in forests where Ovenbird breeding success was low, was there a higher abundance of a predator species than in forests where breeding success was high? I focused on mammalian species, specifically small rodents, that had previously been identified as nest predators (Ricklefs 1969, Wegner and Mirriam 1979). The abundance of other potential predators was not measured due to constraints in time, person-power, and funding.

The study, though conducted and based in the eastern United States, has relevance nationwide as habitat fragmentation in America has been extreme and neotropical migrant population declines have been detected in many areas of the country including Illinois (Ricklefs 1969, Whitcomb et al. 1981, Robbins et al. 1989, Robinson 1992).

Ovenbird at Kankakee River State Park, Will County, 5 June 1991. This species is declining in Illinois and other states such as Pennsylvania. Research is being done nationwide to understand the reasons and find solutions. The pictured Ovenbird was defending fledged cowbirds when Joe B. Milosevich took these photos.