Declining Neotropical Migrants

Illinois scientist searches for clues in state forests

by Peter Friederici

Scott Robinson walked through a lush forest laden with poisonous plants and biting insects, setting up mist nets to prepare for research on neotropical bird species. Robinson, a biologist with the Illinois Natural History Survey, was not thousands of miles away doing research in one of our vanishing rain forests. Instead he was working much closer to home at the Shawnee National Forest in southern Illinois. Although Robinson has spent much time researching birds in the tropics, his work studying the breeding success of neotropical migrants here in Illinois has placed him on the cutting edge of research. The burning issue in North American ornithology is one that links the tropics and our own temperate forests: What is causing the decline of neotropical migrants?

Robinson's work is reminiscent of that done in the tropics not only because of its newsworthiness and significant political import, but because the field conditions are similar. "The Shawnee National Forest is a mass of poison ivy and stinging nettles and tree falls and chiggers and ticks and mosquitoes," he said. "The field conditions are among the most difficult I've encountered. There are very few places in the tropics as demanding as southern Illinois."

> "Over half the nests found by researchers contained at least one cowbird egg; 90 percent of Wood Thrush nests had been parasitized."

The Ovenbird photographed by Todd Fink in Union County is among a group of neotropical migrants being studied at the Shawnee National Forest by Dr. Scott Robinson and a team of researchers.

It is into these hot, humid, buggy conditions that Robinson has sent a dedicated corps of field assistants every summer since 1989. Their job: to census populations of songbirds, set up mist nets to determine population demographics, and search for nests to document reproductive success.

World Travelers

Those birds that breed in North America but winter in Central and South America or the Caribbean are known as neotropical migrants. Most are insectivorous species such as flycatchers, vireos, warblers, and tanagers. In the past few decades, anecdotal evidence shows that populations of many of these species have declined. Discovering why has not been easy.

An initial clue was provided by several long-term studies of forested areas in the eastern United States. Studies of eight relatively small woodlots from Connecticut to Illinois, begun in the 1940s, revealed declines both in number and abundance of species. Several species were extirpated from some woodlands. Among those showing the greatest declines were the Hooded Warbler, Red-eyed Vireo, American Redstart, and Eastern Wood-Pewee.

Some ornithologists believed the destruction of tropical rain forests might be responsible for these declines. Most songbirds occur on their wintering grounds in much greater density than on their breeding territories, so the destruction of an acre of tropical forest might have the same impact on migratory songbirds as the destruction of five acres of Illinois forest.