of the young of consecutive broods within an area."

Robinson's banding research has also found, for example, that young birds are frequently chased out of good habitat by their parents who are often occupied with a second brood and don't need additional competition for food. Young birds hatched that season are forced into marginal habitat, which is often shrubby, second-growth forest. The brushy understory of selectively logged areas and second growth clearings, however, often provides good protection from predators, even if the food is inferior.

Bird banding research in the Shawnee has demonstrated the adverse effects of forest fragmentation through logging. Through comparisons of bird banding surveys in various areas of logging in the forest, Robinson has been able to show clearly the negative impact fragmentation has had on forest dwelling birds. Banding is providing evidence that the purchase and preservation of large, contiguous, unbroken tracts of habitat are essential to protect the state's avian breeding populations. Robinson added that through breeding season banding, he and his researchers are finding that neotropical migrants are living longer than expected. "This fact changes the models we've been using to determine population dynamics the number of young which must be successfully raised to sustain a given population," said Robinson.

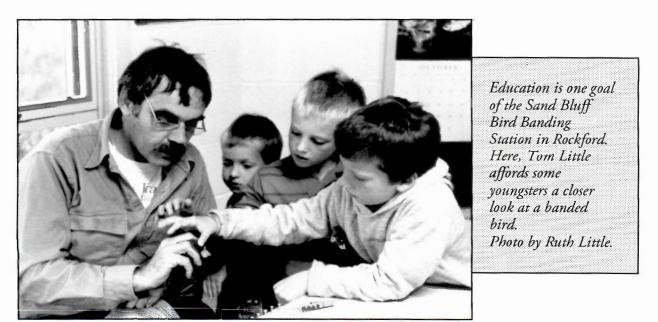
Banding also yields valuable data about where local birds are going later during migration. No real information exists on where Illinois' breeding birds are wintering, said Robinson.

Robinson's data on recoveries of bands from birds combined with netting programs on wintering grounds in neotropical climates is helping scientists understand the complete life cycle of birds. "When you band only during migration, you can't begin to tell where the birds are from and where they're going," he said.

Veteran bander Lee Johnson has some concerns about the "scientification" of bird banding and the movement away from migration banding toward breeding bird banding. Johnson founded one of the nation's largest banding stations 25 years ago, the Sand Bluff Bird Banding Station in Colored Sands Forest Preserve near Rockford in Winnebago County. He and his volunteer staff band some 7,000 birds per year in spring and autumn, using 100 mists, a mile long and spanning riparian bottomland forest, shrubby undergrowth, and open fields.

"Banding breeding bird populations?" said Johnson. "Don't the federal guys know how much that's going to disrupt the normal activities of these birds? How are they going to band all the birds breeding in Canada? This kind of a move is based on a complete lack of knowledge. You get a bunch of college-educated guys with some laboratory-bred ideas about what to do and how to do it, but they have no practical experience in the field."

It is not entirely clear what the future of bird banding in Illinois and North America will be. It does seem apparent, though, that a greater emphasis on bird banding with a specific purpose is the likeliest outcome. For the sake of the birds, perhaps a



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