

Over the past 20 years, *Meadowlark* has featured scientific papers, essays, and lay-written articles about the birds of Illinois. These next three stories feature three different approaches to the change in status for three species of Illinois birds over the past 20 years.

# 1 The northward movement of the Blue-gray Gnatcatcher in Illinois

By Tara Beveroth

Birders most likely hear the Blue Gray Gnatcatcher's (*Poliophtila caerulea*) high-pitched wheezy song before they see it. One of the most unique characteristics of this 4-inch long bird with a bluish gray back and white underside is the long white-edged black tail it flicks from side to side to flush insects off of foliage. After flushing the prey, this bird hovers and sallies to catch a meal.

The Blue-gray Gnatcatcher is a neotropical migrant found farther north than any other species of gnatcatcher, with most other species from its genus found only in the neotropics. Its range extends from Maine and southern Ontario to Belize and El Salvador, and from New England west to northern California. While wintering, it may be spotted along the western coast of Mexico, parts of Central America, Cuba, sections of the Caribbean, and even along the southeastern coast of the United States. Although Blue-gray Gnatcatchers can be found in wooded habitats including mature forest and shrubland, they prefer moist areas with broad-leaved trees, often near edges (Kershner and Ellison 2012). In 1979 Graber et al. considered riparian woods to be the primary habitat for this species in Illinois (Grettenberger 1991). What is especially intriguing about this bird is that during the 20th century, and even more dramatically in the last 25 years in the northeastern U.S. and southeastern Canada, it has shown a significant range expansion.

In the 1920s and 1930s Blue-gray Gnatcatchers started to arrive in



Blue-gray Gnatcatcher.  
Forest Glen Preserve,  
Vermilion County.  
8 May 2011.

Photo by Bob Schifo.

Minnesota and expanded northeast to Pennsylvania. Expansion of the Blue-gray Gnatcatcher in the East coincided with warmer than average winter temperatures in peninsular Florida during the 1940s to 1950s, and early 1970s (Ellison 1991). Data also support the bird's northern movement and expansion within Illinois. Eight species including the Blue-gray Gnatcatcher have been shown to have expanded their range northward (Walk et al. 2010). The gnatcatcher over the last 100 years has gone from having very low occupancy to almost 100 percent occupancy at sites surveyed by Walk et al. Spring Bird Count data from the last 35 years, also show that the Blue-gray Gnatcatcher

population has grown rapidly within the state (Figure 1). Furthermore, the number of counties that are detecting Blue-gray Gnatcatchers has nearly doubled over the last 35 years, again based on Spring Bird Count data (Figure 2). When looking at Breeding Bird Survey (BBS) data from Illinois from 1966-2010, the trend estimate is 0.3% per year, and when looking at BBS data from 2000-2010 the trend estimate is 1.2%, which indicates a significant increase (Sauer et al. 2008).

A few factors are affecting the Blue-gray Gnatcatcher's northerly movement. While Illinois lost much of its grassland habitat over the past 200 years, it actually recovered some forests during the 1900s, primarily in central and northern Illinois (Walk et al. 2010). Available habitat can affect how species cope with movement as well and whether they can actually move (Root et al. 2003). The Blue-gray Gnatcatcher, a forest-dependent bird, has benefited from the recovered forests now available in central and northern Illinois. This species is now detected in greater abundance in these parts of the state.

Another determinant that may affect the Blue-gray Gnatcatcher distribution is food availability. Since the gnatcatcher primarily eats small insects and spiders, the temperature has to be warm enough to support this food supply and the habitat must be sufficient to sustain insect and arachnid populations. Has global climate change influenced the movement of the Blue-gray Gnatcatcher as well?