4-25-1975

# Breeding Bird Survey Newsletter Number 3

Danny Bystrak

BREEDING BIRD SURVEY NEWSLETTER NUMBER 3

spring, 1975

## COVERAGE

The number of routes which were covered in both 1973 and 1974 was considerably higher than any previous pair of years, despite a slight drop in total coverage in 1974. The number of comparable routes has increased steadily in all three regions since the Survey began. Of the 1720 routes covered in 1974, 1541 were also covered in 1973.

California is still in the lead with 145 routes received in 1974. Next were Texas (93), New York (86), Pennsylvania (81), Wisconsin (63), Ontario (58), British Columbia (53), and Maryland (50). Tennessee has had complete coverage since 1967 except for one route missed in 1968, and New Hampshire since 1966 except for one missed in 1973. The biggest drops in coverage in 1974 were in Alabama, Alberta, California, Illinois, Louisiana, Pennsylvania, and Saskatchewan. The biggest gains were in Arizona, British Columbia, Michigan, and Wyoming. Utah continues to be most desperate for help, being the only western State not trying for coverage of at least one route in each degree block and, as of this year, being without a coordinator.

Thanks to Frances Williams, West Texas will increase its coverage to one route per degree block this year. She will be our West Texas coordinator, lightening the fantastic load which Warren Pulich has had for years. Dr. Joseph Greenberg has moved to Georgia and "brought the BBS with him." Thanks to his efforts, Georgia's coverage will almost double this year.

If you are a label-watcher, you may notice a new "stratum number" on your Summary Sheet this year. We have overhauled our stratification system and created a much more realistic picture of the physiographic regions of North America. Over 300 routes were affected by these changes.

New forms are being used this year as the supply of old ones becomes exhausted. These are designed to reduce the number of write-ins encountered. The instructions have been altered slightly also, so please re-read them.

In Newsletter Number 2 we stated that statistical analysis of year-to-year changes in abundance of 50 species had been completed through 1972. During the past two years we have (1) developed new computer editing procedures and re-edited all back records; (2) improved the stratification; and (3) analyzed year-to-year changes in abundance of 120 species, from 1966 through 1974.

## POPULATION TRENDS

The 120 species analyzed include representatives of 32 families of birds. Weighted means for the great majority of species change less than 5 percent from one year to the next; but there are always a few species that show sharp increases or decreases in one or more regions.

Statistically significant changes at the continental level from 1973 to 1974 included increases in the Ruby-crowned Kinglet and Purple Martin, and decreases in the Great Crested Flycatcher, Tufted Titmouse, Brown Thrasher, Evening Grosbeak, Dickcissel, and Field Sparrow. Most of these changes were between 10 and 25 percent. In the Eastern Region (east of the Mississippi River), the House Wren registered an increase, and the Common Grackle and Slate-colored Junco a decrease. In the Central Region the northern Alder Flycatcher (as distinct from the more southern Willow Flycatcher) and the Black-billed Magpie increased, while the Cedar Waxwing declined. The sharpest change in the West was a drop in Least Flycatchers.

The Purple Martin increase was noticed especially in the East, as populations began to recover from the effects of Hurricane Agnes of June 1972.

The spring of 1974 was not without its weather problems, however. Five consecutive days of cold, rainy weather in northern New England resulted in a massive kill of Scarlet Tanagers in Maine and New Hampshire on May 25-26. The Breeding Bird Survey subsequently showed declines of 30 percent in New Hampshire and 50 percent in Maine from the 1973 breeding population. Other species that apparently suffered from the same rainy spell, as indicated by decreases of 25 to 30 percent in parts or all of northern New England and the Maritime Provinces, were Tree, Bank, Barn, and Cliff Swallows and Black-and-white, Nashville, Parula, Magnolia, and Chestnut-sided Warblers.

With nine consecutive years of coverage in the East and seven in the West, we are now able to follow long-term trends as they develop, and to detect some of the more subtle trends that previously have been unnoticed. The most striking changes have been increases in the Cattle Egret in the East (average increase of 12 percent per year from 1966 to 1974), the House Finch in the East (22 percent per year), the Starling in the West (16 percent per year from 1968 to 1974), and a decrease in the Black Tern in the East and Central Regions (15 percent per year). The Yellow-shafted Flicker and Red-headed Woodpecker show a slow but steady annual decline of 3 percent per year in the East.

The Audubon Breeding Bird Censuses conducted in New Jersey, Maryland, and other eastern States had shown a marked decline in populations of three common deciduous forest species, the Red-eyed Vireo, Ovenbird, and American Redstart, during the early 1960's. The BBS has shown an average annual increase in these species of between 8 and 11 percent from 1966 through 1974 on their nesting grounds in the Maritime Provinces. This increase is especially interesting in view of the fact that Dr. David Johnston (*Science* 186:841-842) found a highly significant decrease in DDT derivatives in body fat of ten species of migrating songbirds (including these same species) killed at a Florida television tower during the period 1964 through 1973.

Among the rarer species, there has been an upward trend in Upland Sandpipers since 1969 and in the Mississippi Kite since 1967.

Danny Bystrak

Danny Bystrak
Biological Technician
Migratory Bird and Habitat
Research Laboratory

April 25, 1975