

only 89 individual birds, a 42% drop from the 154 trapped in 1961. 1998 resulted in the second lowest total for individual birds caught, slightly more than half the average for all the years.

Birds caught per day: In the first two-thirds of the historical data, the number of individuals caught per day fluctuated between a low of 3.38 in 1935 and a high of 6.45 in 1940 (Fig. 1). The number later peaked at 7.73 birds per day in 1959, and was followed by a nine-year decline, except in 1968 when it jumped to 5.12 birds per day. 1967 is noted as having the fewest number of birds captured per day (2.81); 1998 is listed as the second lowest (3.30). The best-fit line to the graph of individuals caught per day each year was a polynomial with a correlation coefficient of 17%. The line is an arc that peaks in the late 1940s then makes a downward curve, indicating a declining trend in population numbers over the last 50 years.

Species diversity per day: Initial interpretation of the data indicates fluctuating diversity. 1932 represents the least amount of diversity ever recorded with an average of only 0.23 species trapped per day (Fig. 2). Since 1932 there has been a gradual upward trend ending with the most diverse year being 1998 with an average of 0.52 species caught per day. The best-fit line is again a polynomial (correlation coefficient of 46%). It is a gradual upward arc, representing increasing diversity with time.

Species composition: A total of 53 species were caught between 10 June to 7 August during the years 1931 to 1998 (Table 2). 31 of these species are incidentals (defined as species captured in less than or equal to three of the 27 years we examined). The American Robin ranked first in abundance 20 out of the 28 years, a 74% leader over other species. The Common Grackle (*Quiscalus quiscula*), fared better in the later part of the study by being the most commonly captured species seven times during the years 1958 to 1968. In 1998 the American Robin was the most commonly captured species and the Black-capped Chickadee was second. This was the first time chickadees ranked in the top three. The chick-

adee first appeared in the 1939 data, but finally established a consistent presence in the data from the 1950s. Two incidentals that appeared in 1998 include the Chipping Sparrow, making only its second showing, and the House Sparrow, making its first appearance in the traps. These two species ranked third and fourth, respectively, in abundance for the year.

Evenness Index: The Simpson's Index indicates a trend toward greater evenness over time (Fig. 4). 1967 exhibited the greatest heterogeneity index ($D=21.9$) but also had the least number of species captured. 1998 and 1966 represented the next highest indexes, and their total species numbers were above the mean for all years

Mean Number of Birds Captured Per Day Versus Year

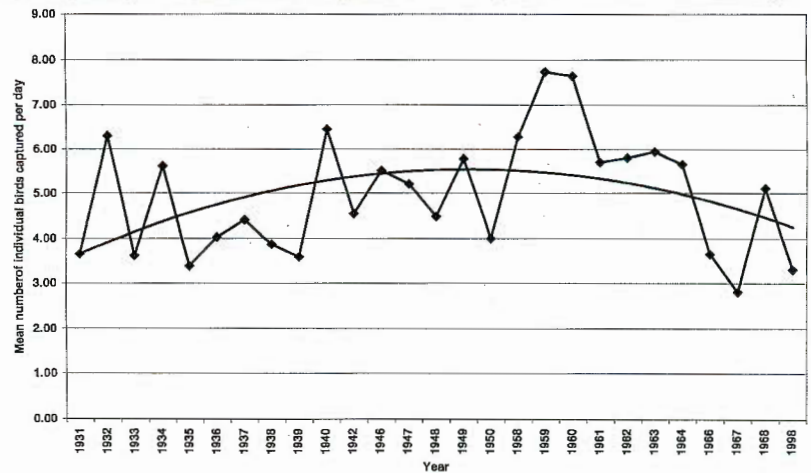


Figure 1. Mean number of individual birds captured per day each year from 1931 to 1998, with gaps. The curve represents the polynomial best-fit line. It has a correlation coefficient of 0.1716.

Mean Number of Species Captured Per Day Versus Year

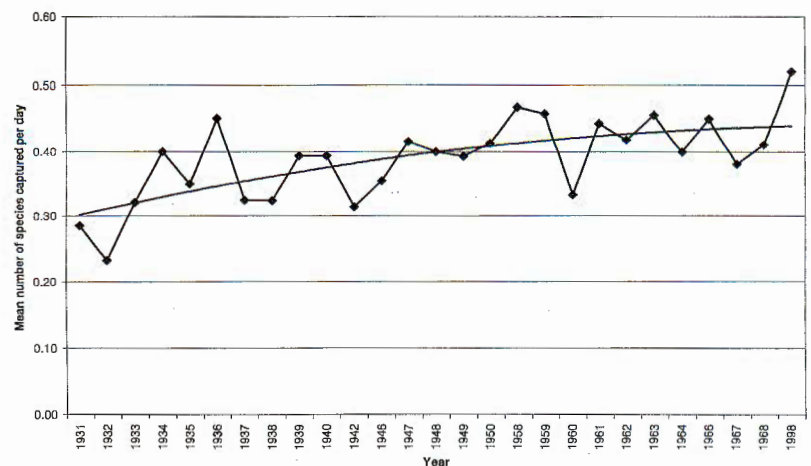


Figure 2. Mean number of species captured per day each year from 1931 to 1998, with gaps. The curve represents the polynomial best-fit line. It has a correlation coefficient of 0.4584.