combined. Prior to 1966, the graph of heterogeneity (D) versus time (year) oscillates regularly with the D index between 0.85 and 7.15.

Discussion

Two distinct trends emerged in the analysis of our data. First, there was a general decline in local population size for most species. Second, overall species diversity increased. These two factors may present misleading indications of greater evenness, which in turn, could lead to a false sense that the local environment is healthy. However, an increase in species richness is not necessarily an increase in ecological integrity (Galli et al., 1976). We must look beyond the quantified index of heterogeneity (Simpson's Index) and assess which species are or are not present in the community and what has led to the decline in their abundance. It is important to point out that because there is a 30-year break in the collection of data, we are unable to say if the Simpson's Index trend set in the last few years of the 1960s is a valid trend or an anomaly in the data.

The four most abundant bird species for 1998 in descending order were the American Robin (*Turdus migratorius*), the Black-capped Chickadee (*Poecile atricapillus*), the Chipping Sparrow (*Spizella passerina*), and the House Sparrow (*Passer domesticus*). All four had a relatively strong showing, which increases the Simpson's Index (heterogeneity increases as the number of species with large populations increases). In the historical data, the American Robin and the Common Grackle dominate most years. Frequent captures of these two species make the Simpson's Index very low for many of those years. An external source, the North American Breeding Bird Survey (Sauer et al., 1997) shows the American Robin increasing its numbers in Illinois during the 1970s, 1980s, and early 1990s (Fig. 3). The robin increase is likely due to the increase in urban and suburban areas, which provide manicured lawns as prime foraging habitat. Sauer et al. (1997) document Black-capped Chickadees showing a small, steady statewide increase over the last 30 years (Fig. 3). At the time of our study, the forested area of campus had been virtually undisturbed, allowing for the accumulation of dead trees for these cavity nesters. North American Breeding Bird Survey (Sauer et al., 1997) data also show a sharp increase in Chipping Sparrows in Illinois from less than three individuals per survey in 1966 to more than 18 individuals per survey in 1996 (Fig. 3). The Chipping Sparrow is considered a forest edge species. Increases in edge habitat due to forest fragmentation could have facilitated the growth in Chipping Sparrow numbers. The House Sparrow, an invasive non-native species, was banded on campus for the first time in 1998 when 14 of them were captured. Based on their present high numbers and expansive range, we suspect House Sparrows would certainly have been captured during the 30 years prior to our study had banding taken place during that time. While having only one year of campus data on this species prevents us from saying anything about its population dynamics at our study site, Sauer et al. (1997) show a steady statewide decline in House Sparrow numbers.

Our data revealed that two previously established bird species, the Brown Thrasher (*Toxostoma rufum*) and the Song Sparrow (*Melospiza melodia*), were not present at our study site in 1998. These birds were not visually or vocally identified during the collection of our data. Further individual analysis of these two species would have to be conducted to confirm their absence from the area. The North American Breeding Bird Survey (Sauer et al., 1997) shows a statewide decline in Brown Thrasher numbers in Illinois, but an increase in Song Sparrows. It is possible that local habitats have diminished in quality or the competition from other birds proved too much.

DuPage County has experienced rapid human population growth and corresponding land use changes over the last several decades. The area surrounding our study site was predominately farmland in the early 1900s (Buresh, 1985). It was not until after the 1950s that the area experienced its population boom. In a decade, the population doubled from approximately 154,000 in the 1950s to 313,000 in the 1960s (DuPage CDD 1996). By 1995, 87.6% of land in the area had been developed to include industrial, commercial and residential use (DuPage CDD 1996). As we enter the 21st Century, quality habitats for many species have nearly disappeared and continue to shrink in size.

Our study area is likely experiencing local extinction of some avian species because of landscape fragmentation, land use changes, and/or the invasion of non-native birds (Vitousek et al. 1996). It has been clearly documented that a forest has more avian species than cropland or an urban area (Weber and Theberge 1977).

Our study area was adjacent to a forest, which may have increased the chance of capturing both more individual birds and a greater variety of species. Only the latter occurred. We banded 14 species during the summer of 1998, but nine species were caught only once or twice. Populations seem to have dwindled except for those of a few species. This is not surprising since the expansion of the local human population and the resulting suburban sprawl create changes in food sources and nesting availability, which can trigger a decline in the number of birds able to sustain themselves in the area.

Individual species have different niche requirements and therefore respond to fragmenting habitat differently. The number of species present in a particular