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FEATURE ARTICLES

AGE-RELATED DIFFERENCES IN BODY MASS AND RATES OF MASS GAIN OF PASSERINES DURING AUTUMN MIGRATORY STOPOVER

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Abstract. Age-related differences in stopover ecology of migrant songbirds are poorly understood. We compared body mass, fat scores, and rates of mass gain of adults and immatures of 52 species of birds during autumn migration stopover at Long Point, Ontario, Canada, on the north shore of Lake Erie. Mean body mass of adults was greater than that of immatures in the majority of species with a detectable difference, but the average difference across species was only 1%. Fat scores were also higher for adults in many species, suggesting that mass differences were due to differences in condition rather than body size. Mean rate of mass gain, estimated from changes in body mass of first captures over the course of the day, did not differ significantly between adults and immatures of most species. However, the power to detect differences was low. Averaged across species (n = 117 903 birds), the estimated rate of mass gain for adults was 10% higher than that for immatures, but with 95% confidence limits ranging from 12% lower to 32% higher. The observed differences in body mass could be produced by a small difference in rate of mass gain. Small differences in body mass and rate of mass gain between immatures and adults could indicate that young passerines rapidly develop similar foraging skills to those of adults, or that young birds are not particularly disadvantaged at Long Point either because of good food supply, or because there is little need to accumulate large amounts of fat in the early stages of migration.

Key words: age-related differences, body mass, Long Point, Ontario, rate of mass gain, stopover ecology.

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