

A SAMPLING UNIT PROBABILITY ESTIMATOR (SUPE) SURVEY OF THE WOLF POPULATION OF ALGONQUIN PARK

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Abstract

*Few reliable methods exist for estimating population size of large terrestrial carnivores occurring at low densities. We used stratified network sampling to sample wolf (*Canis lupus lycaon*) tracks in the snow and to estimate wolf density in western Algonquin Park, Ontario in February 2002. We partitioned our 3,425 km² study area into 137 5 km x 5 km blocks and a priori assigned 61 and 76 respectively as having a high or low probability of containing detectable wolf tracks. This stratification was based on the relative amount of watercourses and hemlock cover within each block. We used a Bell 206B helicopter to sample 28 high (46%) and 17 low (22%) blocks. Seventeen "fresh" track networks were found within the 45 blocks and average pack size in the area we surveyed was 4.2 +/- 0.4 (S.E). These observations result in an estimate of 87 +/- 11.4 wolves in the study area for a density of 2.5 +/- 0.3 wolves/100 km². We detected no obvious violations of the survey design but two key assumptions must be verified by radio telemetry (now underway). Extrapolated across the Park (area 7400 km²) the population estimate is 185 wolves, which is comparable to estimates achieved in the late 1990's. However, recent genetic evidence suggests that the Algonquin Park population is not isolated but part of a much larger population that extends from north-central Ontario well into Quebec.*

A CITIZEN SCIENCE-BASED APPROACH TO MONITORING BIRD POPULATIONS

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Abstract

Bird Studies Canada (BSC) is the leading Canadian not-for-profit organization dedicated to the study, understanding and conservation of wild birds and their habitats. Most of BSC's monitoring programs rely on a partnership of individual "citizen scientists," who collectively contribute the vast amount of data to the programs. All of BSC's programs use the five step Integrated Population