Spatial Relations between Migratory Algonquin Park Wolves and Resident Wolves in a Winter Deer Yard (Winter 1997 Preliminary Results)

John Pisapio
School of Urban and Regional Planning
University of Waterloo
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Abstract

This two year study identifies variable spacing patterns exhibited by migratory and resident wolves (*Canis lupus Lycos*) utilizing a winter concentration of white-tailed deer (*Odecoileus virginianus*) near the southeast boundary of Algonquin Provincial Park, Ontario. Nearest Neighbor statistical testing and GIS mapping analysis were applied to radio telemetry locations for 21 radio collared wolves representing two resident deer yard packs and six migratory packs from the eastern side of Algonquin Park. Also included in the analysis are three lone wolves also from the park. Territorial fidelity was strongest among resident wolves and weakest among lone wolves. The resident packs, totaling five individuals, exclusively occupied 45% of the mid-winter deer yard area. The remainder of the yard was temporally shared by a minimum of 23 migratory wolves. These animals made frequent extraterritorial excursions or seasonal migrations from their annual territories in the park to the deer yard. The duration of these visits ranged from two days to four weeks. Concurrent use of the yard by three or more migratory packs occurred in eleven of the seventeen weeks telemetry monitoring was conducted. Migratory packs occupied smaller areas of use than the resident packs and showed greater spatial and temporal tolerance towards other migratory wolves. Mean seasonal density of migratory wolves present in the yard was greater than the density of resident wolves within their exclusively held territories. Resident pack territories coincided with areas of highest deer density (Poszig 1998). Evidence linking wolf and deer distributions in the yard is discussed in relation to co-evolutionary anti-predator behaviour and management implications.

Reference

Poszig, Dorte. 1998. Algonquin Park Wolf Research Unpublished Data for Masters Thesis. School of Urban and Regional Planning, University of Waterloo.