

Home ranges in Svalbard reindeer

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Introduction

Reindeer and caribou (*Rangifer tarandus*) are typically migratory and seasonally nomadic. Many continental populations, for example, travel between distinct summer and winter ranges which may lie hundreds of km apart. Others, whose summer and winter ranges are contiguous, also range extensively, moving not only seasonally but also within seasons in response to local changes in the quality and abundance of forage, wind, predators and insects. Much less is known about the movements of animals belonging to island populations. This abstract describes seasonal and annual movements of Svalbard reindeer (*R. t. platyrhynchus*) on the island of Spitsbergen.

Methods

Nine Svalbard reindeer were captured and individually marked in Adventdalen, Spitsbergen, between 1977 and 1982 (Tyler and Øritsland, 1989). Four ear-tagged animals (one male and three females) were followed extensively for

between 4 and 7 years. Five radio-collared females were followed intensively by snowmobile and on foot for seven months (Feb.-Aug.) in 1982.

Results

Ear-tagged animals were consistently found within the same small parts of the study area in corresponding seasons in different years. Radio-collared females were sedentary within seasons, travelling, on average, less than 0.7 km per day in both summer and winter. Interestingly, they confined their movements within small areas for several weeks or even months at a time in both summer and winter. One female, for example, remained within 1 500 m of the spot where she was caught and marked for three months during winter.

Conclusions

Svalbard reindeer do not undertake long seasonal migrations like mainland reindeer and caribou, nor are they nomadic within seasons. In-

stead, individual animals appear normally to confine their daily routine activities within small, seasonal home ranges. Some animals display long-term fidelity to particular areas, returning to these season by season over periods of several years. Taken together, these observations suggest that individual reindeer adopt particular seasonal home ranges more than once, returning to them season by season, year by year, perhaps even for life. The size and duration of occupancy of particular home ranges is individually highly variable (Tyler and Øritsland, 1989).

Acknowledgements

This study was supported by the Norwegian MAB (UNESCO Programme on Man and the Biosphere) project in Svalbard. A Special Research Grant from the Eco-Sciences Division of NATO to N.J.C.T. provided additional support.

Reference

Tyler, N.J.C. and Øritsland, N.A. 1989. Why don't Svalbard reindeer migrate? - *Holarctic Ecology* 12:369-376.