An integrated population model for Svalbard reindeer.

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Abstract: An integrated population model for Svalbard reindeer (*Rangifer tarandus platyrhynchus*) will be presented. This model combines individual mark-recapture data with census data and harvesting data within a Bayesian framework. Both demographic and environmental stochasticity are incorporated, as is age structure. The model allows us to estimate age structure from census data that is not age-structured, as well as estimating survival for an age class for which we have no individual survival data, and facilitates the analysis of age structure effects on population growth. Survival and fecundity estimates, as well as estimates of population size and age structure, will be presented and compared to independent population counts from the same study area.