

DALL SHEEP POPULATION FLUCTUATIONS AND INTERPRETATION OF AERIAL SURVEY DATA

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Abstract: Survey flights over several Alaskan Dall sheep ranges in 1991 indicated reduced population numbers. In one case, hunting opportunities were subsequently restricted. Without additional data such as population age structures or population production and recruitment histories, managers are limited to use of aerial survey data. Interpretation of aerial survey data for Dall sheep is a specialized skill which may not be obvious to managers without considerable experience in Dall sheep biology. The purposes of this paper are to suggest a course of analysis for aerial survey data and to suggest a model which may evaluate the likelihood that anomalies in age structure are responsible for seemingly violent population fluctuations that may or may not require management actions.