

(60) EFFECTS OF FOOD-LIMITATION ON AN IRRUPTIVE, HIGH-DENSITY MOOSE POPULATION ON THE GUSTAVUS FORELANDS, ALASKA

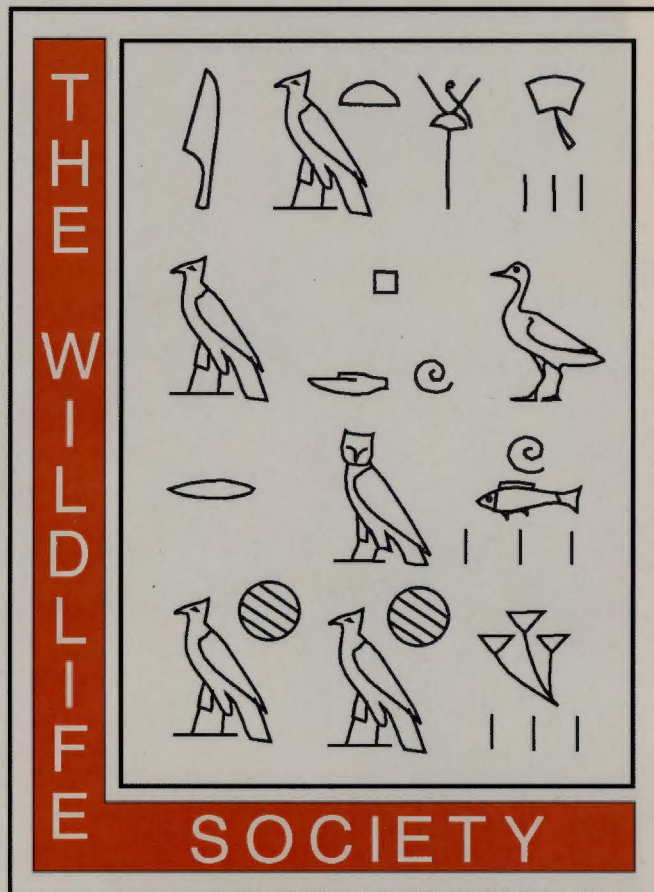
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Abstract: Moose populations in southeastern Alaska have a relatively short history as a result of recent de-glaciation of regional landscapes. The colonization trajectories of such populations have typically been characterized by irruptive fluctuations. That is, following a period of initial establishment, populations have generally increased rapidly (possibly exceeding habitat carrying capacity) and subsequently declined precipitously. Unfortunately, due to temporal rarity of such occurrences, detailed studies of irruptive moose populations in southeastern Alaska have not been conducted. In this presentation, we describe preliminary findings from an ongoing study focused on detailing individual- and population-level responses to food-limitation in an irruptive, high-density (ca. 3.9 moose/km²) moose population inhabiting the Gustavus forelands. We document high levels of forage utilization (54–62% biomass removal of preferred forages) over a 5-year period in which the population roughly doubled. In addition, we compare measures of moose body condition (adult female rump fat thickness) and population productivity (pregnancy and twinning rates) to other populations throughout Alaska. We also describe efforts to link changes in individual overwinter body condition to correlates of habitat quality. The management and conservation challenges associated with irruptive, high-density moose populations are discussed.



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