
(52) SIGHTABILITY, HABITAT SELECTION, AND SEXUAL SEGREGATION OF MOOSE: IMPLICATIONS FOR MANAGEMENT

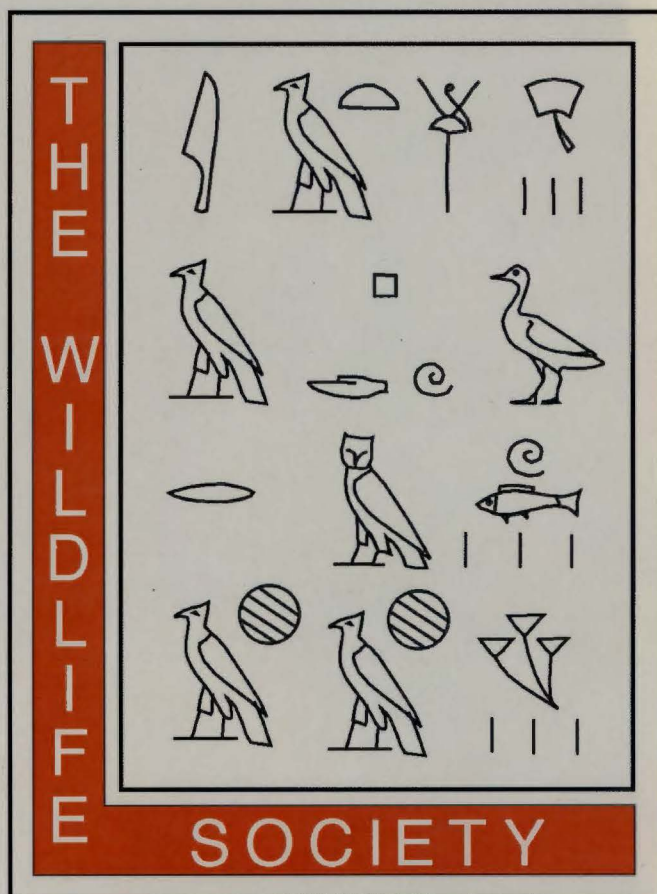
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Abstract: Precise and accurate data on population size and sex and age composition are critical for managing moose (*Alces alces*) populations. Many factors affect the accuracy and precision of aerial counts of moose. The major problem is counting moose in forested habitat is accounting for missed animals (i.e., "sightability"). Confounding this issue is that segregation by sex and age may result in different sighting probabilities between classes of moose. Sightability models, based on trials, relate the probability of observing an animal, or groups of animals, to attributes such as group size, habitat type, and activity. We captured and radiocollared 58 adult moose (36 cows and 22 bulls) on the Yakutat Forelands of the Tongass National Forest, Alaska, over the course of 2 years. We conducted 90 sightability trials during the winter of 2003–2004. We used logistic regression to test for variables significantly affecting sightability of moose, and used these variables to develop a model for estimating the population size from aerial survey data. We also used logistic regression to test for differences in habitats selected between the sexes at different times of year. Finally, we used multi-response permutation procedures to test for spatial segregation of the sexes.



PREDATOR-PREY 2004

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MAY 1-3, 2004

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