

**(12) TWENTY-PLUS YEARS OF POPULATION AND HABITAT STUDIES THAT SUPPORT PREDATOR CONTROL TO INCREASE MOOSE HARVEST IN RURAL INTERIOR ALASKA**

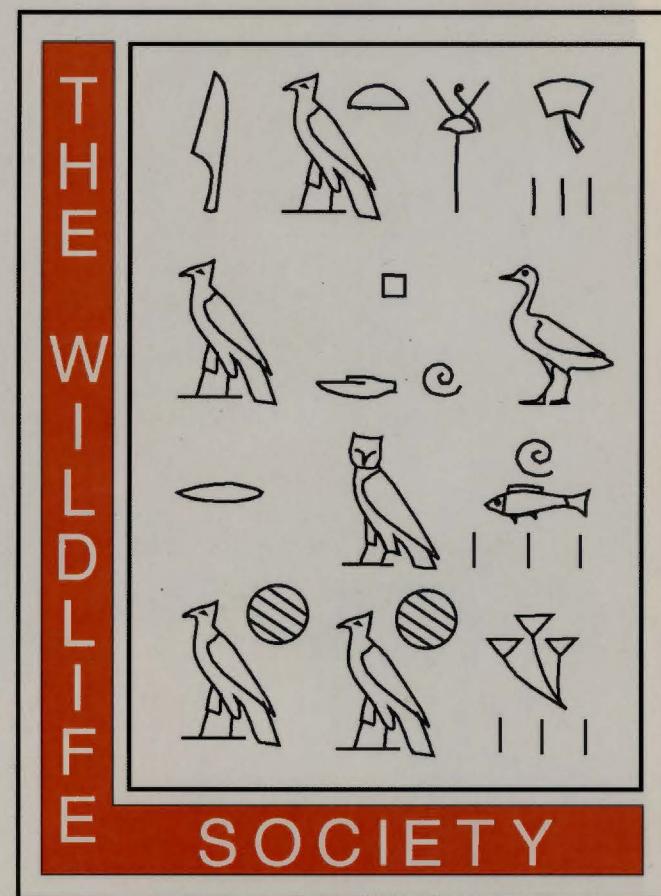
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*Abstract:* Empirical data show that moose in rural Interior Alaska live at relatively low densities because of high, largely additive predation from black and grizzly bears and wolves (and a lack of alternate large prey). Sustainable harvests of moose are limited to 4–15 moose/1000 km<sup>2</sup> despite habitat that is adequate to support higher moose densities (indicated by twinning rates, bodyweights, diet, and browse characteristics). In contrast, after wolves were strongly controlled (56–79% reduction, 1976–1982) in 13,044 km<sup>2</sup> near Fairbanks, moose: (1) increased 5-fold and continue to increase, (2) now live at >5-fold higher density and sustain >5-fold higher harvest density than respective rural Interior averages, (3) have supported >7% of the statewide reported moose harvest since 1995 in <1% of the state, and (4) support higher wolf densities than rural areas but with several times more moose per wolf. Habitat declined and is relatively poor in this 13,044 km<sup>2</sup> (lowest twinning rates, lowest bodyweights, highest browse removal rates and prevalence of brooming, and reduced diet quality), yet calf survival is the highest among 6 calf mortality studies in the Interior because predation is relatively low. In most rural systems, grizzly and/or black bears limited moose by killing large proportions of moose calves; calf survival increased significantly following translocation or diversionary feeding of bears. Wolves were significant secondary predators in most rural systems; case histories indicate that only prolonged wolf control elevated moose harvest. No data support the theory that, following significant predator control, sensitive nutritional feedback keeps moose density low. Rather, near Fairbanks, nutritional feedback began 10 years after the initiation of strong predator control (1976–1982) but has not yet halted population growth. Results of this wolf control offer 2 current challenges: (1) garnering support from fire-fighting agencies to rejuvenate habitat, and (2) garnering support for and administering substantial harvests of moose cows and calves.



# PREDATOR-PREY 2004

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## Program & Abstracts

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