

# The Role of Hunter Education, Experience, and Regulation on Mountain Goat Harvest Patterns in Alaska: Implications for Conservation and Hunter Ethics

TIMOTHY J. SPIVEY, Alaska Dept. of Fish and Game, Anchorage, AK, 99518, USA; [timothy.spivey@alaska.gov](mailto:timothy.spivey@alaska.gov)

JEFF JEMISON<sup>1</sup>, Alaska Dept. of Fish and Game, Juneau, AK, 99801, USA

KEVIN S. WHITE, University of Alaska Southeast, Juneau, AK, 99801, USA

**ABSTRACT:** Mountain goats (*Oreamnos americanus*) have relatively low survival and reproductive rates relative to other northern ungulates requiring careful management to avoid overharvest and population declines. While wildlife managers discourage female harvest, it remains legal in most jurisdictions and incorrect identification in the field often results in unintentional female (nannie) harvest. Reducing female harvest is desirable to increase population resilience and optimize hunting opportunity but knowledge is lacking on how to mitigate female harvest. We analyzed harvest (1998–2019) and follow-up hunter interview data (2008–2011) collected throughout Alaska to understand harvest patterns and inform strategies for reducing female harvest. Overall, female harvest was spatially and temporally variable with area- and year-specific proportions of female harvest ranging between 4–61%. Follow-up hunter interviews revealed that hunters who unintentionally harvested females were less experienced but did not necessarily spend less time observing animals in the field, use lower quality optics, or take longer shots. Surprisingly, of the hunters interviewed, 23% (n = 41/181) took shots longer than 300 meters with a maximum shot distance exceeding 600 meters; an observation that may have important hunter ethics and management implications. We also determined that 42% of females were harvested intentionally; a finding that suggests stricter harvest regulations are needed to meaningfully reduce female harvest, where appropriate. Hunter interview data collected during the initial 4 years (2008–2011) did not reveal an effect of educational materials, however hunter harvest data analyzed over a 12-year period (2008–2019) indicated a 7% decline in female harvest, as compared to the preceding 10-year period (1998–2007). Lastly, we examined 3 different management case studies utilizing various regulatory penalties for female harvest, each resulting in reduced female harvest. This suggests that the combination of education and regulatory incentives can promote sustainable harvest, further ensuring population viability and resilience.

*Biennial Symposium of the Northern Wild Sheep and Goat Council 24:103; 2024*

**KEYWORDS:** Alaska, hunter education, hunter harvest, female harvest, mountain goat (*Oreamnos americanus*), sustainable harvest, wildlife conservation.

---

<sup>1</sup> Deceased.