



Monitoring of hunted mountain goat populations in west-central Alberta: insights gained over more than four decades.

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ABSTRACT: Mountain goat (*Oreamnos americanus*) populations were monitored in west-central Alberta from 1971 to 2017. During the initial period (1971 – 1988) most populations were subjected to an either sex harvest regime of 5% of minimum helicopter counts. Following a series of years of declining numbers, the hunting season was closed in 1988 and remained so until 2000. During this period a kid mortality study was conducted, a provincial management plan was prepared and some, but not all, herds recovered. A hunting season was re-instituted in 2000 under a more conservative harvest regime of 1-2% of observed animals with efforts to focus harvest on males only. Over the last 10 years, both hunted and unhunted herds have again declined even under a very conservative hunting season. Concurrently, poor recruitment and decreased survival of adults has resulted in a strong decline of the unhunted Caw Ridge population. These declines have coincided with harsh winters combined with higher densities of mountain goats and increasing densities of mountain lions (*Puma concolor*). The implication of high levels of fecal cortisol in nannies monitored at Caw Ridge (long-term study area) are also discussed.

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KEYWORDS Mountain goat; *Oreamnos americanus*; harvest; demographics; population trends; predation; Alberta.