Recovery of a Bighorn Sheep Population in the South Okanagan following a Disease Die-Off

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The greatest threats to the conservation of Bighorn Sheep (Ovis canadensis) populations in North America are disease and habitat loss. An interdisciplinary team of academic researchers, wildlife managers, biologists and First Nations is investigating how these threats affect a Bighorn Sheep population in British Columbia's southern interior. California Bighorn Sheep in the south Okanagan suffered an all-age pneumonia die-off in 1999/2000 that killed 65-70% of the population, reducing it from 430 to about 150 sheep. In response to the die-off, the recovery partnership developed objectives for the long-term restoration of the south Okanagan population, which ultimately aims for a population of 400 animals. The recovery team investigated the events leading up to the die-off, tracked the direction of disease transmission, and monitored population dynamics since the pneumonia epizootic. Conditions leading up to the die-off included poor habitat and population quality and contact between wild sheep and domestic sheep. The recovery team hypothesized that the main causes of the epizootic were habitat deterioration and presence of domestic sheep within wild sheep range. Highlighted in our recovery efforts are the successes and challenges of stakeholder collaboration and public participation in the recovery of declining wildlife populations. It is important to engage the public in the early stages of recovery and build relationships to help address issues such as habitat quality, sheep movements over a complex patchwork of land ownership, and mitigation of disease risk on private lands. We are observing a population recovery faster than we expected. Unlike other populations affected by pneumonia epizootics, lamb production and recruitment have been high and it appears that disease did not have long-lasting negative effects on lamb survival. Lamb recruitment in the winters of 2002 and 2003 was 27 and 37 lambs per 100 ewes. The population has increased to 250 sheep in autumn 2003. Despite positive recovery results in the short-term, the fundamental problem of deteriorating habitat quality remains largely to be addressed. The Bighorn Sheep Recovery Project represents a partnership that can develop and implement a successful recovery strategy while including scientific, management, and local interests with all funding levels.