A Six-Month Analysis of the Desert Bighorn Sheep (Ovis canadensis nelsoni) Translocation Project in the Santa Catalina Mountain Range

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Desert Bighorn Sheep thrived in the Santa Catalina Mountains of Arizona until twenty years ago, when the population became extinct from causes yet undetermined. A multi-group restoration effort began on 11/18/14 when thirty-one bighorn sheep from two populations were reintroduced back into the area. This project measured the viability of the translocated population, analyzing their mobility, habitat, herding, and survival rate. The initial release of the thirty-one sheep was observed and their radio-collar data was tracked from 11/18/13 to 04/21/14. Individuals initially scattered 27.78 km, none in conjunction with their herd, with many heading into areas considered “poor” for habitat quality and predation, and with males striving for mountain ridges. By week four, bighorns began entering regions classified as better for survival, and by week twelve a Wilcoxon Signed-ranks test indicated their were significant reductions in the distances traveled ($M=3.114$ km, $SD=3.079$; $Z = -1.98$, $p < .05$) and elevations explored ($M=307.863$km, $SD=285.342$; $Z = -3.061$, $p < .01$). However, by week twelve, there were sixteen mortalities due to myopathy and predation. Mortalities slowed only after three predators (mountain lions) known to be responsible for the deaths were removed. By the final two weeks of this study, all sheep had moved to within 5km of each other with females gathering in areas rated as “good” quality habitat. Four births were documented, and to this date, all survive. The rate of survival of this population remains the topic for continuous study. The data from this study may contribute to whether the controversial bighorn reintroduction scheduled for November 2015, should continue as planned.

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