
****ESTIMATING MIGRATORY—RESIDENT ELK POPULATIONS AND JUVENILE RECRUITMENT USING REMOTE CAMERAS IN THE CANADIAN ROCKIES (POSTER)**

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The use of remote cameras has been at the forefront of debate in the sphere of wildlife population estimates. There is research suggesting camera surveys underestimate ungulate populations, however, with a second component of estimation, such as years of GPS points from collared elk, modeling a population and estimating resident elk calf recruitment and juvenile survival can become quantifiable. During the summer of 2016 I initiated an undergraduate research project under Dr. Mark Hebblewhite's ungulate ecology lab. Over the span of the summer, I deployed 28 remote cameras in a previously sampled large carnivore occupancy grid. The study area is the Ya Ha Tinda Ranch, adjacent to Banff National Park, Alberta. The purpose of my project is to estimate migratory—resident elk populations and juvenile recruitment utilizing remote cameras. Estimating ungulate populations is technical, expensive, and often a dangerous (helicopter surveys) task. As the ecology community evolves into safer, less invasive and more cost effective methods for population estimates, it is up to the wildlife research community to produce evidence that such methods are effective. My research is attempting to do just that with 88 collared individuals inhabiting the study area, *spatially explicit mark re-sight models* can be quantifiable in measuring non-uniquely identifiable ungulate populations across a landscape. The potential scientific impacts and applications resulting from my research project would be significant. A publication detailing how an elk population— with collared and uncollared individuals can be estimated strictly with remote wildlife cameras and would be a contribution in the desired direction of population ecology for less invasive, yet highly accurate and efficient population studies.