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**HABITAT FRAGMENTATION IN THE WASATCH MOUNTAIN RANGE:
UNDERSTANDING THE ROLE OF I-80 ON MIGRATORY MAMMALS AND
COMMUNITY COMPOSITION USING CAMERA TRAPS**

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Habitat fragmentation caused by roads is a growing problem for conservationists as urbanization expands and the need for transit ensues. While there are many factors leading to biodiversity declines, edge effects caused by fragmentation play a major role in species extinctions. Edge effects not only reduce viable habitat size, but they also prevent migration between habitat sites. This has impacts on all species but can especially affect birds and large mammals. Elk (*Cervus canadensis*), for example, are particularly affected by fragmentation due to their need of at least 2 different habitats throughout the year. Large roads have shown to be an obstacle for elk migration, though more research is needed to determine the extent of this barrier in a mountainous environment. Over the course of 6-months, from August 2019-February 2020, 28 camera sites were set up in reference to highway I-80 in Salt Lake City, Utah. 18 sites were placed within 500 meters of the highway, on both the North and South sides. These sites were spaced at 5 km intervals, both east and west of the recently established Wildlife Overpass. The remaining 10 sites were placed in adjacent canyons both North and South of I-80. For one-month periods, these heat and motion activated cameras monitored sites 24 hours per day. Preliminary results echo other research that demonstrates the importance of Red Butte Canyon Research Natural Area, a protected habitat North of I-80 that is only accessible to researchers. Its protection has created a habitat virtually free of human impact, which can serve as a source population for the rest of the Wasatch Mountain Range (WMR). This may help explain why community composition of the northern sites is more diverse. These results suggest conservationists must focus on Red Butte, and protected areas in particular, as a critical component to protecting ecosystems in the Wasatch and abroad, especially in a time where habitat is being divided and degraded at a growing rate.