Arizona Trail Association & Arizona Center for Nature Conservation

Wildlife and Recreation Monitoring Project

2020 Annual Report

Introduction: The Arizona Trail represents a complete transect of Arizona and its many vegetation types, wildlife communities, and geomorphic complexities. The diversity of habitat types, elevational range and temperature along the trail allows for an analysis of the correlation in species occurrence in respect to these variables as well as human activity.

Objective: On year 3 of a multi-year and multi-disciplinary study, trail cameras were placed along passages of the Arizona Trail with the purpose of answering the following questions:

1. Quantity of people and type of recreation along these passages.

2. What natural factors are influencing species occupancy rates across the state; is there a correlation between wildlife site occupancy and human use?

3. What factors are working to improve human wildlife co-occurrence? How can we improve the Arizona Trail to promote sustainable recreation and wildlife conservation?

2020 Collection: Cameras were retrieved from the following passages:

Passage #	Passage Name	# of Photos
2	Canelo East	22,226
7	Las Cienegas	4,673
15	Tortilla Flats	11,200
16	Gila	49,802
21	Pine Mountain	22,226
31	Walnut Canyon	35,143
34	San Francisco Peaks	64,021

Total # of photos captured: 209,291

2020 Deployment: Cameras were deployed on the following passages:

Passage #	Name of Passage	# of Cameras Deployed
1	Huachuca Mountains	5
9	Rincon Mountains	4
11	Santa Catalina Mountains	2
12	Oracle Ridge	2
18	Reavis Canyon	4
19	Superstition Wilderness	4
27	Blue Ridge	4
29	Mormon Lake	4
28	Happy Jack	4
31	Walnut Canyon	4

Total number of cameras deployed: 37 cameras

Data analysis: The results of this project will allow us to monitor change over time and begin correlating wildlife and human use of these regions annually and seasonally. A more detailed summary of wildlife, and trail use will be provided upon completion of photo analysis.

Recreation: Recreation is being divided into categories of day hiker, thru-hiker, day cyclist, thru-cyclist, and equestrian. We are currently in the process of sorting images into categories that will be used for data analysis. While in the stages of sorting there has been a clear increase in trail use during the COVID pandemic, specifically on the San Francisco Peaks Passage in comparison to 2019 data.

To determine day hikers and cyclist versus thru-hikers and thru-cyclists, the type and quantity of gear on individuals was used.

Errors could result from the first members of groups triggering the camera, and therefore being the only individuals captured within the group during the period of time indicated for the photo burst.

Wildlife: Wildlife data is organized and identified to species level, and further separated into number of individuals in a single frame of a photo burst. Presence and absence of species, as well as relative abundance will be measured, and compared to years prior and habitat type from the different passages.

As with recreation data, errors could occur with individuals in a group triggering the camera before all individuals are in frame for the photo burst. All data that is sorted will then be checked by a second expert.