Abstract

Urbanization is an ever-growing problem that has led to habitat loss, habitat degradation, the spread of diseases, and so much more. Wildlife are slowly being pushed out of their historic home ranges, increasing human-wildlife conflicts. As a result, there has been a push to restore lost habitat and mitigate habitat destruction. However, this can be made tricky when managers are unaware of what makes a habitat suitable. Thus, there is an immediate need to determine ways of identifying environments favored by many species and implement conservation plans. Conducting present/absence surveys on animals and placing the sightings on a map is one way of determining where a species can be found. The purpose of this research will be to study the effects of urbanization on raccoons within parks in the Fort Worth area. Parks are valuable habitats for organisms in an urban environment as these parks have resources not found in highly human-disturbed areas such as neighborhoods or shopping districts. We will be comparing the raccoon sightings from iNatrualist, a citizen science platform, to different parks in the surrounding area to determine habitat suitability. We used GIS data from iNatrualist to compare raccoon sightings to habitat type. Habitat was divided into four categories: concrete, open field, water, and field with trees. Pictures of the study site were used to train Mulrispec, a multispectral image data analysis system, to identify areas that meet the habitat types. The distribution data was overlaid on top of the new map. Raccoon sightings were compared to habitat types to determine habitat preference. By identifying suitable habitats, we hope to learn how raccoons and other urban organisms are adapting to rising urbanization.preference. By identifying suitable habitats, we hope to learn how raccoons and other urban organisms are adapting to rising

The objective of this research is to analyze the habitats of local wild life within parks of the Fort Worth Area.

Background

Data & Methods

Results and Discussion

Urbanization is an ever-growing problem that has led to habitat loss, habitat degradation, the spread of diseases, and so much more. Wildlife are slowly being pushed out of their historic home ranges, increasing human-wildlife conflicts. As a result, there has been a push to restore lost habitat and mitigate habitat destruction. However, this can be made tricky when managers are unaware of what makes a habitat suitable. Thus, there is an immediate need to determine ways of identifying environments favored by many species and implement conservation plans. Conducting present/absence surveys on animals and placing the sightings on a map is one way of determining where a species can be found. The purpose of this research will be to study the effects of urbanization on raccoons within parks in the Fort Worth area. Parks are valuable habitats for organisms in an urban environment as these parks have resources not found in highly human-disturbed areas such as neighborhoods or shopping districts. We will be comparing the raccoon sightings from iNatrualist, a citizen science platform, to different parks in the surrounding area to determine habitat suitability. We used GIS data from iNatrualist to compare raccoon sightings to habitat type. Habitat was divided into four categories: concrete, open field, water, and field with trees. Pictures of the study site were used to train Mulrispec, a multispectral image data analysis system, to identify areas that meet the habitat types. The distribution data was overlaid on top of the new map. Raccoon sightings were compared to habitat types to determine habitat preference. By identifying suitable habitats, we hope to learn how raccoons and other urban organisms are adapting to rising urbanization.preference. By identifying suitable habitats, we hope to learn how raccoons and other urban organisms are adapting to rising urbanization.

Conclusion