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Nature of the Problem

The North Texas communities of Frisco, Plano, Farmers Branch and Lewisville are among the fastest growing in the nation. Residential, retail, and commercial development have swallowed up what was open space and farmland less than ten years ago. Due to this rapid expansion, the wildlife populations of this region are being pushed out of natural habitat or being forced to co-exist with humans in an uneasy arrangement. To this point, the availability of inexpensive land in these Dallas suburbs has allowed for the explosion of development with little regard for the impacts upon the creatures that live there. Yet, an oasis does exist, albeit a small one, among the sprawl that now engulfs Lake Lewisville.

The Lewisville Lake Environmental Learning Area is an 1800 acre preserve situated beneath the Lewisville Dam in the cross timbers/ prairie region of north Texas. The property encompasses a diversity of habitat including prairie, bottomland forest, transitional shrub land, and aquatic environments. LLELA is home to a multitude of wildlife including coyotes, white-tailed deer, and peregrine falcons. The facility is managed by a consortium including the University of North Texas, The Army Corps of Engineers, Texas A&M University, Texas Women's University, and the Lewisville Independent School District. With several hiking trails and a service awning, the area is frequented by schools, scouts, and college students. Projects in prescribed fire and reforestation are currently underway at LLELA.

Although LLELA is situated in what once was the path of the Trinity River, this open space provides a glimpse of the landscape as it would have appeared prior to modern human settlement. By conducting an inventory of the non-human animal and specifically mammals that live in LLELA, a better understanding can be achieved as to the spatial needs and distribution of wildlife native to north Texas. Through the knowledge gained by such a survey, community planners in similar parts of the region can develop a vision for land use that is consistent with the needs of all creatures that occupy this land.

Research Objectives

What north Texas mammals have been successful in adapting to the habitat infringement of urban sprawl?

How are these mammals distributed within the remaining pockets of open space?

What impact does the recreational use of reservoirs have upon living in the limited open space?

What corridors are the existing mammal populations using within the LLELA preserve

for feeding, hunting and mating?

Which habitat types are most utilized by the mammal populations?

How do fluctuations in water levels effect mammal populations that live nearby?

Such a survey will require the services of college and graduate level students, professors, and animal tracking experts, Specifically, this project hopes to provide a research and internship opportunity for Dallas based graduate students enrolled in Texas A&M's distance learning program. Graduates and undergraduates from the University of North Texas will be sought out as well as mature Boy and Girl Scouts seeking a volunteer experience to complete badge requirements. Training of student volunteers in tracking and other survey techniques will take place during the summer of 2003 and the official beginning of the survey is slated for August 2003.

Researchers will on a weekly basis employ a variety of species specific detection techniques to complete and accurate survey of the mammal inventory of the Lewisville Lake Environmental Learning Area. Such methods will include:

- Tracking of mammals using footprint, scat, and other methods of species identification.
- Remote still cameras
- Scratch pads
- Scent stations
- Aerial Identification
- Smoked paper

Following the six-month period of data collection, all information regarding species, location, and frequency will be assembled in a database. A mid-project and final report will be issued regarding successes, failures, and expected and surprising results. All researchers will be trained to and encouraged to share the findings of the report with students, community groups, and civic leaders as part of the LLELA outreach.

Intended Career Path Statement

To pursue a career in a government or Non-Governmental Organization that would allow for the influence of policy for the preservation of wildlife, habitat, and water resources.