

ABSTRACT

Uncontrolled populations of feral cats in urban settings have become of concern to public officials, wildlife scientists, animal rights advocates and the public in general due to the risks they pose to public health, urban wildlife, and esthetics. Solutions to the problem of unmanaged cat populations in cities have been limited in scope by the lack of actual data on feral cats and the urban geographic ranges they occupy. Full extent censuses and environmental analyses have not been collected or performed due to the resources allocations and costs involved. A method for collecting this data without the use of field crews and research summaries exists in the form of unused paper records. Past studies on the problem have used data mining of available records to model cat territories and densities (Aguilar and Farnworth 2012). This approach mitigates the cost while providing information regarding the distributions of these animals. This thesis investigates the spatial properties of feral cat populations in a large metropolitan area (Los Angeles, California) using a previously non-spatialized dataset as a proxy for concentrations of feral cats. The following case study explores two matters: 1) development of a workflow to create a spatial model of feral cat extents from geographic data brought into an analyzable format and 2) analysis of the model data to determine what, if any, variables are correlated with these distributions. The data used for the model were obtained from the City in the form of paper records and successfully imported into a Geographic Information System. Densities of applications were determined from the cleaned and geocoded records and concentrations of both raw density and patterns of clustering were mapped. Modeling of correlations found positive associations with population density and a weak negative correlation with median income. The analysis was assessed and future work on this type of data was considered.