

PanTrack: Analysis of Panther Locations and Movements through Time and Space

Jane Comiskey, University of Tennessee, Knoxville, TN

The ATLSS PanTrack tool is a software application designed to display georeferenced spatial animal movement data and perform statistical analyses of spatial patterns. This tool has been specifically customized to study and interpret radio-telemetry observations collected for the Florida panther endangered species recovery project. Features include subsetting location observations for specific time periods, spatial locations, or groups of individuals (e.g. gender, age, genetic makeup, or cause of death); viewing and analyzing observations over relevant habitat and land use maps; and composing user-controlled animations of selected panther movement sets. PANTRACK has been used to extract spatial and temporal patterns from panther movement data to (1) define behavior rules for an individual-based panther model, a process which requires detailed information about individuals and about how they interact with each other and with their environment; (2) explore questions vital to panther survival and recovery, such as habitat use, dispersal at maturity, and reproductive isolation; and (3) suggest possible explanations for recent panther geographical distributions in South Florida. Links between monitoring observations and panther management decisions could be strengthened by the availability of such a customized, user-friendly tool to organize and present monitoring data. This tool could be also be used in an educational setting to increase public awareness and understanding of target species.

Contact: Jane Comiskey, The Institute for Environmental Modeling, University of Tennessee, Knoxville, TN, 37996-1600, Phone: 865-974-0224, Fax: 865-974-3067, Email: ecomiske@tiem.utk.edu, Poster, Ecology and Ecological Modeling