

Abstract – TWS 2024

New Technology and Applications

Title: Advancements in Aerial Wildlife Tracking – Transforming Conservation Research with Multi-Track Radio Telemetry

Abstract: Wildlife monitoring presents unique challenges, particularly in forested landscapes and difficult environments, often necessitating the use of specialized technologies. Traditional single-frequency VHF radio telemetry systems have been the cornerstone of wildlife tracking for decades, including in habitats where GPS and satellite technologies are obstructed, but their limitations in efficiency and data collection have spurred the need for innovation. In this talk, we introduce the evolution of Multi-Track receiver technology, a groundbreaking advancement in VHF radio telemetry. This technology enables the simultaneous monitoring of 500 frequencies, eliminating the need for sequential scanning and revolutionizing aerial tracking capabilities. The Multi-Track receiver automatically determines positions without triangulation, facilitates tracking while in motion without the requirement for hovering and rotating, and stores position data for spatial analysis and longitudinal comparisons. Additionally, we explore the advantages of aerial tracking using aircraft or Unpiloted Aerial Vehicles (UAVs), highlighting the increased speed, safety, and efficiency of fieldwork, as well as the support for fully-automated searches. Through comparisons with other sensor technologies such as visual and thermal imagery, we demonstrate the efficacy of Multi-Track receivers in locating cryptic species. This talk provides insights into the transformative potential of advanced aerial tracking technologies for conservation research and wildlife management.