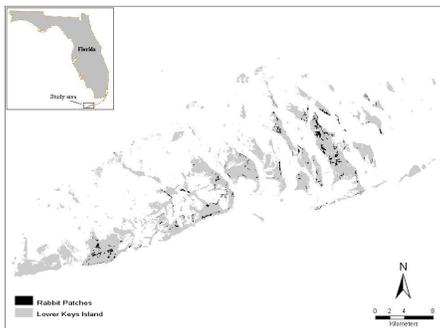


## Patuxent Wildlife Research Center

# Assessing Endangered Marsh Rabbit and Woodrat Habitat use and Predator Population Dynamics



Florida Keys National Wildlife Refuge



**The Challenge:** The Lower Keys marsh rabbit (*Sylvilagus palustris hefneri* - LKMR) and the Key Largo woodrat (*Neotoma floridana smalli* - KLWR) are two examples of endangered endemics of the Florida Keys that prove difficult to survey. Remote cameras and other noninvasive techniques have recently become popular in surveys to better detect elusive and rare mammals. Threats to both of these sub-species include habitat change, sea level rise, and introduced predators like feral cats (*Felis catus*) as well as native mesopredators that thrive in human-dominated landscapes. Current management objectives for LKMR recovery include assessing their co-occurrence with cats and other mesopredators, as well as modeling patch occupancy and restoration across their range. Management strategies for KLWR recovery have focused on the creation of artificial nest structures and predator removal, as both are suggested to increase their distribution.

**The Science:** Integrate noninvasive sampling and modeling procedures to estimate KLWR and LKMR occurrence and the impacts of native and non-native predator populations and other management strategies on their recovery.

**The Future:** Additional sampling techniques including hair and scat collection for potential genetic and stable isotope analyses. Develop new models to account for predators that cannot be uniquely identified and models to account for spatially clustered samples.