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**Using satellites to  
understand corridors and  
trans-boundary landscapes  
and integrate species  
management.**

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Collaborators  
Associate Professor Shelley Alexander  
Elisabeth van Stam**



# The Painted Dog Is A Unique Canid With No Close Relatives

No two dogs have the  
same coat pattern

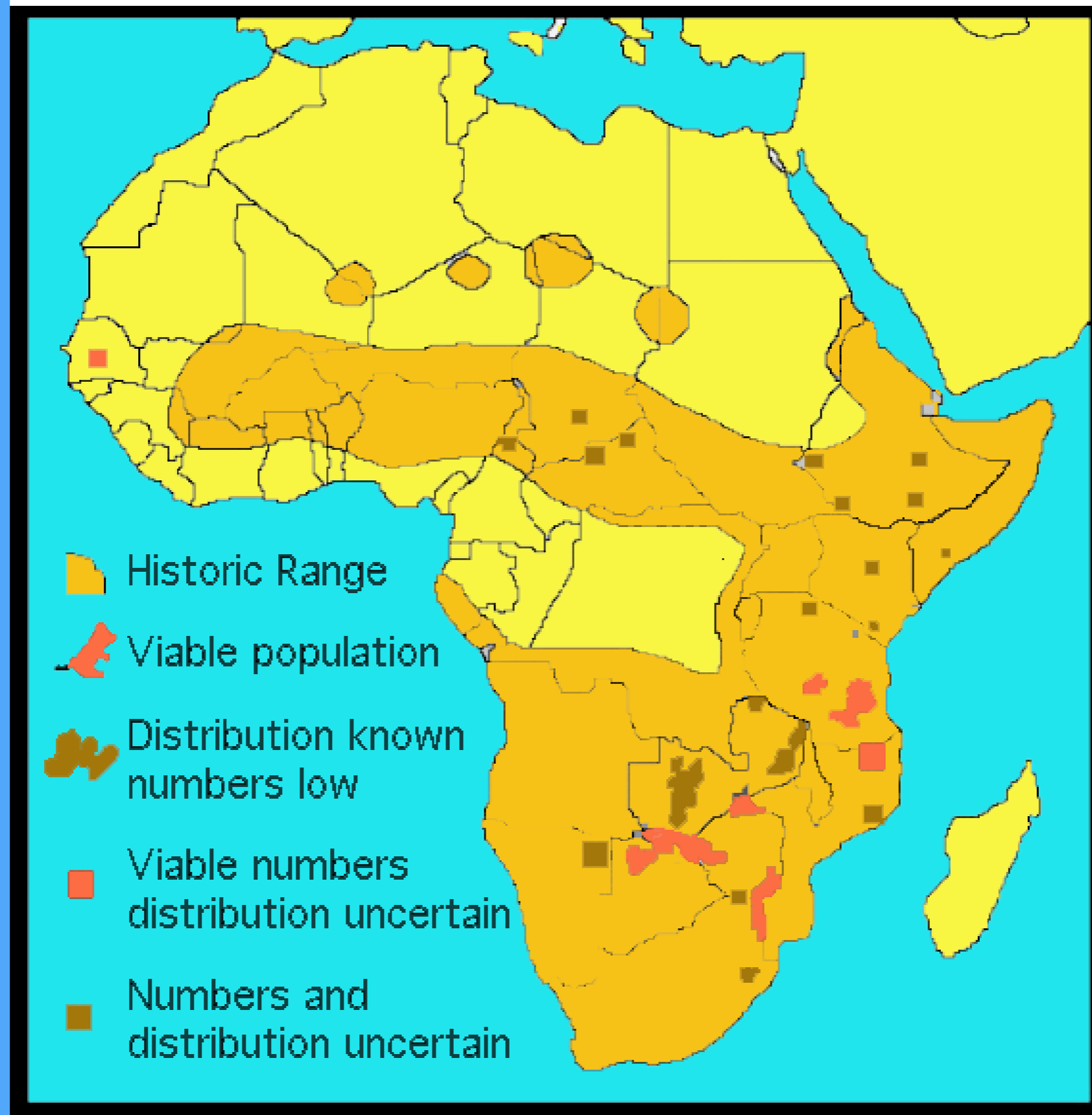
They only have four toes

They are not a true dog  
and stem from an ancient  
evolutionary line.

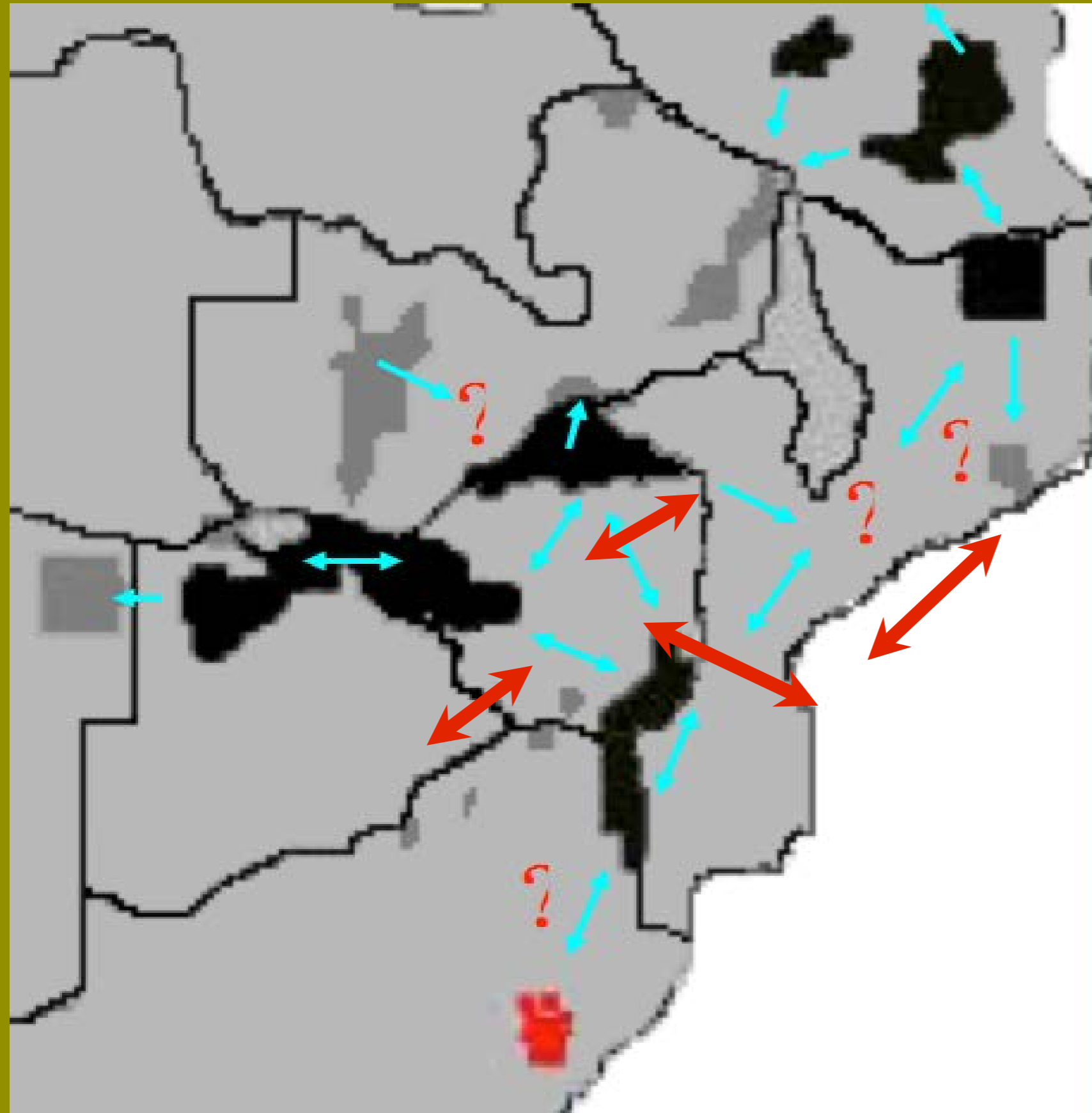








**Distribution and density of the  
Painted Dog *Lycaon pictus***



**Keystone populations**  
 Zimbabwe  
 Tanzania

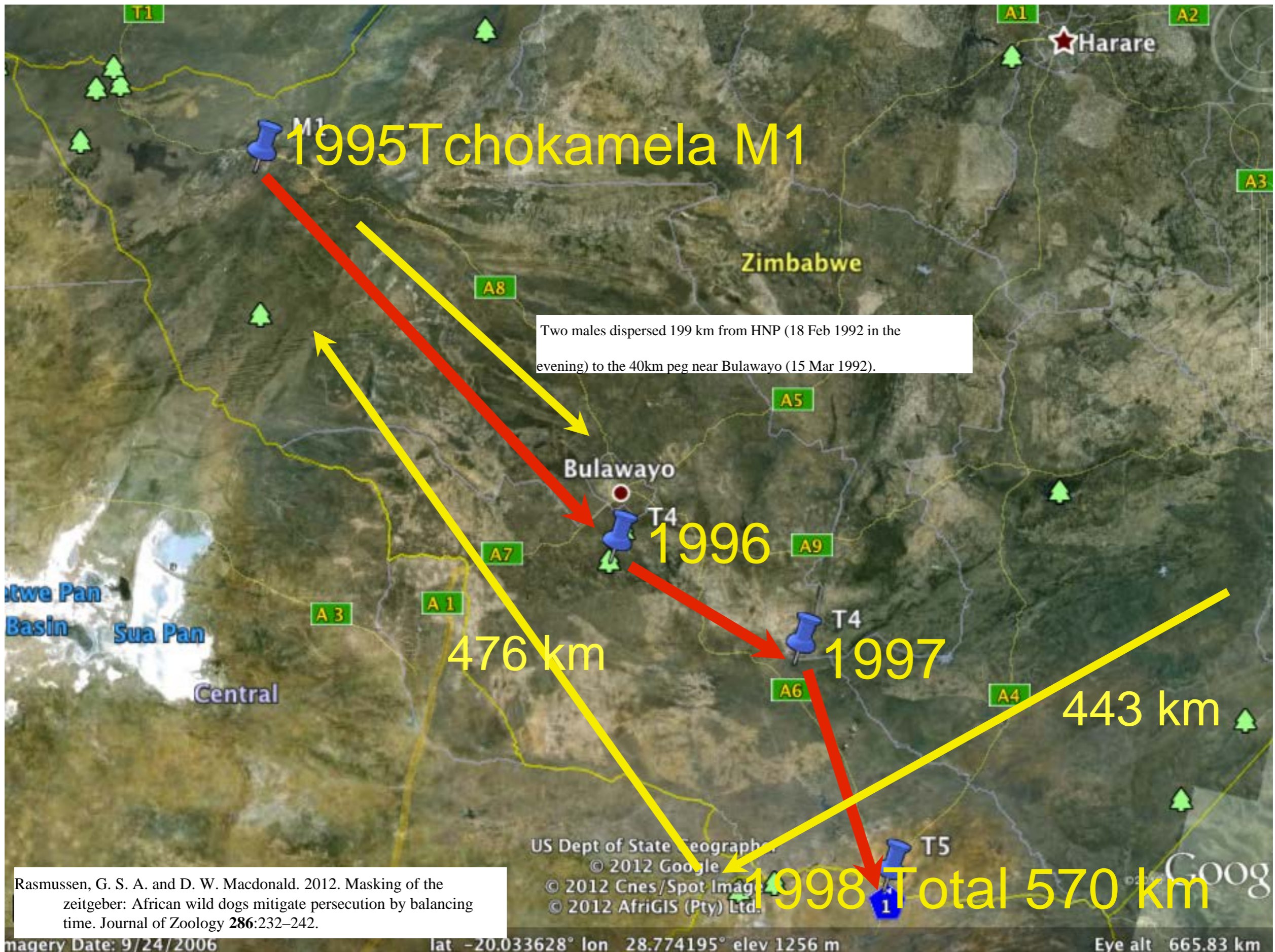
**Important source population**  
 Luangwa, Hluhwe, Niassa, Moremi, Kafue

**Bridging population**  
 Lower Zambezi, Luangwa, Mozambique



# IMPORTANT TRANSBOUNDARY INITIATIVES



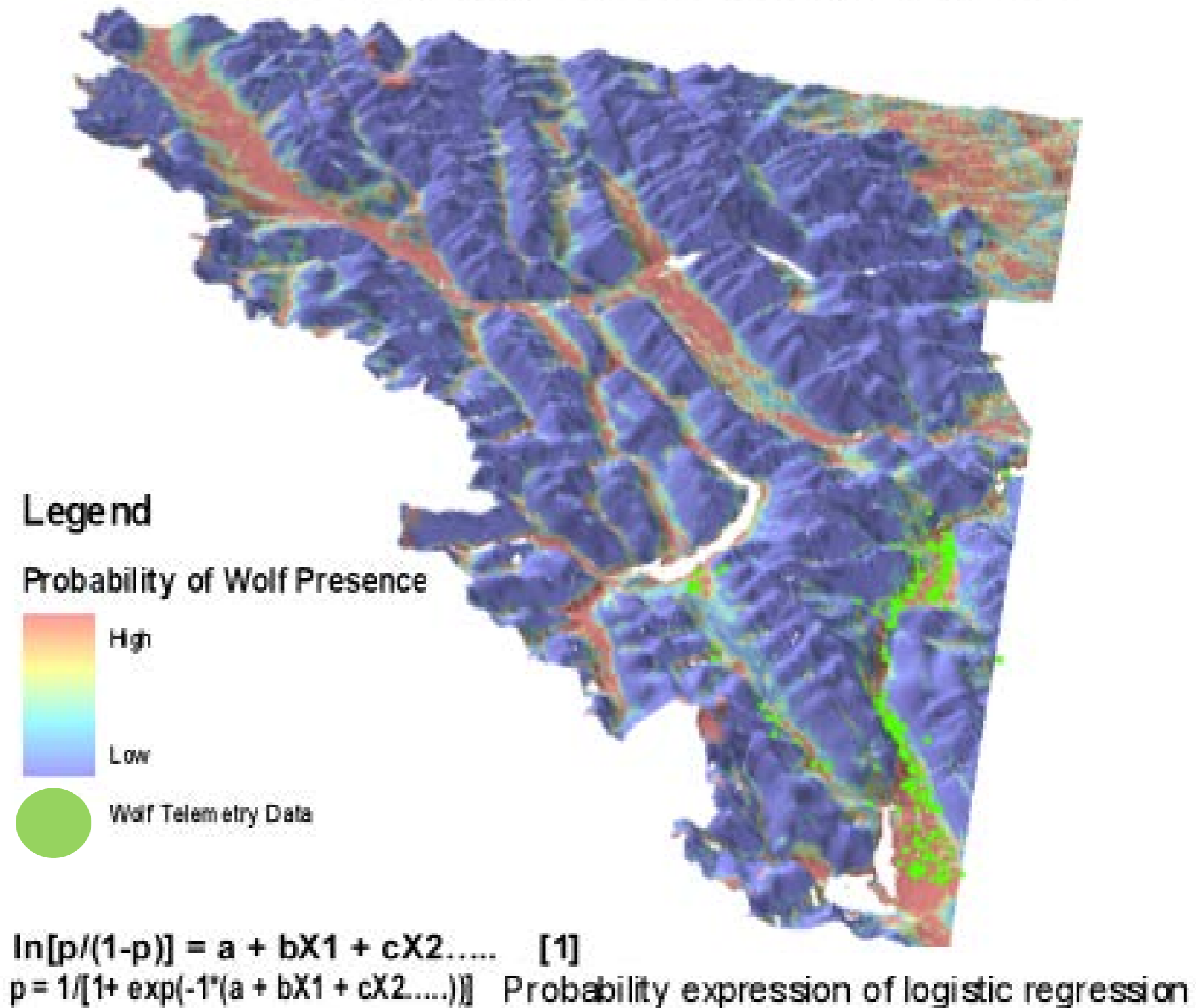


Rasmussen, G. S. A. and D. W. Macdonald. 2012. Masking of the zeitgeber: African wild dogs mitigate persecution by balancing time. *Journal of Zoology* **286**:232–242.

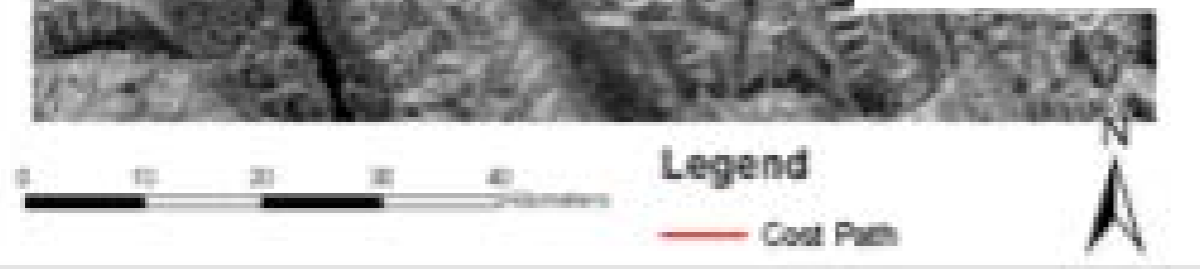
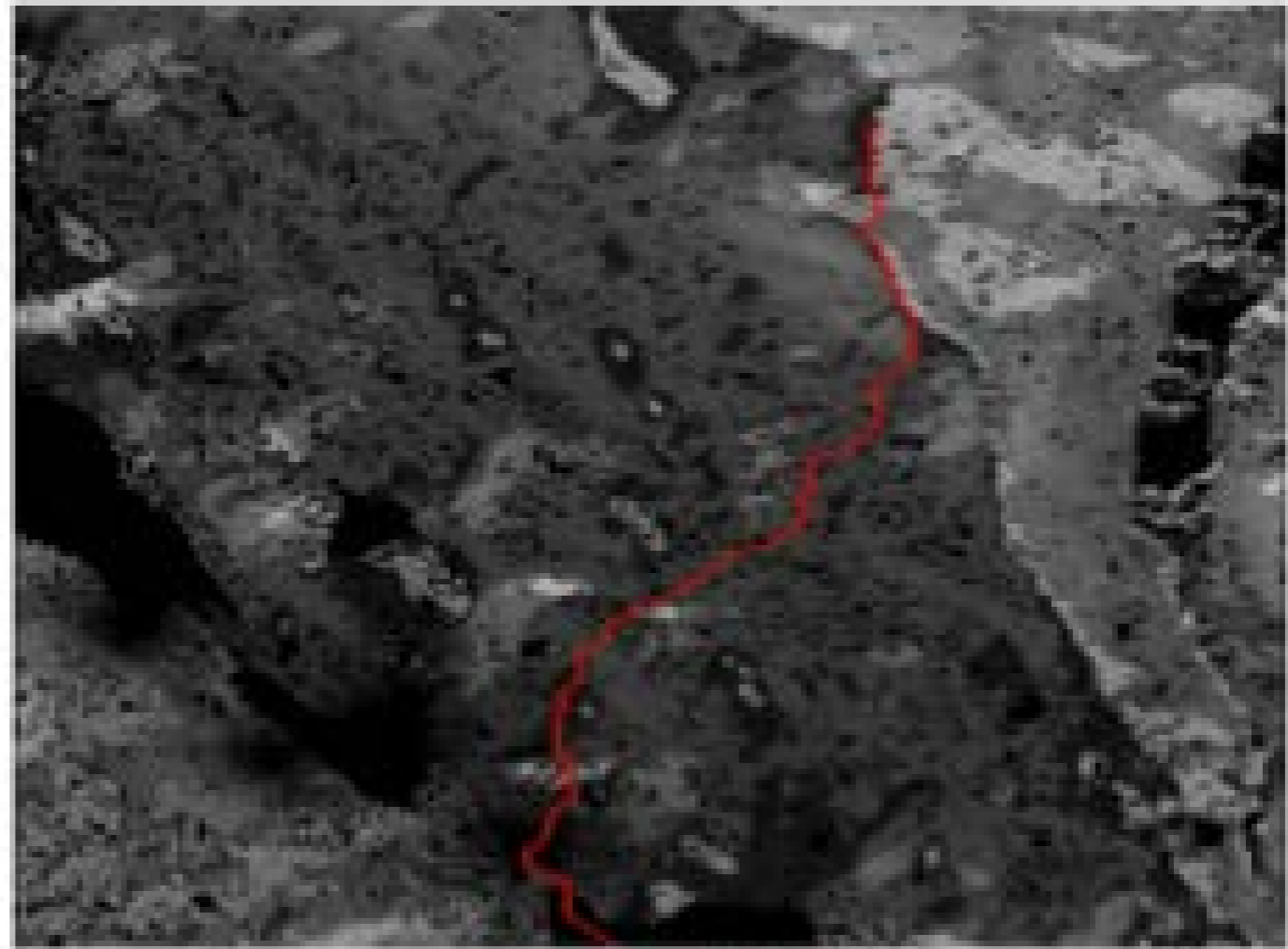
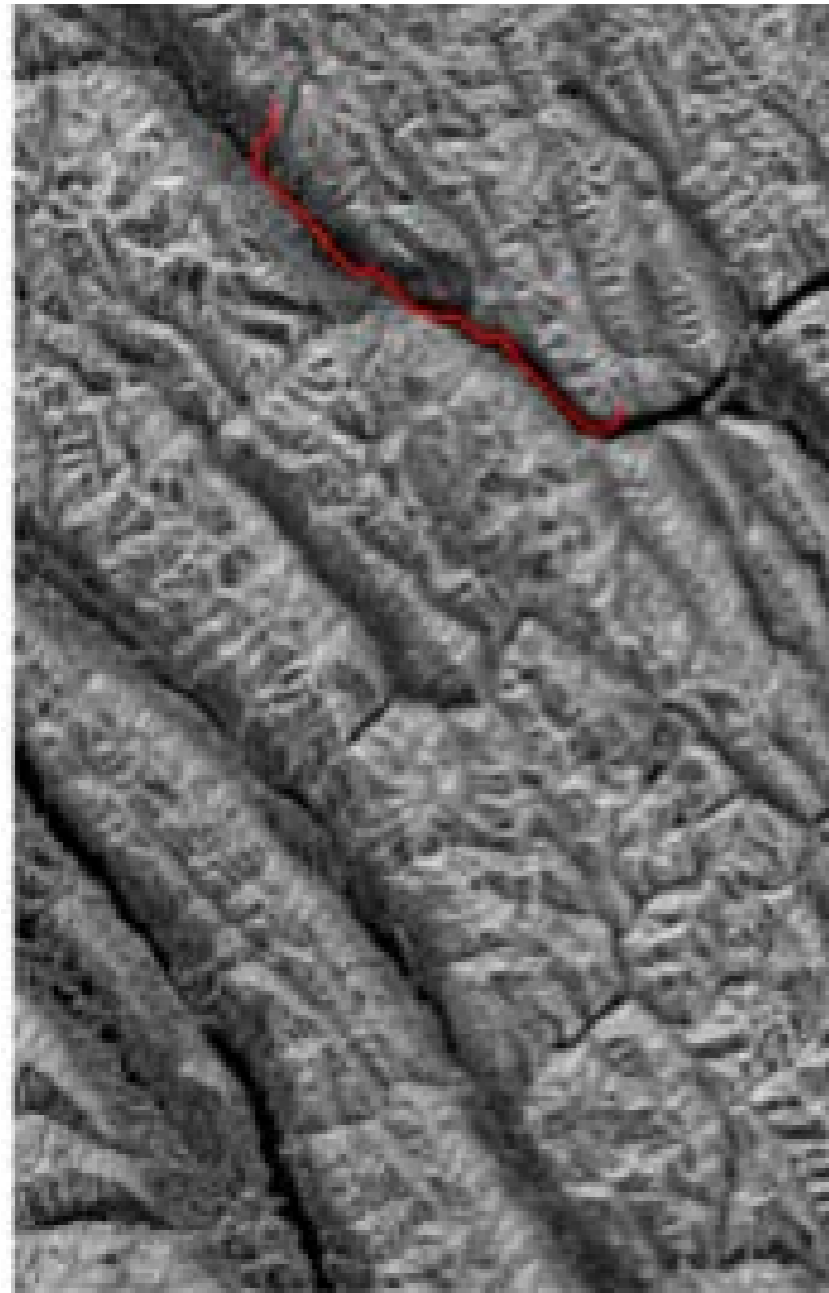


# Species based landscape approach

# Probability of detection using tracking data and multiple environmental layers

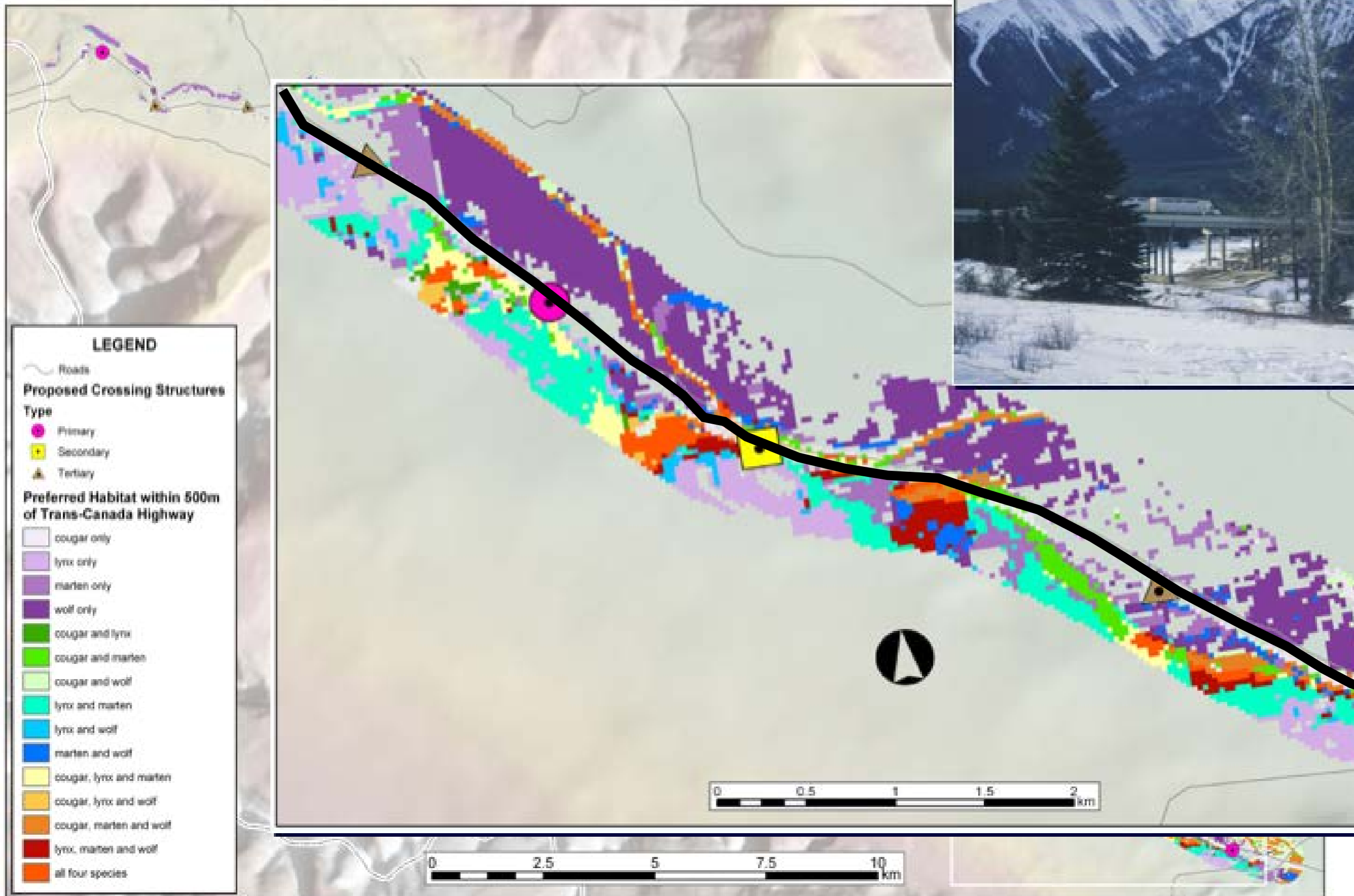


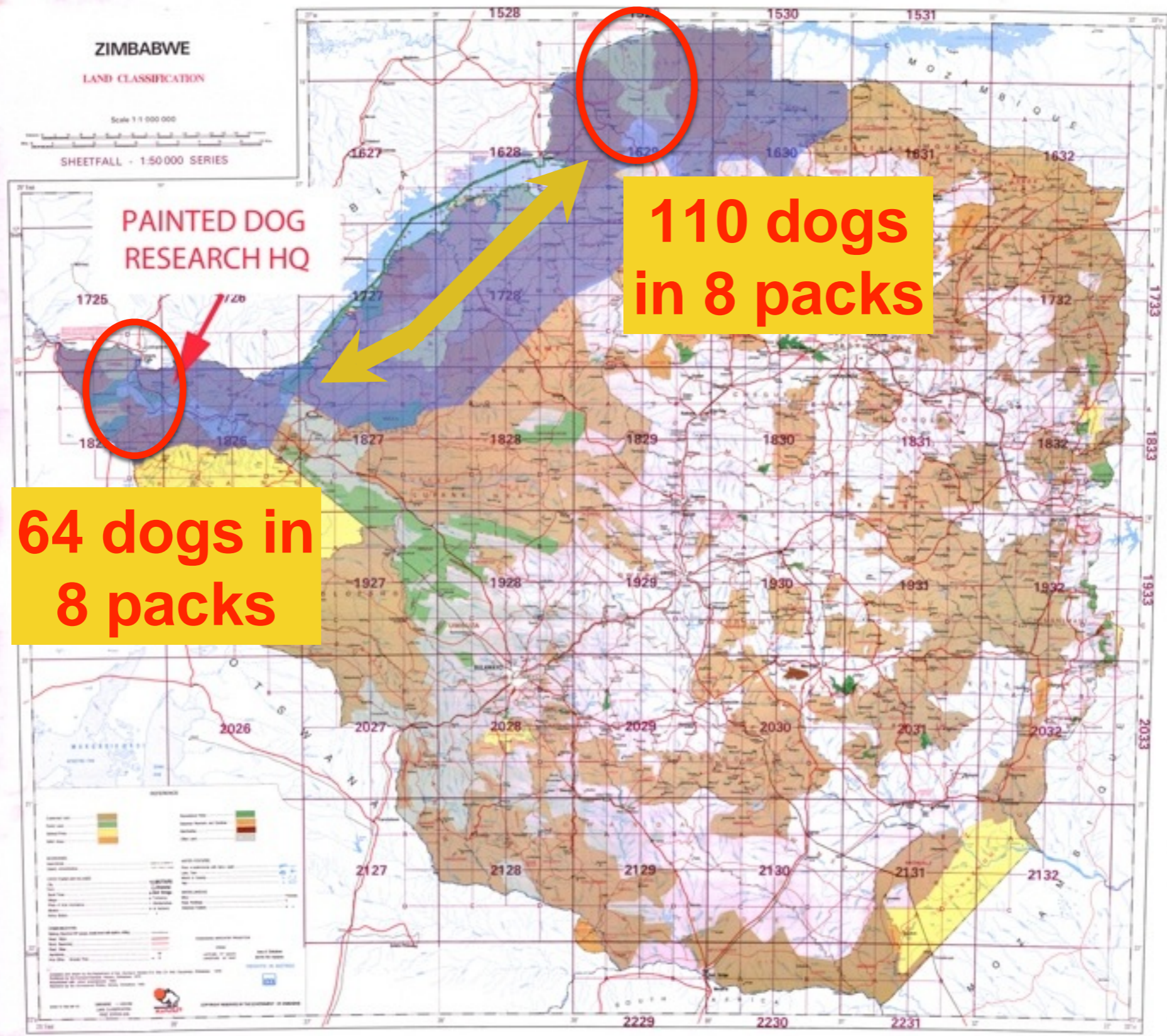
# Facilitating determination of corridors using predictive modeling



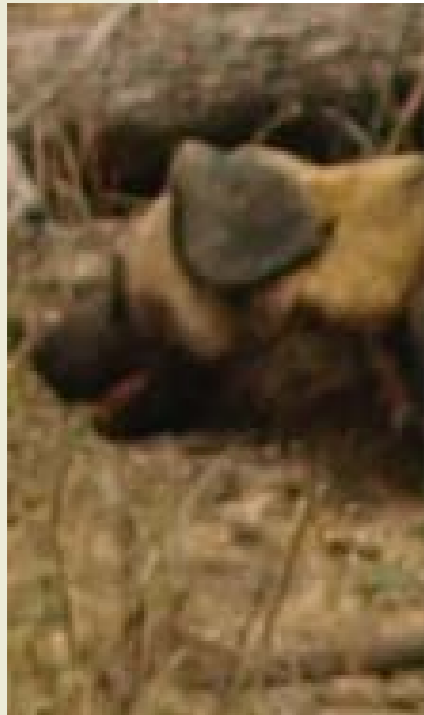


# Finer scale identification of corridors/ linkage zones









Vundu pack



Chitake Pack



Vundu pack



Vundu pack



Vundu pack



Vundu pack

KAZUMA PAN  
NATIONAL PARK

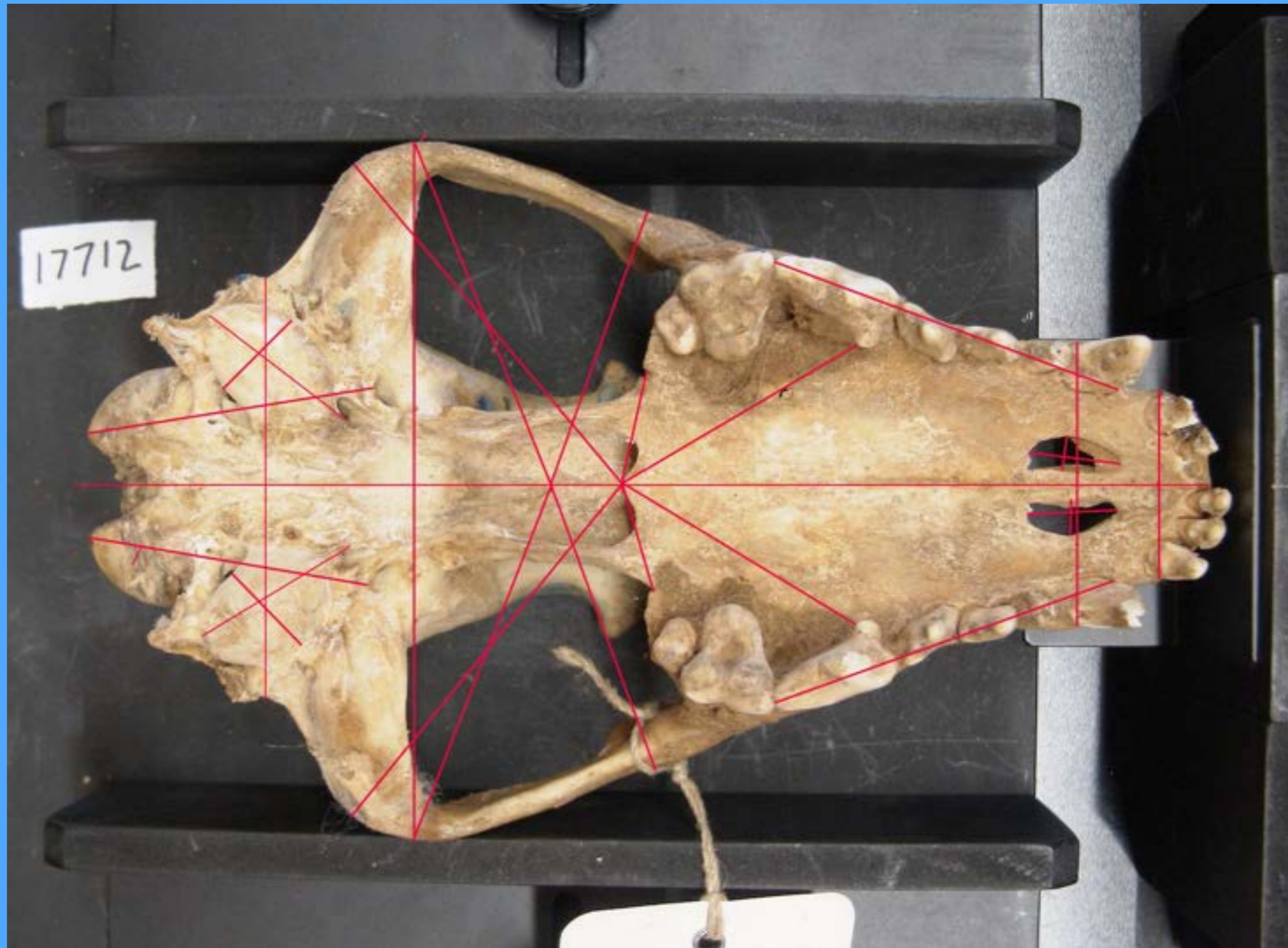
BOTSW



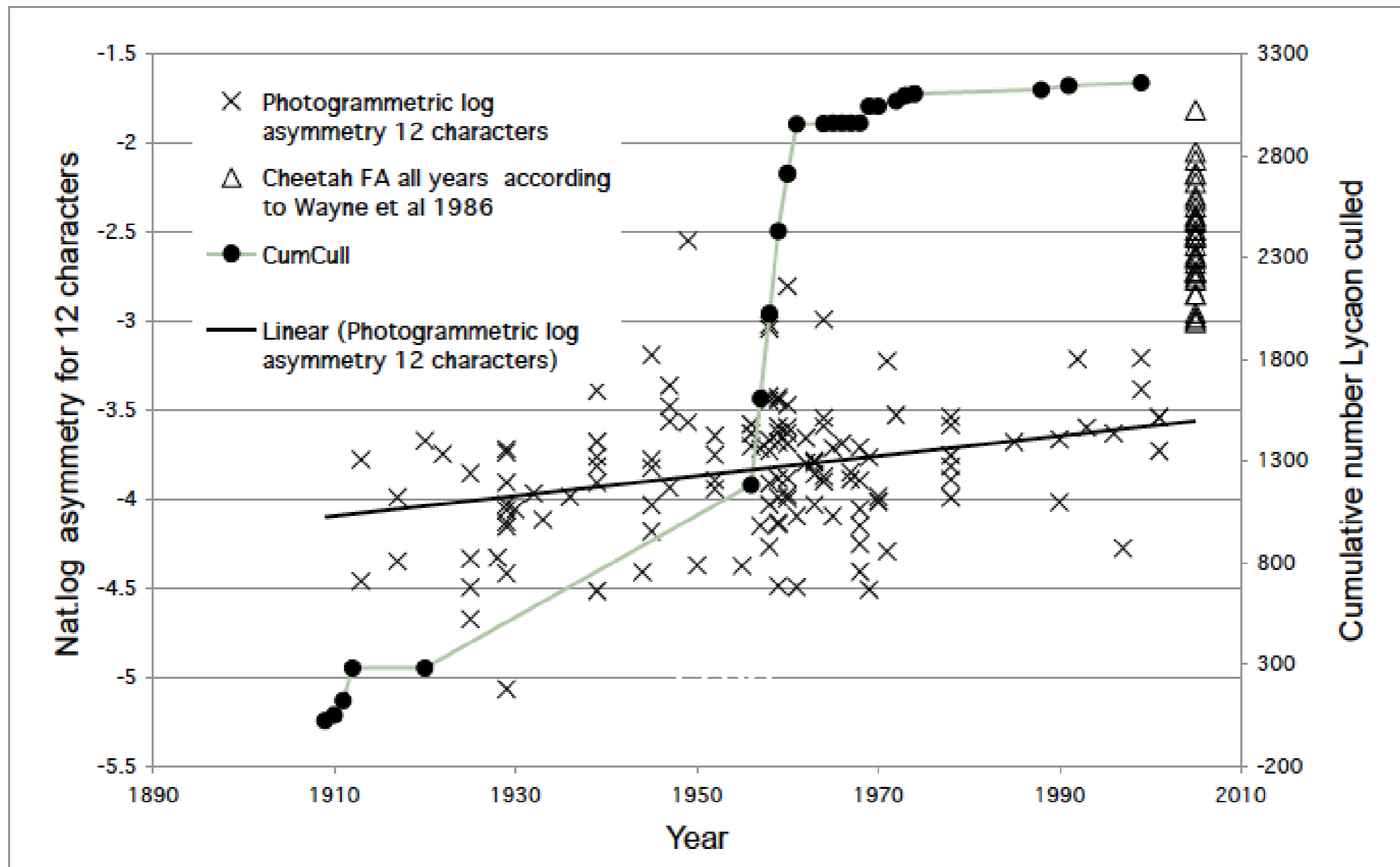
SOUTH AFRICA



# Changing cranial morphometrics







Non-Adaptive Phenotypic Evolution of the Endangered Carnivore *Lycaon pictus*

Charles T. T. Edwards., Gregory S. A. Rasmussen Philip Riordan, Franck Courchamp David W. Macdonald2







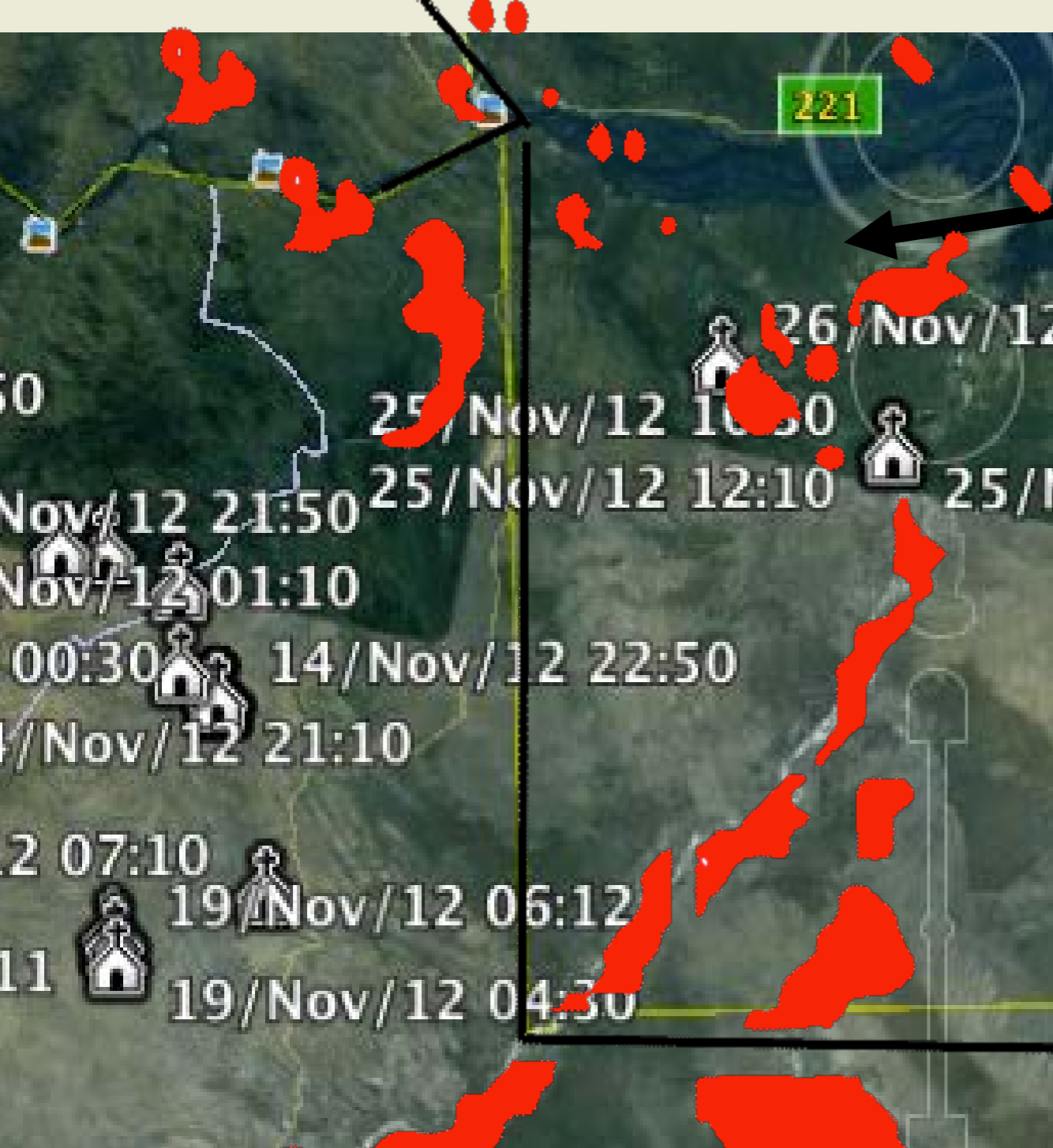




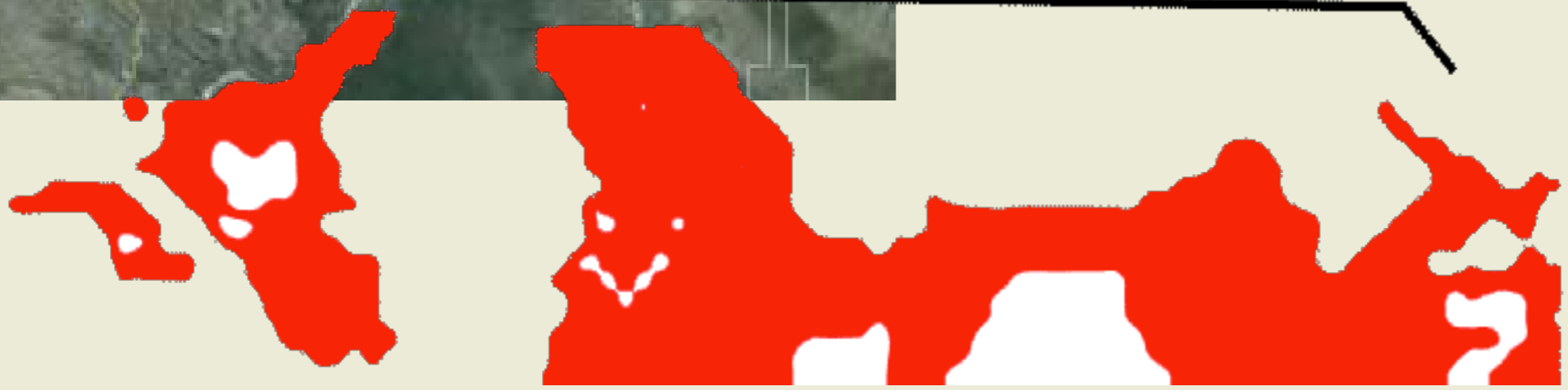








Cochise died HERE









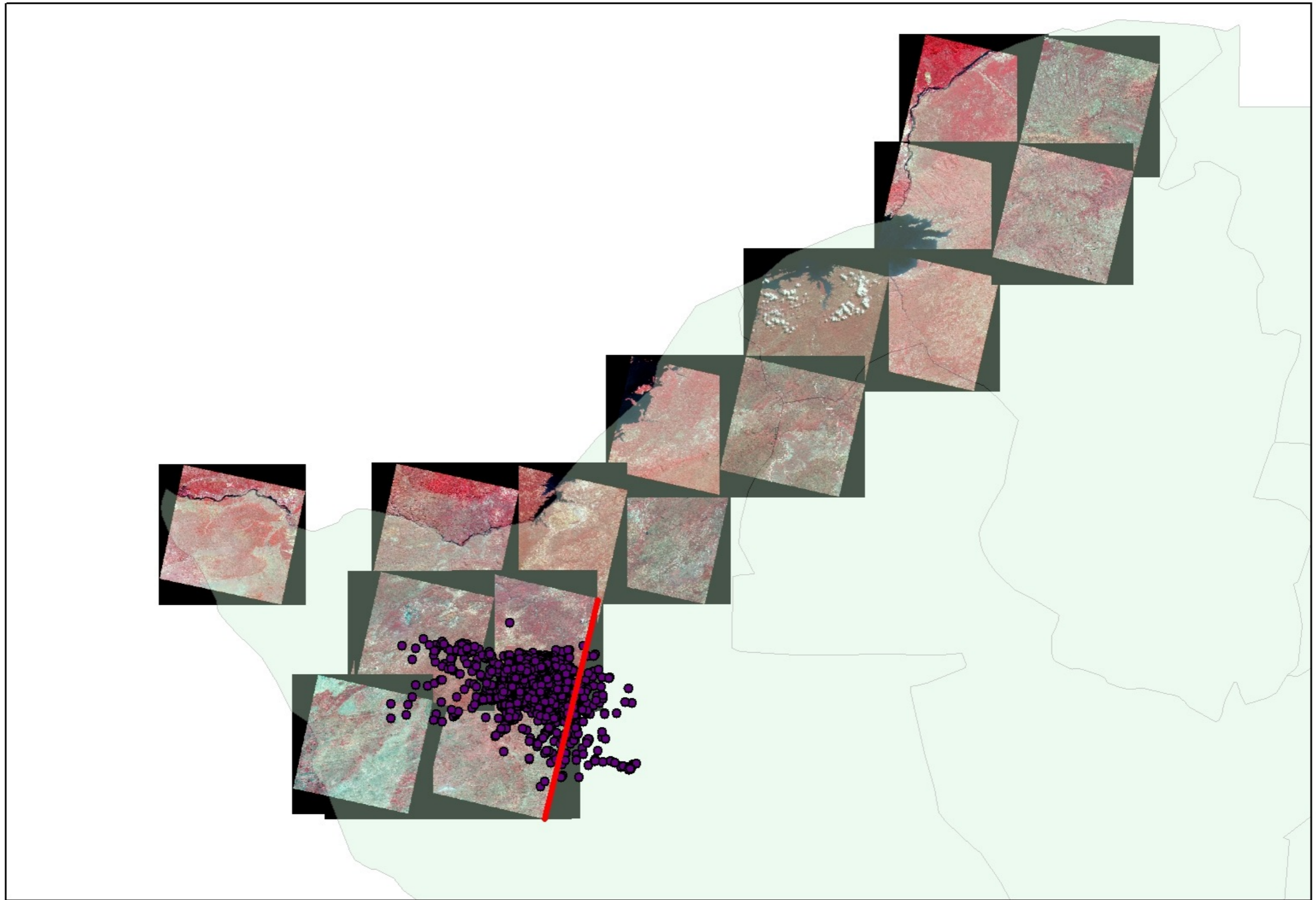
# Solutions

Corridor identification and  
management

Metapopulation Management

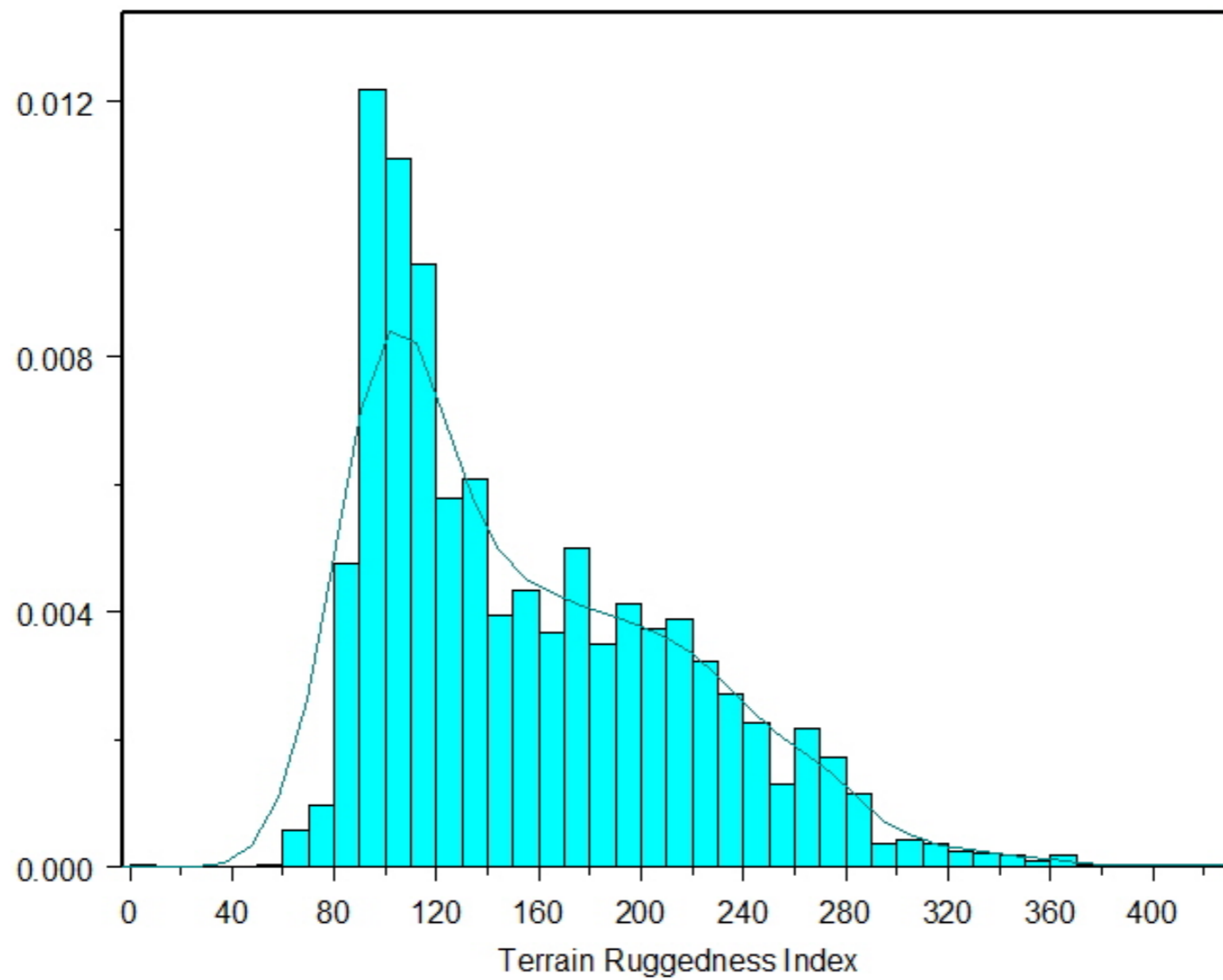
Intervened dispersal

# SPOT Coverage for Hwange and Surrounding Area

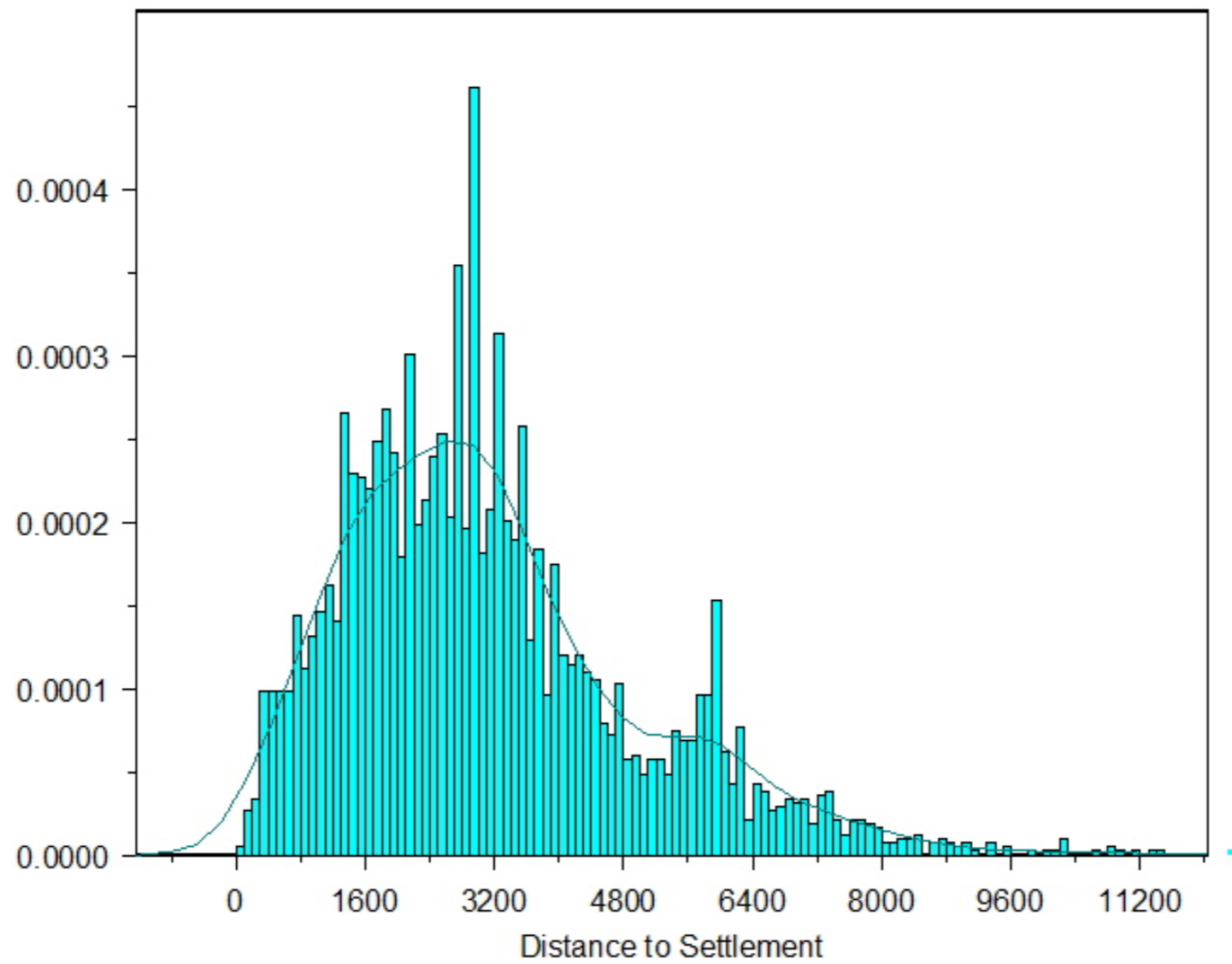




# Terrain Ruggedness Index

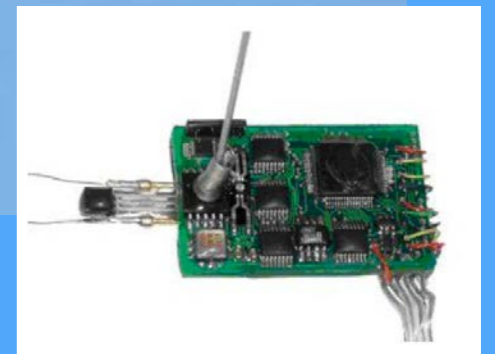


# Distance to Settlements



# Unmanned Data Acquisition Unit

Under construction



Chuck Pezeshki Washington state University  
Brent Wright Boulder Creek Computing Systems  
Carrie Culp Painted Dog Research Trust USA  
Guy Oliver Marine Mammal Institute, Santa Cruz







# Intervened Dispersal



**EWCL HOUSTON ZOO**

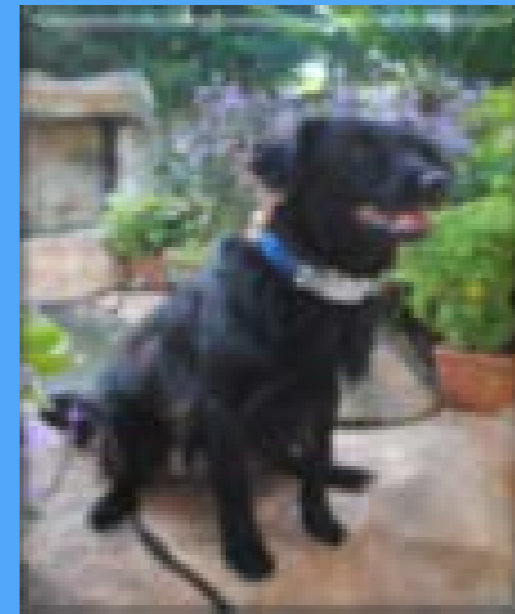
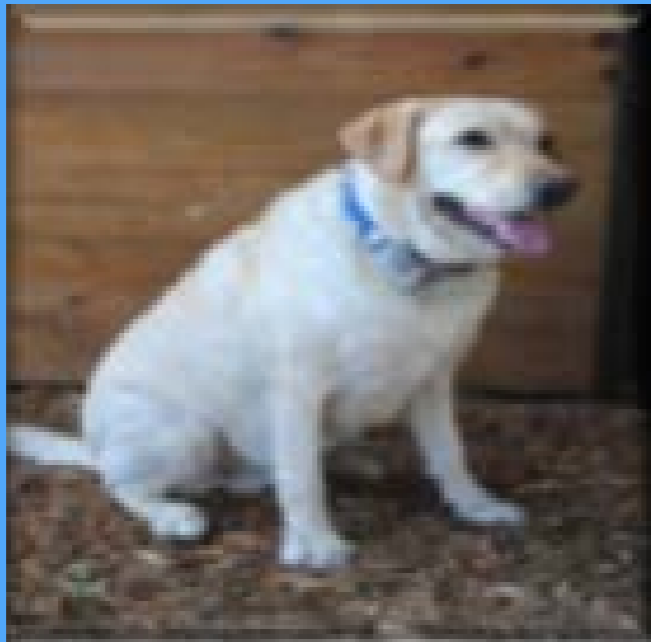








# New Volunteers Painted Dog Protection Initiative







# Metapopulation Management





# Understanding dispersal mechanisms and constraints





**THANK YOU FOR LISTENING**

