

A photograph of a researcher wearing a white t-shirt, black shorts, an orange cap, and a backpack, standing in a rocky, brushy area. The researcher is looking down at a plant. In the background, there are green trees and a rocky hillside. The scene is framed by a concrete structure on the left.

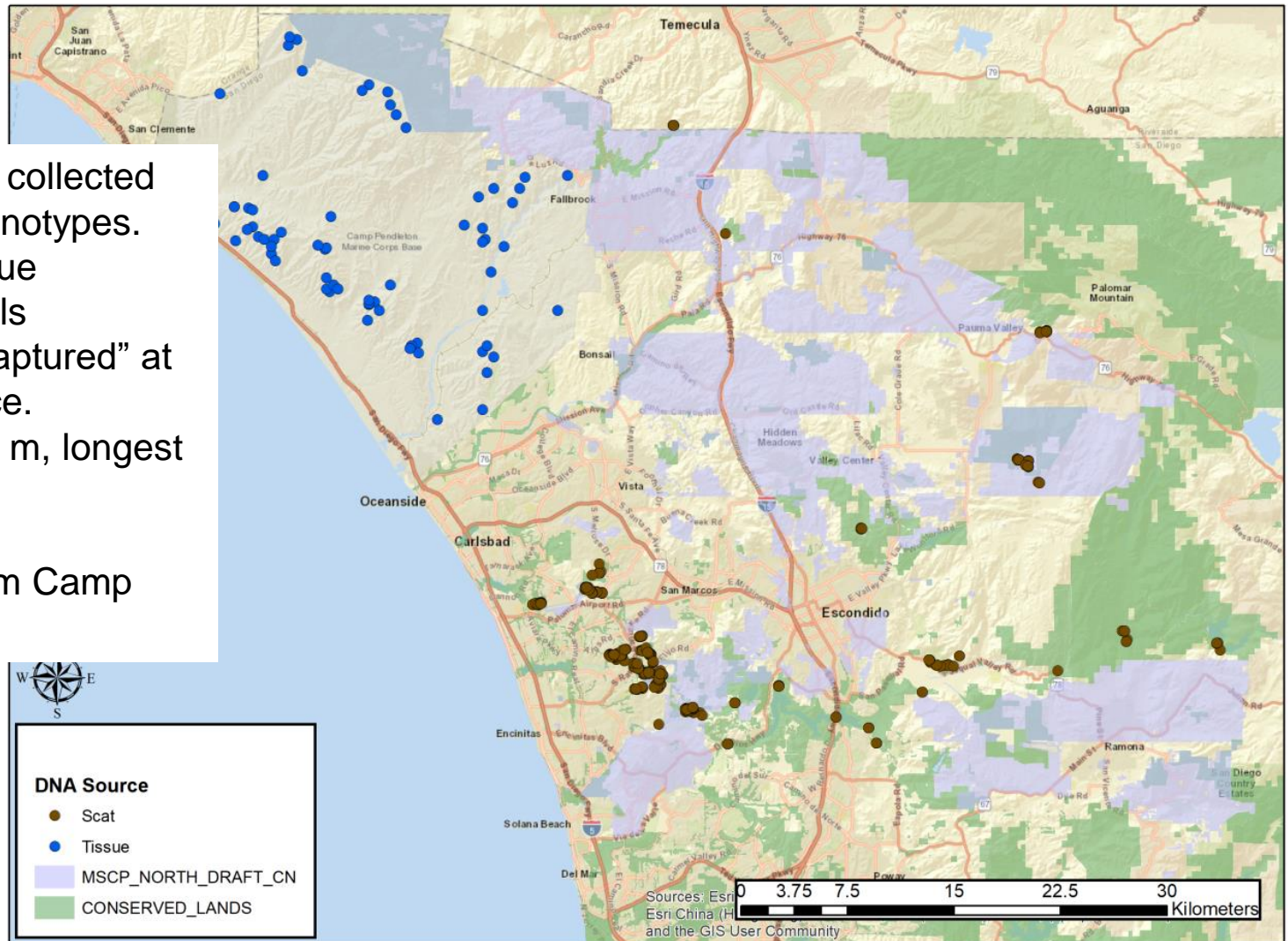
# DNA Fingerprinting of Southern Mule Deer in North San Diego County, California (2018–19)

Anna Mitelberg, Julia Smith & Amy Vandergast



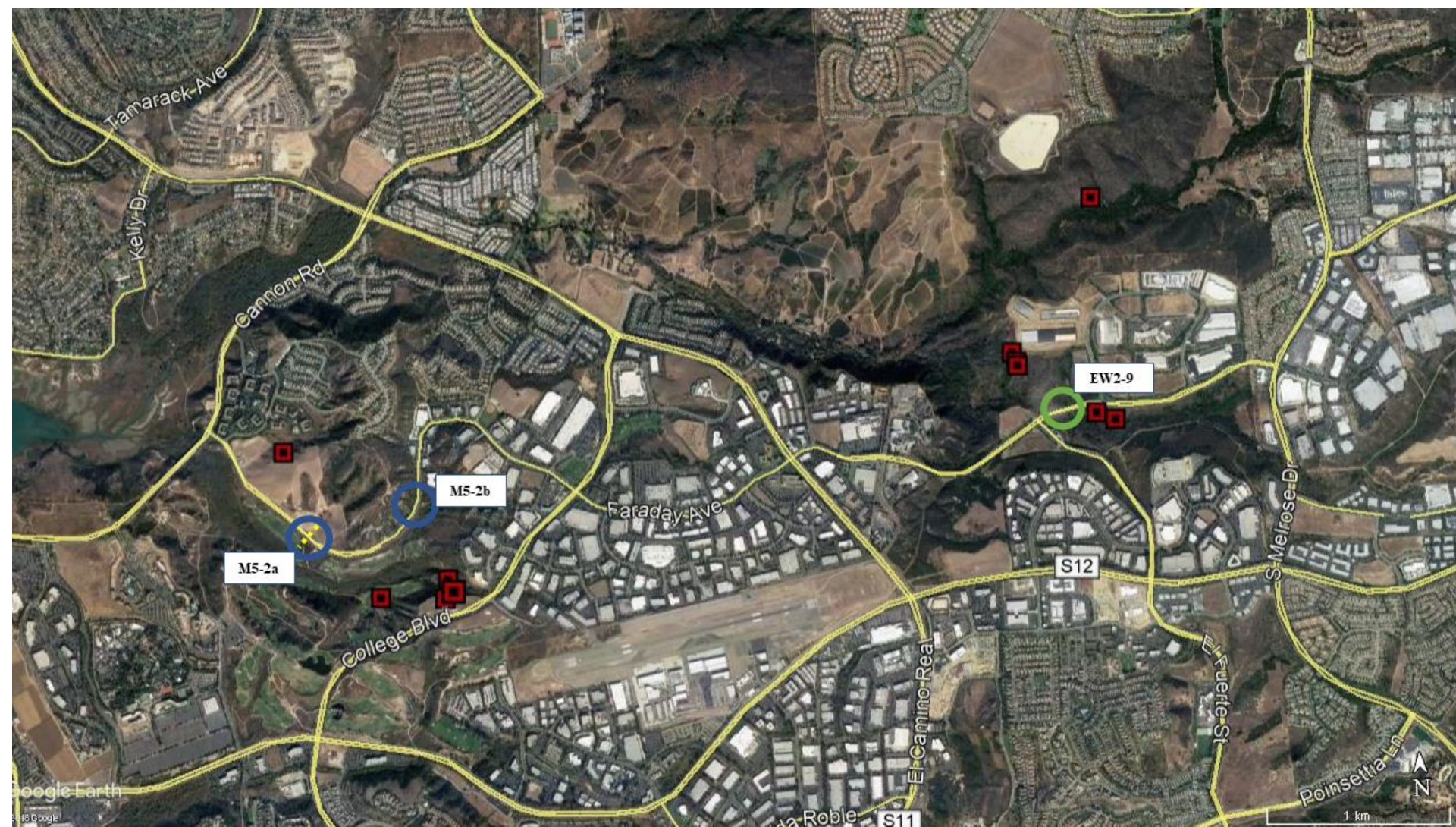
# Collections and Genotyping

- 666 scat piles collected
- 285 quality genotypes.
  - 101 unique individuals
  - ~50 “recaptured” at least once.
  - Avg. 300 m, longest 4km
- 69 tissues from Camp Pendleton



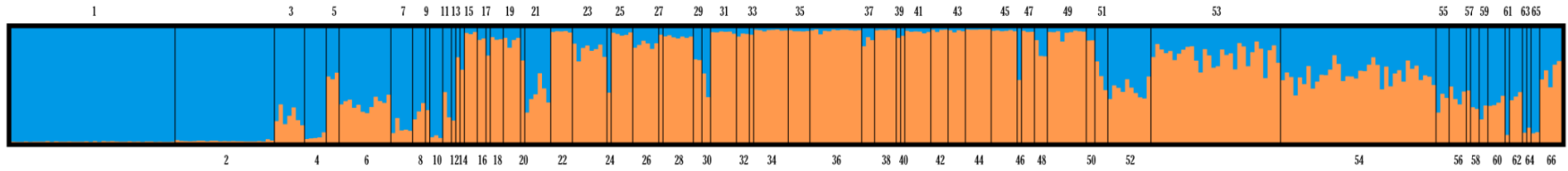


# Individual Movement

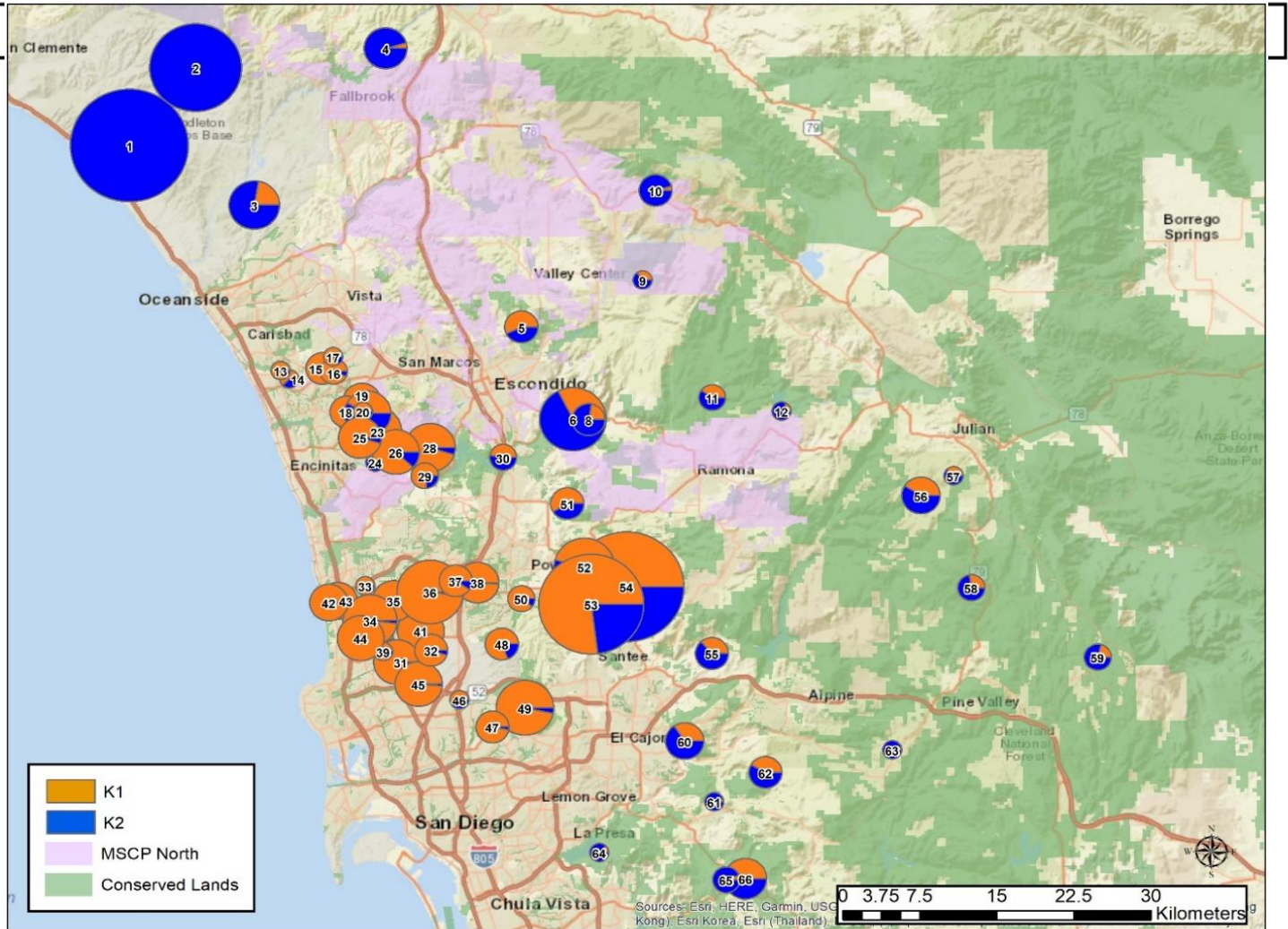




# Regional Population Structure



NW-NoC



# Subspecies Ranges

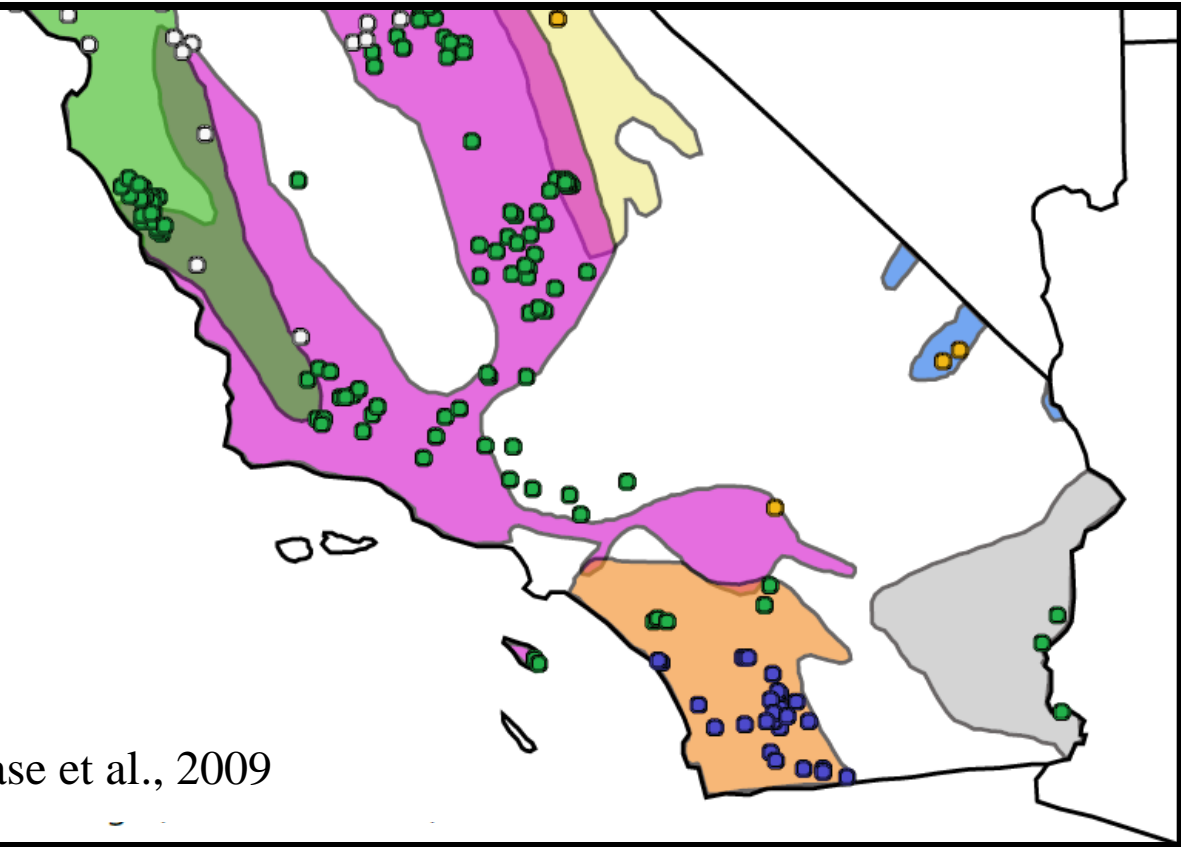
## SUBSPECIES RANGE

- Rocky Mountain mule deer
- Columbian black-tailed deer
- Inyo mule deer
- Southern mule deer
- Burro mule deer
- California mule deer

## GENETIC GROUPS

- Southern
- San Diego
- Northwestern
- Eastern
- Central

Pease et al., 2009



*USGS Report Available Soon!*

# Acknowledgements

- Markus Spiegelberg, Jake Garcia, Sarah Godfrey, Brooke Prentice-Dekker, Stephen Rink (CNLM)
- Michael Tucker (MCBCP)
- Charlie de la Rosa and Emily Burson (San Diego Zoo Safari Park)
- Leana Bulay and Jason Lopez (San Dieguito River Park)
- John Barone (City of San Diego)
- Hans Sin (CDFW)
- Karla Standridge (Fallbrook Land Conservancy)
- James Bourdon and Pablo Bryant (Santa Margarita Ecological Reserve)
- Zach Principe and Trish Smith (The Nature Conservancy)
- Winston Vickers (UC South Coast Research and Extension Station)
- Kurt Broz (Pala Environmental Department)
- Hannah Walchak and Ann Van Leer (Escondido Creek Conservancy)
- Margaret Diss, Ashley Dulaney and Nick Sloan (SD Parks and Rec)
- Sarah Krejca and Austin Parker (San Diego Habitat Conservancy)
- Laurie Carter (Friends of Hellhole Canyon)
- Evelyn and Mickey Vineberg, Diane and Bryan Wold (San Diego Tracking Team)
- Kim Wehinger (City of San Diego Public Utilities Department)
- Dan Hippert (City of Escondido, Lakes and Open Space)
- Jeff Anderson (Elfin Forest Recreational Reserve).