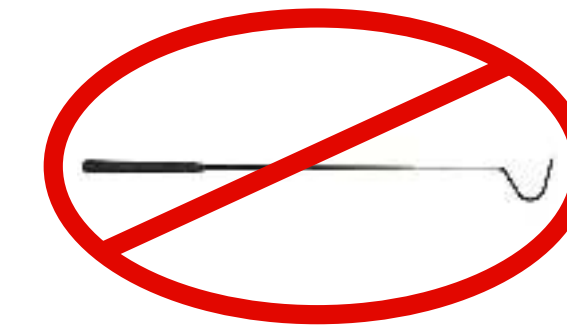


SnakeBook: The Arizona black rattlesnake social network

Jeffrey J. Smith & Melissa Amarello • Advocates for Snake Preservation

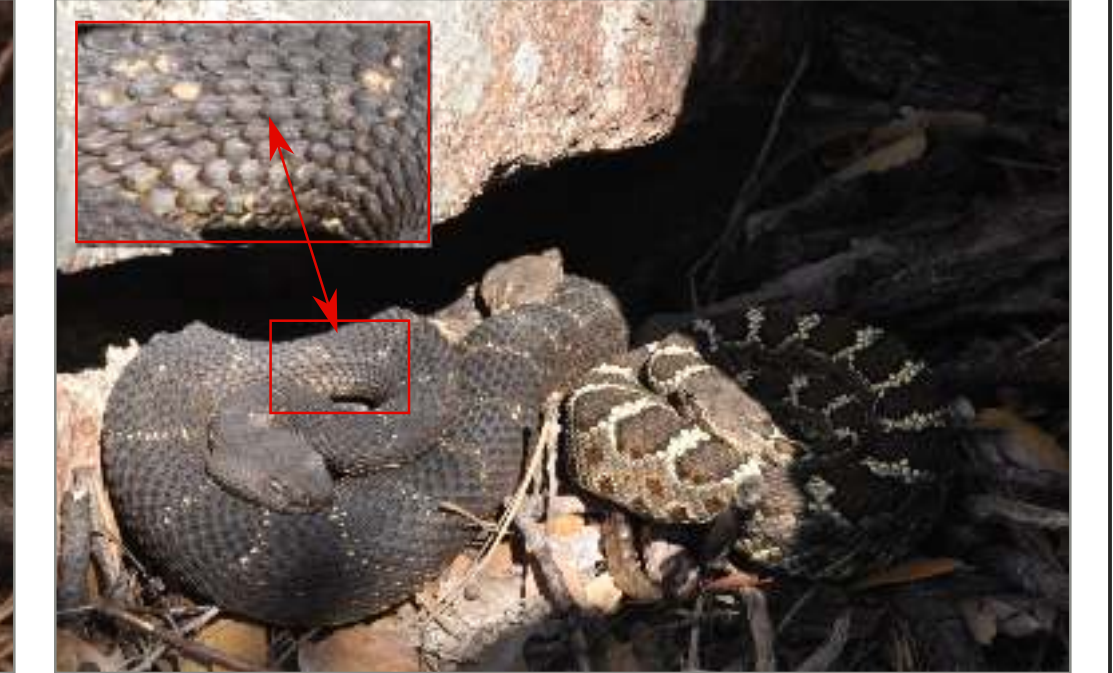
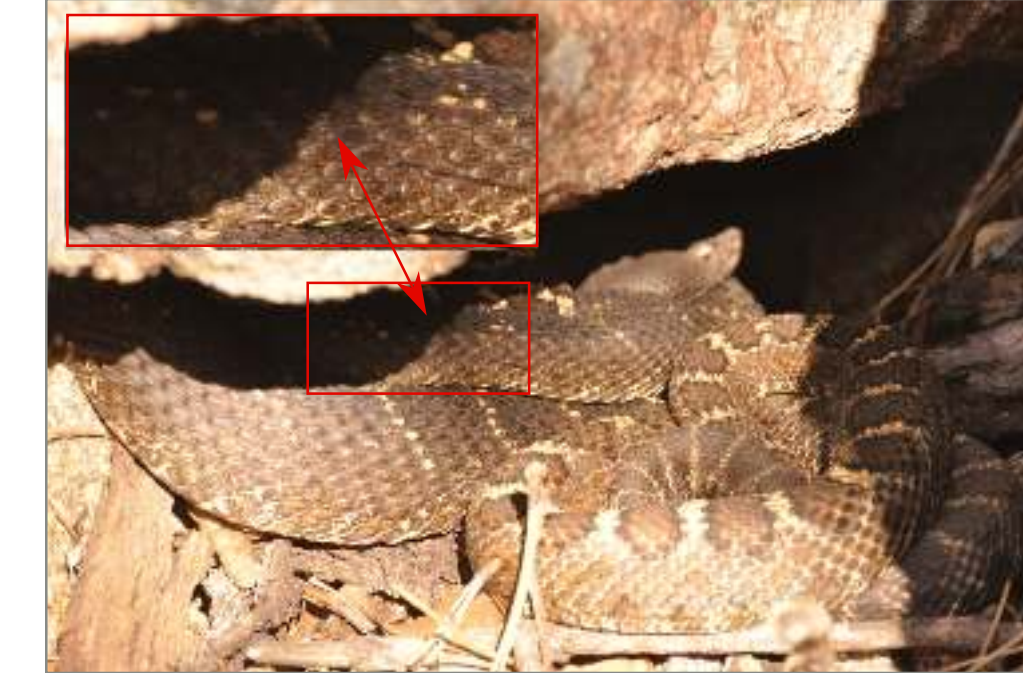


Watch a video of an example day of our data

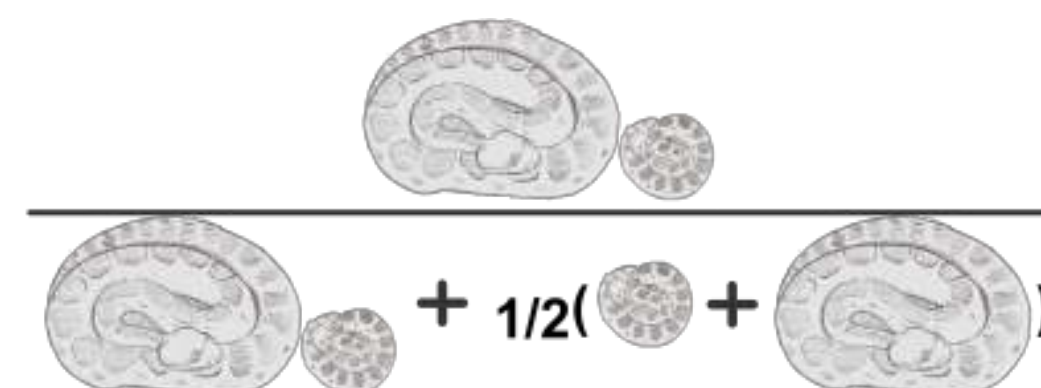
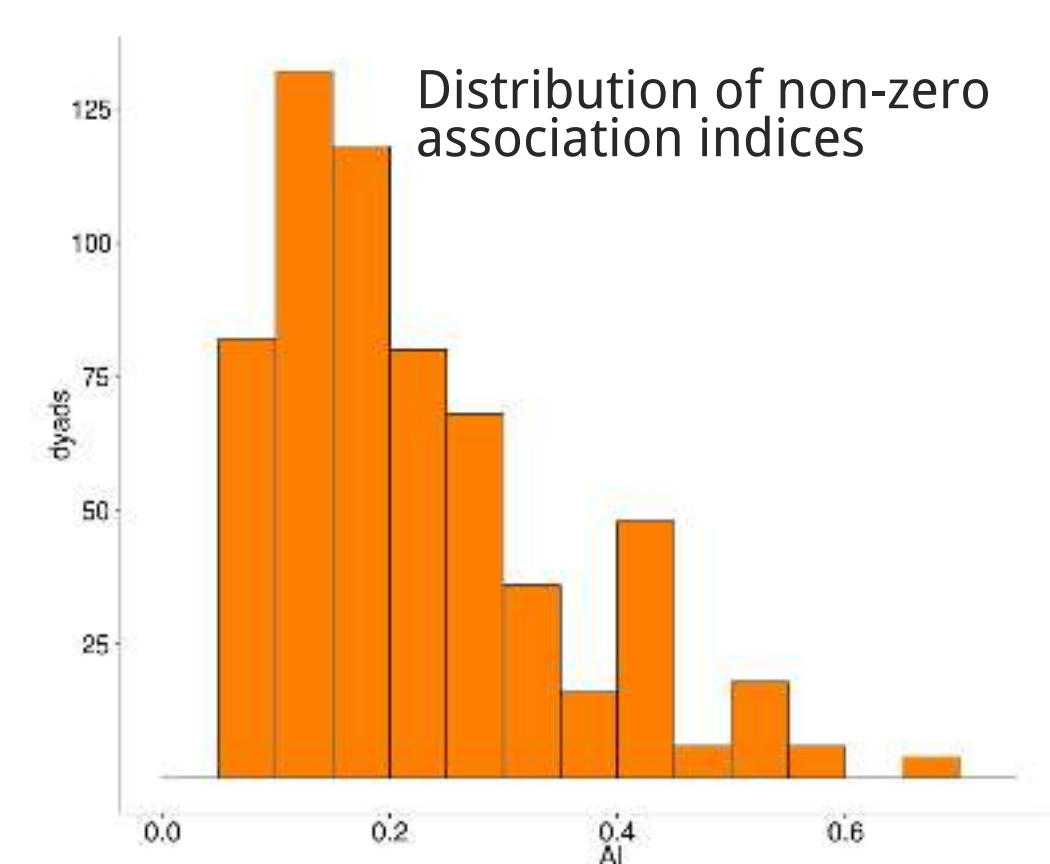


To avoid altering behavior, snakes were not handled at aggregation sites.

We used individual variation in pattern to identify snakes, which was often (left), but not always (right) easy.



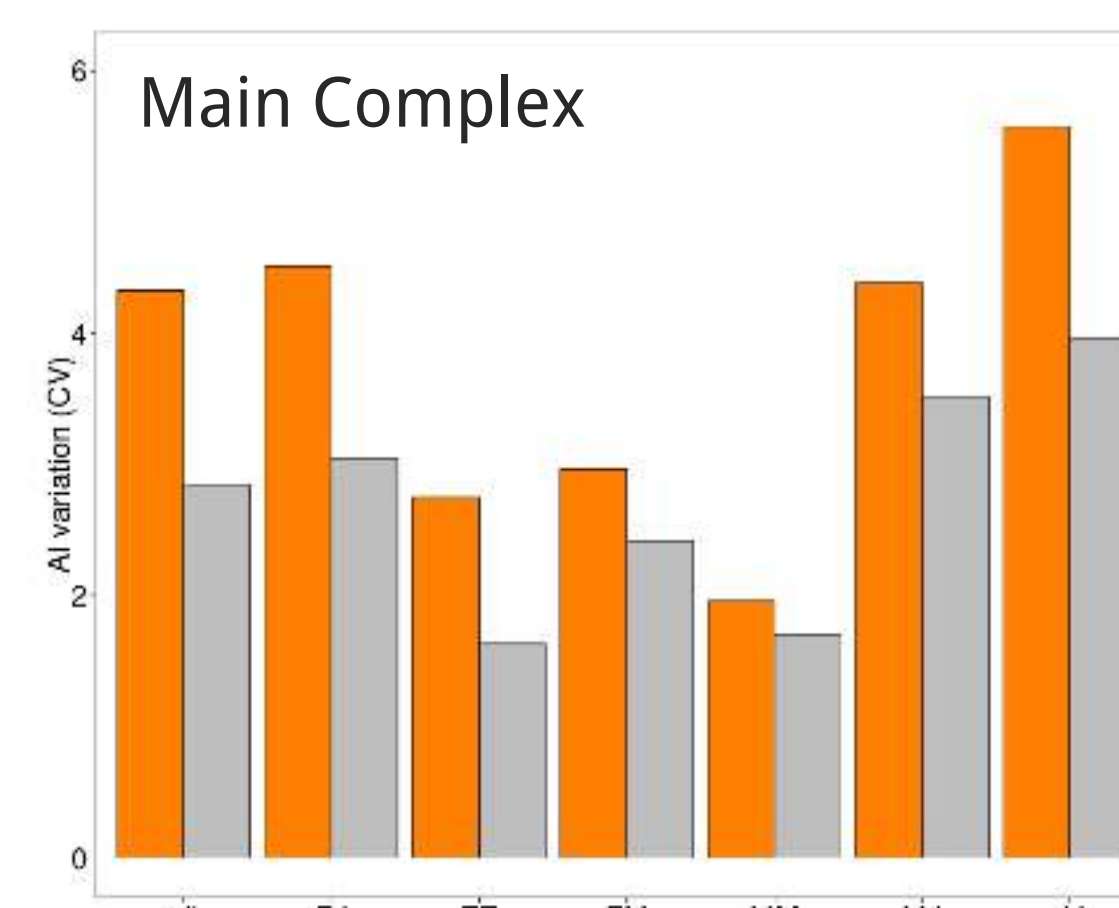
Half-weight Association Index



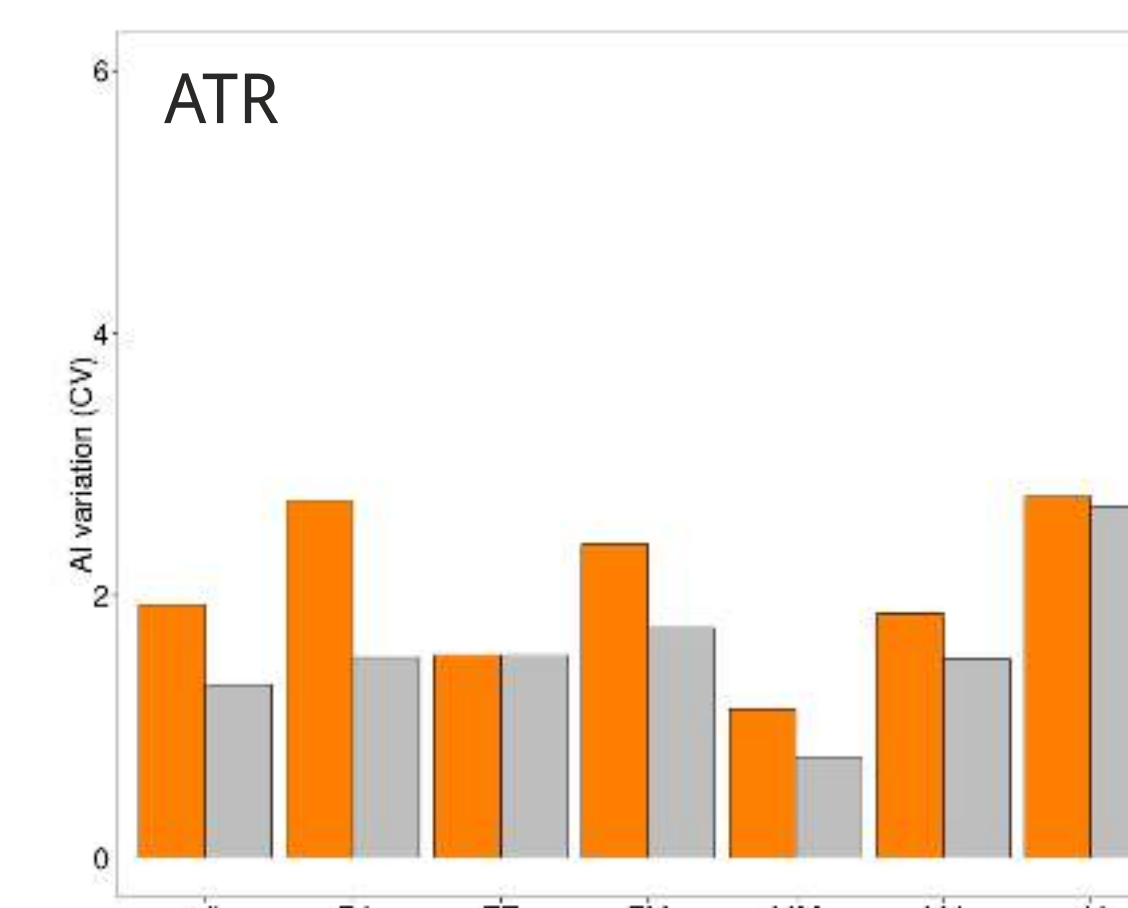
Estimates the proportion of time each dyad spent together

Less biased when not all individuals are identified

Arizona Black Rattlesnakes Choose Their Associates & Avoid Others



Observed variation in association indices (CV) was significantly greater than random data overall and within/between classes ($p < 0.001$), except female-female pairs and juvenile-juvenile pairs at the smaller community, ATR.

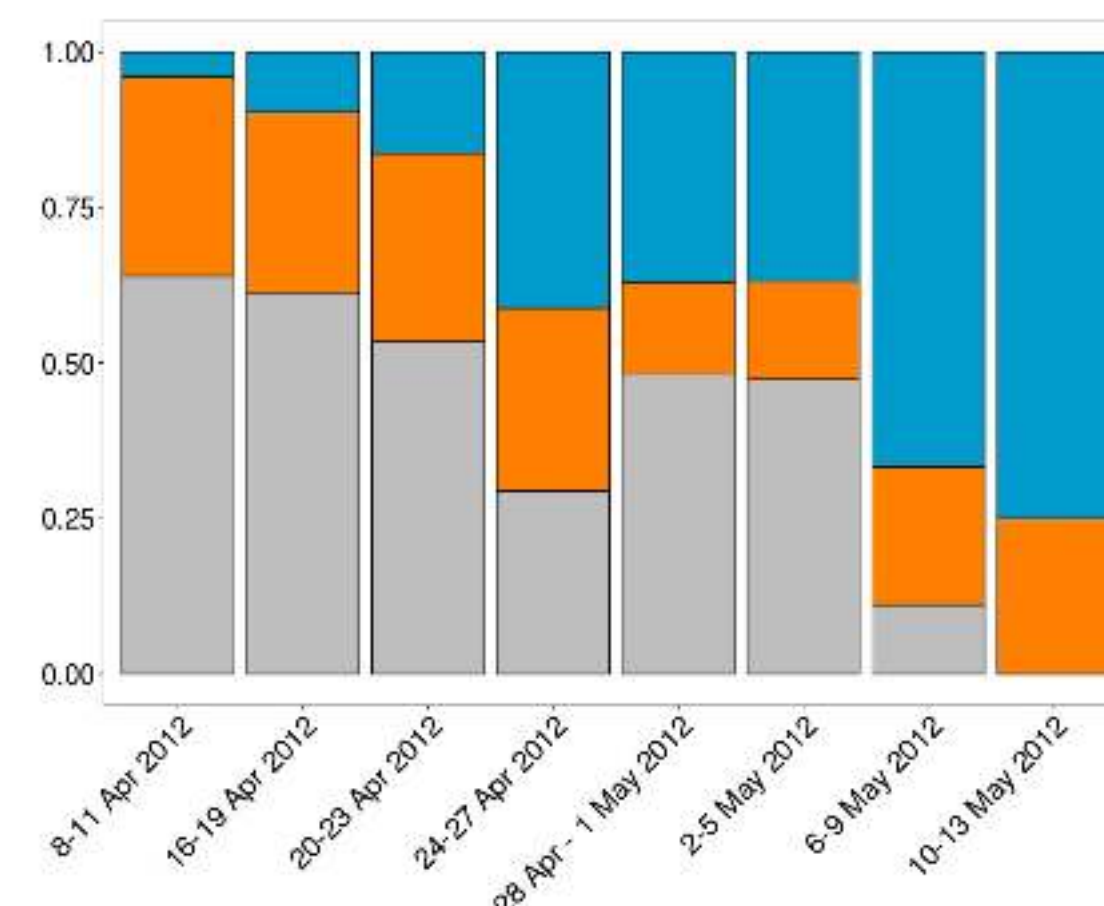
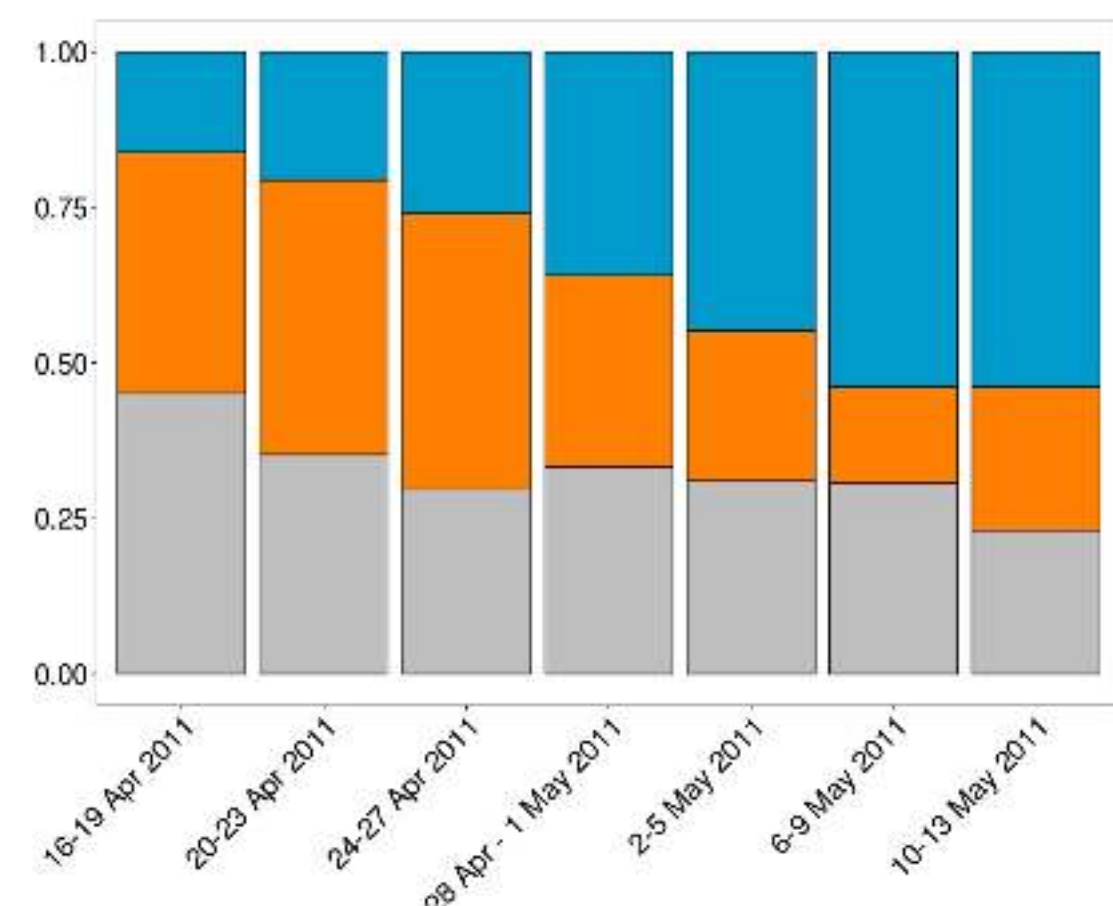


What's Next?

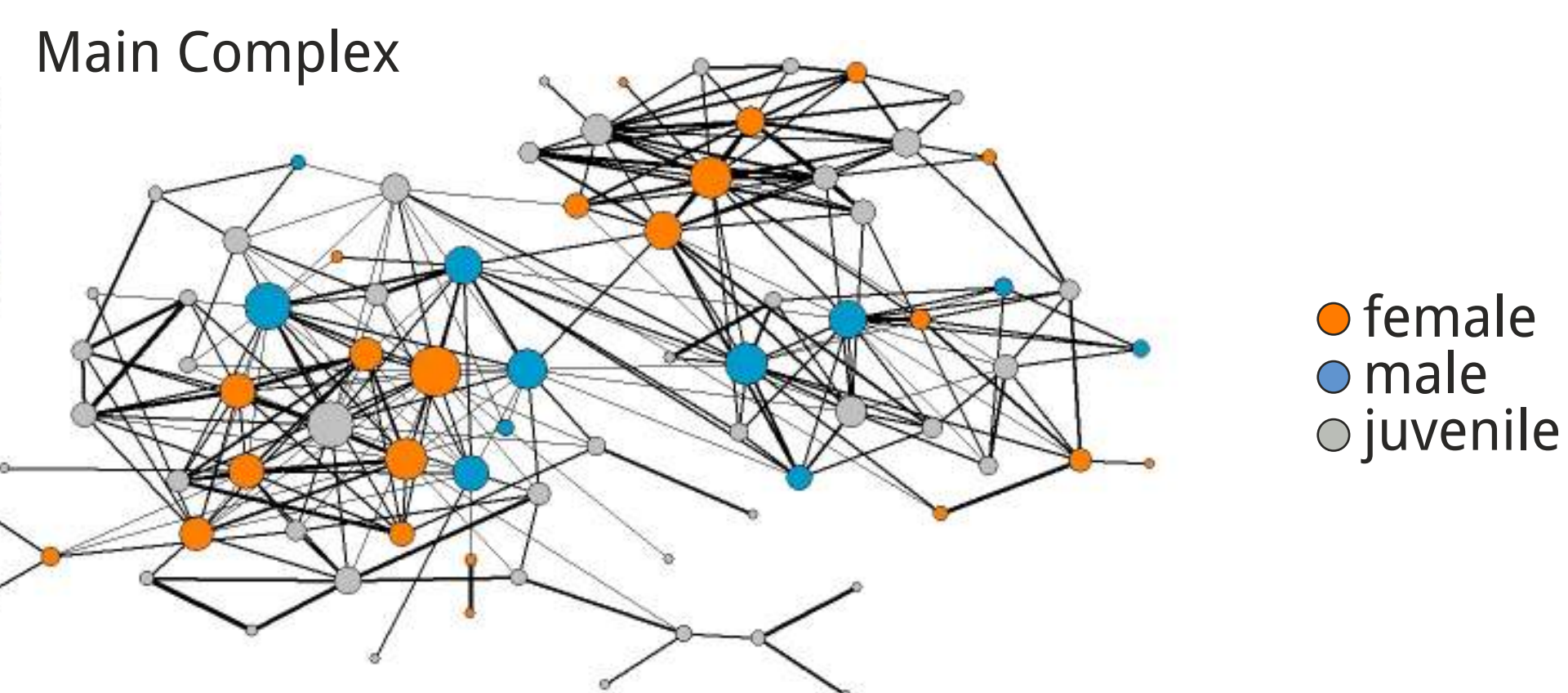
We will use microsatellites to see whether rattlesnakes are choosing their associates based on relatedness.



Woody gave birth to Adam in 2010; here we observed them together in 2011.



Rattlesnake Social Networks



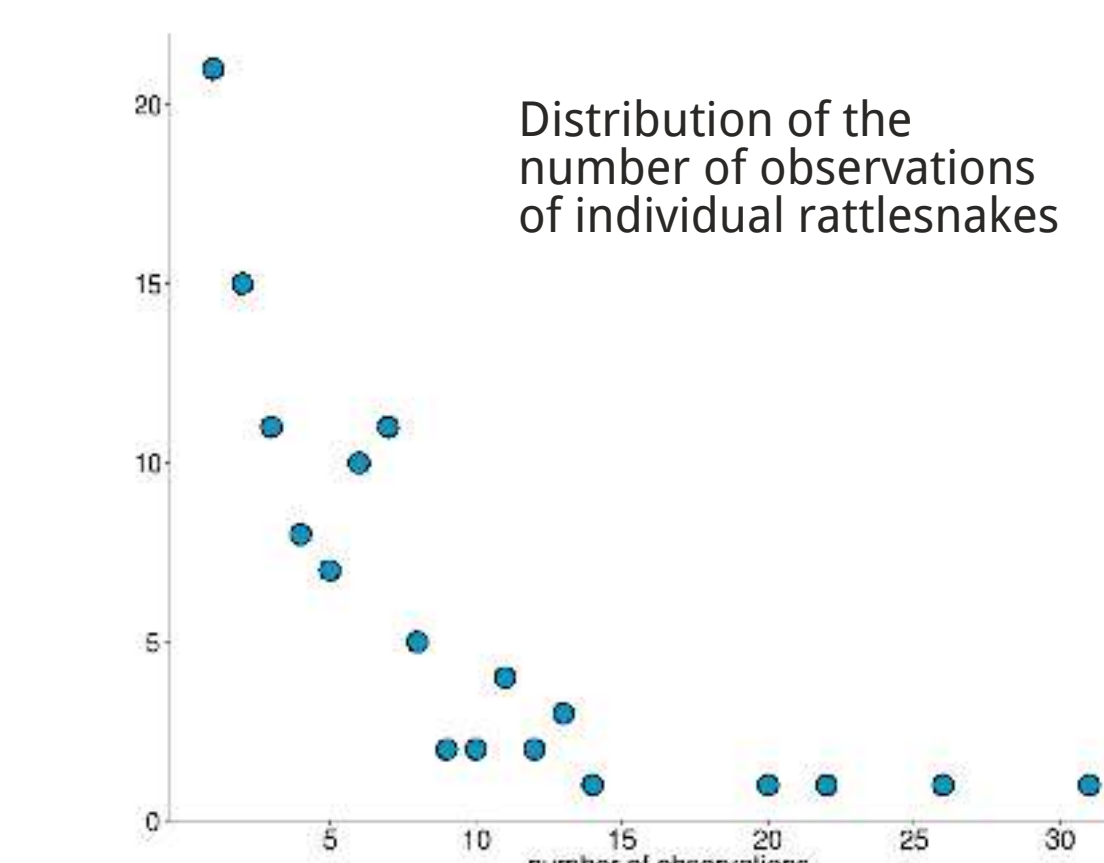
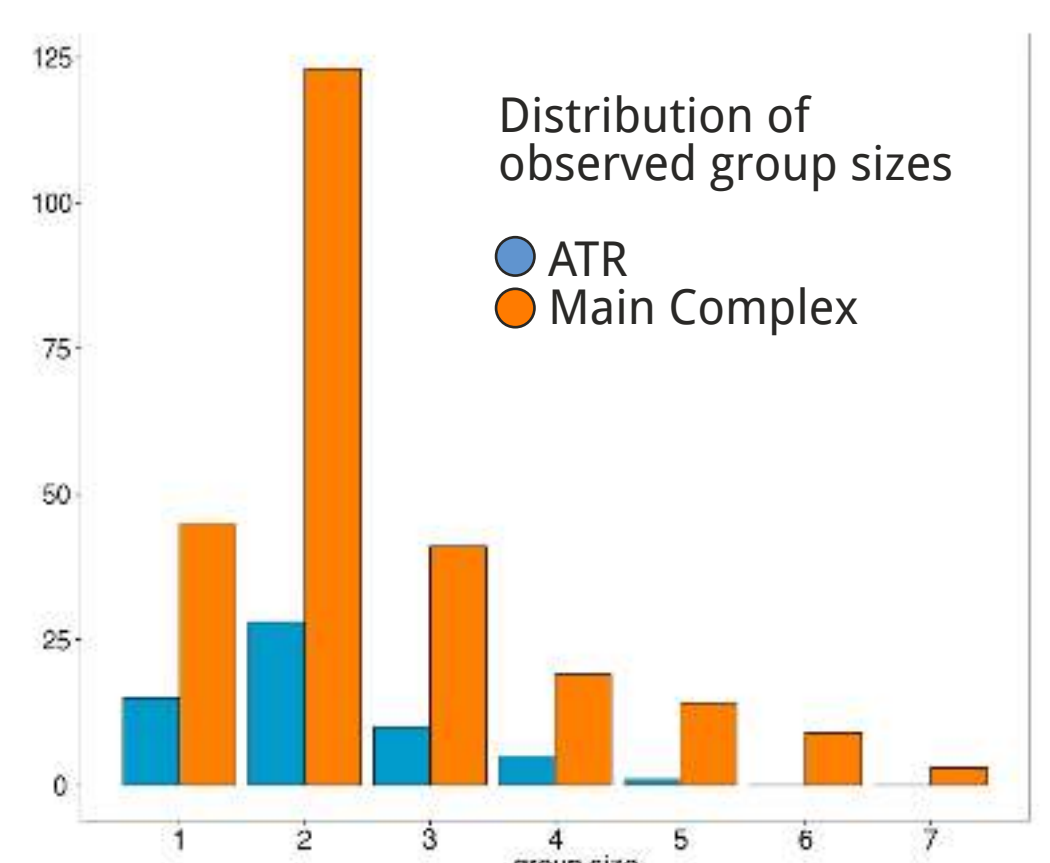
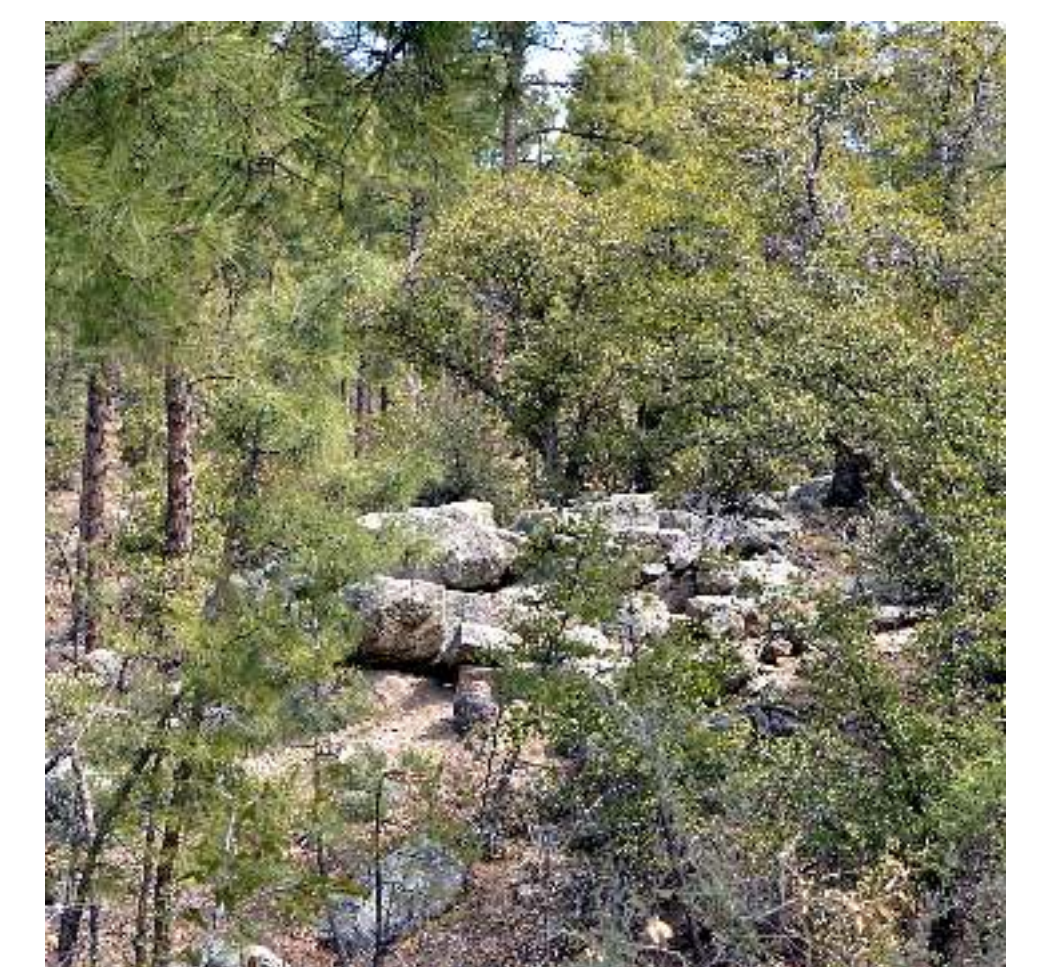
Crotalus cerberus

Medium-sized pitviper
adults: 50-100cm

Occurs in Arizona & western New Mexico
900-3000m elevation
desertscrub, grassland
chaparral, forest

Over-winters in groups or alone

Gives birth to live young
at or near aggregation sites
sometimes gestate in groups



Acknowledgements

We'd also like to thank M. Cardwell, R. Clark, D. DeNardo, M. Feldner, H. Greene, K. McGraw, J. Porter, R. Repp, B. Rogers, G. Schuett, M. Seward, J. Slone, B. Sullivan, Rocket Hub supporters, National Science Foundation, Chicago Herpetological Society, Tucson Herpetological Society, Wingscapes, The Herpetologists' League, Arizona Game and Fish Department (SP796730 & SP729143), ASU IACUC, and especially...

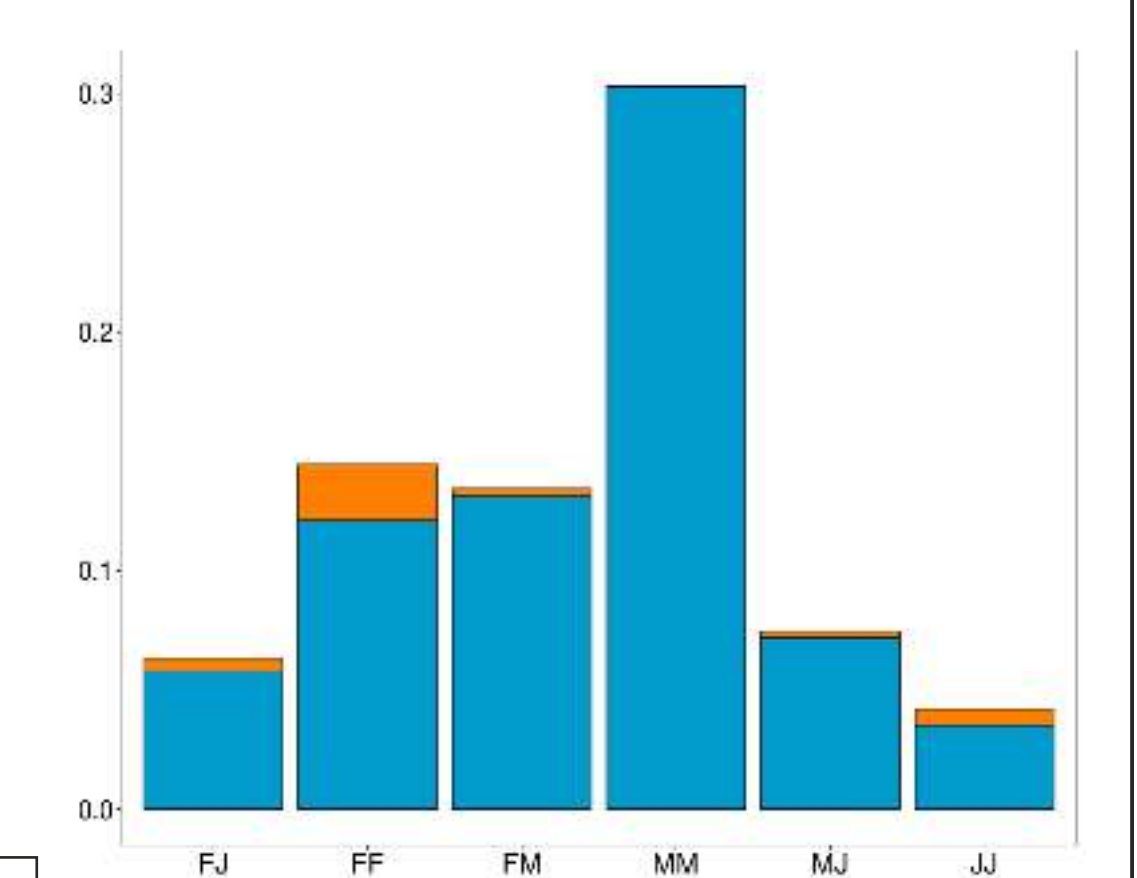
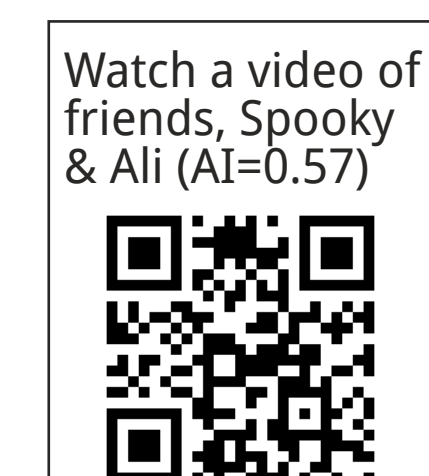


All the Arizona black rattlesnakes who allowed us a glimpse into their social lives.

Friends, Acquaintances, & Avoidance Behavior



Friends were observed in association more than twice as often as expected if snakes associated randomly



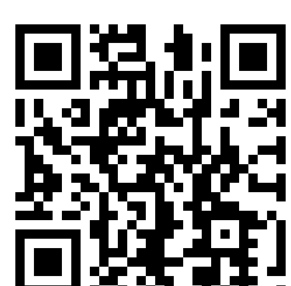
Acquaintances were observed in association at least once, but not as often as friends

93% of pairs were never observed together

Advocates for Snake Preservation



www.SnakePreservation.org



Download this poster & other ASP publications on our website

