## Conscience or Coincidence? Analyzing the Effects of Different Factors on the Likelihood of Hybridization Across Different Populations: A Review By: Natalie Nonno **Research Questions Research Questions**

What are the specific factors that affect the likelihood of hybridization between two species?

Looking at multiple species, what patterns emerge?

How do these factors affect hybridization in these populations?



**WORKS CITED** 

Coomes, C. M., R. M. Danner, and E. P. Derryberry. 2019. Elevated temperatures reduce discrimination between conspecific and heterospecific sexual signals. Animal Behaviour 147:9–15. Grant, P. R., and B. R. Grant. 1992. Hybridization of Bird Species. Science 256:193–197. Ottenburghs, J., P. van Hooft, S. E. van Wieren, R. C. Ydenberg, and H. H. T. Prins. 2016. Hybridization in geese: a review. Frontiers in Zoology 13:20. Rollmann, S. M., L. D. Houck, and R. C. Feldhoff. 2003. Conspecific and heterospecific pheromone effects on female receptivity. Animal Behaviour 66:857-861 Ryan, M. J., and W. E. Wagner. 1987. Asymmetries in Mating Preferences between Species: Female Swordtails Prefer Heterospecific Males. Science 236:595–597.

Female choice played a role in the levels of hybridization within every group I studied.

Other factors within the species and the environment also played a role – these varied more in the different populations, but there were patterns.

Pre-zygotic mate attraction signals also played a role in affecting both female choice and the levels of hybridization within a population.





Swenton, D. M. 2011. Sex Differences in Mate Preference Between Two Hybridizing Species of Poeciliid Fish. Ethology 117:208–216. Uetz, G. W., and G. Denterlein. 1979. Courtship Behavior, Habitat, and Reproductive Isolation in Schizocosa rovneri Uetz and Dondale (Araneae: Lycosidae). The Journal of Arachnology 7:121–128. Willis, P. M., G. G. Rosenthal, and M. J. Ryan. 2012. An Indirect Cue of Predation Risk Counteracts Female Preference for Conspecifics in a Naturally Hybridizing Fish Xiphophorus birchmanni. PLOS ONE 7:e34802. Willis, P. M., M. J. Ryan, and G. G. Rosenthal. 2011. Encounter rates with conspecific males influence female mate choice in a naturally hybridizing fish. Behavioral Ecology 22:1234–1240. Wyman, M. T., B. D. Charlton, Y. Locatelli, and D. Reby. 2011. Variability of Female Responses to Conspecific vs. Heterospecific Male Mating Calls in Polygynous Deer: An Open Door to Hybridization? PLOS ONE 6:e23296.