



Chemical communication in Burmese Pythons and Argentine Black and White Tegus

- Collaborative research between USDA/APHIS/WS National Wildlife Research Center (Gainesville, FL) and Rocky Parker - James Madison University (Harrisonburg, VA)
- Objectives include:
 - 1) characterization of chemical extractions from skin sheds of Burmese pythons and Argentine tegus
 - 2) identification of sex-specific chemical signals for tracking and locating conspecifics
 - 3) development of a chemical lure to improve trapping efforts



Chemical communication in Argentine Black and White Tegus

- Tegus skin sheds analysis completed in 2018 (seasonal differences in lipids detected)
- Trailing experiments in the Y-maze at NWRC (2017-2019)
 - Fall 2017 (outside breeding season) – male tegus showed no preference for either female-scented or male-scented arms of the Y-maze; 8 different trailing behaviors were identified
 - Spring 2018 (breeding season) – 21 chemical trailing trials completed (males)
 - Spring 2019 (breeding season) – 21 chemical trailing trials completed (females)
 - Analyses of breeding season trials are almost complete; results are promising
 - We hope to have a manuscript complete by end of the summer



Chemical communication in Burmese pythons

- Results of Y-maze experiments were published Dec 2018 in Integrative Zoology: Richard *et al.* Male Burmese pythons follow female scent trails and show sex-specific behaviors. (Online first)
- Python skin lipid extraction and analysis
 - Additional samples collected during the breeding season, currently being processed
 - We hope to have a manuscript on the sexual dimorphism of chemical signals in pythons by the end of the summer
- Trailing experiments in the Y-maze at NWRC
 - Testing of python response to lipid fractions are currently on hold (tests were suspended due to a nidovirus outbreak in our captive test animals)
 - We anticipate testing in Spring 2020