

Program Name: Invasive Species Population Management
Project Name: Python Chemical Communication
Project ID: 2815
Lead Agency: USDA/APHIS Wildlife Services National Wildlife Research Center

Strategy and Biennial Report Objective Addressed: 2-B.4
Invasive Species Strategic Action Framework Goal: 4

Measurable Output(s): Characterization of python skin chemicals

Project Synopsis: The goal is to obtain quantitative analyses of chemicals in the skin of invasive Burmese pythons now established in Florida. Understanding the nature of the chemical signals used in python reproductive ecology would lead to the development of useful management tools: 1) female-specific chemical signals for tracking and locating female pythons; 2) development of a reproductive attractant to trap male pythons. Altering male pythons with estrogen implants, which was successfully done in garter snakes, should induce the male pythons to produce female pheromones which will increase opportunities to obtain the pheromone, identify constituents, and perhaps synthesize it.

Current Status: Data collection for the project is set to begin in 2014. Chemical extractions from python shed have been made and several steroid derivatives are present; similar compounds play major roles as pheromone components in several lizard species. There are compositional differences between male and female extracts. Preliminary behavioral trials have been conducted with captive pythons. Male pythons exhibited distinct behaviors and showed robust increases in sampling rates when following female chemical trails in Y-mazes. Future trials will further elucidate the male behavioral responses.

Project Schedule:
Start Date: 2014
Finish Date: 2017

Detailed Project Budget Information

	2014	2015	2016	2017	2018	Balance to Complete	Total
Federal	\$27,500	\$18,500	\$12,500	\$10,000		\$41,000	\$68,500
SFWMD**							
Local							
Total	\$27,500	\$18,500	\$12,500	\$10,000		\$41,000	\$68,500

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