

Python Removal - Methods Development and Field Application in Bird Drive Basin

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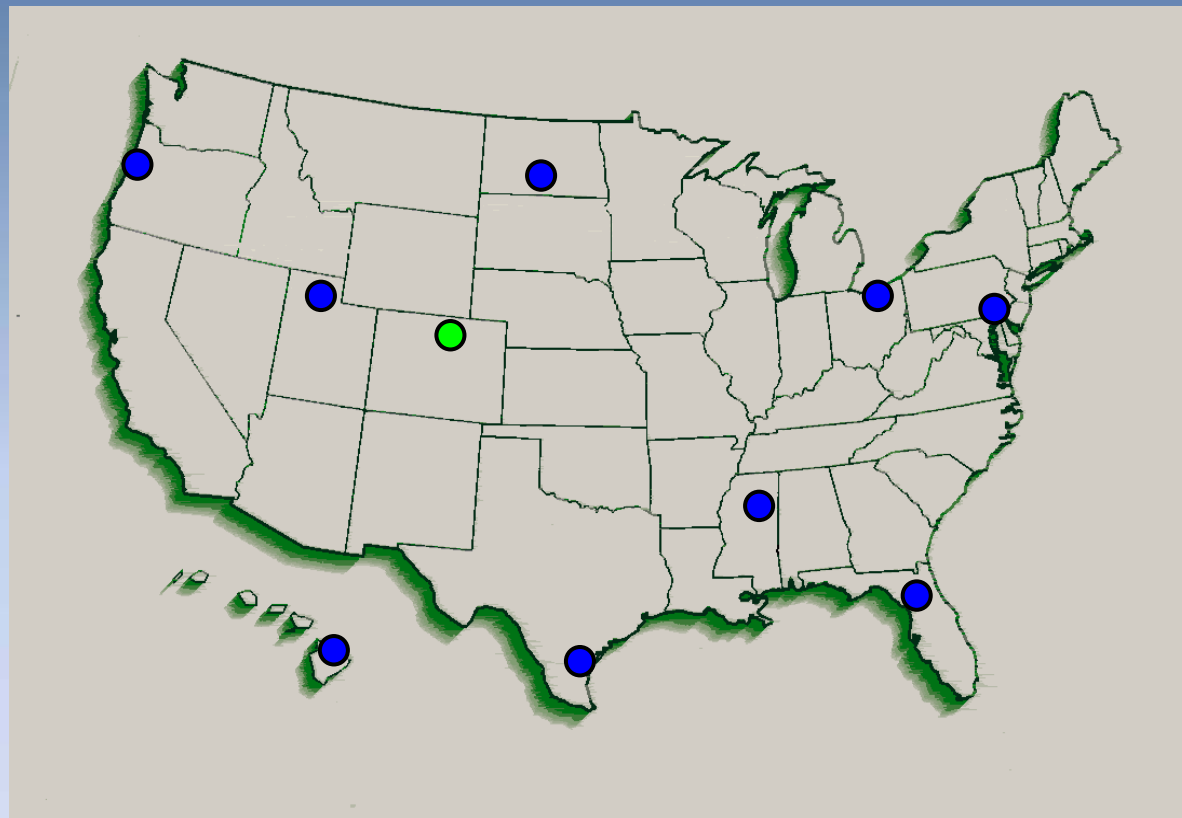
USDA Wildlife Services

National Wildlife Research Center





USDA/WS/NWRC Locations



Apply scientific expertise to resolve human-wildlife conflicts while maintaining the quality of the environment shared with wildlife

Agriculture & Resource Protection

- Aviation Safety
- Feedlots & Dairies
- Sunflower & Rice
- Timber & Horticulture
- Pacific Rim Biosecurity
- Livestock/predation

Technology Development

- Contraceptives
- Chemistry
- Genetics
- Toxicology

Wildlife Diseases

- Cattle Fever Tick
- Pseudorabies
- Rabies
- bovine TB
- Influenzas
- Bacteria
- CWD

Invasive Species



African Python *Python sebae*

Possible existence of an established population of the north African python *Python sebae* prompted a multi-agency response to search and remove the species from its known range in south Florida.

As part of this response, the South Florida Water Management District (SFWMD) entered into an agreement with the US Department of Agriculture's Wildlife Services (WS) Program to search for and remove pythons and other invasive reptiles from SFWMD-managed properties, including the Bird Drive Basin (BDB), the epicenter of *P. sebae* records in south Florida.

African Python *Python sebae*

- To that end, from August 2010 through April 2011 we conducted surveys in the BDB.
- We also surveyed other SFWMD properties as time permitted.
- A second objective was to implement a trapping program in the BDB using the new trap design developed during pen trials.

Priority Animal Species

- **Priority Animals**
 - African python
 - Burmese python
 - Green iguana
- **Newly Detected Animal Species**
 - none

Bird Drive Basin\SFWMD Properties Contracted to Survey



August 2010 – April 2011 Survey Routes - BDB



- Surveys were conducted in the BDB by boat, vehicle, and foot along a series of standard transects to ensure adequate coverage

August 2010 – April 2011 Survey Routes BDB

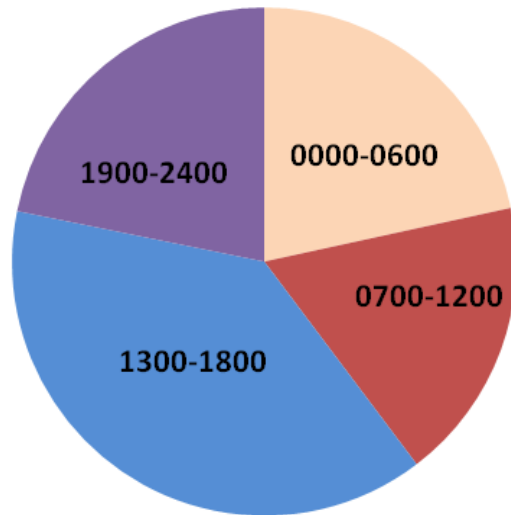


Survey Effort

- We conducted surveys during the weeks of 16 August, 30 August, 13 September, 4 October, 18 October, 15 November, 29 November, 13 December, 3 January, 24 January, 28 February, 21 March and 11 April. (13 total)
- Most searches were carried out by 2 persons, but up to 5 individuals participated at times, including the Auburn University Python Dog Team.

Survey Effort

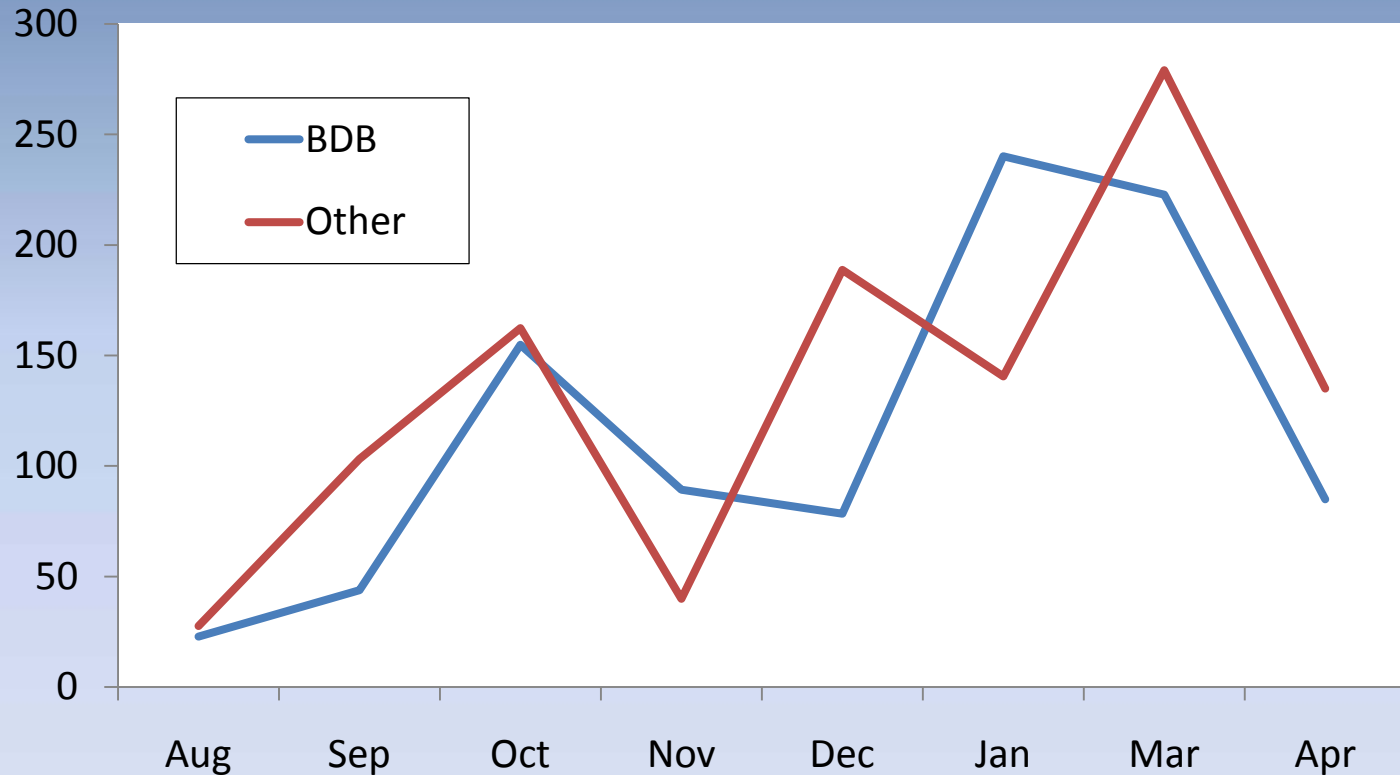
Timing of Python Searches through 7 October



Initially, surveys were conducted day and night until it became a safety issue for personnel and the weather was too cool for snakes to be active
Total hours surveyed = 465.

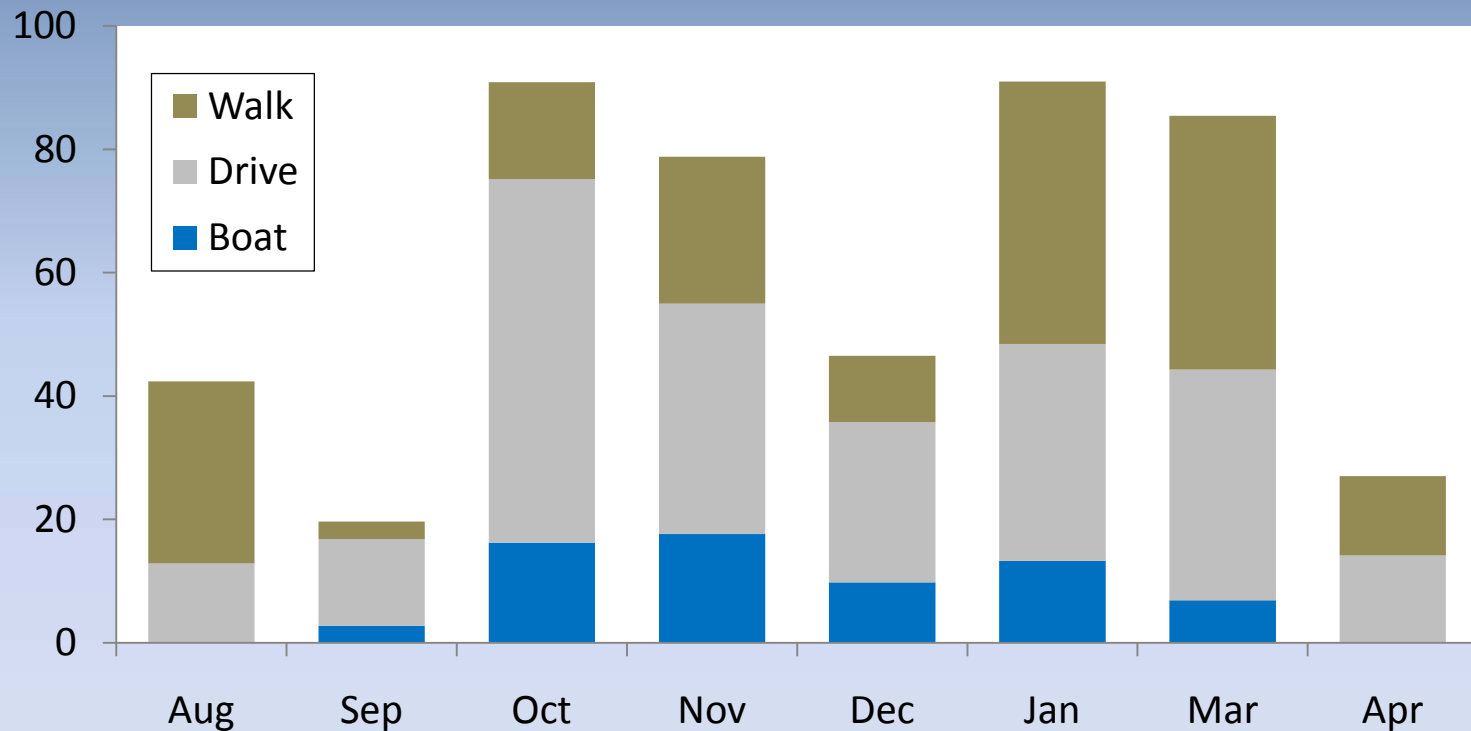
Survey Effort

Acres Searched (total = 2013)



Survey Effort

Hours Searched in BDB by Method



Trap Development and Testing

- At our Gainesville facility, we used captive Burmese pythons to develop and test a new live trap for large snakes and lizards.
- The spring tensioned, adjustable double-treadle system reduces the possibility of trapping non-target animals
- Designed to be used un-baited in drift fence or hide configuration
- Patent pending

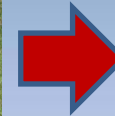
Trap Development and Testing



Trap idea tested



Drift fence configuration



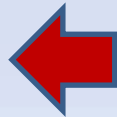
11' python trapped



Trap mocked up for production



Trap prototype produced by Tomahawk Trap Co.



Trap prototype tested in hide configuration

2011 Everglades Invasive Species Summit

Trap Development and Testing



Field-testing of the new python trap was planned, but did not occur because section 7 consultation (indigo snake concerns) was not completed in time.

Innovations



We evaluated an infrared thermal imaging device (FLIR model HS-307 Command) for its usefulness in detecting pythons.

The unit was difficult to aim and to focus while walking on uneven ground, and the given the expense (approximately \$8,000), it is unlikely to be cost-effective.

Handheld search lights and headlamps were easier to use, more versatile, and provided greater coverage.

Needs & Gaps

- Identify critical needs and gaps
 - Coordination/control of the actions of the permitted snake hunters and other surveyors
 - Continued periodic surveys of BDB
 - Security of personnel and property (traps)



Wrap Up Slide

- Acknowledgements -
 - Josh Friars and Tony Duffiney USDA/Wildlife Services for field assistance and administrative support
 - LeRoy Rodgers SFWMD for financial support and encouragement
 - Skip Snow ENP for logistical support
 - Jeff Fobbs M-D Venom 1 Unit for support of animals used in training and research
 - Auburn Dog team (Melissa, Bart, Christina, Ivey, and Jake) for assistance in field surveys