Pondering python population parameters:
Current findings, future directions in Southwest Florida

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Rookery Bay NERR

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How Much Information on Population Biology Is Needed to Manage Introduced Species?

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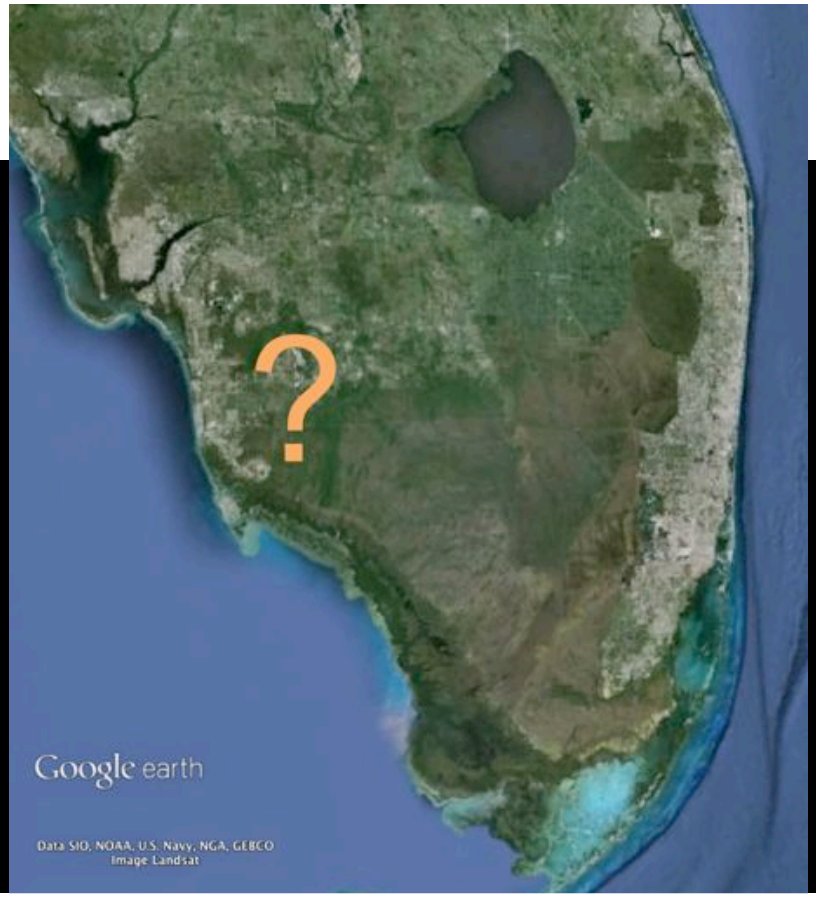


Road to Nowhere, Rookery Bay NERR
• Removal campaign initiated Jan. 2012
• At least monthly visits throughout year
(no pythons were seen outside of dry season)
• 1-3 searchers per visit
• Pythons & shed skins removed

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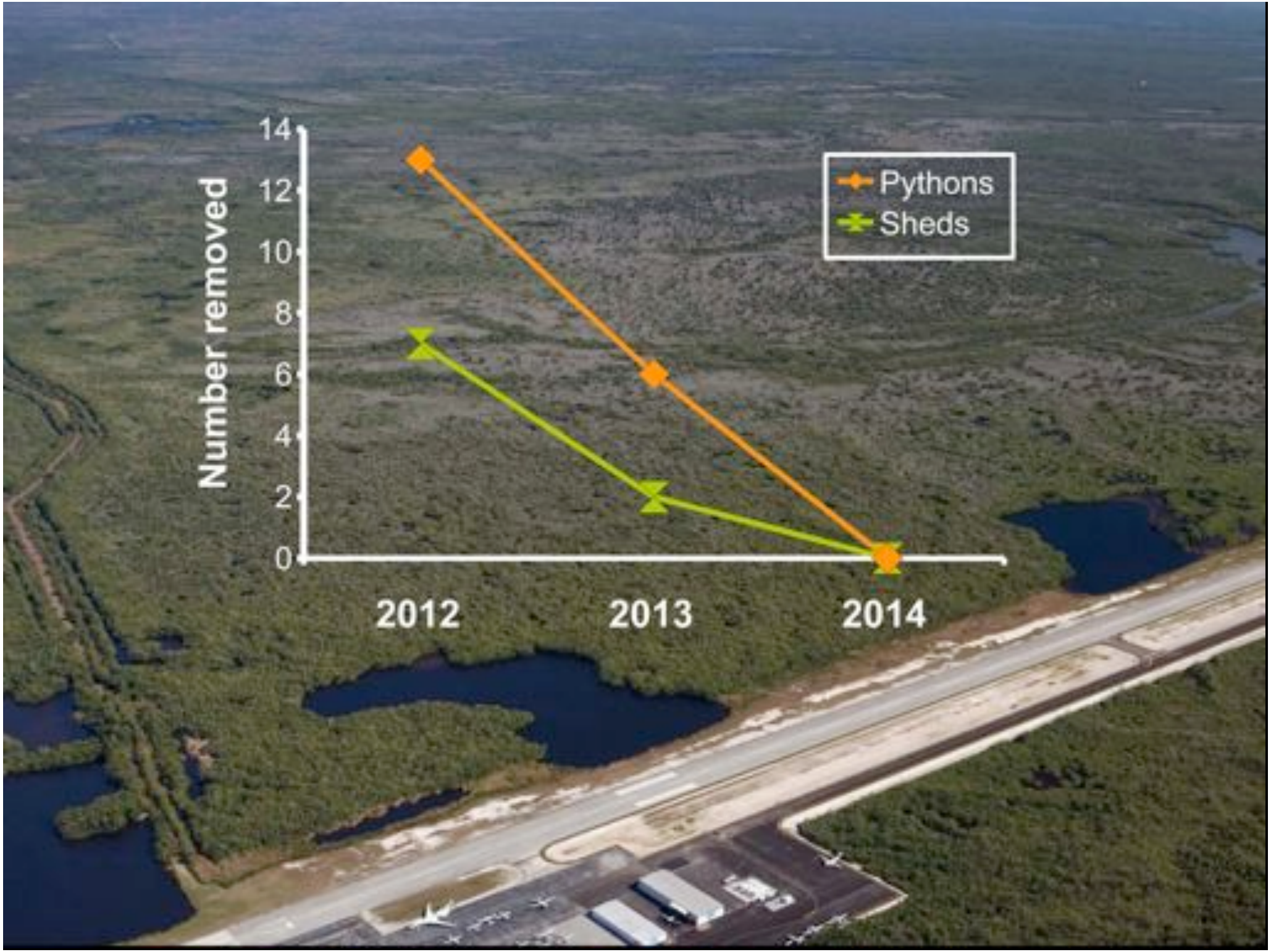
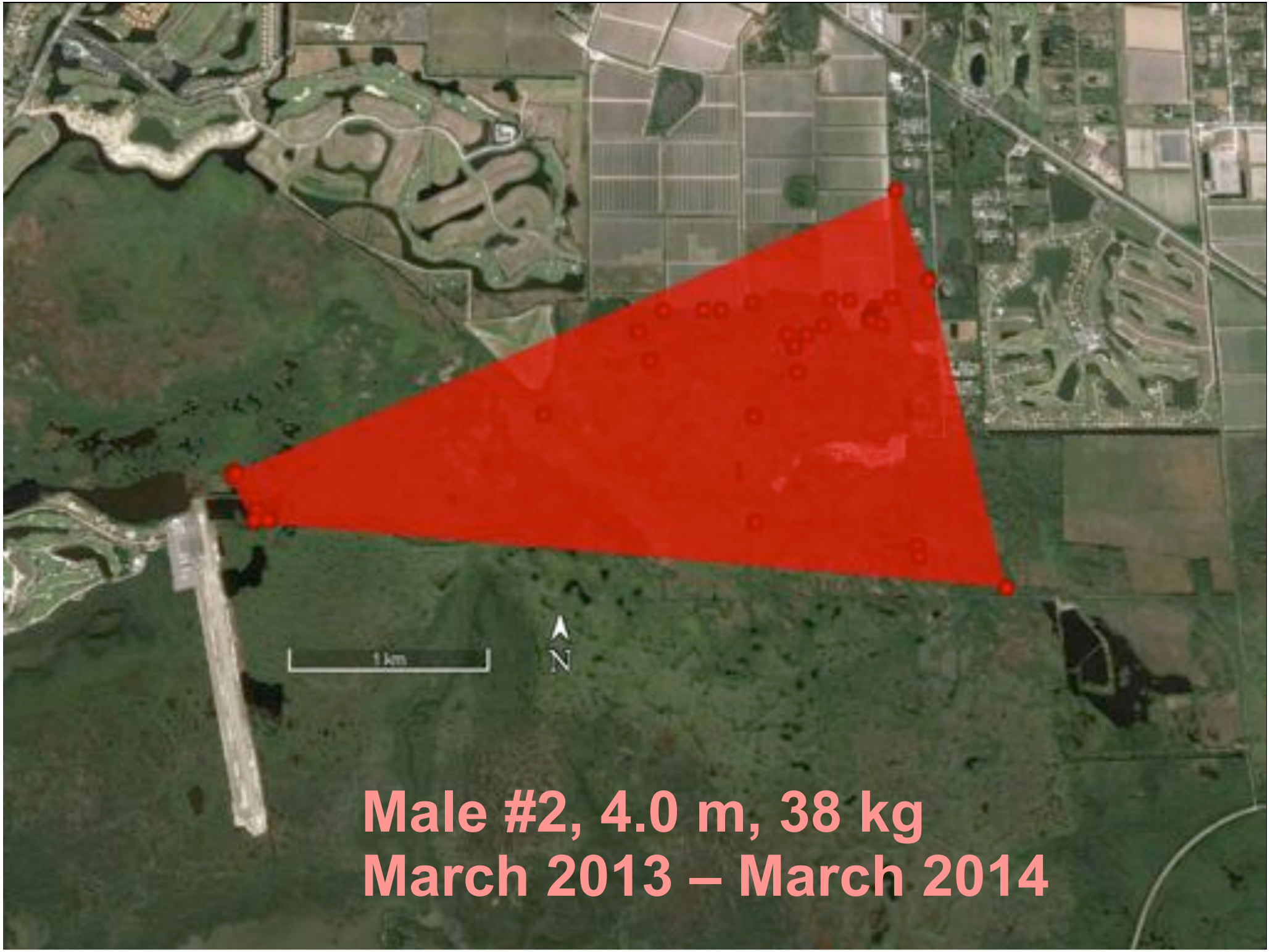
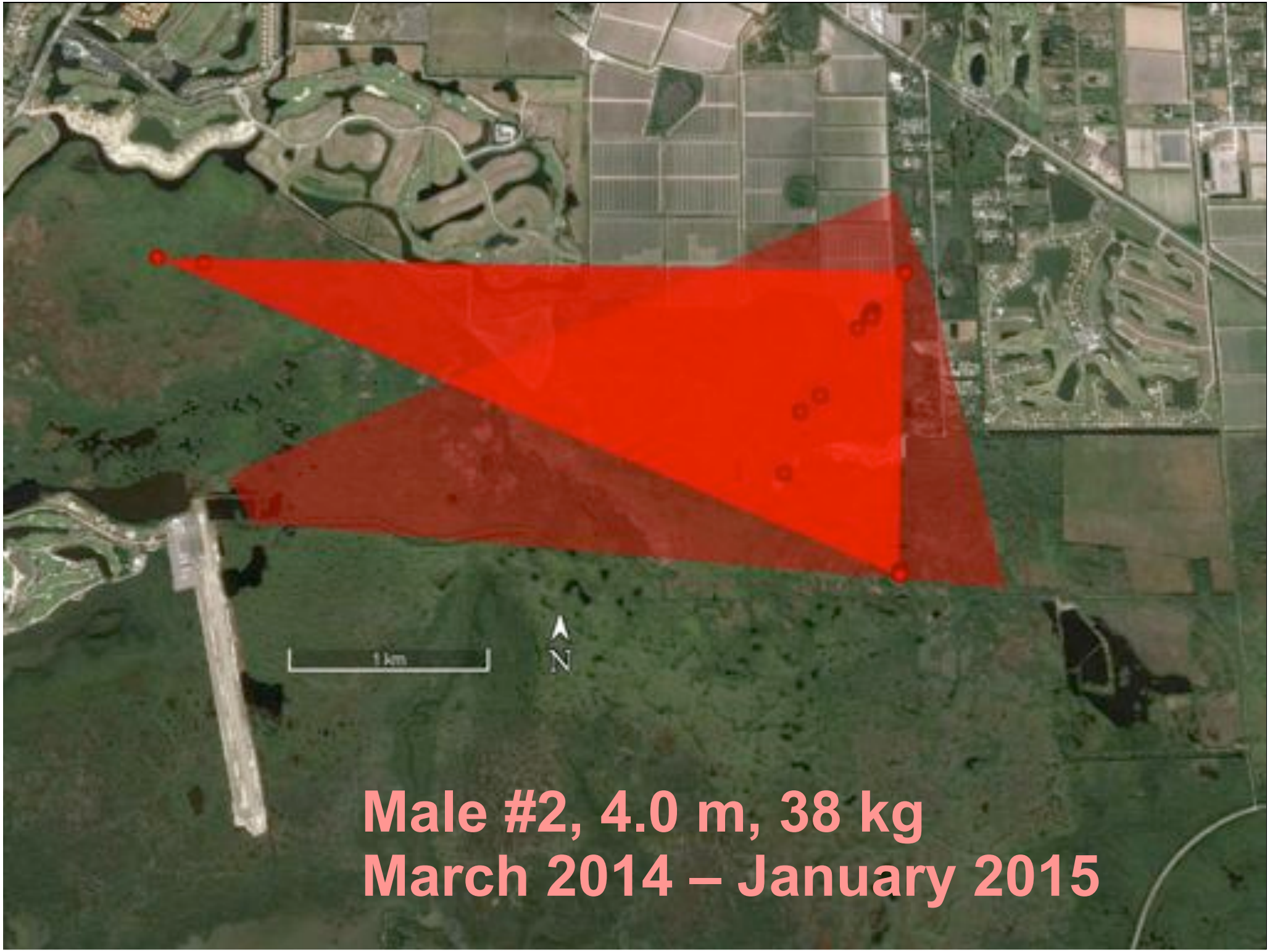
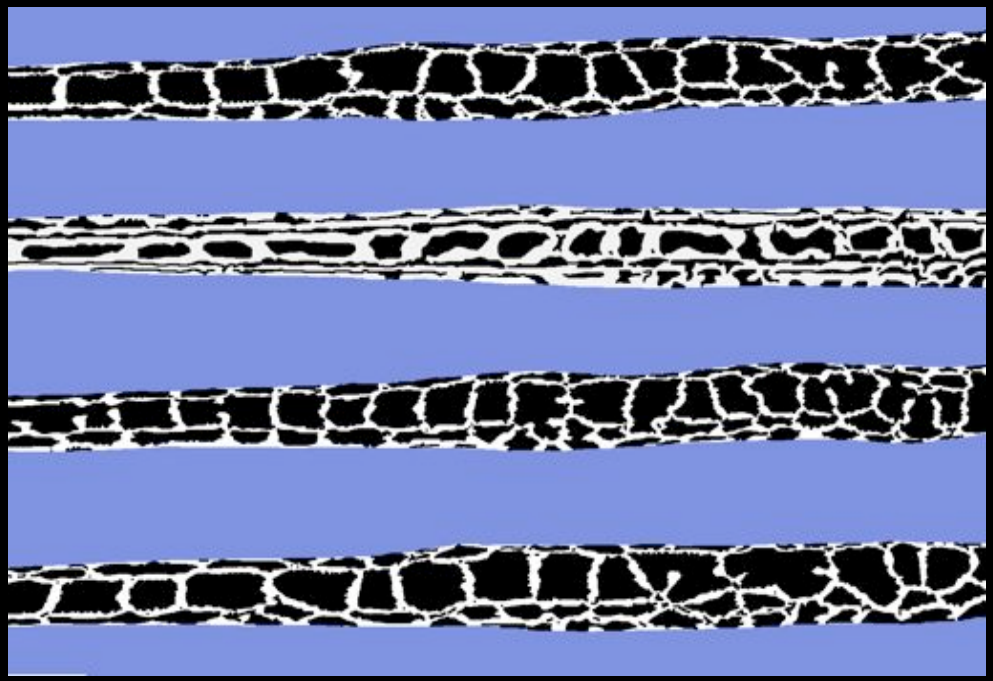

Number removed
14
12
10
8
6
4
2
0
2012
2013
2014
Pythons
Sheds

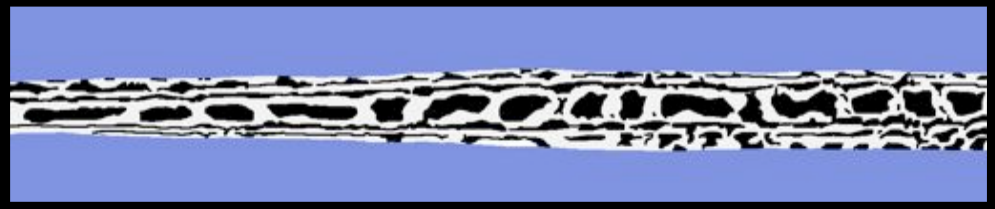

1 km
N
Male #2, 4.0 m, 38 kg
March 2013 – March 2014

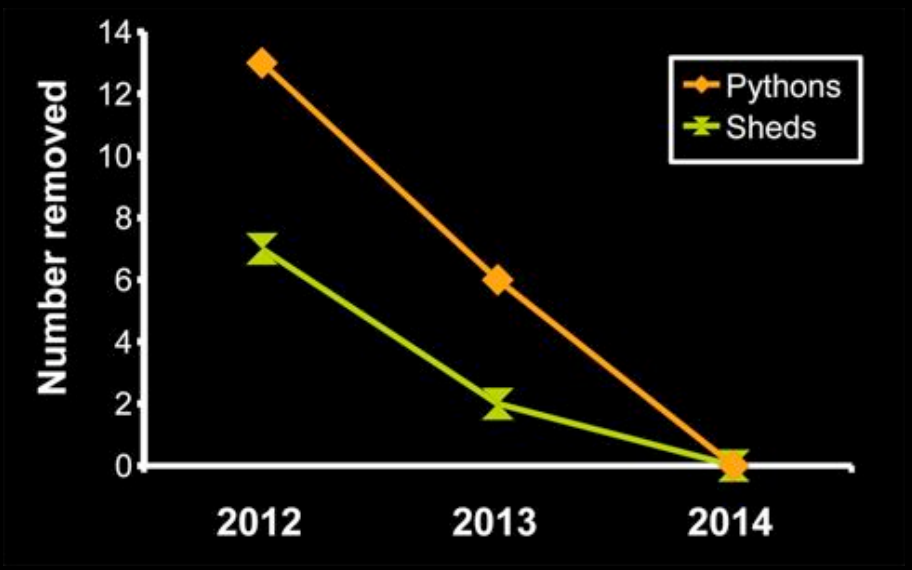

1 km
N
Male #2, 4.0 m, 38 kg
March 2014 – January 2015

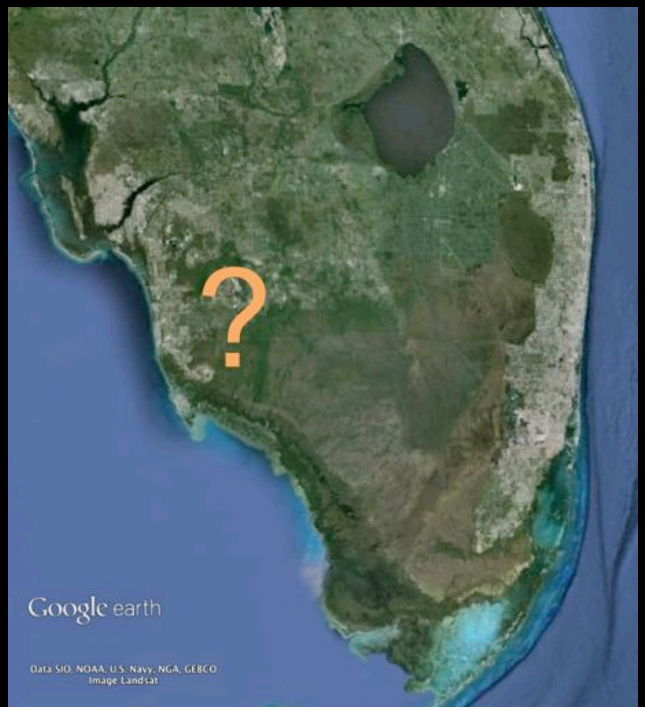
Unusual phenotype



Implications



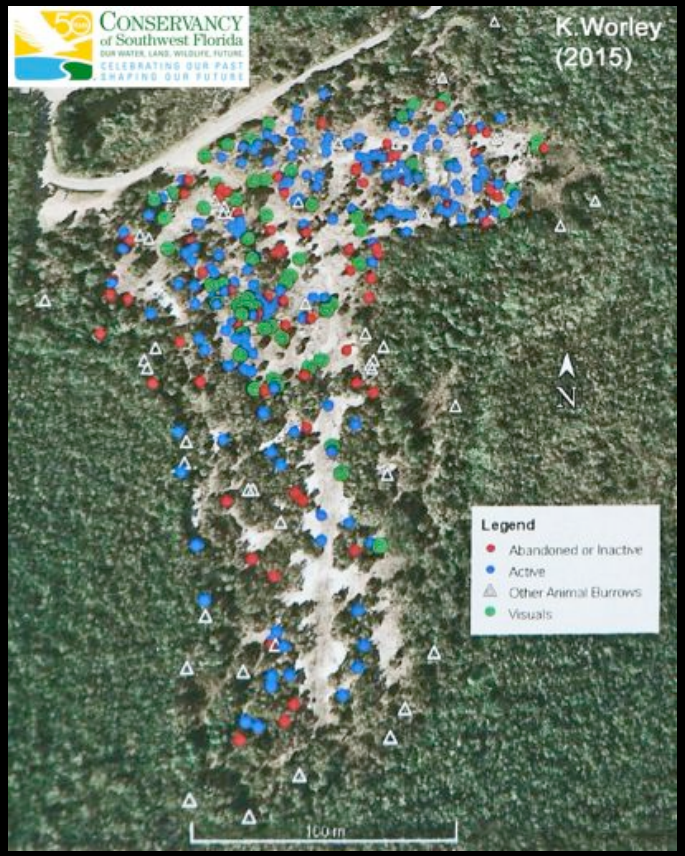




Hitting hotspots hinders hookups

Nocturnal navigating nabs nonnatives

Burrowcams benefit Burmese battle



Herpetological Review 44(2), 2013

PYTHON MOLURUS BIVITTATUS (Burmese Python). **HABITAT USE / OCCURRENCE WITHIN *GOPHERUS POLYPHEMUS* BURROWS.** Many native snake species use *Gopherus polyphemus* burrows as a refuge against cold weather conditions, to prevent desiccation, and to assist with shedding (Bogert and Cowles 1947. Am. Mus. Novit. 1358:1–55; Dodd and Barichivich 2007. Florida Sci. 70:83–94; Stevenson et al. 2009. Herpetol. Conserv. Biol. 4:30–42). It has been speculated that the non-native *Python molurus bivittatus* might also use *G. polyphemus* burrows for the same reasons. The discovery of a live *P. molurus* and a shed skin in *G. polyphemus* burrows within Rookery Bay National Estuarine Research Reserve (NERR), Collier Co., Florida, USA, confirms use of this unique habitat by the invasive snake.

On 20 May 2010, I observed a *P. molurus* shed protruding from the mouth of a *G. polyphemus* burrow and extracted ap-

Biological Invasions **1:** 21–32, 1999.

Positive interactions of nonindigenous species: invasional meltdown?

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Key words: biotic resistance, dispersal agent, facilitation, habitat modification, indirect effects, mutualism, pollination, synergism

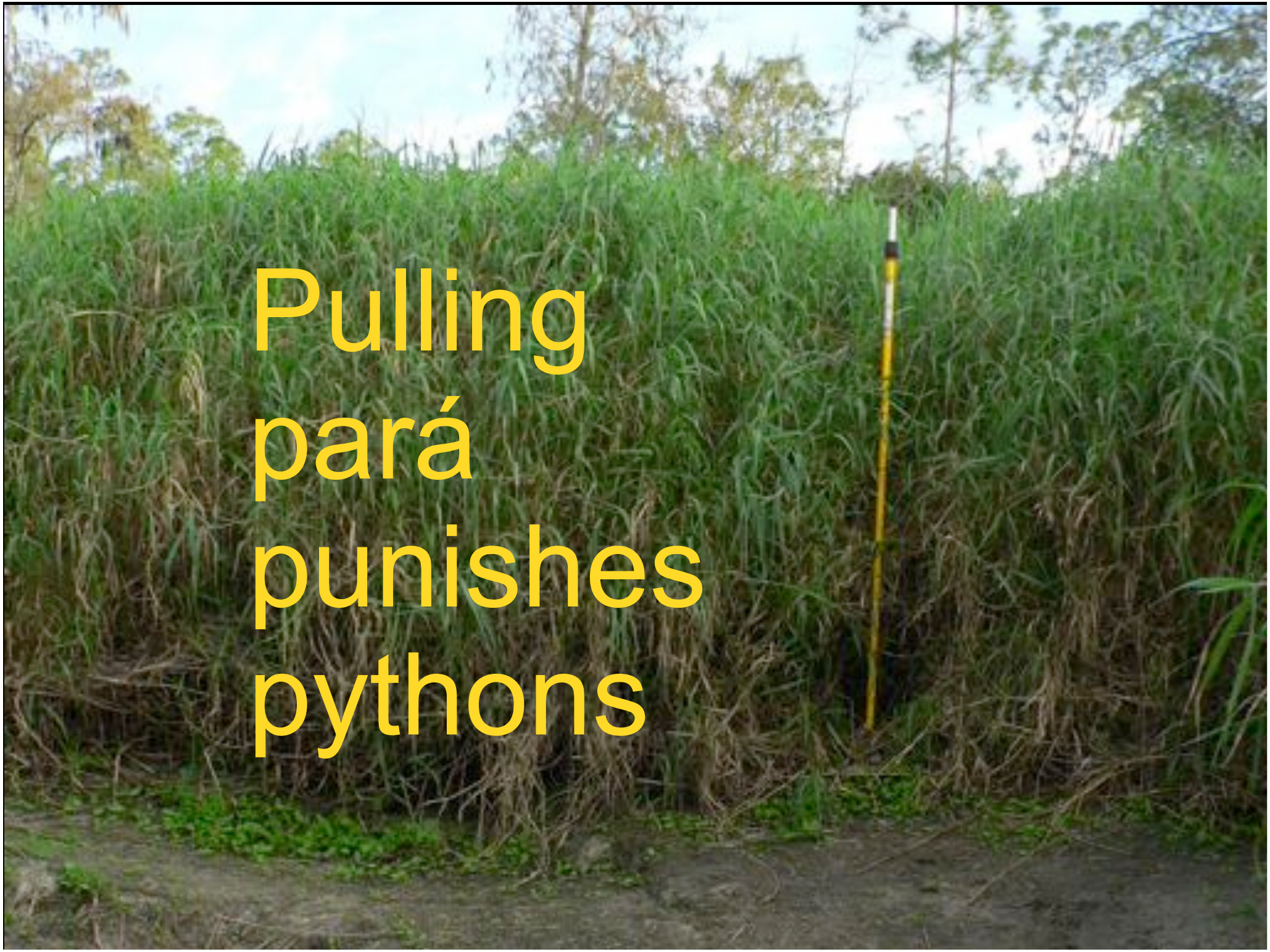
Abstract

Study of interactions between pairs or larger groups of nonindigenous species has been subordinated in the literature to study of interactions between nonindigenous and native species. To the extent that interactions among introduced species are depicted at all, the emphasis has been on negative interactions, primarily resource competition and interference. However, a literature search reveals that introduced species frequently interact with one another and that facilitative interactions are at least as common as detrimental ones. The population significance of these interactions has rarely been determined, but a great variety of types of direct and indirect interactions among individuals of different nonindigenous species is observed, and many are plausibly believed to have consequences at the population level. In particular, mutualisms between plants and the animals that disperse and/or pollinate them and modification of habitat by both animals and plants seem common and often important in facilitating invasions. There is little evidence that interference among introduced species at levels currently observed significantly impedes further invasions, and synergistic interactions among invaders may well lead to accelerated impacts on native ecosystems – an invasional 'meltdown' process.

Pará grass

Urochloa mutica

(Forssk.) T.Q. Nguyen


Pulling
pará
punishes
pythons