

Everglades Cooperative Invasive Species Management Area



University of Florida Invasive Reptile Research and Monitoring

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UF | IFAS Extension
UNIVERSITY of FLORIDA

2021 Everglades Invasive Species Summit

July 21, 2021

Overview

Update ongoing research & monitoring projects

Tegu research

- Live trapping
- Body condition
- Camera traps
- Telemetry



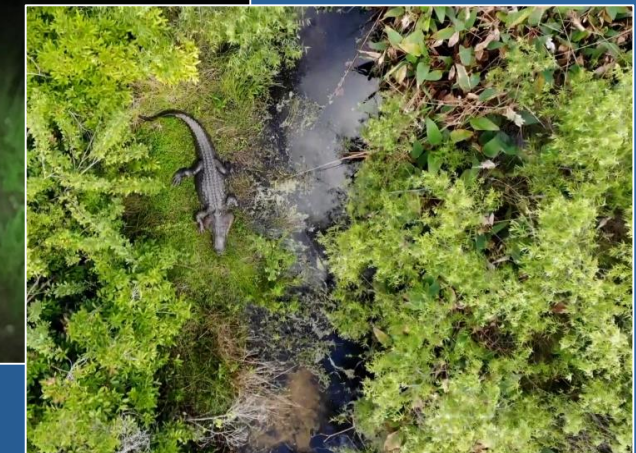
Artwork: Jenna Cole



Ongoing Projects



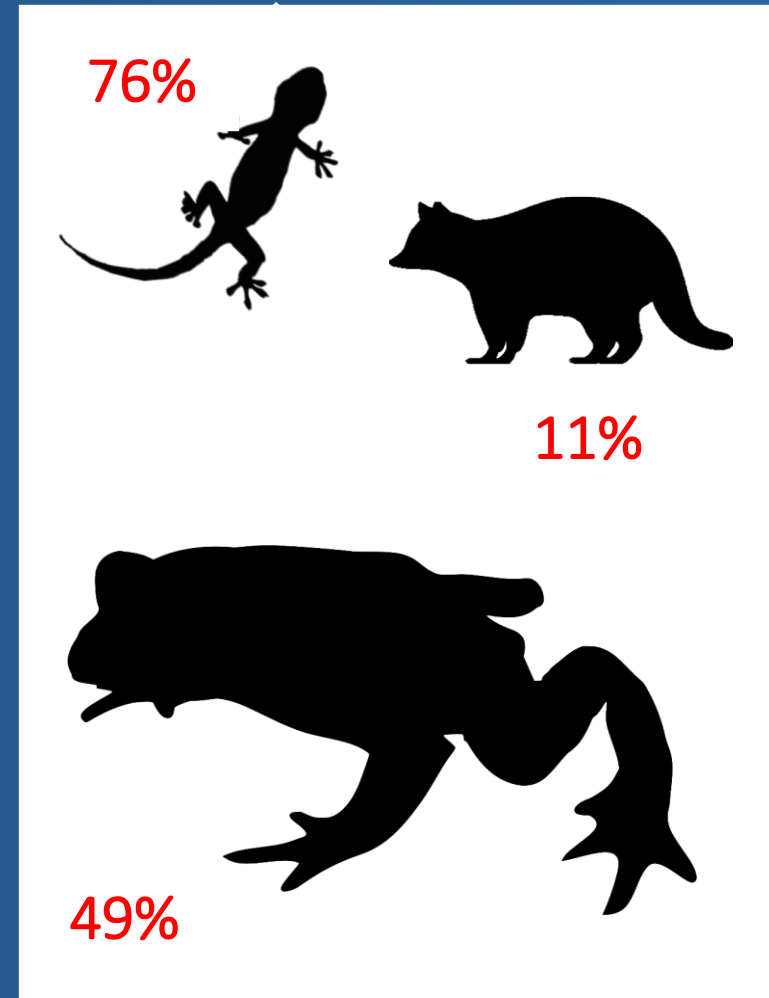
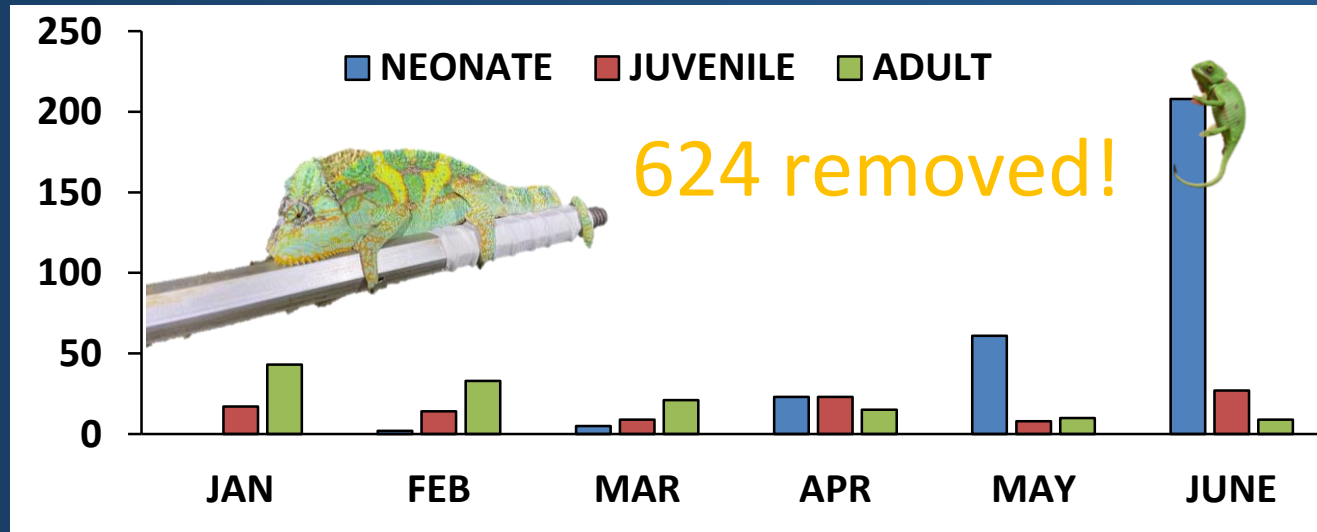
- Mammal inventory of Loxahatchee NWR
- Nile monitor research
- Caiman research



Ongoing Projects



- EIRAMP surveys
- PEP/PATRIC data analysis
- Assessing impact of PEP contractors on mammal and python encounter rates
- Chameleon EDRR

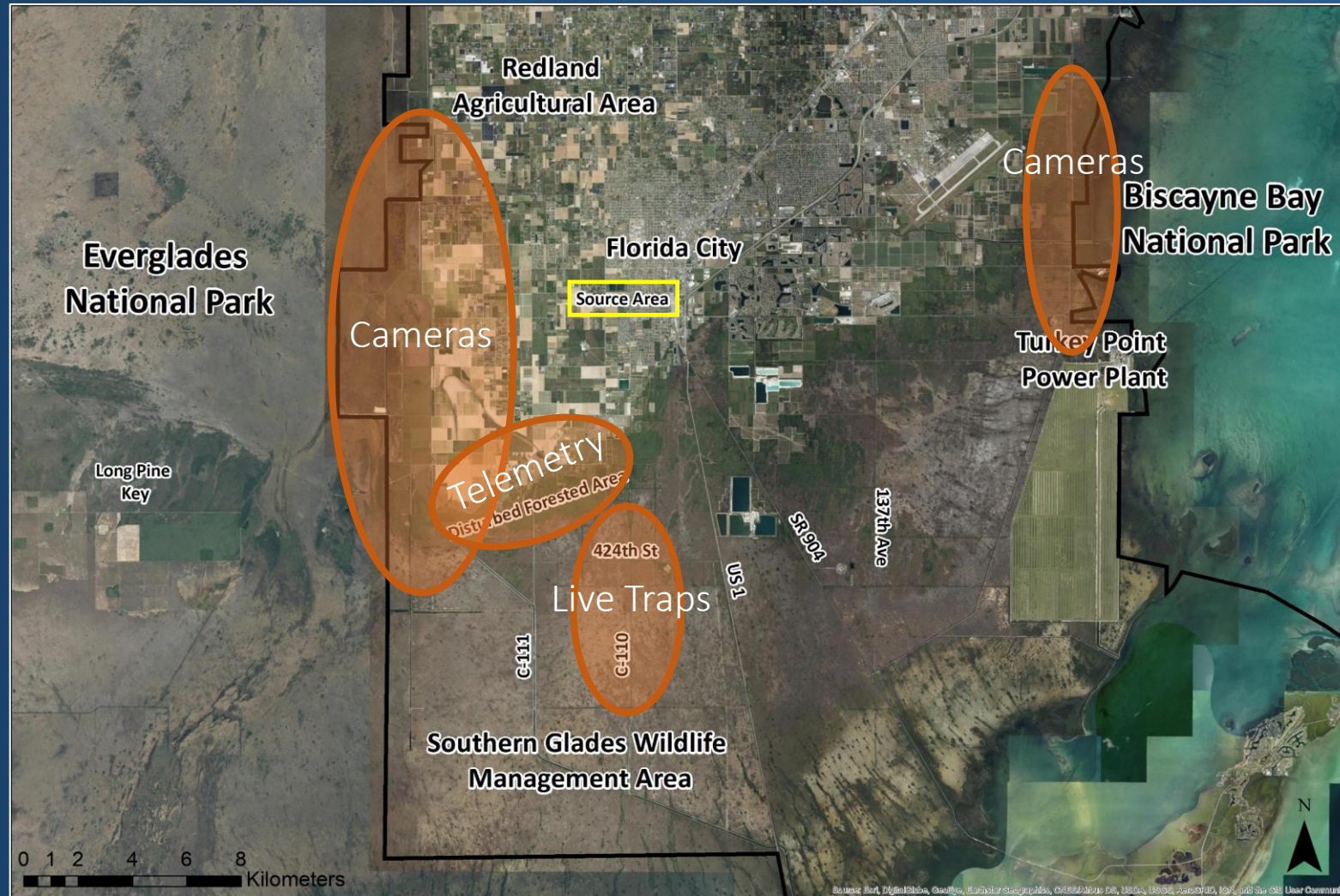


Tegu Research



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Tegu Research



Tegu Research – Live trapping

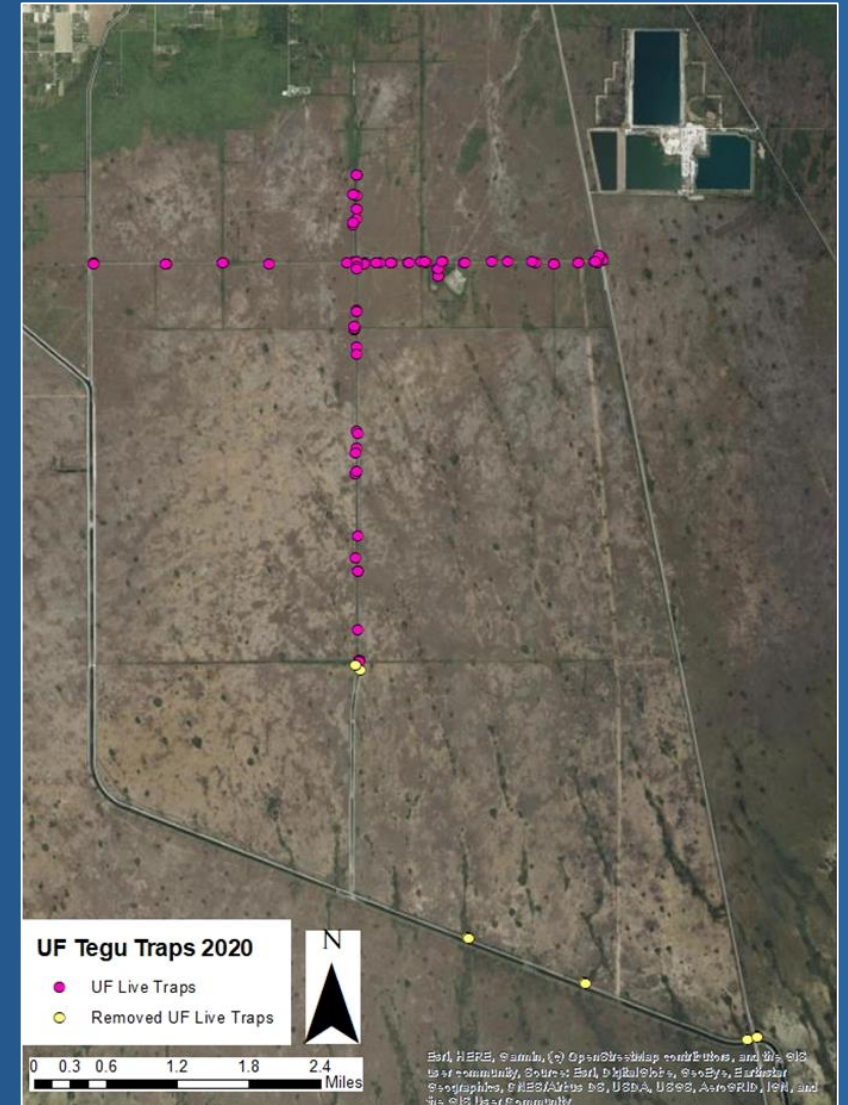
Objectives

- Model probability of capture to improve removal rate of tegus
- Determine if current removal efforts alter relative density or probability of capture



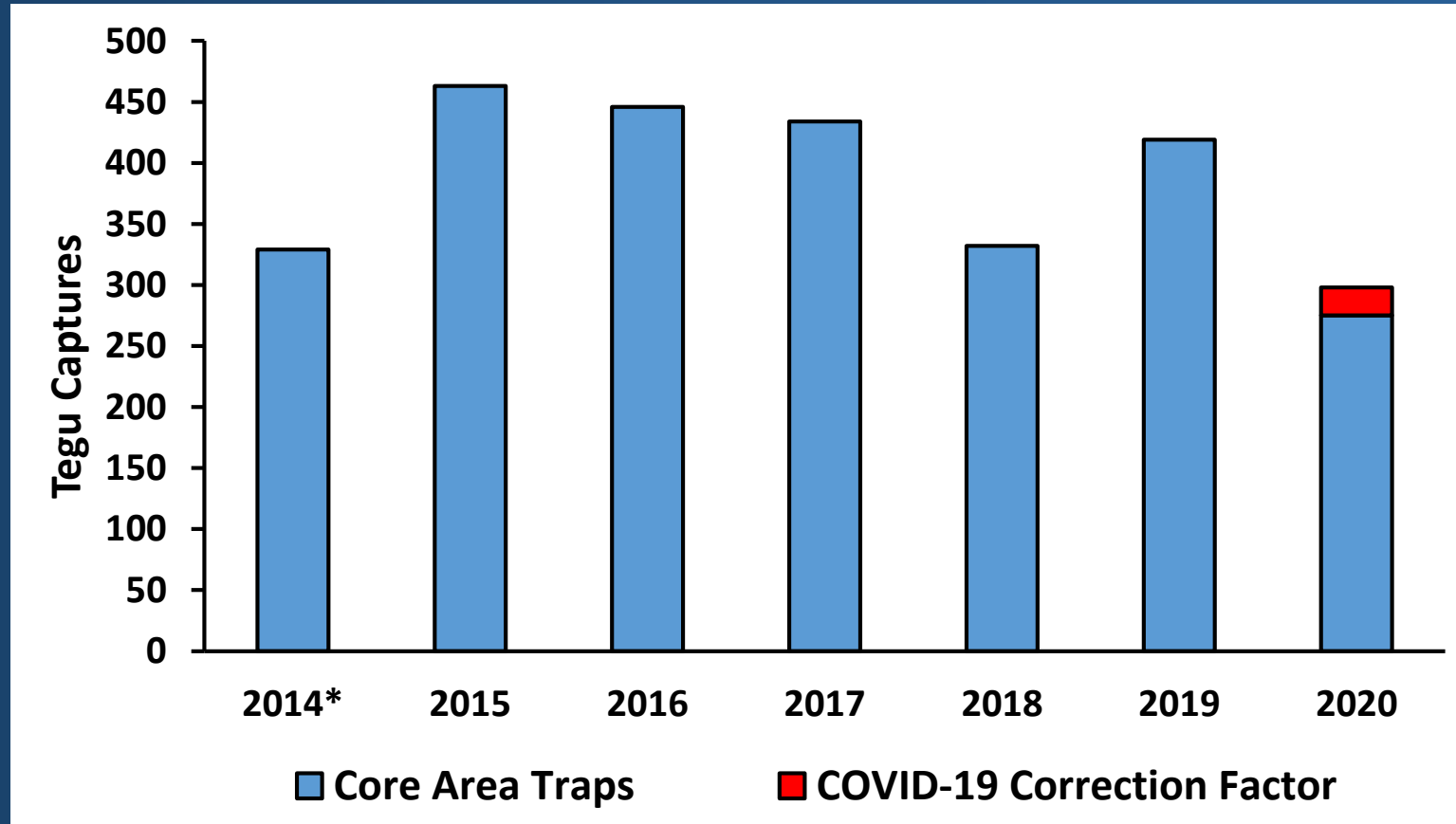
Tegu Research – Live trapping

- 2014-2020
- 2,578 tegus captured
- 108,158 trap nights (avg. 15,451 nights/year)
- Avg. 123 traps/per year (range: 35-194)
- Tomahawk, Havahart, drift fences



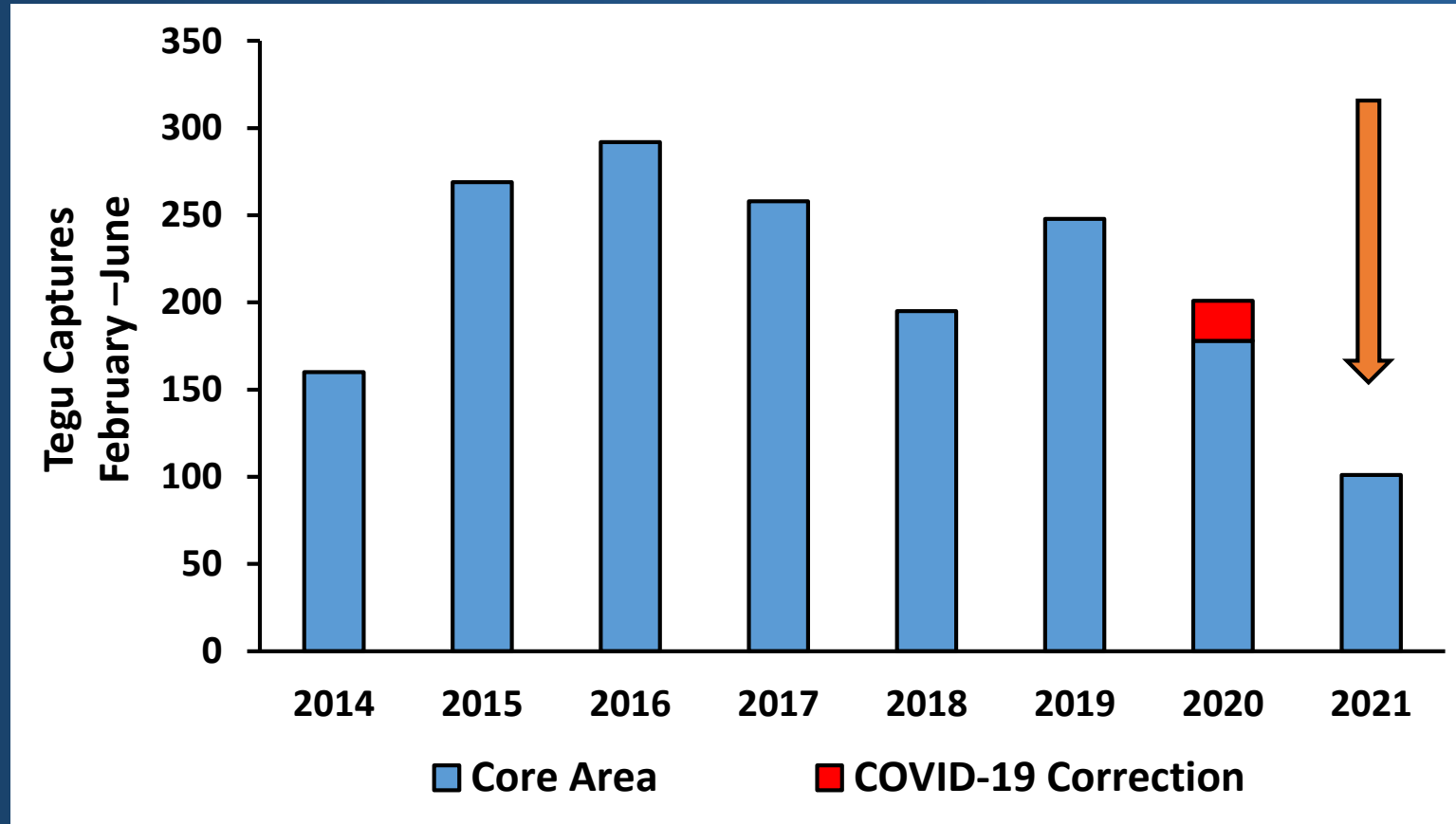
Tegu Research – Live trapping

Capture trends 2014 – 2020



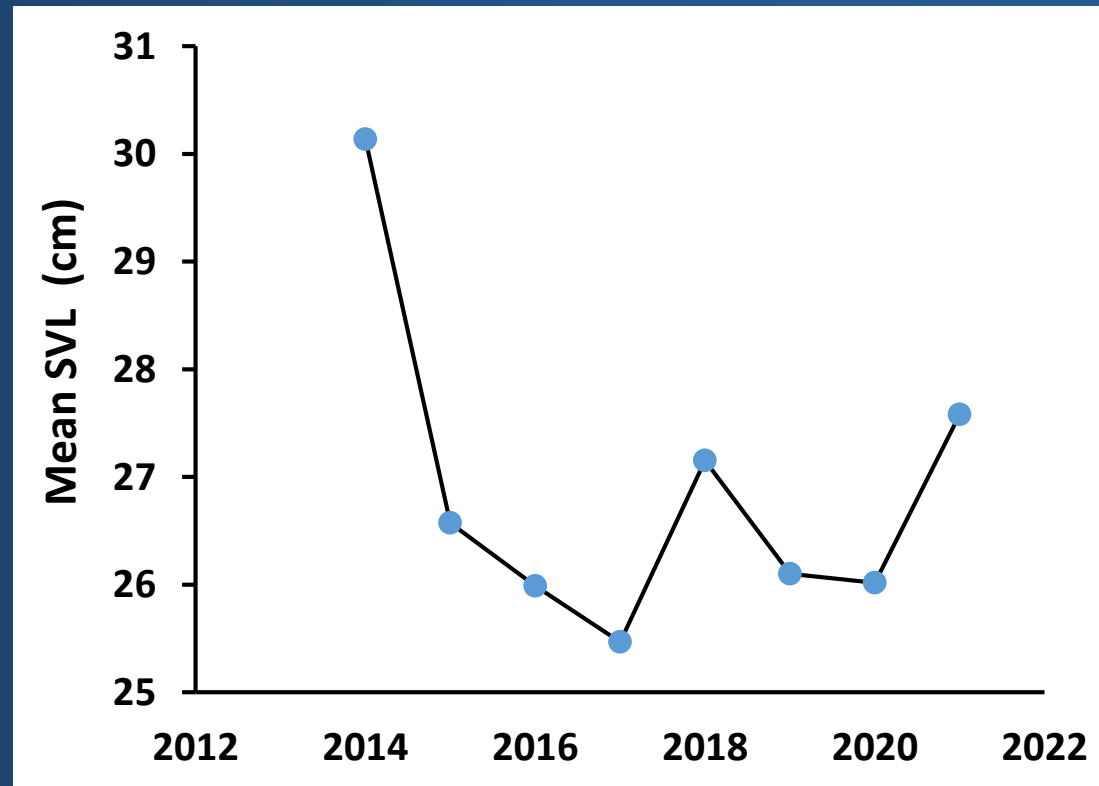
Tegu Research – Live trapping

Capture trend 2021



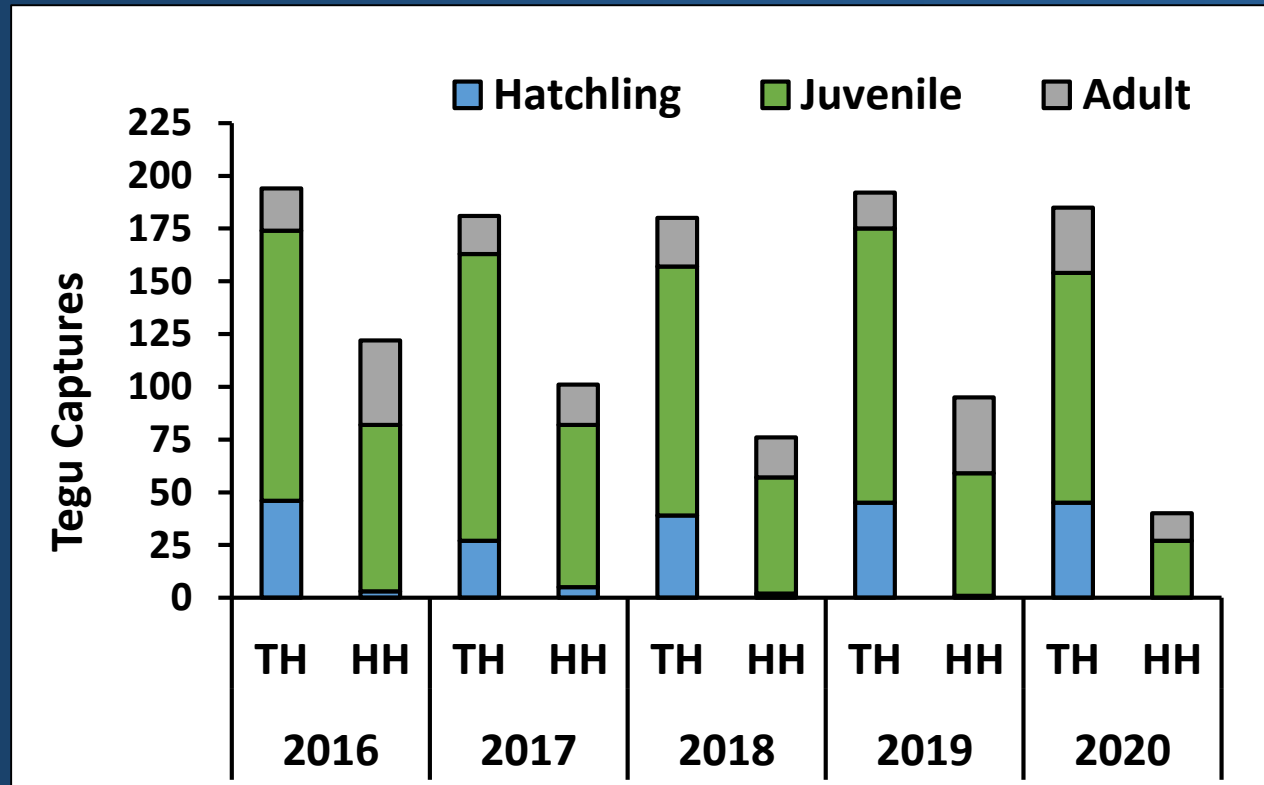
Tegu Research – Live trapping

Capture trends 2014 – 2020



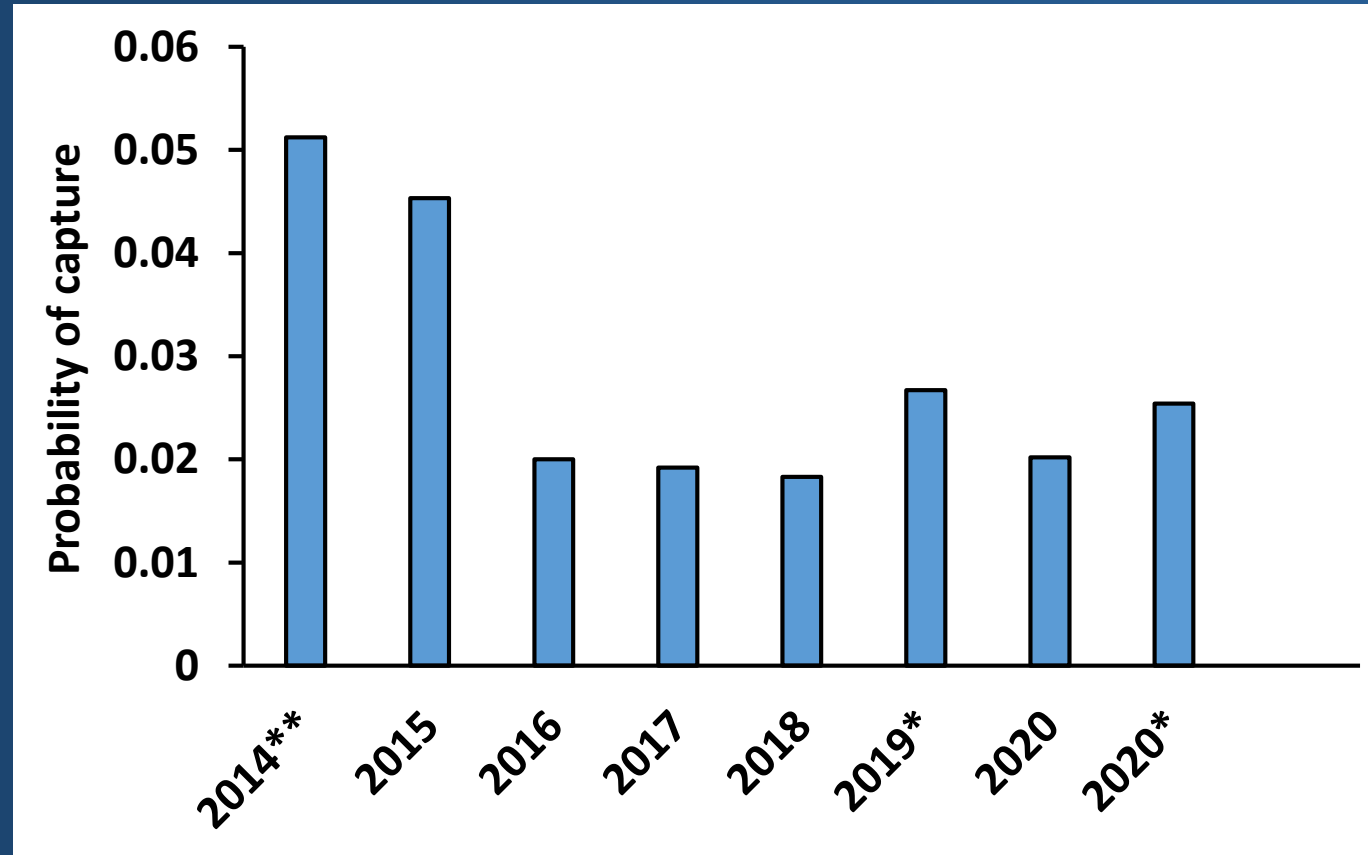
Tegu Research – Live trapping

Capture trends 2014 – 2020



Tegu Research – Live trapping

Capture trends 2014 – 2020



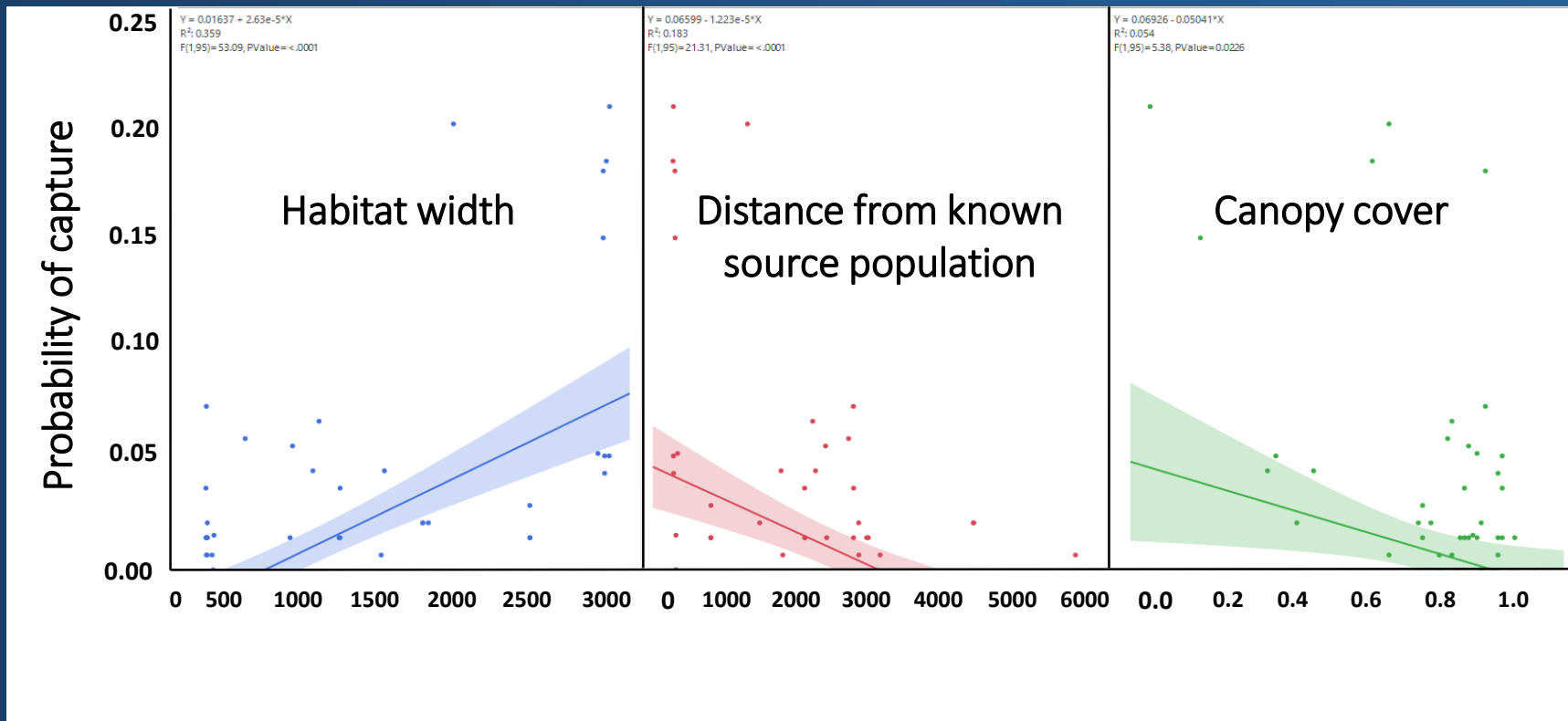
*Includes captures from the US-1 and SW 424th Street underpass

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Tegu Research – Live trapping

Capture trends 2014 – 2020



Tegu Research – Camera traps

Objectives

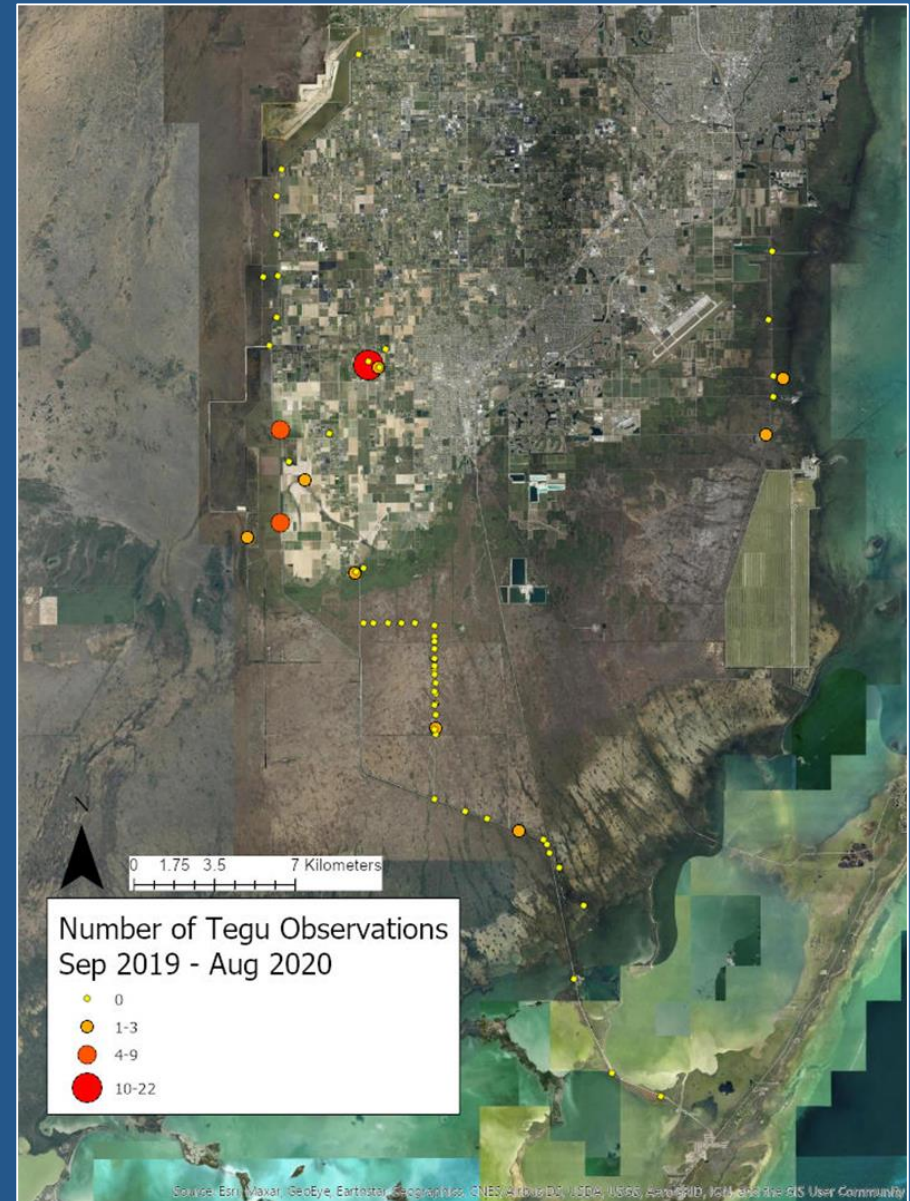
- Model tegu occupancy to identify variables affecting occupancy and detection
- Improve our ability to locate and remove tegus
- Assess our ability to contain tegus



Tegu Research – Camera traps

Preliminary results

- More tegu observations in west and east relative to core



Tegu Research – Telemetry

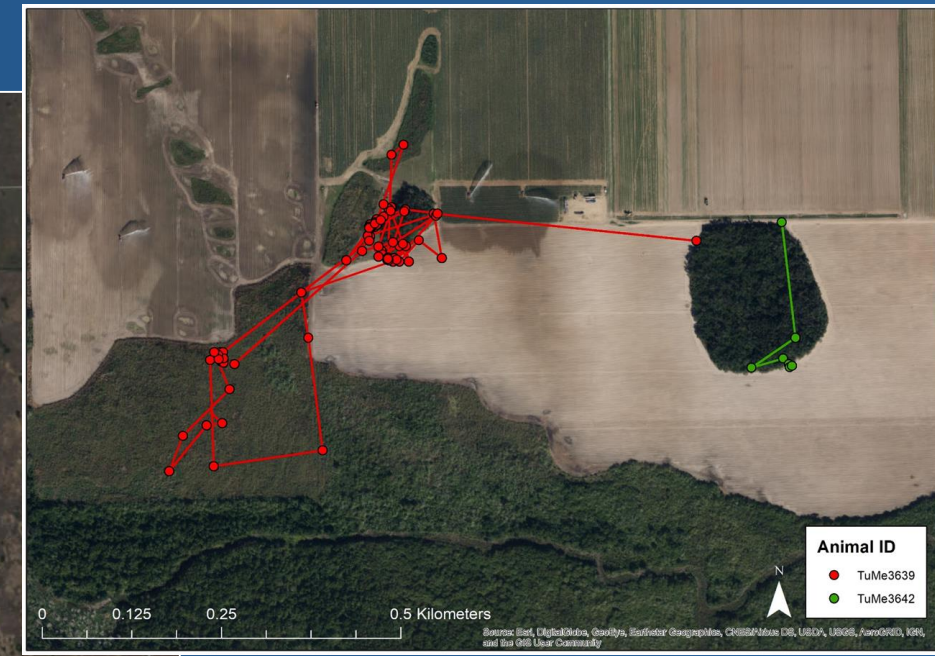
Objectives

- Model tegu movement using telemetry data to understand habitat selection by this species and to identify movement corridors through which tegus may disperse



Tegu Research – Telemetry

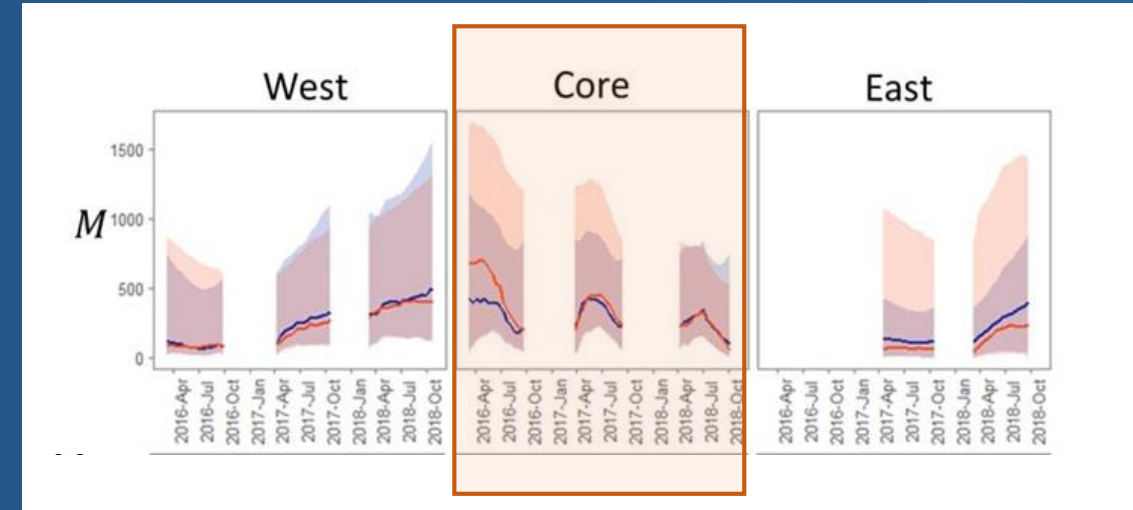
- Use of linear and non-linear habitat varies among tegus
- Important for directing trap efforts and understanding potential dispersal pathways



Tegu Research – 2014 - 2020

What have we learned?

- Sustained intensive trapping can reduce population size and dispersal
- Core population is decreasing or stable – supported by removal models (Udell 2020)
- Have to keep efforts up or effect of trapping in core will be negated (2021 final year of trapping by UF in core)



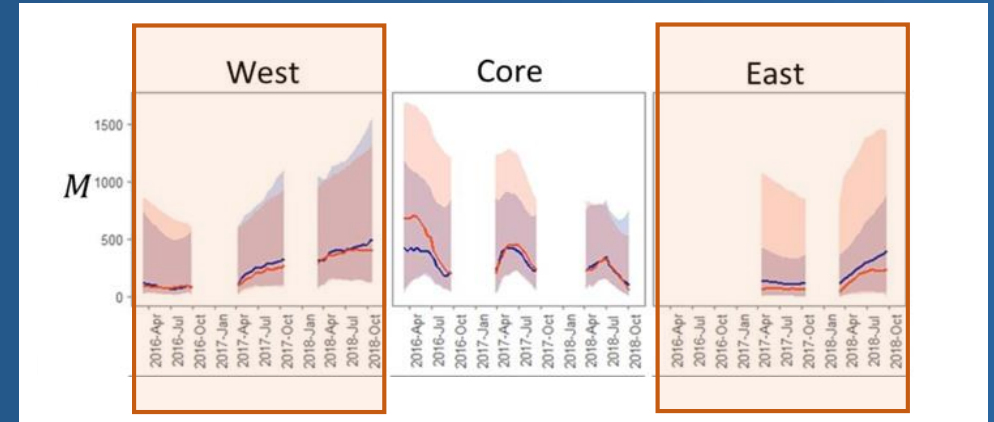
Udell 2020



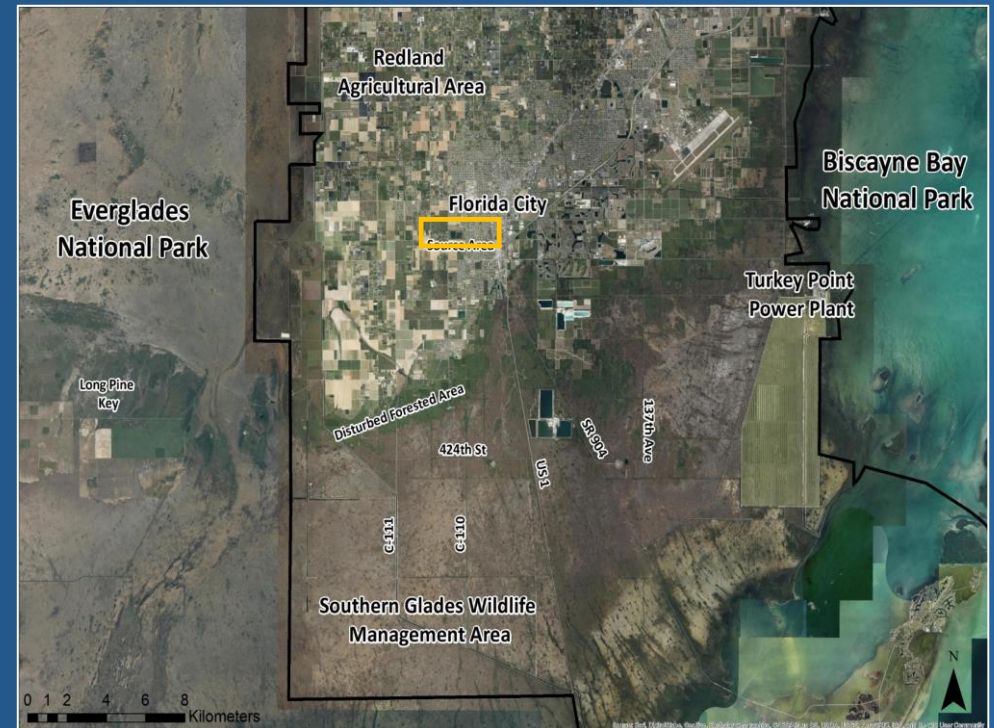
Tegu Research – 2014 - 2020

What have we learned?

- Camera surveillance – more tegus observed in west and east
- Udell (2020) model predicted population increase in west and east
- CERP project lands and private lands are at risk



Udell 2020



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Tegu Research – 2014 - 2020

What have we learned?

- Need to expand and sustain trap efforts in RAA and DFA
- Private trappers ceasing work in this area; on par to catch 100s of tegus per trapper

Private trapper data from traps set in the RAA and DFA		
Year	Tegus captured	# of clutches
2015	1367	6
2016	1532	2
2017	1760	5
2018	1843	4
2019	1437	3



Tegu Research – 2014 - 2020



Artwork. J. Cole

What have we learned?

- Tegus are using linear and non-linear habitats differently; can help direct trapping efforts and identify dispersal pathways
- Tomahawk traps better at catching tegus than Havahart, account for 82% of captures
- Factors affecting trap performance – can be incorporated to increase removal rate
- We know what to do, how to do it, and where it needs done; Increased effort is needed to prevent tegu populations from increasing and expanding in CERP project lands



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Questions

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Think Locally, Act neighborly
invasive species know no boundaries!

