Investigating the Presence of a Non-native Mediterranean Gecko (*Hemidactylus turcicus*) at Tennessee Technological University.

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Introduction:

- Mediterranean House Geckos (*Hemidactylus turcicus*) are a non-native, old-world species that have expanded their range throughout the Southeastern United States.
- Human infrastructures serves as thermal refugia for colonies of geckos which are increasingly found in urban centers at higher latitudes.
- **Individuals were discovered on the campus of Tennessee Technological University, but study is required to determine if a viable population is present.**

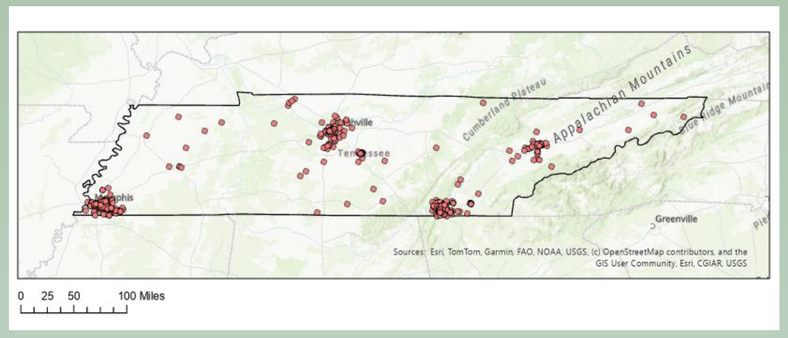

Fig. 1 Map of reasearch grade observations made on INaturalist.

Research Question:

Does Tennessee Tech University harbor a viable population of Mediterranean Gecko?

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Methods:

- We implemented visual encounter surveys on 37 buildings to identify the prevalance of *H. turcicus* across campus.
- Each building was randomly surveyed twice from May to July 2026 during peak activity 20:30-22:00.
- If geckos were discovered on a building, the building was not searched a second time.
- Age class estimations were recorded along with the number of individuals discovered during each survey. (Fig. 2)
- Capture-recapture efforts measuring age class, sex, mass, and snout-vent length are currently underway to establish population demographics. (Fig. 3-4)

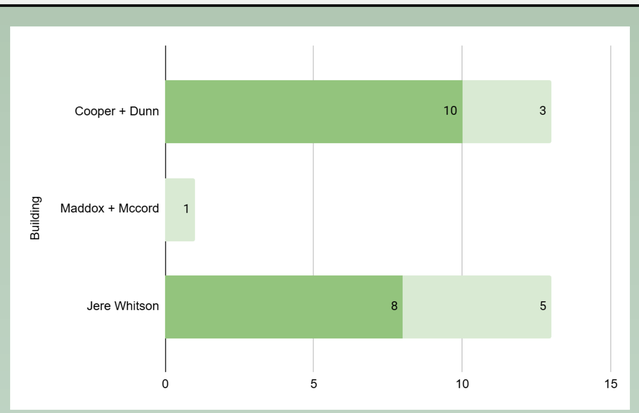

Fig. 2 Number of individuals and their age class found at each building.

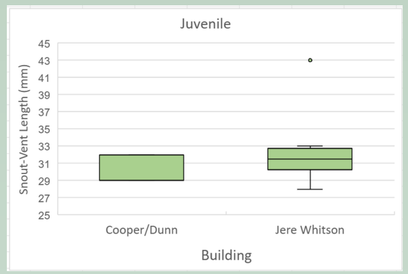

Fig. 4 Snout-vent length of juvenile individuals found at Cooper-Dunn Hall and Jere Whiston Hall.

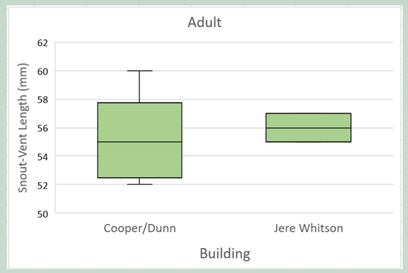

Fig. 3 Snout-Vent Length of adult individuals found at Cooper-Dunn Hall and Jere Whiston Hall.

Results

- Three buildings were identified to house at least one individual: Jere Whitson Hall, Cooper-Dunn Hall, and Maddox-McCord Hall. However, two buildings had enough animals to indicate a breeding population: Cooper-Dunn and Jere Whitson.
- Twenty-seven total individuals were observed: 13 at Jere Whitson Hall, 13 at Cooper-Dunn Hall, 1 at Maddox-McCord Hall.
- Both adult and juvenile individuals were encountered at Jere Whitson Hall and Cooper-Dunn Hall.

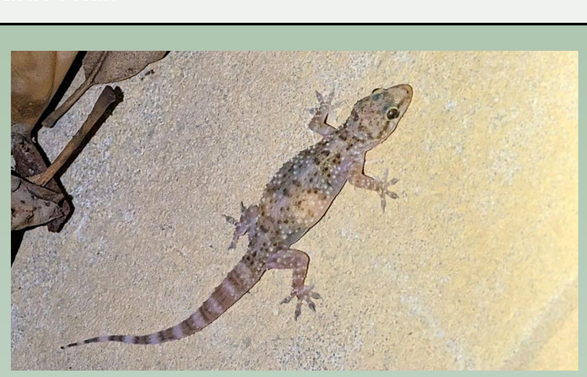

Fig 5. Gravid *H. turcicus* female.

Conclusion:

- The detection of multiple age classes and sexes across survey efforts provides strong evidence that Tennessee Tech hosts a stable, naturalized population of House Geckos.
- Capture and release efforts are now underway to estimate population size on campus.

Acknowledgements:

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