

Florida's infamous invaders: the impact of the green iguana in South Florida

The history of iguanas in Florida

- Green Iguanas were first seen in Florida in Miami-Dade county in the 1960's as a result of the exotic pet trade.
- Studies, reported sightings, and mapping of the population locations of the green iguana show populations as north as Gainesville, and in large clusters north of Port St. Lucie. 7,000 reported sightings marks this species as a large issue in the state (University of Georgia Center for Invasive Species and Ecosystem Health (n.d.)).

The issue with invasive

- Iguanas burrow underground in the early springtime to lay their eggs. In areas where homes and other structures such as sidewalks exist, these tunnels can compromise the integrity of these structure's foundation. This also damages natural environments such as sand dunes and trees and their roots (Florida Fish and Wildlife Conservation Commission 2019).
- Though iguanas do not pose any official threat to native species according to current data, these reptiles do consume some native snail and butterfly species, as well as consuming these species' shelter and food source: the nickerbean plant (Townsend 2005).
- As invasive species spread due to a mixture human negligence and changing habitat climates and structures, native species are threatened severely. These threats include direct or indirect competition among a native population versus a non-native population, predation of the native population by the non-native, or the transmission of disease (Abbate 2019)

Temperature leading to proliferation: How are winter temperatures of the last decade affecting the population numbers and impact of the non-native green iguana in South Florida?

- Iguanas respond well to warm temperatures, and in present-day south Florida, even the coldest month (January) has an average temperature of 65* F, well within a safe and habitable range for these iguanas.
- The winter average rose a degree in 2010-2019 to a low of 61* F from a previous average held steadily from the 1970s of 60* F (Campbell 2012).
- Though cold snaps, such as the freeze experienced by green iguanas in 2010 that devastated between 50%-75% of individuals can dwindle numbers, the long (and increasing) periods of warmth provide the species plenty of time to bounce back.
- Iguanas can lay up to ~70 eggs per nest (Florida Fish and Wildlife Conservation Commission 2019).
- Due to the intricate and expansive network of canals in the urban and suburban areas of Florida, these reptiles use these waterways as a travel route, steadily allowing their populations to expand north. (Cerrabino 2017)

Socio-economic threats

- Iguanas have been an ever-increasing presence in the lives of south Floridians. As temperatures rise, the range of these reptiles increases further north, allowing their damage and impact to become greater in recent years.
- Though the iguana does not compete with any native species directly here in south Florida, their impact has a cascade of events for many of its inhabitants. As aforementioned, the financial burden of the damages caused by the green iguanas of south Florida is high and ranges from private property damage such as causing porches and structures to collapse above areas where nests are dug, to genuine damages to the environment such as damaging dunes, canals, and protective sea walls.
- In West Palm Beach, \$1.8 billion damage was caused in 2019 due to burrows disrupting reservoirs and dams (Cerrabino 2017)

What can be done?

- Understanding how to implement humane control where species, native or not, intersect with human life, such as relocation efforts, plant and tree suggestions that won't attract unwanted creatures to the site, such as the nickerbean tree in the case of the iguana, and education on efforts to coexist with the natural world.
- Monitoring the pet trade to no additional iguanas are introduced, especially to areas with smaller populations of the reptiles can also slow their spread. Capture and relocation are not allowed in Florida, only capture and euthanasia. Though this has led to the capture of thousands, the problem persists greatly (Florida Fish and Wildlife Conservation Commission 2019).
- The issue lies in the lack of competition for iguanas in this region paired with the suitable habitat the state provides due to the ever-warming climate. Curtailing the explosion of non-native species like the iguana requires long-term effort and attention to solve. With consistently warming climates, habitats can become suitable to invaders that can cause damage to native species and create socio-economic disasters (Abbate 2019).



Counties in Florida where the green iguana can be found. (Eddmaps, n.d.)



Nesting female iguana. (Oxford, P. 2015)



Iguana in nickerbean tree. (Stein, S. 2013)

References

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