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Powered by iNaturalist API

Wildlife Observations In Georgia



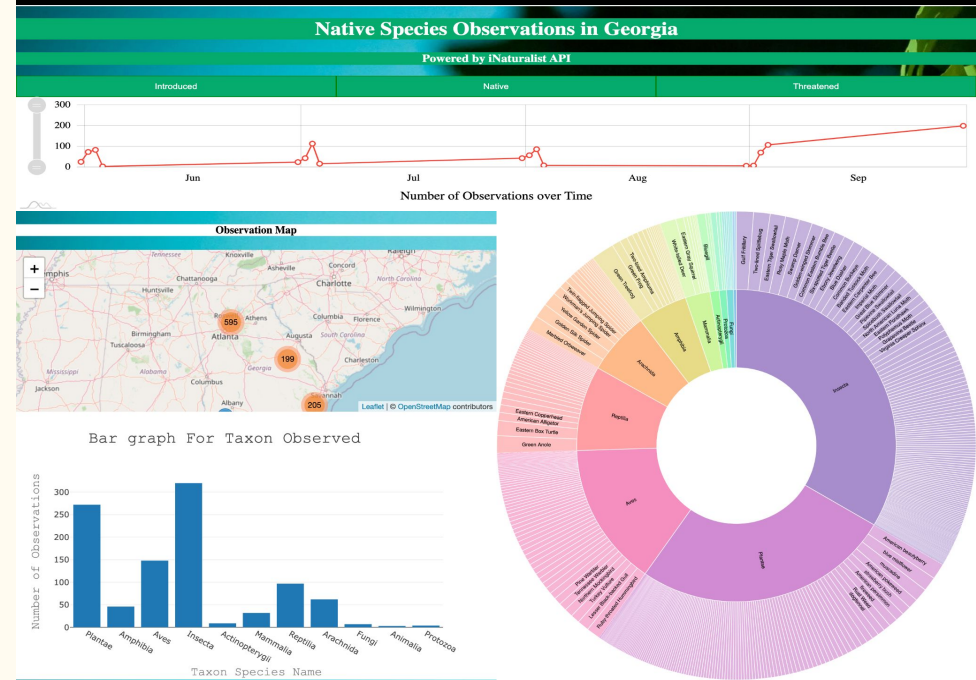
Introduction

- iNaturalist provides a place for any and all nature enthusiasts to record their observations of wildlife
- These observations are used by scientists as well as hobbyist
- Our project is a look at GA wildlife utilizing the iNaturalist API using aggregated data observations



Theme

- For our project we decided to use a dashboard with multiple charts that updates based on the same data.
- We broke down the dashboard into 3 views:
 - Native species
 - Threatened species
 - Introduced species



SELECT * FROM observations

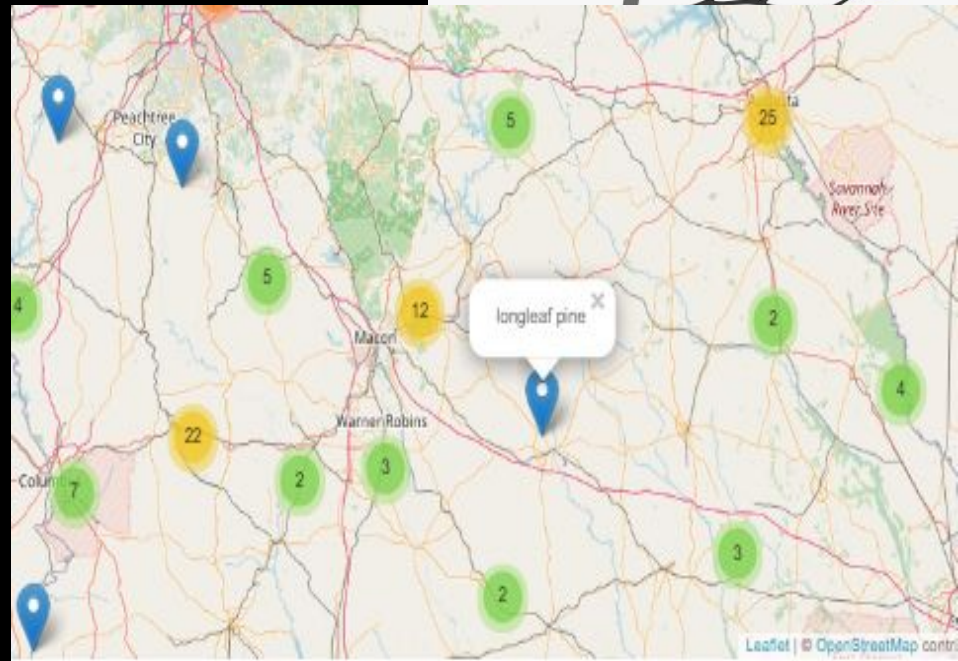
RESULTS 2.7k rows in 47 ms

UPDATE: October 6, 2021 20:23

Index	Time_observed_at	Species_guess	Place_guess	Location	Count
0	2021-10-03T19-02-00-04-00	beefsteak plant	Stone Throw Ct, Stone Moun...	(33.775305,-64.1047971667)	Pic
1	2021-10-03T22-23-24-04-00	Mediterranean House Gecko	Rocking Horse Ln, Pooler, GA	(32.165454221,-81.252765...	Re
2	2021-10-03T14-10-58-04-00	common fig	Elm Dr, Forest Park, GA, US	(33.5914216667,-84.36065)	Pic
3	2021-10-02T13-28-41-04-00	Brown Anole	Montgomery St, Savannah, ...	(32.0475278333,-81.1092)	Re
4	2021-10-03T18-02-00-04-00	Heavenly bamboo	Morrow, GA 30260, USA	(33.5784833333,-84.33688...	Pic
5	2021-10-03T16-22-24-04-00	Chamberbitter	Country Lake Dr, McDonoug...	(33.48817,-84.091575)	Pic
6	2021-10-03T15-47-00-04-00	Jen's Spider	Georgia, US	(33.9155480461,-83.23304...	Ar
7	2021-10-03T17-59-51-04-00	Chamberbitter	Cartersville	(34.1154937744,-84.85150)	Pic
8	2021-10-03T17-28-17-04-00	red spider lily	Cartersville	(34.1149291992,-84.85109...	Pic
9	2021-10-02T11-06-53-04-00	Cypress Vine	Magnolia Park/Blueberry HIL...	(32.0161470295,-81.08525...	Pic
10	2021-10-03T16-32-18-04-00	Heavenly bamboo	Atlanta Park Dr, Jonesboro...	(33.54527,-84.313575)	Pic
11	2021-10-03T15-49-41-04-00	Chamberbitter	Altamir, GA 30322, USA	(33.79524179,-84.32274344)	Pic

Visualizations

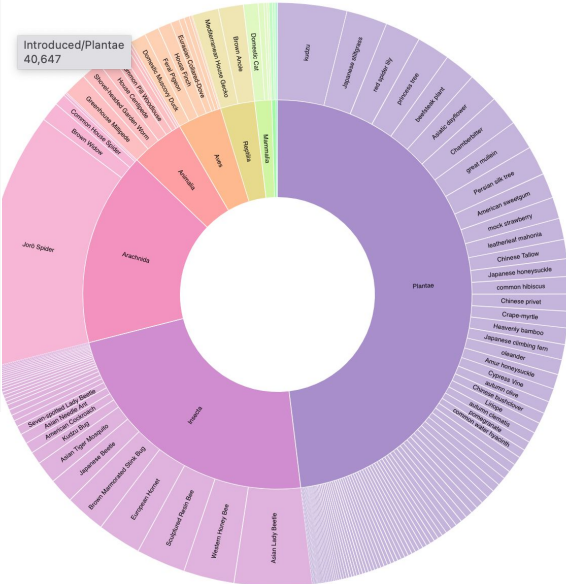
- Map: Shows exact location of each observation.
 - We used leaflet to create a map with markers that can be clicked in order to drill down into sightings of wildlife throughout the state of GA



```
markers.addLayer(L.marker([location[0], location[1]])
    .bindPopup(data['values'][i][7], data['values'][i][6])
);
}
// Add our marker cluster layer to the map.
myMap.addLayer(markers);
```

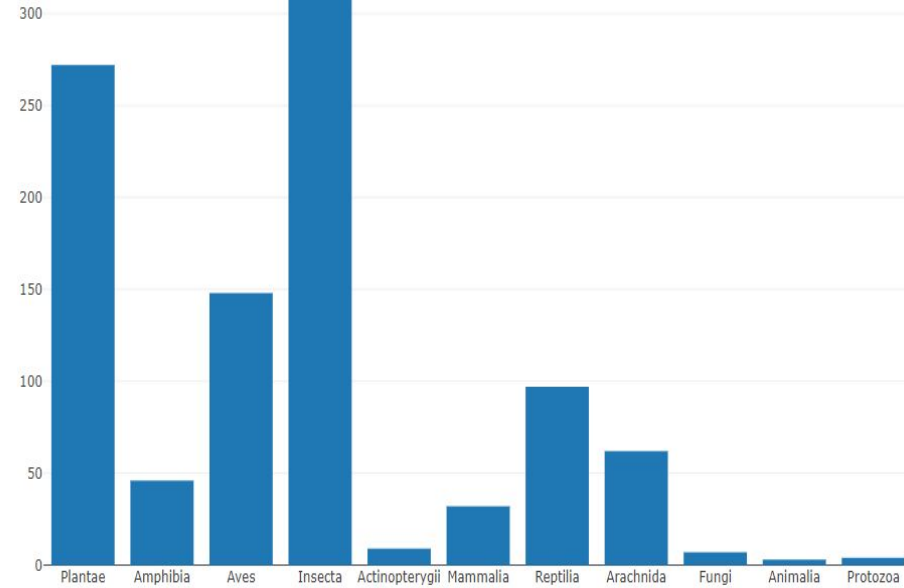
Visualizations

- Sunburst Chart: Shows amount of observations by taxon, then common name.
- Dataframe was utilized as well as json.

[illegible]

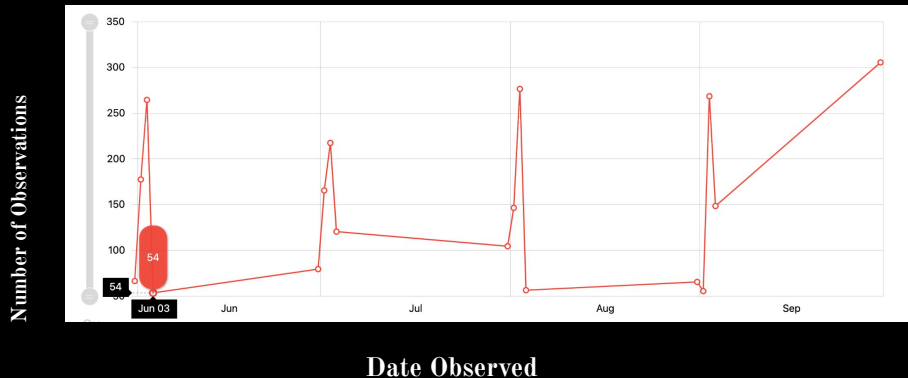
Visualizations

- Bar Chart: Shows concentration of taxon's and shows number of observations
- Located values and fields and created objects based on them to generate a Plotly bar graph.



Visualizations

- Line Chart document number of observations over time
- Extracted Data-Time field from JSON
- Created an array and used AmChart to map observations



```
<!-- amchart -->
<script src="https://cdn.amcharts.com/lib/4/core.js"></script>
<script src="https://cdn.amcharts.com/lib/4/charts.js"></script>
<script src="https://cdn.amcharts.com/lib/4/themes/material.js"></script>
<script src="https://cdn.amcharts.com/lib/4/themes/animated.js"></script>
```


<https://ga-wildlife.herokuapp.com/>

Sources

iNaturalist API: <https://www.inaturalist.org/pages/api+reference>

pyiNaturalist: <https://pyinaturalist.readthedocs.io/>

D3.js: <https://d3js.org/>

Amcharts.js: <https://www.amcharts.com/>

Plotly.js: <https://plotly.com/javascript/>

Observable: <https://observablehq.com/>