

Deer Survey In Jonathan Dickinson State Park

By

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What is a population survey?

- A population survey is a survey in which the population of a species in an area is counted and recorded for future use.

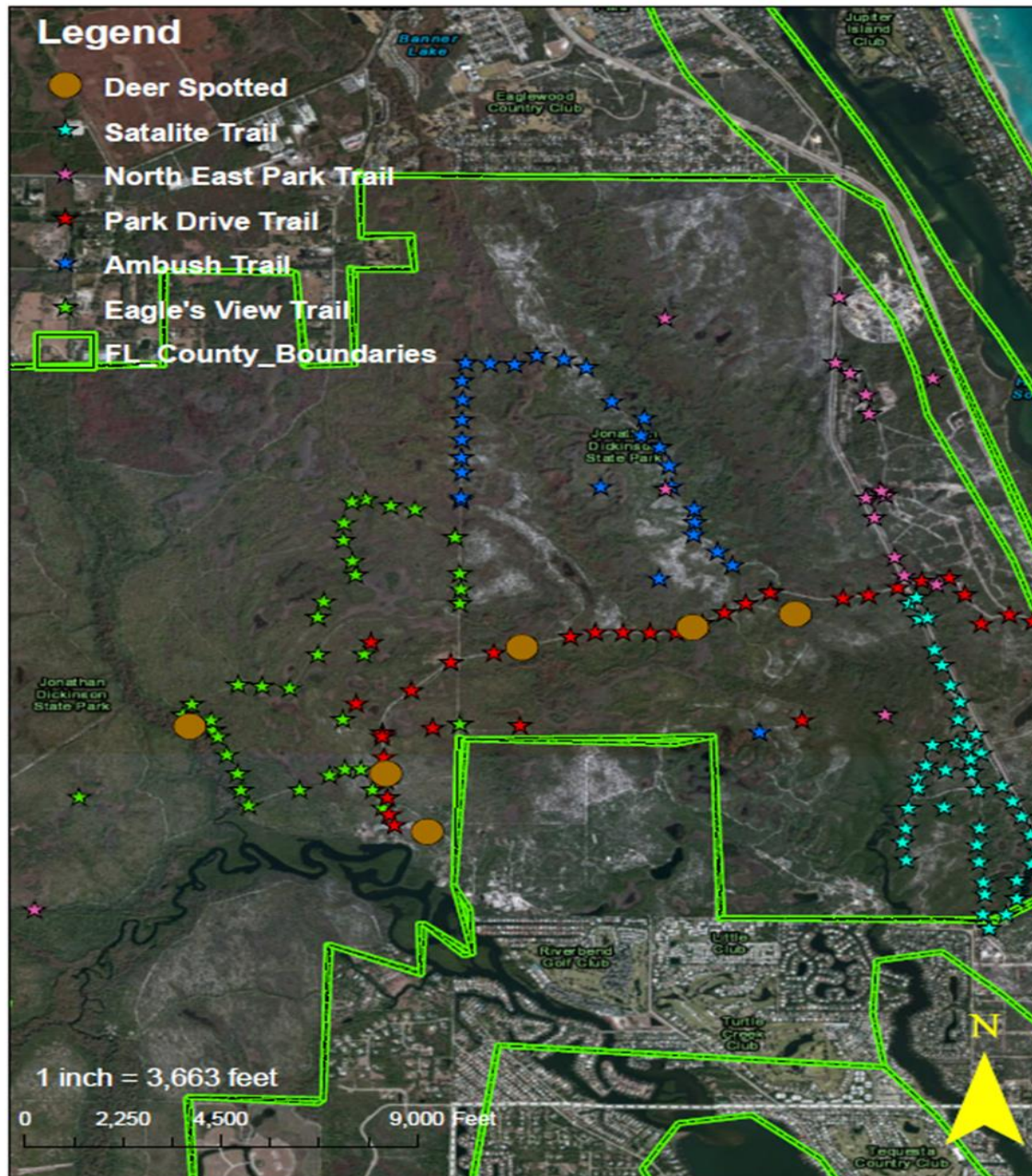
Why are surveys necessary?

- They are necessary because they give an estimation of the populace of a certain area.
- They also lay the grounds for population management of wild animals and can help identify seasonal trends.

Why White-tailed Deer?

- White-tailed Deer (*Odocoileus virginianus*) is one of the most common large herbivores in the country.
- Nationally, there is an estimated 25 million individuals in the U.S. today.
- Deer are popular game for hunting.

Deer Survey Trails and Deer Spotted



Methods

- Two methods were used in this survey:
 - A visible yardage method
 - Involves finding the visible yardage on both sides of the vehicle
 - Visible yardage to be used later in the project to calculate the visible acreage.
 - A spot lighting method
 - Involves going out at dusk or after dark to spot deer or some other large animal using spotlights.

Methods Continued

- visible acres observed/number of deer sighted equals acres per deer
 - This is the equation used to create the acres per deer.
- total acres in park/acres per deer equals estimated deer population
 - This equation was used to calculate the number of deer per region of the park.
 - If a surveyed region of the park did not have any deer spotted, then the estimated deer population would remain at zero.

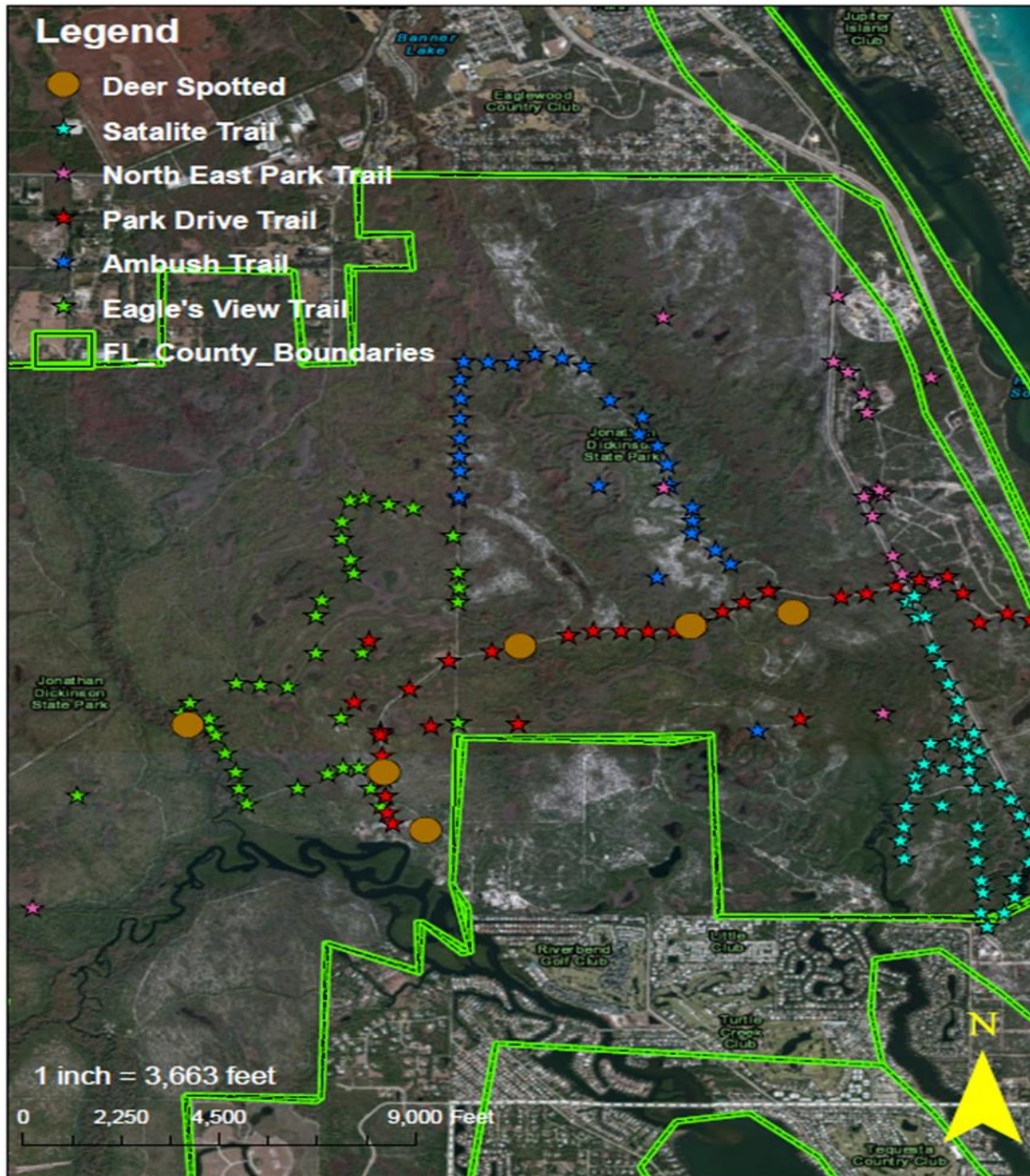
Equipment

- A four wheel drive open bed truck was used as transportation for the surveyors.
- Two high beam spotlights was used to spot the deer in the tall grass
- A range finder was used to find the visible yardage
- A GPS was used to mark the location of the deer seen as well as create trails to be followed in the survey

Results

- Observations were made from February 5th to March 26th 2013.
- A total of 8 deer were seen.
- Six of the deer were seen on Park drive while the other two were seen on Eagle's View.
- The park contained a total of five observational routes.

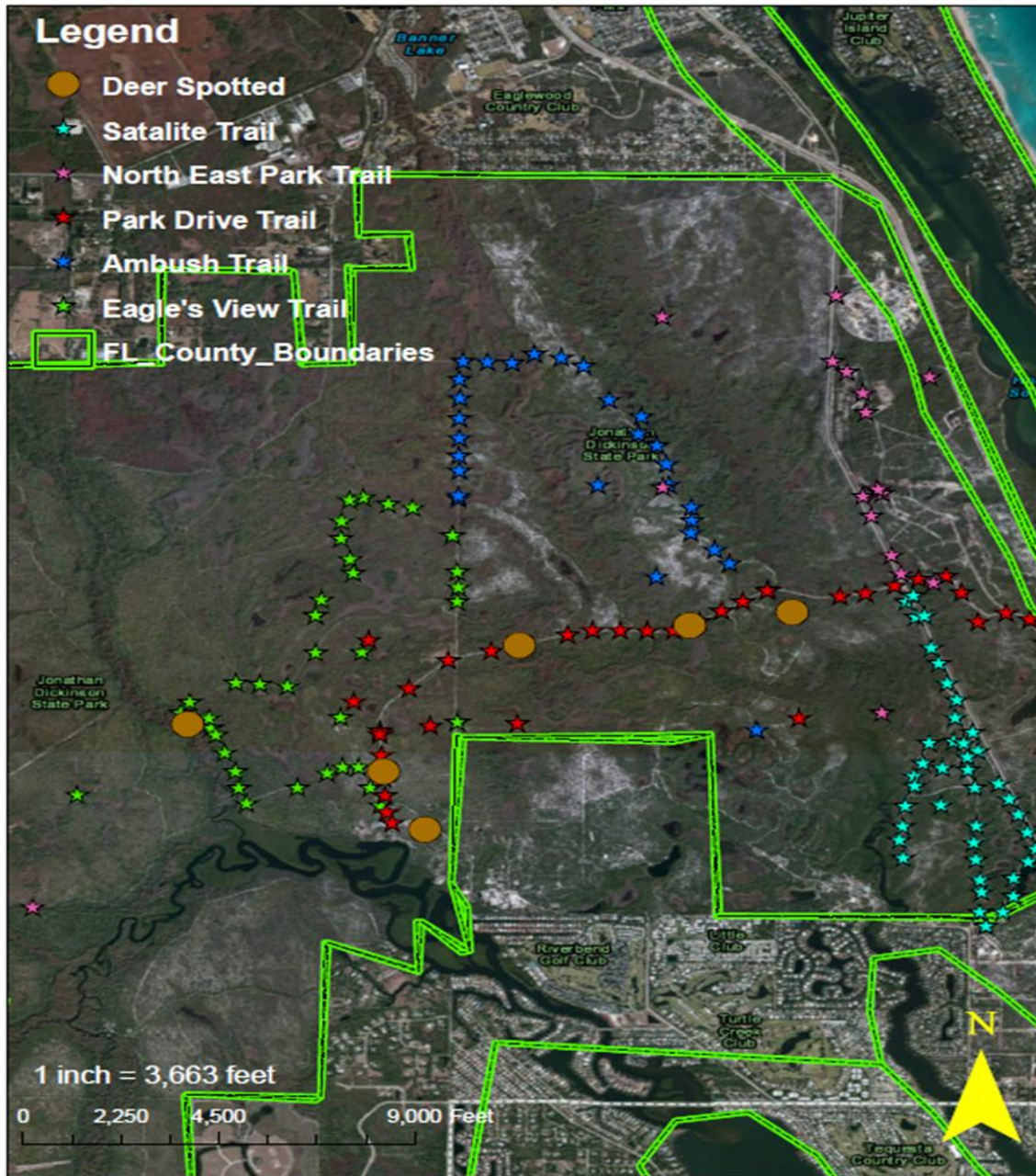
Deer Survey Trails and Deer Spotted



Results continued

- Route 1 was Eagles View.
 - 234.49 visible acres, observed three times, two deer spotted, estimated deer population of 33.
- Route 2 was labeled as Ambush Road.
 - 179.33 visible acres, observed twice, no deer spotted, estimated deer population 0.
- Route 3 was called NE Park.
 - 99.38 visible acres, observed 3 times, no deer spotted, estimated deer population 0.

Deer Survey Trails and Deer Spotted



Results continued

- Route 4 was labeled Satellite Dishes.
 - 93.05 visible acres, observed once, no deer spotted, estimated deer population 0.
- Route 5 was labeled Park Drive.
 - 121.64 visible acres, observed five times, six deer spotted, estimated deer population 94.

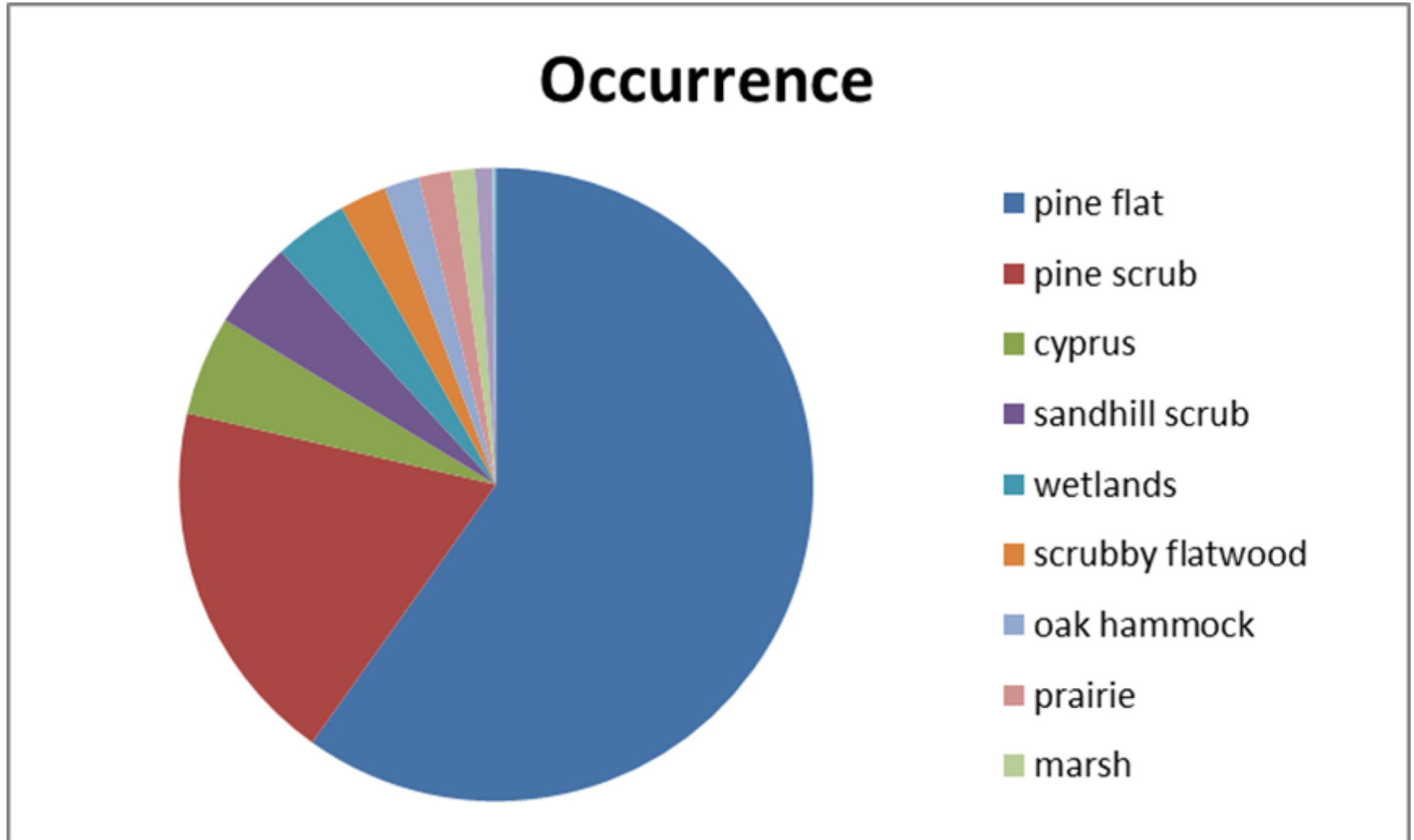
Table 1: Estimated Deer Population By Route

Estimated Deer Population by Route					
	Eagles View	Ambush Road	North East Park	Satellite	Park Drive
Number 1/10th Mile Stops	41	29	19	43	36
Number of Miles on Route	4.1	2.9	1.9	4.3	3.6
Total Yards Visibility	9553	5170	1875	3934	4312
Visible Acres	234.49	179.33	99.38	93.05	121.64
# Observations	3	2	3	1	5
Visible Acres Observed	703.47	358.66	289.14	279.15	608.2
Number of Deer Observed	2	0	0	0	6
Acres Per Deer	351.74	0	0	0	121.64
Total Acres in Park	11500	11500	11500	11500	11500
Estimated Deer Population	33	0	0	0	94

Table 2: Breakdown of Ecosystems By Type

Ecosystem	Occurrence	Total Data Points	Percentage
pine flat	100.5	168	59.82
pine scrub	31.5	168	18.75
cyprus	8.5	168	5.06
sandhill scrub	7.5	168	4.46
Wetlands	6.3	168	3.75
scrubby flatwood	4	168	2.38
oak hammock	3	168	1.79
Prairie	2.8	168	1.67
marsh	2	168	1.19
hardwood hammock	1.5	168	0.89
Pond	0.3	168	0.18

Graph 1: Breakdown of Ecosystems By Percentage



Discussion

- Deer are crepuscular so the best time to spot them is at dawn and dusk
- Hunting is forbidden in the park so some of the deer have lost their natural fear of people and have no qualms about stopping in the middle of the road to investigate the surroundings or to scratch an itch

Discussion Continued

- All of the deer were seen in Pine Flatwoods habitats.
- The deer are about the same size as the palmettos in the flatwoods habitats. Because of this, I assume that they prefer Pine Flatwoods over other ecosystems because of food and shelter possibilities.

Discussion Continued

- A possibility for the majority of deer being seen on Park Drive
 - This could be that the truck is quieter on paved roads as well as it is the place a deer would be most likely to see a truck.
 - As well as the fact that Park Drive was surveyed more than other areas.
- The deer probably wouldn't expect a truck out on the off road trails and likely took shelter in some brush before the truck even arrived.

Discussion Continued

- Since this is the first deer survey done in the park, there are no other resources to compare it to.
- It would be beneficial to continue this study so that deer populations could be tracked over the years and seasonal trends recorded.

Discussion Continued

- There are two new studies being done.
 - One is a sand drag that would allow the surveyor to identify the number of and types of animals passing through the area.
 - The other survey, will track deer with fixed game cameras.

Acknowledgements

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I want to thank Heather for helping me collect data points and driving us around on surveys.

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Any Questions?

