

Can Japanese Stiltgrass (*Microstegium Vimineum*) Be Beneficial To The Frog Population?

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What Is An Invasive Species?

Not native

Rapidly spreads, taking over native species

No or few predators or competition



<http://www.esa.org/esablog/ecology-in-policy/managing-non-native-invasive-plants/>



https://en.wikipedia.org/wiki/Cane_toad

Effects of Invasive Species:

Negative:

- Prey on native species

- Displace native plants and animals

- Change soil conditions

- Decrease biodiversity

- Expensive and difficult to eradicate

Positive:

- Provide food and home for native species

Stiltgrass (*Microstegium Vimineum*)

Origin- Japan, Korea, China, Malaysia, India

Habitat

Found in wet or dry areas

Found in the shade or in the open

Associated with moist, nitrogen rich soil



<http://drprem.com/green/invasive-japangrass-may-hinder-regeneration-of-the-native-woody-forest>

Wood Frogs

Size- 1.4- 3.25 inches in length

Lifespan- up to three years

Diet- insects, arachnids, slugs, worms, and anything they can fit in their mouths

Habitat- live in woodlands

-They live as far south as alabama up past the arctic circle



Spring Peeper

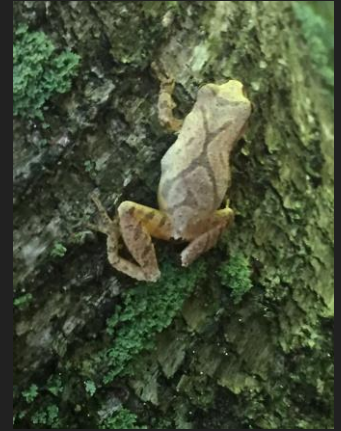
Size- 25mm- 38mm

Weight- 3.1g- 5.1g

Range- From the Gulf Coast of Texas to central Canada

Habitat- Wetlands (required for breeding)

Diet- Nocturnal insectivores



Goal

To see if Japanese stiltgrass provides a better environment than the native environment (ferns, leaf litter, natural grasses)



VS.



Materials

Pitfall traps

Quadrat

Densiometer

Insect guide

Frog guide

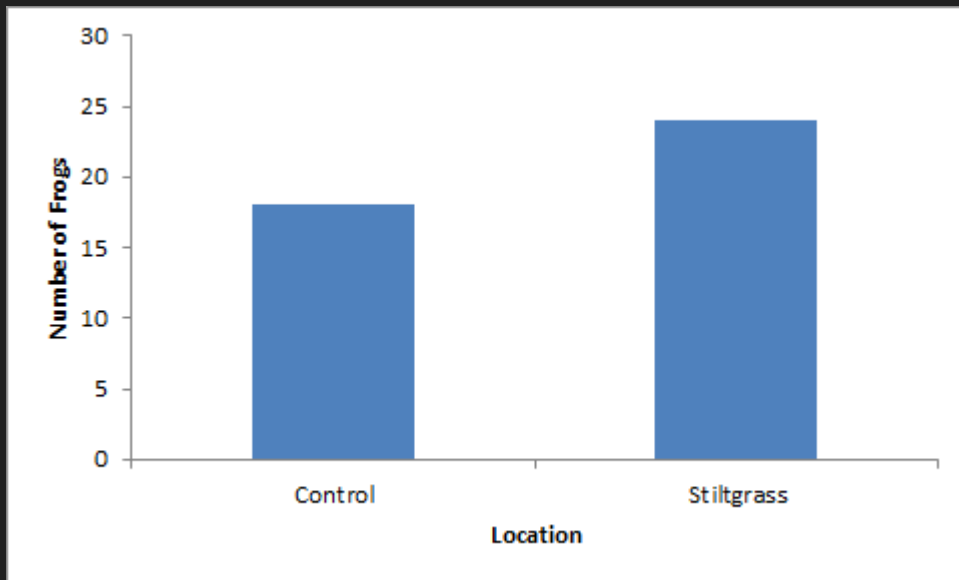
Pin Flags

Net

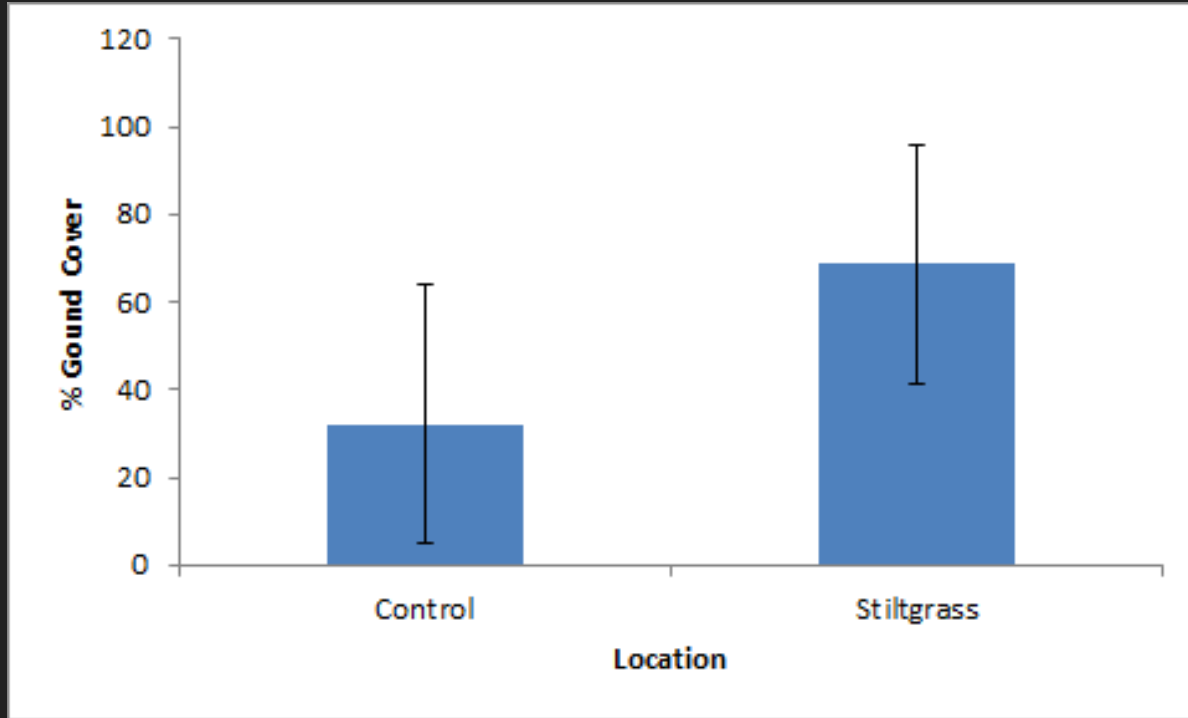
Compass



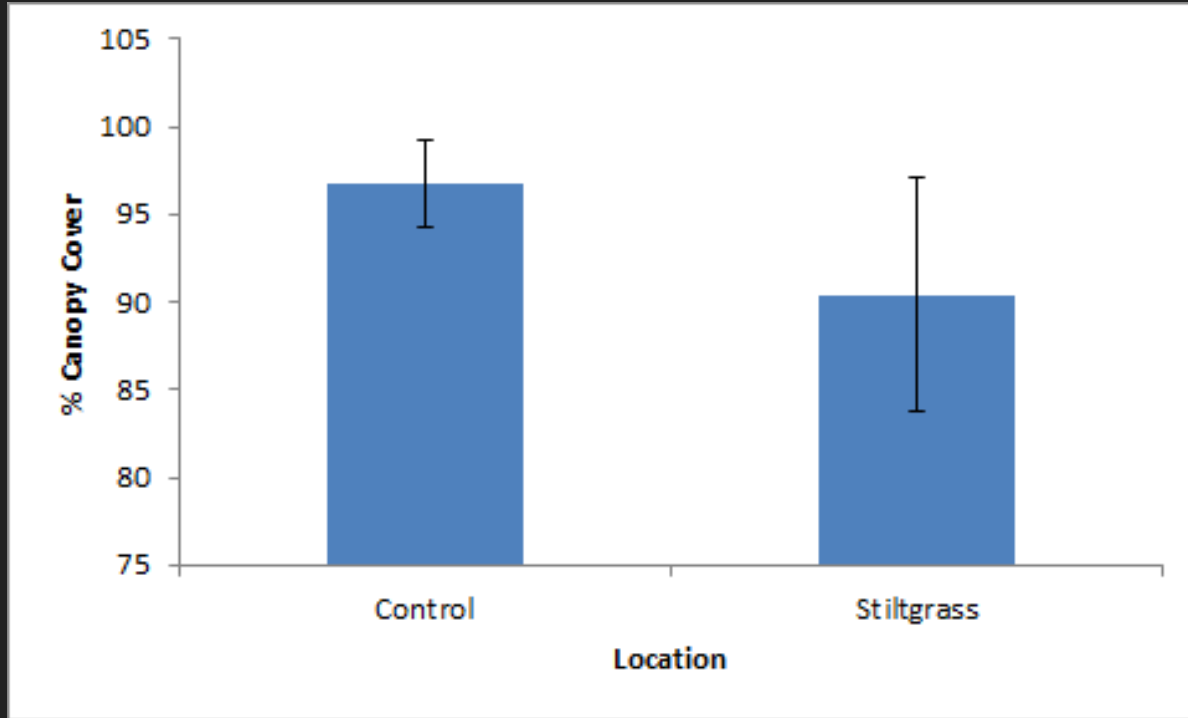
Results:



Ground Cover



Canopy Cover



Insects

	Species Richness	Diversity
Stiltgrass	73 Insects	0.767140152
Control	47 Insects	0.707487184



What Do All These Graphs Mean?

Ground Cover

Canopy Cover

Insect Richness

Insect Diversity

Summary

The importance of japanese stiltgrass:

- Food Diversity

- Hiding Place

- Water

- Temperature

*Not All Invasive Species Are All Bad!

Future Research

Continue the study in the same fashion with the bugs

Possibly set traps for frogs in transects

Conduct the study at different times of the year and in different locations

Study the water quality and pollutants present

Look at the overall health and reproductive rate of the frogs

Acknowledgements

