

**Brazilian Peppertree Control on Nueces County/University of Texas
Marine Science Institute Property**

Acreage

Overall a total of 6.81 acres of BP was treated at IB Magee

Herbicide

Garlon 3A mixed at 5% (high volume, low mix rate) foliar Treatment- 100.84 Gallons

Remedy Ultra mixed at 25% (low volume, high mix rate) Basal/Cut Stump Treatment- 29.14 Gallons

Summary

The Brazilian Peppertree industry has cost the United States of America over \$100 Billion (Cuda et al, 2006). It is the #1 invasive woody species plant in Florida and Hawaii. With climate change altering weather patterns, known established populations of BP are growing at an exponential rate just within the last decade.

American Conservation Experience (ACE), an Americorps based environmentally focused Invasive Species Strike Team was contracted by CBBEP under a modest CMP grant to gain control of the non-native invasive species, Brazilian Peppertree in IB Magee Beach, Port Aransas TX. ACE Corpus Christi's mission is to provide transferrable professional experience to young adults interested in pursuing careers in environmental protection, resource management and invasive plant management using integrated pest management strategies. All members are trained in activities such as safe chainsaw operation, safe and legal herbicide handling, plant ID, integrated pest management, reforestation, forest management, and feral hog trapping. After completion of a six-month term, Americorps members are awarded an education award of \$2,900.00 and given special non-compete hiring status for federal jobs. Many ACE-Texas crew member graduates pursue master degrees or jobs with the National Park Service, Forest Service, USFWS; or other state, city and non-profit land management agencies. These experiences and references are crucial for anyone interested in pursuing careers in resource management.

The treatment areas in IB-Magee were split into two priority zones. Zone one, located along the dune line, zone two- located south east behind the UTMSI property. A total of 6.81 acres of infested area was treated over the course of 8 months, broken down into three treatments. Initial treatment- the most expensive, laborious and time intensive; first follow up treatment- completed in one week to make sure all treatments are successful; and final follow up treatment- eliminating any opportunistic resprouts and seed sprouts which took 2 days.

ACE was selected for this project due to their light footprint approach towards invasive species control as the treatment area is within the "dune zone" which is protected by Texas law to not be trampled by any heavy equipment. Although machines such as bulldozers or mulching machines on skid steers would be the most cost efficient option for eliminating BP biomass, their footprint would devastate dune structure and ecology, and provide opportunity for surviving Brazilian Peppertree populations to resprout. ACE's approach to controlling the invasive was through the use of a combination of foliar, cut

stump, basal and “hack and squirt” treatments. Different environments and vegetation structure would dictate the most effective and productive treatment method.

A technique called “tunneling” was adopted from a strategy used in controlling dense stands of the woody species, Salt Cedar (*Tamarix ramosissima*) by National Park Service Bio-Techs in western states. The treatment method involves cutting pathways into the interior of the dense populations of BP, allowing Strike Team members availability to each individual stem to be basal or cut stump treated with a mix of 25% Remedy Ultra- an oil-based herbicide designed to penetrate the bark of trees, enter the cambium effectively and silently kill target species.

In July 2018 initial treatments at IB-Magee were completed over a two-week period and had a 95% success rate across treatment methods. A follow up treatment was completed in October 2018, and a final treatment was completed January 2019. ACE is honored to be a part of this initiative and a lot of very beneficial information was gained in the treatment process. In order to maintain control of these Brazilian Peppertree treatments it is vital that further follow up is made every 6 months from the January 2019 treatment for the next 3 years. Brazilian Peppertree is an opportunistic invasive and known for springing back if neglected.

REFERENCES

Cuda, J.P., Ferriter, A.P., Manrique,V. andMedal, J.C. (2006). {FLEPPC} Florida Exotic Pest Plant Council - Florida’s Brazilian Peppertree Management Plan 2006. Available at: http://www.fleppc.org/Manage_Plans/2006BPmangagePlan5.pdf.

Zone 1 and Zone 2 Treatments



Zone 2

Zone 1

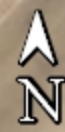
E Götter Ave

600 ft

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Zone 1 Major Populations

Zone 1



200 ft



Zone 2 Major Populations



Zone 2

E Cotter Ave

