



Documenting Location, Optimal Harvest Times, and Nutritional Value of Foraged Items at the Nicholls Farm

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Abstract

Foraging is a traditional practice for people in South Louisiana, defined as venturing into natural areas to harvest native plants and fungi for food and medicinal uses. Many of the edible species found at the Nicholls Farm represent organisms that have been established throughout South Louisiana for many generations. A catalog of edible species found at the Nicholls State University Farm could be beneficial to foragers in South Louisiana and more specifically those who utilize the Nicholls State University Farm. The goal of this project is to compile a list of different species that can be foraged at specific times of year on the Nicholls Farm. Another objective is to describe nutrition facts and possible recipes that can be used for each species. The third objective is to contribute to the future forage on the farm by collecting and cultivating American Lotus. Several forage items have already been located and identified at the Nicholls State University Farm including yaupon holly (*Ilex vomitoria*), bull thistle (*Cirsium vulgare*), dewberry (*Rubus trivialis*), wild blackberry (*Rubus argutus*), red mulberry (*Morus rubra*) and oyster mushroom (*Pleurotus ostreatus*). By measuring potential growing area for each species, we found that the bull thistle possesses the largest area, though its distribution can sometimes be sparse. Our preliminary results include a prediction of the species with the highest nutritional value being the wild blackberry (*Rubus argutus*). At the end of the Spring Semester we will measure the success of our underwater planting of the American lotus (*Nelumbo lutea*).

Background/ Rationale

Many of the edible plant species found at the Nicholls Farm represent species that have been established throughout South Louisiana for many generations, dating back to pre-colonial history^{1,2}. Sadly the rich cultural practice of living off the land is slowly beginning to fade away with the modern shopping practices^{3,4}. A catalog of edible plants found at the Nicholls State University Farm could be beneficial to foragers in South Louisiana and more specifically those who utilize the Nicholls State University Farm. This study has three primary objectives, 1) catalog forgeable species according to seasonal availability and prevalence on the landscape, 2) describe nutritional information and possible recipes for forgeable species, and 3) create additional forage and research opportunities through the cultivation of American Lotus.

Approach

This project involves using the Nicholls Farm as a collection site to forage a set of edible plants. The reported values of nutrition, taste, and the possible uses have been documented where applicable. Edible forage has been found and identified using field guides along with the help of Dr. Gary LaFleur. Plants that have been identified will then be quantified using a one square meter quadrat or transects.

A small portion of each identified edible plant that is in season has been harvested and sampled to identify taste to help describe its use. All identified edible plants have been researched for nutrition, what habitats are these plants typically found, and what season are they ripe for harvest. Recipes have been created, taste tested, and analyzed in ESHA to create a nutrition label. Creating nutrition labels in ESHA can be helpful when looking at the nutrition value of the foraged edible plant recipes.

In order to add to the forage of the Nicholls farm, the seeds of the American lotus will also be collected, germinated and planted in ponds at the back of the farm.



Figure 1. A. Mature American Lotus B. Harvested seeds C. Lotus Sprouts being prepared in mud balls that have been planted.



Figure 2. Aerial Map of the Nicholls State University Farm. The white outline represents the entire border of the farm. The black outline represents the possible oyster mushroom forage area. The yellow stars represent locations on the farm with large quantities of blackberry vines. The purple rectangle represents the area reserved for letting bull thistle grow. The green outline represents an area where more blackberry vines can be found. The white star represents where the American Lotus seeds were planted.

Citations

1. Elias T, Dykeman P. Field Guide To North American Edible Wild Plants. New York: Outdoor life Books; 1982.
2. Tiner R, Rorer A. Field Guide To Coastal Wetland Plants Of The Southeastern United States. Amherst: The University of Massachusetts Press; 1993.
3. Crown P, Emerson T, Gu J, et al. Ritual Black Drink consumption at Cahokia. Proceedings of the National Academy of Sciences. 2012;109(35):13944-13949.
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Results

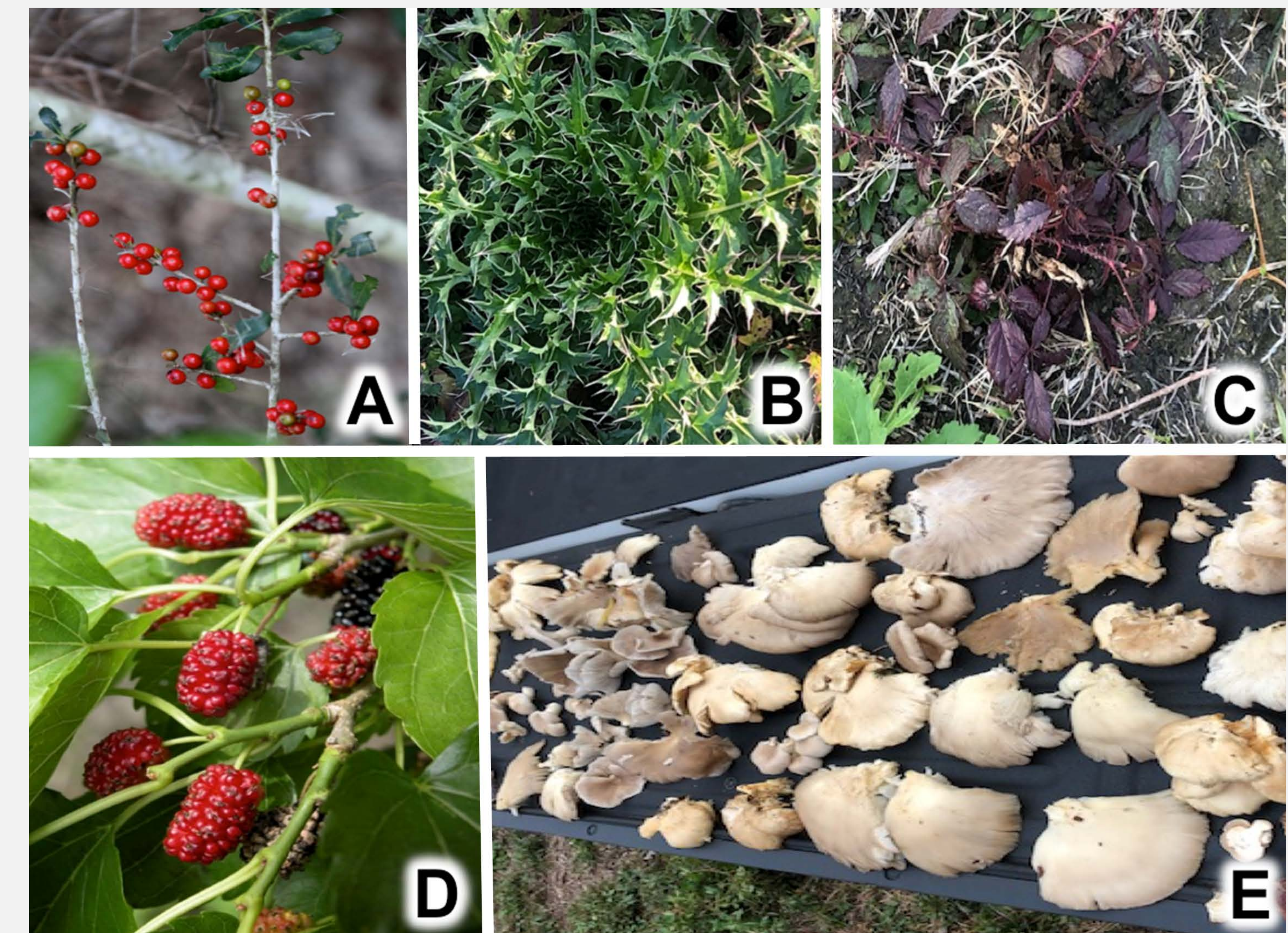


Figure 3: A. Yaupon holly (*Ilex vomitoria*) B. Bull thistle (*Cirsium vulgare*), C. Dewberry (*Rubus trivialis*)/ wild Blackberry (*Rubus argutus*) D.Red mulberry (*Morus rubra*) E. Oyster mushroom (*Pleurotus ostreatus*).

The farm has a total area of 1.43 km². 188,000m² of the farm has oyster mushrooms (*Pleurotus ostreatus* Figure 2; Figure 3 E). Red mulberry (*Morus rubra* Figure 2; Figure 3 D) and Yaupon holly (*Ilex vomitoria* Figure 2; Figure 3 A) is found on 1,488m of the farm's waterfront. 12,800 m² of the farm is reserved to let Bull thistle (*Cirsium vulgare* Figure 2; Figure 3 B) grow and most of the other open fields on the farm is suitable habitat for bull thistle. A total of 8 locations throughout the farm have a heavy coverage of blackberry (*Rubus argutus* Figure 2; Figure 3 C) and dewberry (*Rubus trivialis* Figure 2; Figure 3 C) vines, but vines can also be found throughout most of the farm. About 2,000m² of the pond is being used to grow out American lotus (*Nelumbo lutea* Figure 1).

Conclusion

These preliminary results show how the Nicholls State University Farm is home to many great edible species. It is with great hope that the rest of this research will show how nutritious these forage items are and how it is worth continuing the historic practice of foraging.

Sautéed Oyster Mushroom Recipe:

- 1tbs Olive Oil
- 1/2 tsp minced garlic
- 1 Cup oyster mushrooms
- 1/4 tsp salt
- 1/4 tsp pepper

Heat oil on medium. Sauté garlic and mushrooms for about 10 minutes. Salt and pepper to taste. Use to top steaks, chicken, or enjoy a la carte.



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