

# Ringtail 2021: Community Outreach Project

Report written and compiled by Claryce, May, and Izzy.

Nature is a beautiful thing that frequently gets lost in the hustle and bustle of the city. Luckily, here in San Marcos, Texas there is a wonderful group working to preserve our environment and provide access for the community. The San Marcos Greenbelt Alliance takes it upon themselves to establish accessible local parks and trails within city limits that improve our landscape's sustainability as well as provide homes for wildlife. Collen Myles's Environmental Interpretation class (4322) during the Fall semester of 2021 is in full support of these actions, and volunteered their semester's time to SMGA, focusing on Ringtail Park. In order to align with and enhance SMGA's actions over the years, 4322 collectively decided that a scavenger hunt and plant identification signage along the main trail would appropriately entice any age to enjoy the natural area and potentially spark further interest. To most effectively do this, the class was split into groups that were delegated responsibilities as the graph on the next page shows. We would like to thank the SMGA representative (Susan Hanson) and city arborist (Kelly Ebby) that collaborated with the class on this project.

## Timeline

Project Begins!	September 13th	-Project Beginning, First meeting with SMGA
	September 27th	-Second meeting with SMGA
	October 11th	-Third meeting with SMGA
	October 24th	-Rough outline of the scavenger hunt
	October 25th	-Drafting of plant species to use in scavenger hunt
	November 11th	-Final decision on plants species to showcase
Announced!	November 15th	-Flyer for Scavenger Hunt Kickoff Event
	November 21st	-Scavenger hunt draft finalised
	November 22nd	-Group check in for final deliverables due dates
	November 23rd	-Physical plant signs for the trail completed
	November 28th	-Outline for final SMGA presentation @ Ringtail
	November 28th	-Sign placement locations identified & map created
Signs Installed!	November 29th	-Group meeting/discussion at Ringtail Ridge
Welcome all!	December 1st	-Community launch at Ringtail Natural Park

Groups	Delegated Responsibilities	Members
Onsite Identification	<ul style="list-style-type: none"> <li>● locate plants fitting for signage placement along the main trail</li> <li>● collect signage information on budget and material needs</li> <li>● facilitate sign creation</li> <li>● implement signage within Ringtail Park</li> </ul>	Emma Hannah Maria Cecili Enzo
Plant Research	<ul style="list-style-type: none"> <li>● identify 10 native plants</li> <li>● collect information and facts on specified plant species</li> <li>● prepare QR links for plant signs on trail</li> <li>● establish best photos to use for each pick</li> </ul>	Journey Aries Happy Isa Antonio
Design & Graphics	<p>Scavenger Hunt Focus</p> <ul style="list-style-type: none"> <li>● formatting through ArcGIS Survey 1,2,3</li> <li>● develop QR codes for signage to link to scavenger hunt or additional information sources</li> <li>● design to accommodate all ages / groups</li> <li>● ensuring ability to collect data through survey for future use</li> </ul>	Eric Adriana Josie Molly Nicholas John
Outreach Planning	<ul style="list-style-type: none"> <li>● “press release” flier before implementation of scavenger hunt</li> <li>● project overview flier</li> <li>● present final results to SMGA onsite</li> </ul>	Rachel Alex Genesis Josh
Historian Recordkeeping	<ul style="list-style-type: none"> <li>● document timeline</li> <li>● administer reflection activity</li> <li>● discuss successes and obstacles</li> <li>● project overview report</li> </ul>	May Claryce Izzy Mike
Project Coordinators	<ul style="list-style-type: none"> <li>● responsible for collaboration outside of class members <ul style="list-style-type: none"> <li>○ SMGA</li> <li>○ Discovery Center</li> </ul> </li> <li>● coordinates activities between groups</li> <li>● facilitates information sharing between class groups</li> <li>● holds groups accountable for progress</li> </ul>	Greg Emilee Isabelle

## **Obstacles**

There have been occasional challenges faced by 4322 and SMGA whilst planning and implementing this community project. The largest setbacks being miscommunication and being forced to change plans throughout the project. The site of the scavenger hunt and interpretive signs changed from Schulle to Ringtail, the types of sign infrastructure changed, and the objective goal for the theme shifted throughout. That being said, the involved parties did an excellent job adapting to rapid change under a strict time schedule. In the future, having a direct representative who has more direct contact with team leaders and community leaders could improve miscommunication. Additionally, having a more structured timeline of project goals may be responsible for future projects, to ensure proper materials can be supplied and communications can take place on time.

## **Reflections**

The students worked with their groups to create a project that would help TXST give back to the San Marcos community. The goal of this project was to create an experience that connects individuals to their environment. Creating understanding of the natural world around us, provoking interest in nature and history, and inspiring future stewardship of community parks and resources. With this project and the contributions of each group, our team has hopefully succeeded in achieving these goals.

Looking back over all that has been done, each team has the opportunity to share their experience at the community launch with SMGA representatives and guests. The teams created a summary of what they contributed to the project, successes, and room for future improvement; these views can be browsed in the graph on the next page.

<p><b><u>On-Site Planning, Development, &amp; Implementation</u></b></p>	<ul style="list-style-type: none"> <li>● Collected data from plant research and graphic design team to create signage</li> <li>● Identified and placed temporary signage on trail</li> <li>● Created materials list for future permanent signs</li> </ul>
<p><b><u>Plant Research</u></b></p>	<ul style="list-style-type: none"> <li>● Conducted research on which plants were present in the park</li> <li>● Compiled a list for the top plants for showcasing</li> <li>● Gathered information such as pictures, characteristics and fun facts about said plants</li> </ul>
<p><b><u>Graphics, Design, &amp; Technical Elements</u></b></p>	<ul style="list-style-type: none"> <li>● Created poster for trailhead</li> <li>● Created online scavenger hunt by using information collected by plant research group</li> <li>● Created printable version of the scavenger hunt</li> <li>● Created interactive map showing the location of the new signs</li> </ul>
<p><b><u>Graphic Design/ Technical Elements</u></b></p>	<ul style="list-style-type: none"> <li>● Our group demonstrated these adaptations and necessary changes for the future by creating an accessible Survey/Scavenger Hunt of Ringtail Ridge. Which can be used for fun in a digital format through ArcgisSurvey123 (which can collect data for other purposes later.) As well as---</li> <li>● A printable easy to read survey in-case those who cannot use or have access to phones.</li> <li>● Including making new physical signs that give the name of the signature scavenger hunt plants, some information about those plants, a picture, and a QR-code that links back to the Lady Bird Wildflower Center website.</li> <li>● We also created an interactive map that shows the location of the new plant signs that are along the Texas Trail of Ringtail Ridge with the use of ArcGIS pro.</li> <li>● Lastly, we've added a new poster that provides informational resources through QR codes on the scavenger hunt and to our partners the San Marcos Greenbelt Alliance.</li> </ul>
<p><b><u>Presentation &amp; Community Outreach</u></b></p>	<ul style="list-style-type: none"> <li>● Created flyers for the event, contacted groups/orgs that may be interested in the scavenger hunt, developed a promotional video, completed this presentation</li> <li>● We learned through this project the importance of partnerships, collaboration, and promotional skills.</li> </ul>
<p><b><u>Historians/ Record Keepers</u></b></p>	<ul style="list-style-type: none"> <li>● Maintain communication facilitation across groups</li> <li>● Kept a timeline of the creation of project materials and objectives</li> <li>● Aid in accessing successes and obstacles of past and current community projects, recommendations for future works <ul style="list-style-type: none"> <li>○ Things learned for future: need for direct and timely communication, necessity of a clear and thorough timeline</li> </ul> </li> </ul>

## 2020 SMGA Project Overview

This is not the first class to take on a social outreach project, as during a previous semester in 2020 a series of videos and short presentations was intended to align closely with SMGA's goals by promoting awareness that can facilitate further community involvement in local parks. In the attempt to further a legacy of conservation in San Marcos, a series of short interpretative videos educating about "plant pairs" that are invasive to central Texas were created and paired with a video educating on how SMGA uses dry creek beds to further the sustainability of our landscape. This was presented during a one-time Zoom session that encompassed a PowerPoint overview of SMGA's mission and vision in habitat and water preservation, recreation, and mitigating hazards.

These 2020 Interpretive videos can be found on SMGA's YouTube Channel:

<https://www.youtube.com/channel/UC80ELZRUIZRHJ0BexvOLKCA>

- Flameleaf vs Tallow  
<https://www.youtube.com/watch?v=o3LcWOciT-s>
- Muhly vs Bluestem  
<https://www.youtube.com/watch?v=Wx34kTratXg>
- Soapberry vs Chinaberry  
[https://www.youtube.com/watch?v=IN11KgQ\\_jb4](https://www.youtube.com/watch?v=IN11KgQ_jb4)
- Yaupon vs Ligustrum  
<https://www.youtube.com/watch?v=ZBqijdTxGHM>
- SMGA promotional video  
<https://smgreenbelt.org/about-smga/>

## Compare & Contrast

Considering the context of these social outreach projects both originating from the same Geography course, as well as working with the same environmental group, quite a few similarities are noticeable.

As both groups are attempting to align with SMGA's values, both projects work to further *educate* the surrounding community and encourage *awareness about / involvement with* the natural landscape. In 2020 the video created by Jarod Phillips and Sonia Onescu that can be found on SMGA's 'about' web page inspires one to get *involved* and volunteer their time to help transform landscapes into natural spaces for the community to have fun. Additional videos further *educate* on plant species and their invasiveness, simultaneously encouraging *awareness* of the environment around oneself. In 2021 these same overarching goals are present; by incorporating a scavenger hunt of plants and park landscape markers, trail users are encouraged to *use the trails* through a fun *educating* activity about native species and the land's history. Even further *learning* opportunities are provided through easily accessible QR codes placed on individual plant identification signs.

Perhaps the most noticeable similarity otherwise is the focus on plants; 2020 with invasive "plant pairs" and 2021 with native species identification. Natural areas carry the goals of flood mitigation, clean air, and wildlife refuge -all of which would be impossible without plants' roots in the soil, photosynthesis processes purifying the air, and trunks or leaves providing homes and sustenance to endangered species. So, while SMGA's website says nothing in particular about the greenery that grows around us, it is a crucial aspect of both conservation and stewardship practices to consider the flora habitat around us. This is possibly why both groups did take the time to focus on education about plant species. Additionally, considering that plants grow everywhere, and not just in natural areas, the hope is that once native or invasive species have been learned, they can then be pointed out in daily life; furthering awareness and involvement with our surrounding environment even within the hustle-bustle of the city.

Of course no two projects are the same, and these final results do cater to different aspects of environmental awareness and community outreach.

For starters, the 2020 actions were focused on restoration practices- encouraging volunteer involvement specifically through the SMGA advertisement, and awareness of species that could be considered "bad" and in need of removal in the plant storytelling videos.

However, in 2021 the focus shifts to more conservation awareness of “good” native plant species and historical landmarks through a fun activity.

Yet, the crucial difference in these two community projects lies in the ability of the community to be exposed to the materials. In 2020 with COVID-19 at its height, a one-time Zoom conference was how these materials were presented and exposed to the community. While one video was implemented to SMGA’s website, the other materials created are not easily accessible by anyone anymore. 2021’s class learned from this and ensured that the idea of a scavenger hunt would stay accessible for the local community to learn from in the future. Further improving on this, the platform that the 2021 class’s activity is on can also provide data on those who participate in SMGA for future evaluations of needed improvements to continue allowing for community involvement. This includes suggestions and editable materials for SMGA to create permanent aluminum signage and have the capability to post materials to their sites.

Aluminum Alternatives

Aluminium is the best overall material to use for signs of this purpose. It can be expensive, but long-lasting.

- Amazon and Lowe’s have pre-cut aluminum but SMGA would have to get the signs etched/lasered/prepared by a professional.
- There are also wholesale suppliers like Grimco that can supply aluminum precuts.

There are several websites that offer parking signs that are completely customizable that we believe would be a great alternative for having aluminium signs.

- Parking signs on the cheap: Offer 13 completely customizable signs for \$11.04 each. <https://www.parkingsignsonthecheap.com/all-parking-signs>
- Signs on the cheap: Offer 13 completely customizable signs for \$8.65 each. [https://www.signsonthecheap.com/?ncode=646446443256786376453948536F704E526A3266466974343563624757434C30&qclid=Cj0KCQiAy4eNBhCaARisAFDVI1THkicSMq93SeqpJo16JW\\_nqCR2i3NrkD-1RuLKrJBq0cdUG8JOUQaAkhVFEAlw\\_wcB](https://www.signsonthecheap.com/?ncode=646446443256786376453948536F704E526A3266466974343563624757434C30&qclid=Cj0KCQiAy4eNBhCaARisAFDVI1THkicSMq93SeqpJo16JW_nqCR2i3NrkD-1RuLKrJBq0cdUG8JOUQaAkhVFEAlw_wcB)

**(Both of these aluminium alternatives require a way to hang the signs but I suggest using a U channel fence post sold at Home Depot for \$4.54 a post.)**

Wood Alternatives

Durable wood that paper or other simple material can be attached to. Not as long lasting and the content would have to be switched out occasionally due to weather and sun-bleaching.

- Can be found at any hardware stores and prices fluctuate. These could be engraved or have the laminated paper that we used for the temporary signs attached to it.
- I would suggest using wood made of beech and poplar, that is a reliably strong hardwood. It is also a very common wood so it is almost always found at an affordable price.

Other Cheap Alternatives

Foam board/poster board material will not last long at all but is good for events or temporary use.

- Most local sign-making stores can get these made at a good price.

Another significant difference that was briefly mentioned, is the context in which these community outreach projects were enacted that drastically affects the longevity of these materials applicability. As COVID-19 restricted the ability of many to partake in activities at the park in 2020; COVID being less of a threat in 2021, the opportunity to implement materials in person / on-site presented itself. This allowed the 2021 project to focus on tangible applications

of plant identification and activities on the trail itself, while the 2020 class was limited to presenting additional educational materials about SMGA and San Marcos's local parks.

### **2021's Class Recommendations**

- Make sure that there is sufficient communication between groups early on. Some groups rely on others for their work so communication is key!
- Get information for what SMGA wants as early as possible so that no changes are required further down the road of development. It is harder to revise a near finished project rather than know what to do from the beginning.
- We should have more checkpoint due dates so that procrastination isn't possible. This could potentially be in the form of a paragraph that is submitted of what has been worked on or another type of assignment.

### **The Results!**

Overall, in 2021 Dr. Myles' 4322 class created a number of final products to proudly present to SMGA. On the next page is a list of these results dubbed "final deliverables," alongside an attachment/example and short explanation.

- Onsite worked in conjunction with Plant Research and Design Graphics to formulate plant identification signage that have QR codes that lead to educational fliers and implement them at Ringtail Park.

\*Links to the plant posters AND QR codes will be included in the project folder\*

- Plant QR codes

Plant Information and QR Codes to Lady Bird Johnson Wildflower Center:

1. Texas Persimmon



2. Frostweed



3. Texas Prickly Pear Cactus



○ Plant Information List

Ashe Juniper (*Juniperus ashei*)



Ashe Juniper is a native tree that has been here for several thousand years and continues to adorn Central Texas. It stands out with its grooved and twisted trunks and large, radiating branches as well as its fragrant, dark-green, needle-like foliage. The wood of Ashe Juniper is resistant to decay and insects because of resins that the leaves produce. This perennial produces blue fruits on female trees, a delicacy to a variety of wildlife. The Golden-Cheeked Warbler is an endangered bird species that migrates 1,100 miles from Central America to its home in Texas. This species relies on Ashe Juniper bark to nest and raise its young from March to July. The old-growth juniper provides dense coverage, a suitable habitat for wildlife, and it

Texas Prickly Pear Cactus (*Opuntia engelmannii*)



The Texas Prickly Pear Cactus is an evergreen succulent with flat, round, and spined pads. This cactus is native to South and Central Texas as well as Mexico, and survives in hot dry climates due to its high heat tolerance and low water requirements. The Texas Prickly Pear is the Official State Plant of Texas. Yellow and orange bowl-shaped flowers can be seen blooming on the Prickly Pear Cactus in the month of June. The cactus also bears fruit, called "Tunas," that ripen from July to September. The Tunas are red to purple in color and have clusters of barbs on the surface. The fruit can be used to make jelly, syrups, fermented juice, or a tea to treat gallstones. The younger pads of the Prickly Pear can be used as vegetables (traditionally called *nopalitos*) and to derive sap that is used in commercial alcohol, anti-inflammatory agents, and candle-making. Prickly Pear Cactus can often be seen with small, white, cotton-like mounds attached to their pads. These mounds are a type of scale insect called *Cochineal* that feed on the plant's sap, and contain a strong red acid that is extracted to make dye. *Cochineal* dye was used historically by Mixtec Natives to indicate social status through clothing, and still used today in clothing dyes, food coloring, and even lipstick. Before the spread and cultivation of the substance by the Spaniards, *Cochineal* was in extremely high demand and second only to Gold in value.

<https://aggie-horticulture.tamu.edu/ornamentals/nativeshrubs/opuntiaengelmann.htm>

<https://txmnp.org/alamo/area-resources/natural-areas-and-linear-creekways-guide/prickly-pear-cactus/>

○ Plant Identification Signs

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# Agarita



Identifying *Mahonia trifoliolata* is a bit easier due to its resemblance to the more well-known plant, Holly.



SCAN FOR PLANT FACTS!

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# Elbow Bush



The Elbow Bush *Forestiera pubescens*, often called "the Spring Herald" because it is usually the first to bloom in spring.



SCAN FOR PLANT FACTS!

■ Installation of Signage!





- Outreach Planning got advice and feedback from the rest of the class and formulated two fliers and a video informing about the new activity at the park.

\*Video & map file will be included in the project folder with recommendations to upload it to the SMGA site in the near future.\*

- Promotional video inviting the community to enjoy the beautiful hidden gardens that thrive within our local natural spaces.



- Press release flier alerting the community to 4322's Kickoff Event on December 1st.



- Flier to raise awareness of Ringtail Ridge sporting a Community Scavenger Hunt!



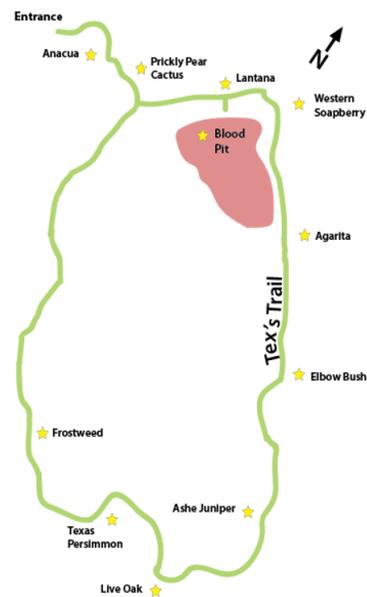
Design & Graphics worked with Onsite Planning and Plant Research teams for these results:

- A fun sign that gives access to the scavenger hunt.
- A “cheat sheet” for the scavenger hunt, showing locations of each plant identification sign.



(additional learning opportunities throughout)

### Ringtail Ridge Scavenger Hunt



(intended for SMGA maintenance use)

- Design & Graphics worked with the entire rest of the class to ensure that a fun scavenger hunt was developed incorporating local landmarks, native plant species, and fun facts throughout

- Paper copy (printable)

[https://txst-my.sharepoint.com/:w:/g/personal/j\\_w493\\_txstate\\_edu/EeaCYtQe6lVCmm2rGoXMT7wB4fa69DEqujPSi72yfnhD2A?rttime=QATpgiC02Ug](https://txst-my.sharepoint.com/:w:/g/personal/j_w493_txstate_edu/EeaCYtQe6lVCmm2rGoXMT7wB4fa69DEqujPSi72yfnhD2A?rttime=QATpgiC02Ug)



- Online copy

<https://survey123.arcgis.com/share/18d49a7f5dbc4fec85ea3ec9034296a6>



## Ending Remarks

Dr. Myles' 4322 class has been different, yet the general census agrees that it has been a productive Fall 2021 semester. Over the months obstacles have been recurring, but have been worked through and solved. Learning from these, future groups taking on similar outreach projects over the semester are encouraged to prioritize communication and check-ins to ensure that the majority of the work goes smoothly. This 4322 class is proud to provide materials to entice the local community into enjoying our natural spaces more. Catering to SMGA's overarching goals, almost ten different final deliverables work to make Ringtail Ridge Natural Area more enjoyable, provide educational opportunities, and potentially foster a love for these natural parks.

The entire class is thankful to have had the privilege to contribute this semester!