
Pathways Journal



Service Learning Literary Magazine 2018
Alternative Spring Break
Volume VII

Welcome

Welcome to Alternative Spring Break's literary magazine, Pathways. This year marks the 26th anniversary of ASB's founding at the University of Virginia. Originally part of Madison House, ASB is now an independent, completely student-run 501(c)(3) that has sent thousands of students on meaningful service trips all over the world. This journal has been dedicated to ASB's mission of service learning. Our service learning grant program challenges ASB participants to further pursue the mission of service learning by engaging with their site through the lens of their creative and research projects. The phenomenal outcomes from these projects demonstrate the wide range of approaches to interpreting service-learning with humility and depth.

ASB is a massive endeavor that wouldn't be possible without the tireless efforts of many dedicated individuals. I am continually inspired by our executive board, 62 site leaders, spring Fellows, community partners, University administrators, site contacts, fellow CIOs on grounds, and the hundreds of participants who took a chance and spent their spring break traveling and volunteering with strangers.

Additionally, I'd like to thank Ms. Kathleen Baireuther, UVA Alumni Association, and Hannah Graham Fund for funding our grants and community outreach programs. To everyone involved: thank you so much.

Personally, joining ASB my first year was the best choice I have made at UVA and has significantly informed my career path moving forward. Working with grant recipients this year and seeing how they reflected on their service learning experience, was such a rewarding opportunity. We are proud to share with you this year's Pathways- enjoy!

ASBest,

Gabby Levet

ASB Service Learning Chair 2017-2018

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Baireuther Grants

The Importance of Communication and Understanding in Serving a Community - Brandon Kim

Adopted From Full Paper

Introduction

There are different ways for an individual to be engaged within a community. Two researchers looked at different views towards civic engagement and service learning, and they framed their results into three different types of “citizens”: personally responsible, participatory, and justice-oriented (Westheimer and Kahne 237). A “personally responsible” citizen is someone who acts responsibly in their community, for example, by picking up litter and obeying laws. Programs that seek to develop personally responsible citizens “attempt to build character” and “nurture compassion by engaging students in volunteer activities” (241). A “participatory” citizen focuses on collective, community-based efforts, and programs that support the development of participatory citizens focus on “teaching students how government and community-based organizations work and training them to plan and participate in organized efforts to care for people in need.” Lastly, a “justice-oriented” citizen “emphasize social change” and seek to critically analyze and address social issues and injustices (242). This framework of examining nonprofit organizations and the volunteers who help through these organizations is really important, because it lets us see how the effects of one’s level of civic engagement is affected by the organization’s involvements in a community.

A big aspect of engagement and service in a community is communication between the organization and the community. An online research guide about communication discusses the importance of communication for providers to Hispanic communities by saying it is key to “developing strong and lasting relationships between providers and communities” (Torres et al., 9). Communication entails understanding the needs and desires of the community, how to reach out and spread the word about services to community members, and actually directly interacting with the community members.

Entering a Community

Olive Tree was founded by a group of individuals from the United States with experience in providing healthcare; therefore, one important facet of Olive Tree is that it is a nonprofit organization that exists “outside” of the community it serves. This affects many aspects of service, such as the depth of engagement one can have with the community and how the volunteers communicate with the community members.

The type of engagement with this organization is on the level of a “participatory” citizen, in which we work together towards a common goal and through community-based efforts. The way that this organization is set up, the volunteers who come together to serve the people of Huehuetenango are not on the level of a “justice-oriented” citizen, meaning we don’t analyze the root causes of social inequality and aren’t working to solve those type of issues. This is in part due to the ephemeral nature of Olive Tree and the stark separation between ourselves and the Nicaraguans. My ASB team only showed up for a few days, and many of us have never felt, first hand, the effects of the history and government of the country. This sort of separation makes it much harder to relate to and serve the members of the community, as opposed to having members of the community alongside us to help them.

Another factor that influences the productiveness of service is communication. This was especially a crucial aspect in Nicaragua, where there were both cultural and language barriers. The local residents of Huehuetenango do not speak any English, and none of us, except the translators, were fluent in Spanish. But this type of communication was not the only barrier to providing the Nicaraguans service. There were also differences in cultural customs and practices. Local residents tended to have very curt responses when asked questions; they didn’t want to give long answers to any of the translators, so acquiring information from them was difficult. Having a full story of their personal medical history and family history is vital in order to better understand

the health issues at hand, so curt responses and lack of explanations hurt both the service we could provide and the treatments they could receive. One of the Nicaraguan interpreters, Darren, explained that this is definitely a cultural difference with a large majority of America, where patients are more likely to over explain their health problems and even try to come up with their diagnoses from the internet. Many of the people in Huehuetenango are more reserved and do not want any sort of long or complex conversation, so they tend to answer with very short responses and don't elaborate with their answers. The interpreter also mentioned that Nicaraguans are cautious of Americans who tend to be overly friendly, joking, and polite. Darren said that they often want to be spoken to more upfront and direct. And lastly, he said that they may not understand something, even in Spanish, but will pretend like they do, which creates further problems down the line. Many of these issues arise, as outsiders who don't speak the language and may not understand the customs of Huehuetenango come to provide services to the community.

Existing in a Community

A different type of nonprofit organization that helps a community exists, which is a CBO that exists within community and is supported by members who are a part of the community. An example of a CBO that exists "inside" of the community is Sin Barreras. They are non-profit 501(c) organization located in Charlottesville that works to provide a variety of services to mainly Latinx undocumented immigrants such as legal, ESL, and transportation services (Sin Barreras, "About Us"). The organization was co-founded by a woman named Fanny. She came to the Charlottesville community and saw that there was a growing Latinx immigrant community that needed more resources and direct services. Sin Barreras grew rapidly after its initial founding thanks to Fanny's deep connection to the Latinx and undocumented immigrant community in Charlottesville.

This is also on the level of a "participatory" citizen engagement, but also includes a level of a "justice-oriented" citizen. When discussing how Sin Barreras functions and gains the trust of many of undocumented immigrant population in Charlottesville, Edgar, a member of Sin Barreras, explained that the community members see the efforts of Edgar and Fanny by their actions. When the Sin Barreras members went to rallies and protests for the rights of undocumented immigrants, and when they marched to Richmond in solidarity, Edgar said the community saw these actions. And this level of engagement creates more trust and comfort among the community members towards the organization.

Although Sin Barreras faces similar issues with Olive Tree in the fact that many of the volunteers do not fluent Spanish to communicate with the undocumented immigrants, there are still members of the community who volunteer with the organization that do. Edgar says that it is so important that this organization is led by someone like Fanny who understands the struggles and feelings of the people they are trying to help, because more members of the community are willing to become involved and help out. This tie to the community draws in more members of the community and Spanish-speaking volunteers. Similar to Olive Tree, Sin Barreras sees difficulties in culture as well. Doris, who is another member of Sin Barreras, explains that many of the undocumented immigrants who come to the organization may seem reticent or bashful, which is polar to the American way of being outspoken and bold. She says it is due to their being embarrassed about their lack of education and feeling intimidated by people who can speak English.

Photo Contest Winner
Best Overall: Guadalupe Mountains, Claire Stemann



Implementing waste management programs in schools and the surrounding community: Charlottesville, Va and Drake Bay, Costa Rica - Christina Anton

Adopted From Full Paper

Case Study 1: Charlottesville City Public Schools

Background

I was told by an employee of Charlottesville City Schools (CCS) that CCS has done composting in the past, but there has been some period of time when there was not a local service provider available, and options from Richmond were more costly. When I contacted them in February, I was told that “a local provider (had) re-emerged and some local interest and discussions around composting (seemed) to be re-emerging as well.” I was then referenced to Carlton Jones, the Nutrition Services Manager at CCS. The week before I left for Costa Rica, I met with him for about twenty minutes to ask questions regarding the waste-management program within the CCS. The week following my trip, I was able to meet with Mr. Jones again as well as Wendy Baucam, a parent who has helped coordinate and propose waste-management plans with CCS over the past year.

Meeting 1: February 22, 2018

Mr. Jones came into the position of Nutrition Services Manager about two years ago. Prior to when he started, the school began using compostable trays during lunch period. However, it has been a long period of time since CCS was partnered with a local service provider. When I asked him what was restricting the school from starting a recycling program again, he told me the limited budget served as the largest restriction. For every pound of trash that ended up in a composting bag, the school would be fined extra money. This consequence would put a lot of pressure on the custodians. The lack of hands and eyes to manage the children during lunches also serves as a large restriction. At this time, the two possible service providers he was looking to partner with were Black Bear and Natural Organic Process Enterprises (N.O.P.E.).

Meeting 2: March 13, 2018

The approved budget for composting bags and service fees is \$200 a month. Black Bear Composting charges \$1.30 per bag, which would allow for approximately 153 composting bags a month. Considering the school system is very big potential customer, Black Bear showed flexibility with prices during the first few months of the new waste-management program. To ensure that compostable trays were being properly separated from the trash, the school will need volunteers to monitor the lunch. This would help solve Mr. Jone's previous concern about overwhelming the custodians. There is also the opportunity to participate in training sessions with the children, which will be led by Black Bear employees. Mrs. Baucam and Mr. Jones proposed doing a test run with the first-graders (~30 students) first. The test-run will begin the second week of April.

Case Study 2: Drake Bay Elementary School

Background

During our time in Drake Bay, nine other students and I stayed on Rio Drake Farm. The house is owned Hyme, his wife Alba, and their daughter Jasmine. On March 8, 2018, my group visited the local elementary school in Drake Bay, Costa Rica, which is located about a mile away from Rio Drake Farm. There is one teacher that runs the pre-school and then one teacher named Heraldo who teaches the elementary school. About 30 children, ages 4-12, attend the school altogether. Within the walkway that connects the pre-school and elementary school, there are three separate bins that read "basura", "papel", and "glass" (Appendix A). During lunches, parents from the local area come in to make food. They serve food on reusable plates and metal utensils. When the children are done eating, the plates and utensils go into a wash bin while the leftover food goes into a "composting bin"

Interview

With the help of my site-leader, Sophia Padillo, I was able to conduct a thirty minute interview with Heraldo regarding their waste management program. When I asked him about the separate bins (Appendix A), he told me that the children don't follow the labels and that there was no real recycling program within their school and, on a grander scale, within Costa Rica as a whole. At the end of the day, the trash service takes it all to the same place without separating trash from recyclable materials. Heraldo did not know where the trash service disposes of the trash. He does know that Drake Bay does not have access to the technology or machinery that is able to turn recycled plastic or paper into reusable materials. Therefore, it is safe to assume that the trash on Drake Bay is taken to a landfill. The food disposed of during lunch also goes to the trash and is not composted.

I also asked him where the recycling training for the children begins- at home or at the school? Heraldo told me that some children learn at home, but not all. There have been attempts to teach source-separation in the past, but with only one teacher, it has been difficult to enforce a recycling program. There is also no motivation to implement a program because the government does not push for it themselves. "Waste is a huge problem in Costa Rica," he says, and the government is "all talk, [with] no action" (Heraldo. Personal interview. 8 March 2018).

Participant Observations

Drake Bay is a rather secluded area located on the Osa Peninsula. Getting there takes about an hour-long boat ride, 40-minute flight from San Jose, and five-hour car-ride. Getting people over is a big endeavor in itself, let alone transporting big machinery over. My interview with Heraldo opened my eyes to the complex relationship between local and national movements. Even if Heraldo were to create a school recycling movement, the lack of technology and government support prevents the materials from actually being recycled.

At Rio Drake Farm, the house my ASB group stayed in, the family had a composting bin for leftover food. Hyme, Alba, and Jasmine are a family who do practice sustainable waste-management. But according to Heraldo, composting is not practiced within the homes of every student. With only one teacher, it is difficult to start a composting routine at the school when not all of the children have a background in composting.

Photo Contest Winner
Best Landscape Shot: Moab, Jackson Collins



Urban Housing Crisis and Sustainable Living - Shannon McAvoy

Adopted From Full Paper

Housing Crisis Case Study: Charlottesville

The city of Charlottesville is no exception to the housing issues that face the rest of the nation. The majority of existing housing requires an income level that is well above the average for the area. One-fifth of the population earns less than \$23,000 a year, meaning that they would need to make two to three times more for most housing options to be considered affordable (Yager). In 2010, the city government set a goal to have at least 15 percent of housing units be affordable for low-income residents by the year 2025, however the true level has not budged from the 10 percent at which it sat at the time of the decision (Yager). One of the problems with the Charlottesville housing processes is known as Form-Based Code. This is the part of many zoning laws that encourages and in some cases requires mixed-uses of land, leading to an increase of retail and restaurant space and a decrease in residential buildings (Charlottesville). These other types of buildings are preferred by many building owners and developers because they are more profitable, but the consequences on housing costs are detrimental.

Charlottesville has the second highest fair market rents in the state of Virginia, only falling behind the Northern Virginia area (Mckenzie). Waitlists can be long to get into one of the limited affordable housing options and some families have been waiting for almost 10 years. The city of Charlottesville has recognized an area of the city that is south and east of the Downtown Mall area that has the potential for a lot of new growth. This area is known as the Strategic Investment Area, and a plan has been created that will encourage developers to build up the area because it has a low population density and therefore a lot of open space for new expansion. (Strategic) In this area, there already exists four affordable housing developments:

Crescent Halls, Sixth Street, South First Street, and Friendship Court. The Strategic Investment Area Plan includes some redevelopment of these neighborhoods, but they ensure that the plan will not displace current residents, and the city also claims that it will allow residents to participate in the planning process (Strategic).

Housing Crisis Case Study: Seattle

Seattle is one of the areas in the United States that has the most pressing and controversial homelessness problems. Much of the current crisis in this area has been caused by the swift and exponential economic boom that the city has seen in recent years, mainly due to large companies like Boeing, Microsoft, and Amazon. These massive corporations have contributed to skyrocketing rent prices, increasing at 4 times the national average, because of the huge numbers of people that have flooded into the city to become employees in the technology industry (Sanburn). Middle- and upper-income level individuals have caused housing availability to decrease rapidly while, at the same time, the limited options left have seen huge inflation in costs. Locals in the area have expressed much opposition to the gentrification of their city, and the general opinion seems to be that these companies have done more harm than good for the urban population.

The homeless population in King County, mostly concentrated in the urban Seattle area, is the third largest in the entire United States, only trailing behind New York City and Los Angeles. As of 2017, there were 11,643 homeless citizens. This includes people staying in emergency shelters and transitional housing, but there are still 5,484 people that are “unsheltered”, meaning they are living in vans, tents, or on the streets. (Coleman) One of the most controversial events that frequently occur in the city are the routine “sweeps” of unsanctioned encampments. This is where city police forces will collect all of the belongings left in an area, such as tents, clothes, sleeping bags, and camp stoves, and simply throw it into the landfill. There is a legal requirement to give a 72 hour warning to the residents in these areas, but this protocol is not always followed. Residents, locals, and civil liberties advocates have been in outrage at the continued sweeps, calling them “cruel and unconstitutional”.

The Low Income Housing Institute is an organization that seeks to mitigate the homelessness crisis of the state of Washington. Their main office is in downtown Seattle, but they own and manage over 2,000 housing units in six different counties in the state. The non-profit also runs various support services for the homeless residents of the area, including training programs and after-school children’s activities. They also run hygiene facilities known as Urban Rest Stops where homeless citizens can do their laundry, shower, and use the restroom for free. These are crucial services for people, and they provide much needed supplies and support for the homeless population. Funding has recently been an issue for the Low Income Housing Institute, with two of their new housing projects at a standstill due to the recent federal cutbacks that have resulted from the Trump tax bill.

Sustainable Housing Case Study: Charlottesville

Charlottesville has recently seen some initiatives moving forward in regards to green and sustainable housing. The city encourages developers and homeowners to support environmentally friendly practices by offering various incentives such as tax exemptions and credits, reduced building permit fees, and rebates on various energy-efficient appliances (Green). Charlottesville City Council signed on to an agreement to implement sustainable building practices that promote energy efficiency and follow the LEED standards (Sustainable)

One of the developments that is still in the working stages is the Charlottesville Ecovillage. This idea was created by people who wanted to live a more meaningful way of life while minimizing their impact on the environment (EcoVillage). Another project that was undertaken by the city itself in partnership with the University of Virginia is known as the EcoRemod,

which was a remodel of a historic house on Ridge Street that has now been retrofitted to make it a zero net energy user. The purpose of the EcoMOD project was to show that zero net energy housing is a possibility for the Charlottesville community. (EcoRemod) The series of EcoMOD project that occurred over several years also made sustainable home obtainable for lower-income families, as they were each created with Habitat for Humanity volunteers.

Sustainable Housing Case Study: Seattle

Seattle is known for being innovative, progressive, and technologically advanced, so it is no surprise that there are many green building initiatives in the city. The area is a national leader in ecological protection, renewable energy generation, and sustainable development, and it is even third on the list for policies and programs that aim to advance energy efficiency according to the American Council for an Energy Efficient Economy (Building). The Seattle Housing Authority as an organization that oversees much of the development in the area holds environmental stewardship as one of its main goals. They provide residents in the low-income housing developments that they manage with food and yard waste collection, which made them one of the first housing organizations do so. Organic waste collection such as this helps to reduce the carbon footprint of the neighborhood as well as reduce the cost of landfill collection and storage. (Environmental)

The Low Income Housing Institute is one of the largest low-income housing organizations in the area, however they lack the funding that would allow for innovation in the realm of environmentally sustainable homes. One of the big initiatives they do run is the Tiny Home Project, which provides transitional housing for people who are living in un-sanctioned encampments on the streets, in parks, and under overpasses and bridges. These Tiny Home villages are sustainable and great means by which people can get their footing and eventually be moved into more permanent housing. The encampments are fenced in and the residents of the community are required to take security shifts as well as cleaning shifts to ensure the safety and sanitation within and beyond the fence. The Low Income Housing Institute Volunteer Services Coordinator, Crystal Dawn Walker, expressed the non-profit's desire to expand their operations and incorporate sustainability into their processes and designs, but noted their they are not quite to that point yet.

Photo Contest Winner
Best Group Photo: San Juan, Paige O'Brien



Understanding Motivations of Citizen Science Volunteers in Sequoia and Kings Canyon National Park - Rachel Thoms

Adopted From Full Paper

Very little has been published in the academic literature regarding what motivates people to participate in citizen science, despite its importance for both recruitment and retention of participants. A study examining motivations of participants in a citizen science water quality monitoring project found that the strongest motivation for volunteers was helping the environment, followed by helping the local community, connecting with nature, and finally contributing to scientific knowledge. Volunteers also felt strongly that they wanted to know the data collected has made an impact.⁵ An earlier study on environmental citizen science projects similarly found that the most common motivations of participations were wanting to help nature in general. They also found were motivated by wanting to contribute to scientific knowledge, though this was less important.⁶ When looking at success of youth-focused citizen science, Ballard et al. found that the ability of a project to support youths' environmental science agency depended on extended time working on the same project, pre-existing relationship to the place they are studying, and perception of the project as contributing to real science.⁷

A more comprehensive online survey of 147 environmental-based citizen scientists confirmed these case-based studies, and altruistic motivations again dominated responses, specifically "to help wildlife in general" and "to contribute to scientific knowledge." However this study also found that feedback and communication are vital to citizen science. Feedback was the single-most cited reason for remaining involved in a citizen science project, followed by a similar reason of knowing their participation had main an impact of contribution. This survey also pointed out that volunteer generally wished they could volunteer more, but were inhibited by lack of time, lack of resources, and lack of good health.⁸

Using this literature review, an online survey was designed to get at the motivations of volunteers and assess quality of volunteer experience in the Blue Oak Citizen Science Project at Sequoia and Kings Canyon National Park. Several questions were adopted from Geoghegan et al., and several project specific questions were added. The survey is intended to provide a comprehensive look at volunteer motivations along with assessing fulfillment of the projects goals and overall volunteer experience. In order to get preliminary data, a trial run of this survey was completed by nine participants on the University of Virginia (UVA) Sequoia and Kings Canyon Alternative Spring Break (ASB) service learning trip. These participants volunteered for a full day at both sites covered by the BOCSP collecting an extensive amount of data.

The goal of this survey is to provide SEKI with a tool to gather information about volunteer experience in the BOCSP and can be adapted to other citizen science projects in the park as well. The survey will inform staff on areas of strength in addition to areas of improvement while also giving insight into volunteer motivations. After collecting responses from nine student volunteers several key adjustments can already be made.

The first proposed adjustment is that improvements to the navigation procedure will reduce volunteer frustration over not being able to locate plots or trees. This aspect seemed particularly difficult for college students and will likely be challenging for younger students as well. Some suggestions include giving volunteers who are not familiar with compasses a brief training and including coordinate directions on the maps to make it easier for participants to navigate using the printed maps.

Another adjustment suggested by the preliminary survey indicates that participants want to know they are making a meaningful contribution when volunteering. Like previous studies, volunteers main motivator was helping wildlife or the environment in general. Thus during the project briefing, park staff should continue to emphasize the goals of the project and what will be done with data collected. Even more importantly, the survey overwhelmingly indicates that participants would like feedback or a follow-up after their involvement with the project. A similar result was found in the results of Geoghegan et al. and again emphasizes volunteers want to know that they have made a difference and the work their doing is important. Many of the student participants indicated they would like a summery email or a graphic or map displaying the data. One recommendation is to send out a summary email to volunteers or their group contact or school teacher thanking them for

volunteering and include both a link to the survey and a summary graphic or map of the data collected. This could also be combined with the creation of a volunteer website or social media page that could also be linked in the email. The page would allow volunteers to keep in touch with SEKI and get updates on the project, information about upcoming volunteer opportunities, and contact fellow volunteers. If transportation proves to be a large obstacle for volunteers, this page could also be used to arrange volunteer carpools to the park.

Finally the trial survey results indicate the park is fulfilling their goal of fostering a science stewardship in its community volunteers. The UVA student volunteers all felt more interested in contributing to science and want to volunteer on similar projects in the future. Therefore, the project is not only collecting important data with their citizen science project, but SEKI is also cultivating a connection to nature and science in their volunteers.

Through this survey, SEKI will be able to strengthen this goal. Accumulation of responses will allow SEKI to evaluate and monitor volunteer participation to inform project management. Volunteer responses will ensure the BOCSP is meeting its goals along with fulfilling the motivations of its participants. In addition the survey will help improve the project and understand its impact. Some areas of improvement are already evident from preliminary survey responses, the most apparent being a venue to provide volunteers with feedback. Whether it is a summary email or webpage updates, this feedback is important to ensure volunteers feel like they are making a real impact and are motivated to continue participating in the project. Citizen science has been a key aspect of the Blue Oak Monitoring Project at Sequoia and Kings Canyon National Park and ensuring continued volunteer participation through strengthening communication and feedback with volunteers will guarantee that citizen science is not only continued but expanded throughout Sequoia National Park and other environmental educational institutions in the future.

Photo Contest Winner
Best Service Shot: Pensacola, Lily Hungarland



Proposal for Service Project in Guatemalan Communities - Leila Villacorta

Adopted From Full Paper

The objective of this particular project was rooted in helping as many members of the communities as possible by providing the schools—a central meeting place for the members of these communities—with environmental and health friendly stoves for cooking meals. In many rural area of Guatemala, Central America, and around the world the most common method of

cooking is open-fire wood burning stoves. This type of meal preparation poses a big health problem in these communities as individuals are forced to inhale toxic fumes from the smoke, women and children get burned, and sometimes small children fall into the fire. Having so many children to feed at these schools, many of the mothers, teachers, and children spend long hours inhaling these fumes. The stoves that were built in these communities provided a different method of cooking. The stoves used less wood for heating and burning, provided barriers from the smoke, and also encapsulated all the smoke into a pipe that went out the building through the roof. This way, the women and children no longer had to inhale the toxic smoke, children are less likely to get burned, and less wood is used reducing the amount of smoke that goes into the atmosphere and reducing the number of trees that are cut down in nearby forests.

Though each school and their surrounding communities have other pressing issues that they must deal with, the stoves project proved to be a very meaningful and impactful project both to the community members and to the participants of the trip. Not only did the installation of the new stoves generate immediate changes in the each of the schools (one could quite literally see how the eyes and faces of the cooks were less red and glassy and how they could all breathe more easily and profoundly), the installation of the eco-friendly stoves also serves as a preventive mechanism for upper and lower respiratory diseases which shed years off of many the people in this region and is the number one leading cause of death in Guatemala.

In assistance to the volunteers and employees at Primeros Pasos, as well the people of the communities of the Palajunoj Valley, this document may serve as an itinerary and a proposal for a comprehensive health services project which may be executed by future volunteer student groups, medical student groups, or employees and members of the Primeros Pasos clinic itself. Through the installation of “plancha” style stove tops, the project outlined in this proposal aims to address and reduce the same health issues that come from open-fire cooking which the group from this year aimed to reduce. In addition, the project also provides an educational and interactive aspect that teaches children and families personal hygiene habits. By teaching the importance of personal hygiene as well as teaching and providing personal hygiene resources and how to make them, the outcomes of this project will not only include immediate health services and relief through the stoves, but also will prevent the children and families from acquiring certain illness or diseases by practicing healthy habits like washing hands, brushing teeth, and bathing/showering often. These are practices that many people in these communities do not do every day, many times because they lack the knowledge and resources to so.

Budget

Stoves:

Item*	Provider***	Total Item Cost	Cost Per Person**
Estufa Escolar	<i>EstufaChispa</i>	Q1600.00 (\$215.82 USD)	\$20.00 USD
Modelo construido en sitio	<i>EstufaDoñaDora</i>	Q1600.00 (\$215.82 USD)	\$20.00 USD
Ecolancha III Ibrida	<i>EcoComal</i>	N/A (<i>Call for prices</i>)	N/A

*The chosen stoves models listed above were chosen as the best in terms of price, sizing, and convenience for installation in schools with at least 100+ students. Other models with different prices can be found on the provider’s websites.

**The total cost per person is calculated based on there being 12 participants in the volunteering group in total.

***These are just three stove providers that exist and can provide materials to build a stove for the project. Other stove providers can be contacted if so desired.

Transportation:

Item	Provider	Total Item Cost*	Cost Per Person**
12-person bus	<i>502 Expeditions</i>	\$1,200.00 USD	\$100.00 USD

*The grand total cost is calculated based on needing a 12-person person bus for the span of a seven-day work week. Price may vary based on total group size and total hours or miles of transportation.

**The total cost per person is calculated based on there being 12 participants in the volunteering group in total.

Additional Materials:

Item*	Provider	Total Item Cost	Cost Per Person**
Gloves (100 count box)	Walmart	-\$10.99 USD	-\$0.92 USD
Baking soda (1 lb box)	Walmart	\$30.66 USD	\$2.55 USD
Coconut oil paste (125 oz pail)	Walmart	\$35.34 USD	\$2.95 USD
3 oz travel size bottles (4 count)	Walmart	\$7.20 USD	\$0.06 USD
OR Small Ziplock bags (300 count)	Walmart	\$17.95 USD	\$1.50 USD
Apple Cider Vinegar (1 gal)	Walmart	\$29.19	\$2.45 USD
Spoons (600 count) or toothpicks (500 count)	Walmart	\$14.99 or \$1.48	\$1.25 or \$0.14 USD
Disposable Plates (300 count)	Walmart	\$11.97	\$1.00 USD
Napkins (300 count)	Walmart	\$5.17	\$0.44 USD
Distilled Water (optional to purchase)***	--	--	--
Total		\$199.46 USD	\$13.42 USD

*The items purchased should be sufficient for about 30+ people.

**The total cost per person is calculated based on there being 12 participants in the volunteering group in total.

***Some of communities in the Palajunuj Valley do not have running water. Group should be informed about the water situation in the communities beforehand to know if the group needs to be purchase distilled water.

Total Budget for Project

Item	Item Type	Total Cost	Cost Per Person**
<i>EstufaChispa</i> or <i>EstufaDoñaDora</i>	Stove (3)	Q4,800.00 (\$647.46 USD)	\$53.96
Bus	Transportation	\$1,200.00 USD	\$100.00 USD
Additional Items	Other	\$199.46 USD	\$13.42 USD
Total		\$2,046.92 USD	\$167.38 USD

**The total cost per person is calculated based on there being 12 participants in the volunteering group in total.

Schedule

Monday - Stove installation in community #1
8 a.m. - Volunteers meet at a central location and get picked up by 502 expeditions
9 a.m. - Arrive at community
9:15 a.m. - Begin unloading the materials to build stove
9:20 a.m - With the help of the hired installation expert, chose an appropriate spot to build the stove (away from children, located under a roof, water station nearby)
9:30 a.m. - Begin building the stove with the help and guidance of the hired installation expert
11:30 a.m. - Finish building stove and gather women and teachers for a demonstration on how to use the stove

<p>11:35 a.m. – Hired installation expert, will give a quick step-by-step presentation of how to light the stove, maintain the fire, clean the stove and pipes, and turn off stove as well as answer any questions</p> <p>12 p.m. – Finish presentation and clean up</p> <p>12:15 p.m. – Gather materials and load on to the vehicles, get on bus and drive back home</p>
<p>Tuesday - Stove installation in community #2</p>
<p>Same schedule as day before.</p>
<p>Wednesday - Stove installation in community #3</p>
<p>Same schedule as day before.</p>
<p>Thursday: General hygiene workshop and DIY toothpaste, shampoo, and conditioner pt. 1</p>
<p>8 a.m. – Volunteers meet at a central location and get picked up by 502 expeditions</p> <p>9 a.m. – Arrive at community</p> <p>9:15 a.m. – Begin unloading the materials for the workshop, set up class room with chairs and tables for the workshop, gather volunteers and community members in one room</p> <p>9:30 a.m. – Begin workshop with general hygiene explanation, ask questions and keep the children and community members involved and engaged</p> <p>10 a.m. – Get a few children volunteers and pair with student volunteers to give a demonstration on how to wash hands (with soap, rubbing both hands, and scrubbing under finger nails); teach the alphabet song or birthday song during demonstration</p> <p>10:30 a.m. – Get different children and student volunteers and demonstrate how to brush teeth</p> <p>10:45 a.m. – Begin DIY toothpaste tutorial</p> <ol style="list-style-type: none"> 1. Hand out gloves 2. Hand out plates, spoons or toothpicks, and 3 oz bottles or ziplock bags 3. Pour out baking soda and coconut oil on every plate 4. Begin mixture using spoons or toothpick 5. Pour mixture into empty bottle or ziplock 6. Take mixtures home for everyday use 7. Donate left over baking soda and coconut oil to community/school leaders <p>12 p.m. – Wrap up workshop and clean up</p> <p>12:15 p.m. – Gather materials and load on to the vehicles, get on bus and drive back home</p>
<p>Friday - General hygiene workshop and DIY toothpaste, shampoo, and conditioner pt 2.</p>
<p>8 a.m. – Volunteers meet at a central location and get picked up by 502 expeditions</p> <p>9 a.m. – Arrive at community</p> <p>9:15 a.m. – Begin unloading the materials for the workshop, set up class room with chairs and tables for the workshop, gather volunteers and community members in one room</p> <p>9:30 a.m. – Recap on workshop from day before about general hygiene practices and DIY toothpastes</p> <p>10 a.m. – Ask for a child volunteer to demonstrate washing hands</p> <p>10:10 am – Ask for another child volunteer to demonstrate brushing teeth</p> <p>10:20 a.m. – Teach importance of personal bodily hygiene</p> <p>11 a.m. – Begin DIY shampoo and conditioner tutorial</p> <ol style="list-style-type: none"> 1. Hand out gloves 2. Hand out plates, spoons or toothpicks, and 3 oz bottles or ziplock bags 3. Pour out baking soda, water, and apple cider vinegar mixture (shampoo) on to every plate 4. Pour out coconut oil and apple cider vinegar mixture (conditioner) on to every plate 5. Begin mixing using spoons or toothpick

-
- 6. Pour mixtures into empty bottle or ziplock bags
 - 7. Take mixtures home for everyday use
 - 8. Donate left over materials to community/school leaders
- 12 p.m. - Wrap up workshop and clean up
12:15 p.m. - Gather materials and load on to the vehicles, get on bus and drive back home

Photo Contest Winner
Funniest Photo: Joshua Tree, Katie Carlson



Grand Canyon National Park: Wildfires, Fuel Treatment and Firewise - Antea Cooper

Adopted From Full Report

Firewise

According to the National Fire Protection Association, “The Firewise USA™ program teaches people how to adapt to living with wildfire and encourages neighbors to work together and take action to prevent damage and losses.” Wildfires can put dozens (even hundreds) of homes at risk simultaneously, and firefighters may not have the resources to protect each home. However, residents can take action to increase their homes’ chances of surviving a wildfire by taking action consistent with the Firewise program and understanding how society’s influence has altered historic fire cycles, leaving an unnatural buildup of vegetation in the wildlands.

The Firewise program is constructed according to three ‘Home Ignition’ zones, which include the home, in addition to its immediate surroundings up to 200 feet (Fig 7). Zone 1 (up to 30 ft) is an area that should be occupied with low-flammability plants, landscaping materials and accessories, and tree limbs. It should be mowed, watered, and pruned 10 ft from the ground while allowing for generous space between trees. Care should be taken to avoid positioning firewood or propane tanks in this immediate area. Zone 2 (30-100 ft) should allow for 30 ft between tree clusters and 20 ft between individual trees. Branches and leaves should be 6 to 10 ft from the ground, and heavy accumulation of flammable debris should be removed to ensure fuel breaks. Zone 3 (100-200 ft) must have a reduced density of taller trees, smaller conifers between trees and extensive woody debris.

It is necessary to create a survivable space around structures by removing, reducing, relocating and replacing fuels and vegetation to slow the spread of wildfire. Detached garages, storage buildings, and barns should also be included in the personal fire management plan applied to the primary structure (Fig 8).

Grand Canyon National Park

Grand Canyon National Park – and Kaibab National Forest– will continue to reduce the accumulation of forest fuels in the area to protect life and property from wildfire. Restoration techniques will aid in the preservation of historic structures and archaeological sites, and help to restore the North Rim developed area cultural landscape.

Fire managers are also currently initiating pile burns primarily in the North Rim developed area. These piles – small diameter trees, branches, and twigs– were removed in late winter 2018 as a part of hazardous fuel reduction projects intended to improve defensible space within the wildland urban interface (WUI). The piles were left to stand for five months in order to allow the moisture to exit the heaps, allowing the combustion process to be initiated more effectively in the summer season. Depending on weather conditions and fuel moisture levels, the fires may show activity for several weeks via smoke along the South Rim, Arizona Highway 64, and US Highway 89. A quantitative history of preparedness and fuels expenditures will be assessed to determine a FY'18 budget of treatment expenditures (Fig 12).

PREPAREDNESS	FY'12 Completed	FY'13 Completed	FY'14 Completed	FY'15 Completed	FY'16 Completed
Preparedness Expenditures*	\$39,093,000	\$31,045,000	\$36,207,000	\$37,888,000	\$39,015,000
Preparedness FTE	384	359	348	350	346
Facilities Expenditures*	\$2,626,000	\$642,000	\$3,057,000	\$231,000	\$319,580
Wildfire - Unplanned Ignitions**	528	513	355	579	543
Wildfire - Unplanned Ignitions Acres**	146,007	209,195	72,133	398,118	176,695
*Source: NPS Financial Business Management System (FBMS) data as reported in the DOI Obligation Report and rounded to the nearest thousand. **Source: WFMI. Acres are the sum for which the statistical data owner is NPS: fires originated on NPS lands; statistic does not include acres that originated on other lands and burned onto NPS lands. Fire type/protection type 11,12, 13, 14. Acres shown are control acres.					

FUELS	FY'12 Completed	FY'13 Completed	FY'14 Completed	FY'15 Completed	FY'16 Completed
Wildland-Urban Interface (WUI) Fuels Treatment*					
Mechanical Acres	11,860	6,726	8,238	8,069	17,843
Prescribed Fire Acres	99,521	94,202	65,972	112,391	84,827
Other Acres	8,099	3,500	2,346	7,454	7,400
Total	119,480	104,428	76,556	127,914	110,070
Non-Wildland-Urban Interface (Non-WUI) Fuels Treatment*					
Mechanical Acres	644	80	363	738	1,158
Prescribed Fire Acres	36,321	20,352	17,133	2,265	2,094
Other Acres	2,153	35	150	212	2,503
Total	39,118	20,467	17,646	3,215	5,755
WUI and Non-WUI Total Acres Treated*	158,598	124,895	94,202	131,129	115,825
Fuels Expenditures**	\$30,311,000	\$21,028,000	\$21,355,000	\$25,186,000	\$24,240,000
Fuels FTE	242	208	180	183	186
*National Fire Plan Operations and Reporting System (NFPORS) **Source: NPS Financial Business Management System (FBMS) data as reported in the DOI Obligation report and rounded to the nearest thousand.					

Figure 12. Preparedness and Fuels Budget for Treatment Expenditures.

Fire is complex to manage, and the National Park Service's Wildland Fire Program will continue to protect the public, communities, and infrastructure. Fire personnel will work with many different stakeholders to conserve natural and cultural resources, and restore and maintain ecological health.

Park landscapes have great potential for change due to wildfire over time, more-so when this natural process is important to preserve fire-dependent ecosystems. By reversing the century-long trend and practice of fire-suppression, fuel build up will be avoided along with hotter, more destructive fires.

Charlottesville

The Charlottesville Fire Department – founded in 1865– provides fire protection, emergency response, and fire safety education to the City of Charlottesville and the University of Virginia. Similar to the Grand Canyon NP Fire and Aviation Squad, Charlottesville FD focuses on customer service, education, prevention, and preparedness in all fire management avenues. For more than 150 years, the core values of family, integrity, respect and excellence have strengthened and guided the Charlottesville community through dedicated service.

Day-to-day routine includes fire suppression, rescue, hazmat, and emergency medical services, the latter of which are processed by the Emergency Communications Center (ECC). While each emergency alarm level has a pre-established number of resources assigned, additional specialized resources are dispatched based on the nature and magnitude of the incident. The resulting budget is based on the distribution of fire incidents reported by the ECC– 17% of which are brush fire, grass and forest fires on average while the rest all reflect private infrastructure and the surrounding area (Fig 13).

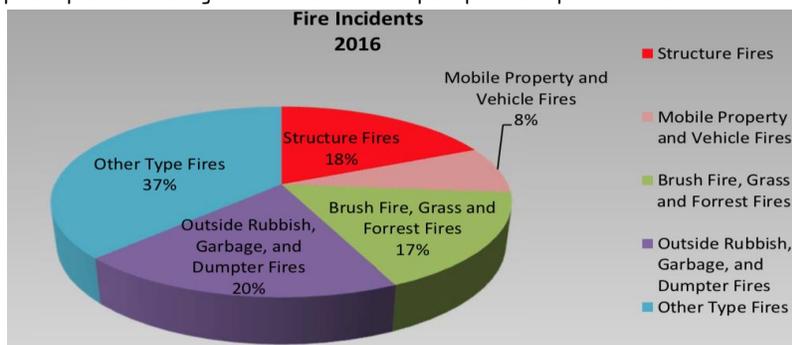


Figure 13. Fire Incidents of 2016 According Emergency Categories.

The diversity of fire incidents often leaves the department’s staff strained for resources to dispatch. Without first considering the level of risks required to effectively mitigate the incident, there is a chance that valuable assets may be continuously wasted. For this reason it is important to implement a Firewise plan into the greater Charlottesville community, thereby avoiding the majority of fire incidents encountered by the Charlottesville FD. A mosaic-like community (Fig 14) of patches (pruned areas) should be implemented, with the goal of protecting private property and immediate surroundings (farmland, community infrastructure, agroindustry, etc.) from the threat of wildfire. As the East Coast shifts to a more dry and windy climate, the after-effect may have the population experiencing wildfires similar in magnitude to what is currently only prominent on West Coast media.



Figure 14. Mosaic Firewise Standards of Seasonal Employee Ranger Community.

Photo Contest Winner
Honorable Mention: Anza-Borrego, Emma Mcphail-Snyder



The Resilience of Ridge to Reef Farm - Janet Johnston

Adopted From Full Paper

As Ridge to Reef has been operating for over thirteen years, it has weathered through several difficult storms. This paper will discuss the actions taken by the farm to increase resiliency and decrease damages from hurricanes, as well as what can be done in future to further help resiliency. While much damage cannot be prevented, wind damage can be particularly devastating and incredibly difficult to prepare for. The aim of this research is to evaluate the performance of the Ridge to Reef Farm as well as suggest further resiliency tactics that can be put in place to help reduce destruction from future hurricanes.

Hurricane Resilience

During the ASB farmstay, Nate Olive, Shelli Olive, Matt Johnson, Snow Bear, and James Bondz were interviewed. They were all at the farm last fall, during both Hurricanes Irma and Maria. Most of them have had experience with hurricanes before, but they were taken aback by how devastating these two were. The fact that there were two category five hurricanes within 14 days of each other made it even more difficult to deal with the damages. Maria hit St. Croix with heavy rainfall in the early morning hours of September 19th. Around midnight on September 20th, the winds escalated and began to pass over the island. Matt Johnson and Nate Olive said they stayed in the cellar below the community center the day of the storm. The day after the storm, they set out to find the livestock that had been left out overnight. Many of the sheep were trapped between trees, and their donkey, Pippin, was stuck in a blown over mango tree. After the livestock were detangled and cared for, they turned their attention to getting the power and water up and running again.

Ridge to Reef runs entirely off of solar power and filtered rainwater and is therefore not part of a major grid. Instead, they generate power on a micro grid which is much easier to manage. The day before the worst of the storm hit, Nate Olive and Matt Johnson moved the generator inside to reduce the damages. While many of the solar panels were crushed during the storm, the generator allowed the farm to restore power and water to the farm the day after the storm. Many other areas of the island, along with other islands in the Caribbean were without power for months after the storm, because they were connected to the main grid that was damaged during the storm. Even hospitals went without power for long periods of time. Shelli Olive's godmother passed away in a hospital in Puerto Rico that lost power during the aftermath. While no casualties were reported on

any of the Virgin Islands, homes were demolished, trees were uprooted, and the power grid across all of St. Croix was decimated.

Secure and reliable connection to the electric power grid is important to social wellbeing. When large portions of the population are connected to a singular power grid, they become extremely vulnerable to power outages. Between 2003 and 2012, roughly 679 power outages occurred due to weather related disasters in the United States. New technologies such as micro grids, smart grids, and wide area monitoring applications can be put in place to enable faster restoration of the power system after a weather-related incident. Thorough and consistent inspections of energy sources are also critical for resilient power structures.

The Federal Emergency Management Agency (FEMA) uses these natural disasters as opportunities to assess the effectiveness of the current conditions and provide recommendations to improve resiliency for future disasters. To get further information on the role FEMA plays, Jennie Orenstein, a branch chief in the hazard mitigation division at FEMA was interviewed. She visited St. Thomas, another island in the U.S. Virgin Islands, as part of the Mitigation Assessment Team (MAT). The MAT was sent to the Virgin Islands to assess the damages done on the islands and to make recovery advisories to prevent future damage. The effectiveness and resilience of different solar panels was discussed. Solar energy, along with other renewable energy sources, is very common in the Virgin Islands. While the storm did a great deal of damage to the solar farms, the panels that were installed before 2007, or by a federally approved company, fared better than those installed by “pop up” companies that were created once the U.S. government began endorsing solar energy projects post 2012.

James Bondz, the site coordinator for the Little La Grange (LLG) Farm site, was also present during Hurricane Maria. The LLG farm site is the second certified organic farm property owned by the Ridge to Reef farm. The property consists of the historic home of Carl and Marie Lawaetz, a Danish family living on St. Croix as plantation owners. Along with the house, the estate has lucrative farmland that produces fruits and pork that are sold as part of the CSA to the local public-school system. James Bondz reported that the museum itself was not severely damaged during the hurricane, as a hurricane in the early 1900’s blew the roof off. Consequently, the roof was rebuilt with stronger materials that have held ever since. The farmland and orchard however, were destroyed. The land surrounding the house was severely damaged, with trees uprooted and blown far away from where they were planted. James Bondz commented that the uprooted trees and the broken limbs made the roads undrivable. It took him nearly 18 hours of hard labor over a two-month period to clear out the orchard.

As the LLG farm was only adopted into the Ridge to Reef CSA in 2015, it was still in its early stages of crop production. The hurricane disrupted the food-to-school program that was supposed to take place on the Lawaetz property. Several months later, in March 2018, the program is only just getting to its feet again, and the re-launching began with the planting of vegetables for the CSA.

Wind Damage on Orchards

Wind damage is one of the most devastating and unpredictable forms of destruction a hurricane can bring, especially for a farm. Buildings and other physical structures can be designed and constructed to reduce damage, but the outside world of agriculture can be extremely difficult to protect against record rainfalls, catastrophic flooding, and sustained winds from cyclones. Certain types of farming have been shown to be more resistant against hurricane strength winds. The Moringa tree in particular is highly hurricane resistant in comparison to other trees grown on St. Croix.

Moringa oleifera offers many benefits to human health including living enzymes, amino acids, vitamins, and minerals. One gram of Moringa leaves contains: seven times the vitamin C in oranges, four times the calcium in milk, four times the vitamin A in carrots, three times the potassium in bananas, and two times the protein in milk. The potential for Moringa trees to benefit humanity is enormous and is of great importance to the Ridge to Reef farm, who have been growing these trees since before they became widely known as a lucrative commodity. The farm currently works with a local company, Moringa Lion, that produces organic Moringa-based products such as Moringa vegan capsules and Moringa powder. The importance of the Moringa tree to the local community is enormous, and their resistance to hurricanes have made them available all year round.

The Moringa tree's physical form is a key to its resilience. The Moringa tree requires pruning or lopping to promote branching, increase production, and facilitate harvesting. A technique known as pollard cutting is a type of pruning where the tree is cut around chest height. This allows for more branches to grow, lowering the center of gravity for the tree, and therefore increasing its resistance capacity against wind. In a sense, this means that the Moringa tree gets stronger the longer it is pruned and harvested. Several other fruit trees from the CSA had been blown over, some were even uprooted. One of the major projects after the hurricanes was trying to push them up and support them with other trees so they had a chance to survive and continue producing fruit. Moringas that were planted more recently did not survive the hurricane, because of their shallow roots and their lack of pollard pruning, but most mature Moringas did. The Moringa tree also has a very soft wood and as a result, grows very quickly compared to other fruit trees. This makes it one of the first trees to regenerate after a disaster.

As Ridge to Reef harvests their Moringa trees, they have grown to be extremely strong and resilient to wind damage. They grow Moringas in an orchard, where they alternate planting Moringas and other fruit trees. This crop diversification tactic has shown to improve resilience in a variety of ways. For example, it suppresses pest outbreaks and dampens pathogen transmission and buffers crop production from the effects of extreme weather events such as Hurricane Maria. Ridge to Reef also uses windbreaks in their orchards, one of the most widely-used strategies to protect from wind damage. While windbreaks protect wind-sensitive crops and control wind erosion, they also can benefit soil and water conservation, and increase bee pollination.

Shelli Olive specifically mentioned using hedge bamboo as a windbreak. This hedge bamboo, specifically known as *Bambusa multiplex*, is commonly used as a windbreak in Asian and Pacific Island cultures and makes one of the strongest and most resistant windbreaks according to research done by Paige Boehlke with the University of Florida Institute of Food and Agricultural Sciences. This type of bamboo is known as a clumping bamboo, meaning its bamboo canes (culms) grow from rhizomes (underground stems). The new culms develop very close to the base of the older culms, giving it an extremely sturdy foundation and making it wind resistant.

During the research process, Kate MacFarland, an assistant agroforester for the U.S. Forest Service (USFS) was interviewed. Discussed during the interview was the importance of windbreaks, particularly in hurricane prone areas such as the Virgin Islands. Wind protection on fruit crops in particular has seen significant increases in yield and quality of marketable fruit, as well as decreased premature fruit fall and decreased damage.

Creative Grants

Graffiti Art in Native American Culture - Savannah Hard





El Progreso - Sophia Padilla



Anza-Borrego State Park Website - Ramya Ravichandran

Anza-Borrego Desert State Park

University of Virginia || *Alternative Spring Break 2018*

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THE EARTH HAS ITS MUSIC FOR THOSE WHO WILL LISTEN - GEORGE SANTAYANA

Anza-Borrego Desert State Park is located halfway between the cities of Los Angeles and San Diego. Despite its rich history, diverse fauna, and distinction as California's largest state park, it only receives enough funding from the state to maintain fewer than 20 full-time staff members year round. This website is dedicated to showcasing a bit of the diverse plant life and natural splendor of Anza-Borrego to promote an appreciation for state parks and their commitment to protecting native species. Check out the blog for images!





Beaver Tail (*Opuntia basilaris*) cacti, pre-bloom; a native species in the region



Palm Canyon palms



Citrus trees in the midst of the desert



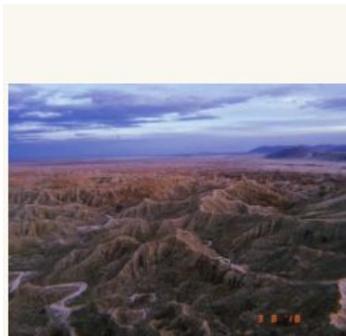
Oasis interior within



The view from within Palm Canyon



One of the few sources of water in the midst of the desert



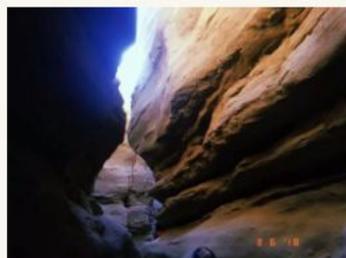
The Borrego Badlands themselves



Silt, found on dried riverbeds throughout the desert



Font's Point, the iconic scene of Anza-Borrego Desert



Pink and tan siltstone walls inside Slot Canyon



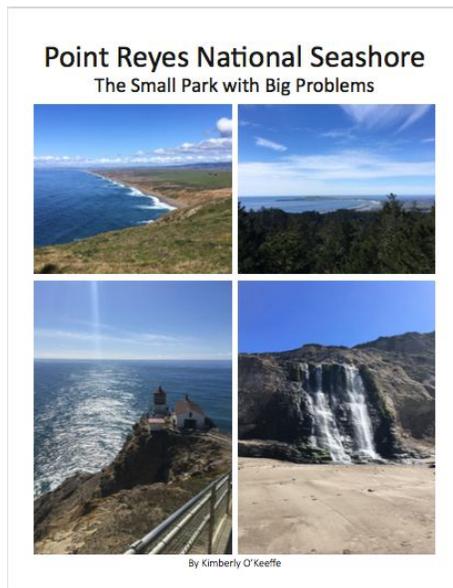
Distortia: Arches National Park - Erin Cunningham



New Perspectives - Ivy Peterson



Point Reyes National Seashore: The Small Park with Big Problems - Kimberly O'Keefe



Problems Within the Park

Point Reyes is referred to as "Small Park with Big Problems" because, while it is small in area, the Point Reyes peninsula is geographically diverse and attracts many tourists to the area due to its location an hour north of San Francisco. Point Reyes is only 111 square miles, compared to Yosemite which is 1,169 square miles, but in that small area Point Reyes is home to small towns, beaches, pastureland, seaside cliffs, waterfalls, natural growth forests, meadowlands and estuaries. The influx of visitors is difficult to deal with as tourists overuse trails, leave garbage on the beach, and park illegally in protected areas. Social media plays a large role in the increase of day travelers to the area as posts on sites such as Instagram draw attention to obscure hikes and scenic locations. This puts a strain on the Trails Team, which consists of only 3 full time employees year round, as they need to monitor and upkeep the lesser known trails that are now becoming more popular.

The iconic Point Reyes lighthouse and Elephant Seal beach are popular tourist destinations that can only be accessed by tour bus. The park used to allow cars on this thin road but the influx of tourists resulted in people parking illegally and blocking the road to emergency vehicles. The solution was to bus visitors between the famous sites on the edge of the peninsula. The roads are small and difficult for buses to navigate but the decrease in car traffic has shown to be beneficial to the working dairy farms on the peninsula and to the conservation of the coastline.

Point Reyes is home to numerous endangered species, the most famous being the Spotted Owl. During nesting season, rangers must use hand tools instead of power tools in the forests because the noise disturbs the owls. While this creates additional work for the rangers, it allows the owls to nest in peace. For some areas of the park, rangers drive on winding backroads and wide horse trails to access remote areas. All other areas must be reached by foot so the rangers are used to hiking with all of their equipment. However, coastal areas are not impacted by owl nesting so larger equipment can be used by the water year round.



Equipment used by Park Rangers

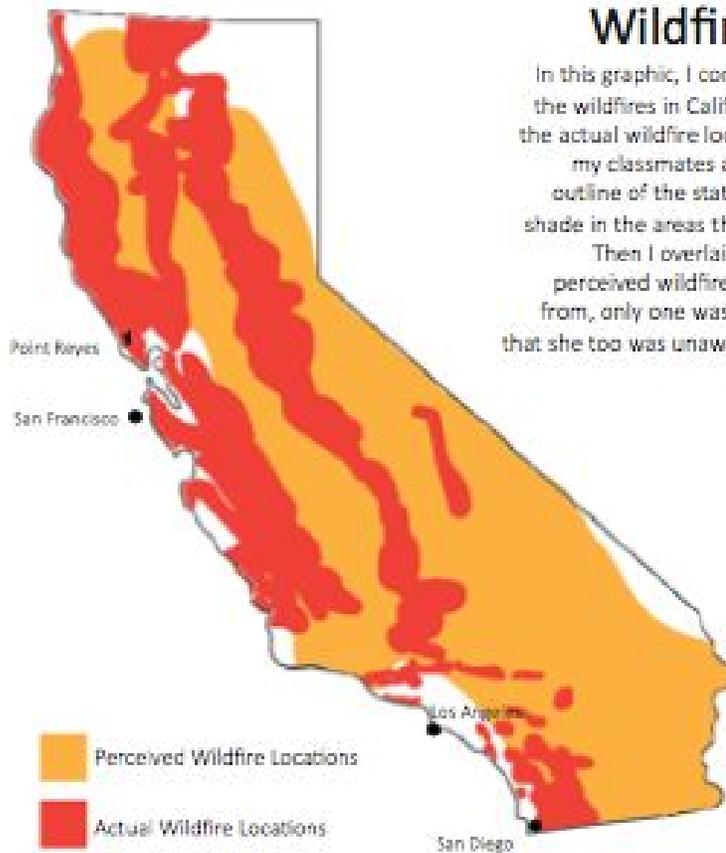


Tour Bus Stop

Wildfires in California

In this graphic, I compared where UVA students think the wildfires in California are located (orange) against the actual wildfire locations (red). I gathered data from my classmates and participants by giving them an outline of the state of California and asking them to shade in the areas they think the wildfires are located.

Then I overlaid this data to see the total area of perceived wildfires. Of the students I collected data from, only one was from California and she admitted that she too was unaware of where the fires are located.



The majority of people believed that the fires occur in the desert areas west of Los Angeles when in actuality the fires are located near the coast and in the valley between mountain ranges. I found that people, especially those from the East Coast, think that the wildfires impact more land than they actually do, as multiple people that I collected data from shaded in the majority of the state.

*Wildfire Data from Cal Fire, a branch of the California State Government

Point Reyes is a National Seashore, not a National Park, because it has active ranches and dairy farms on its land. This causes constant debate between the agricultural and the conservation communities over the pastureland. The peninsula that Point Reyes is located on is naturally barren and wind-blown. If the ranchers were to leave and the land to return to its natural state of wild flowers and grasses, it would become more susceptible to wildfires because the wind would carry the flames through the brush. Point Reyes is in an area that is prone to moderate wildfires but if the ranchers were to be removed and the land no longer used for farming, the peninsula would become a high risk for wildfires. I found this interesting the typical conservation argument is to protect the land but in the case of Point Reyes, taking a purely conservation approach would bring wildfire threats closer to San Francisco and cause permanent damages to the land for future generations, going against the National Parks Service goal of preservation for future use.

Among the Moringa - Zach Schaffler

I can't put my finger on it, but something's different on St. Croix. As I step off the plane and begin to navigate the airport, I can tell that this Caribbean U.S. Virgin Island is unlike any place I've been. As the plane took a lazy spiral toward the runway, I took in the panoramic sights through my plastic oval window. Lush green mountains stretched down into beaches and met bright blue water. Towns were scattered all about. Yet it isn't just the newness of the island's physical nature. As I retrieve my bag amid a bustling crowd, I keep this feeling in the back of my mind and decide to try to determine what makes this place feel different by the end of the week.

I'm here as part of Alternative Spring Break. For the last year, my friend Gabby and I have been planning this week-long service trip for ourselves and our ten participants. We're all peers and all students at the University of Virginia. Due to a blind selections process and the nature of the program, Gabby and I don't know any of the participants, and only loose connections exist among them. We're a group of strangers together on an island, yet the spirit of the group feels more *Swiss Family Robinson* than *LOST*. As we wait outside the airport with our bags, everyone's excited.

The common thread among our group is an interest in camping and farming. That's what we'll be doing throughout the week as guests of Ridge to Reef farm, a mountainous, sustainable agricultural operation that alone provides a substantial 1% of the island's food. We don't all have experience, but enthusiasm is high.

As our taxi van pulls up, we meet our first local. Enter Kaya, a happy-go-lucky driver of indiscernible age. Gabby met Kaya when she led this trip with different participants last year. The two of them catch up as if no time has passed as Kaya loads our bags and takes us to the grocery store. After shopping for the week, we load up the van, this time to the brim. Potatoes and bananas are stacked on top of suitcases; everyone has some produce in their lap. While we shopped, Kaya stood outside at the entrance to the store. It seemed like he knew every other person who walked up. Passersby greeted him with enthusiastic shouts, and he returned the call and caught up with them.

We then head to Ridge to Reef. Our campsite will be on the farm on a level patch of earth close to the bathhouses. We'll be sleeping in tents and cooking in the community building, which houses a kitchen, long dining tables, and many musical instruments, completed with a long, wrap-around porch. It's here we'll spend most of our time.

That first evening, we're invited to a welcome dinner. Nate, the director of the farm, and his wife Shelli are gracious hosts. In the kitchen, two salty-looking chefs prepare pizzas. Apparently, they had come here from St. John for the weekend, but due to bad weather, they had been crashing here and contributing by cooking meals. They might go home tomorrow—but maybe not. This seems to be par for the course for Nate and Shelli. I can't tell if they're friends with the cooks, but I don't think it matters. They needed a place to stay, and the farm could provide.

The dinner is delicious, and afterward Nate toasts our arrival with some jokes and loose instructions. We'll mostly be helping with the moringa harvest. Moringa is a tree whose leaves are a vitamin-packed superfood. Ridge to Reef has been contracted to supply a few hundred pounds of the leaf to an entrepreneur hoping to make a Whole Foods-esque diet supplement powder from the leaves. It's a tall order, and we'll have to help harvest, strip, and bundle the leaves throughout the week.

This is a lucky contract, though. In September, the Virgin Islands were slammed by both Hurricane Irma and Hurricane Maria. The storms devastated the farm. Nate and Shelli lost all of their crops. Moringa, however, is resilient and plentiful. The farm pivoted to cultivating the tree and hopes to be able to break even this way.

It's clear that island life—especially island farm life—isn't easy. Yet everyone we meet throughout the week has a distinctly unstressed attitude. There's Matt, a shaggy, bearded blonde farm apprentice who came down from Virginia and built his own house on the farm. There's Bear, another Virginian who's about three times Matt's age, a wiry, salt-of-the-earth type guy who treats us to oral histories, poetry recitations, and drumming songs. James is the youngest farm worker we meet—he lives in a historic museum a ways off the property and, between throwing parties in the museum, tends to an orchard and a pen of pigs.

The island attracts people who need to get away. For us, it's the allure of getting off campus for a week, away from tests, assignments, and social pressures. We relax, get to know each other, construct elaborate inside jokes. We harvest moringa in the day; we eat, play games, and sleep well each night. It's a comfortable routine.

We also meet Katherine, another person from the mainland US who came to the farm after a bad, prolonged break-up. She bought a one-way ticket and will spend some time at Ridge to Reef before working on a flower farm further up the island. She describes this choice to Gabby and I; the island offers her better headspace, a chance to decompress and find herself again. I think to some extent that can be said for everyone here.

As the week comes to a close, we realize we have too much food leftover. It starts as a joke, but we decide to spread the word and invite everyone we've met throughout the week to a send-off feast. We don't know if they'll come. We hope they do.

Sure enough, after we prepare mass quantities of pasta, pizza, rice, stir-fry, and salad, people trickle in. Then more and more of them: we have to keep dragging more tables to extend our eating area. Finally, the porch is filled with everyone we've encountered: our group of twelve squishes in alongside Nate, Shelli, Matt, his three friends, Bear, Kaya, and several other locals. There are kids and families, and everyone passes the dishes all the way down.

As we clean the kitchen afterward, I realize that this is it. The thing that distinguishes island life. There aren't many modern amenities, but there are people, and this sense of community permeates every day on St. Croix. People come together to enjoy each other's company, to swap stories and laugh together. Back home, I'm often caught in my own routine, bouncing from place to place in a rush. Here, everything is much more deliberate. While we learned a lot about sustainable agriculture, I head to the airport with a new appreciation for the little things. Our group of twelve smiles and shares some final jokes. Yet when we touch down, I think we'll still carry the island's intentionality with us. There's something about a table full of strangers-turned-friends that sticks with me.

Hannah Graham Grant

Hannah Graham Grant Reflection - Celeste Meadows

Gratitude. Gratitude is what I have and feel towards the Graham family and her two site leaders from the 2014 Tuscaloosa trip. The Hannah Graham fund provided for me financially this year on my trip to Johns Island, South Carolina. Hannah served in Tuscaloosa her first year by working with Habitat for Humanity. I, too, had the pleasure of working with Habitat in South Carolina and was able to experience some

of what Hannah might have on her trip. Habitat supports low income individuals and families who are in poor living situations by building homes for them, providing a manageable mortgage and by offering guidance and counseling on home ownership. I'm grateful to have been awarded this scholarship because of how it allowed me to reflect on Hannah, her life and the service she did in Alabama. It provided me with the chance to remember her commitment to serve others and to live joyfully. Thank you, Hannah, for your hard work and energy, you are still very missed.

2017-2018 Trips, Executive Board, Fourth Years

Site Leaders & Trips:

Hank Turner & Kara Adams - Annapolis, MD

John Patterson & Austin Brown - Anza-Borrego Desert, CA

Nathaniel Abraham & Jack Wilkins - Austin, TX

Michael Knapp & Riley Okeson - Biscayne National Park, FL

Jacob Weitzman & Jessika Washington - Congaree National Park, SC

Paul Armstrong & Katie Vinson - Death Valley National Park, CA

Sarah Overton & Paige Yanity - Denver, CO

Jei-Si Ang & Sophia Padilla - Drake Bay, Costa Rica

Evelyn Immonen & Austin Gogal - Eagle Butte, SD

Shiv Sharma & Gabby Carter - Fajardo, Puerto Rico

Brooke Castleberry & Julie Cortes - Grand Canyon National Park, AZ

Claire Stemann & Ava Reynolds - Guadalupe Mountains NP, TX

Emily Hooker & Erin Plant - Hilton Head, SC

Gabby Levet & Zach Schauffler - St. Croix, US Virgin Islands

Emma Feinman & Katie Trainum - Joshua Tree NP, CA

Jackson Negus & Bay Diggs - Zion National Park, UT

Lillie Neal & Seneca Tsang - Little Talbot Island, FL

Carlton Higby & Jackson Collins - Moab, UT

Makenzie Scanlon & Kate Bellows - Nashville, TN

Meredith Hughes & Alec Tekamp - St. Bernard in NOLA

Abby Reeves & Emily Dhue - YRNO in NOLA

Rachel Coldren & Mary Cowden - Nicaragua

Ellis O'Day & Lily Hungarland - Pensacola, FL

Brianna Cabrera & Kimberly O'Keefe - Point Reyes, CA

Saskia Feldman & Morgan Feldenkris - Portland, OR

Abby Mainwaring & Mattie Sullivan - San Francisco, CA

Ashwanth Samuel & Megan Norris - San Juan, TX

Celeste Meadows & Chad Lehman - Sea Island, SC

Shannon McAvoy & Sarah Yang - Seattle, WA

Leila Villacorta & Tyler Walsh - Xela, Guatemala

Jared Feig & Custis Coleman - Sequoia, CA

ASB 2017-2018 Executive Board

Gillean Kelly - President

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Amy Singer & Mary Cowden - Site Leader Co-Chairs

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Alec Tekamp & Meredith Hughes - Outreach Co-Chairs

Ben Donovan & Claire Simons - Placement Co-Chairs

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ASB 2017-2018 Fourth Years

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Mattie Sullivan

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Amy Singer

Kara Adams

Custis Coleman

Emily Mace

Hank Turner

Crystal Gong

Gabby Levet

Rachel Coldren

Caitlin Embly

Mary Cowden

Joy Hart

Brianna Cabrera

Janet Johnston

Kimberly O'Keefe

Emily Zhou

Sophia Padilla

Jane Wilkinson

Jei-Si Ang

Matthew Thornton

Evelyn Immonen

Laura Young

Austin Gogal

Steven Gercken

Emma Feinman

Julia Stenbridge

Katie Trainum

THANK YOU ALL.