

# VALLEY LAND ALLIANCE NEWSLETTER

Our mission is to educate and build alliances to protect our uniquely productive California Central Valley Farmland

## The President's Message

**ECOLOGY IS THE STUDY OF THE RELATIONSHIPS BETWEEN LIVING ORGANISMS, INCLUDING HUMANS, AND THEIR PHYSICAL ENVIRONMENT. ECOLOGY CONSIDERS ORGANISMS AT THE INDIVIDUAL, POPULATION, COMMUNITY, ECOSYSTEMS, AND BIOSPHERE LEVEL.** WIKIPEDIA

Did you know there is a Patron Saint of Ecology? In 1979 Pope John Paul II named St. Francis of Assisi the Patron Saint of Ecology..

In Europe ecology refers to what we in the United States call environmentalism and not just the science. In the US environmentalism denotes a social movement that seeks to influence the political process by lobbying, activism, and education in order to protect natural resources and ecosystems. Humanity is recognized as a participant in ecosystems which are centered around the laws of nature. Ecology, health, and human rights. With this theme, our articles in this newsletter focus on ECOLOGY, including the science and the human participation in ecosystems.

Just as farmers will say "if you eat and wear clothes you are part of agriculture", the ecologists will say "if you are alive, you are part of the ecosystem. Both ecology and agriculture can thrive if we take care of them. However, especially in the last 150 years or so, humans have disrupted nature resulting in drastic changes to our environment. We have fouled our air, water and soil, our most precious resources. We have created an environment which has resulted in losing much diversity. Insects, butterflies, bees, you name it, where did they go?

I hope you enjoy this newsletter focusing on ecology.

Jean Okuye

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#### Where to find us

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Barn owl captured by Scott Magnuson

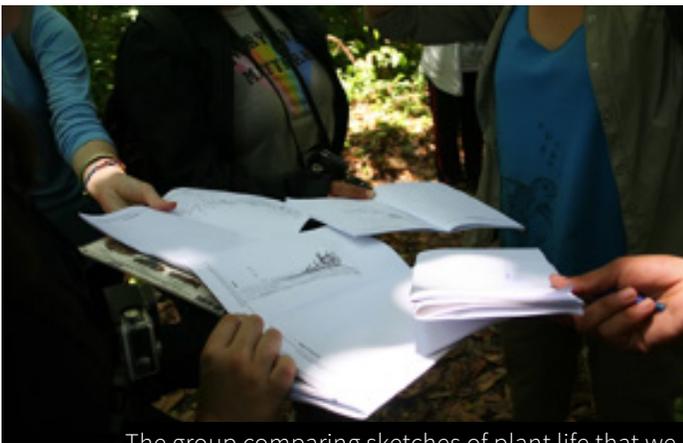
# Root Work:

## Looking at the ground beneath to implement sustainable practices

Our roots tie us all together, interconnected through the land that feeds us and provides for us. Through my time and efforts across different countries and cultures, that concept proved itself prevalent in each environment.

I was fortunate enough to attend a performing and fine arts academy through my time in middle and high school. In 2018, I was able to participate in an international peace program called One Voice, connecting students from different countries together through the arts to find peace and overarching themes within their cultures.

That year, I traveled to Limon, Costa Rica with Ecology Project International (EPI) on a Leatherback Sea Turtle conservation project. We met with research assistants at the Pacuare Reserve, learning about the history of Leatherback Sea Turtle migration on the Caribbean Coast during mating and nesting seasons, as well as the threat of poachers and predators on the vulnerable eggs of the endangered species. Our tasks were to perform biometric data collection on the females, as well as relocating the eggs to a designated hatching area for their protection.



The group comparing sketches of plant life that we had observed throughout our hikes (2018).

Although the existence of Leatherback Sea Turtles can date back to prehistoric times, very little is known about them. They have the ability to live in almost all temperatures and oceans, swimming to depths

of about 4,200 feet below sea level and living up to 50 years (NOAA Fisheries). With most of their life spent traveling the depths of the ocean and living in undiscovered waters, the location of their hatching is innate, and the females always come back to lay their eggs in the same place that their mother laid her eggs.

**THE IDEA OF RETURNING TO YOUR ORIGIN WITHOUT HAVING BEEN THERE FOR THE MAJORITY OF YOUR LIFE WAS SUCH A PROFOUND CONCEPT TO ME. THROUGH THE EFFORTS OF ECOLOGICAL CONSERVATION, WE CAN PROTECT THE JOURNEYS AND HOMES OF THESE BEAUTIFUL CREATURES SO THEY MAY CONTINUE THIS PROCESS.**

The following year, I was fortunate enough to work alongside someone who I consider to be one of the most pivotal mentors in my educational journey. Diana Almendariz is an artist from the Wintun tribe in Woodland, CA who taught me that there is power and purpose behind unassuming things in your life. My work with her began as she first taught me about the history of her tribe—their practices, what they value most, and how they became the people they are today. I learned about the beautiful practice of weaving and the significance of weavers and master weavers within the tribe community. Weaving is just as artistic as it is purposeful, like many aspects of the Wintun culture.

I was then taken on a tour of the Cache Creek Conservancy, a nature reserve that my mentor frequently visited and volunteered at. At the sight of every new plant, we stopped and were told the history and uses of it. I've never been so amazed by the things I would have classified as just scenery. There was one plant in particular that was the main plant we would be weaving with. Tule is a long and hearty plant found in marshes that is soft enough to bend and use for weaving, while also sturdy enough to hold its shape and withstand weathering. Due to its abundance, along with cattails, we were able to utilize these plants as the removal of them would create minimal impacts on the environment. When working with environmental

remediation using natural resources, the abundance and impacts of the resources you will be using is vital to take into consideration. The work that is being performed will end up causing more detriment than improvement if you fail to do so.

Diana Almendariz showing the group how to weave with tule and cattail roots (2019).



After understanding and taking these factors into consideration, we began to harvest and collect the tule and cattail to begin the weaving process. The project we had been working on was a tule mat that acted as a water filtration system in the marshes, intended to collect plastic and debris that had been thrown into the marshes by visitors. We also inserted cattail roots into the floating mats so that as the roots grew, the environment underneath had an increase of oxygen production for the fish, and the cattail that grew above the mats could become a new and safe habitat for the Tri-colored Blackbird, a bird population whose numbers had been affected by human impacts.

Although this project was simple in the materials used, the idea of using plants to create a regenerative and biodegradable water filtration system was so technologically advanced and unlike anything I had seen. This was a new concept for me but was common practice for weavers of the Wintun tribe. By immersing yourself into other cultures and allowing yourself to learn and connect with individuals with different experiences, you are able to learn so much about the world around you and yourself.

Through these unique experiences, I have made an effort to apply what I've learned in terms of emphasizing the strong ties between cultural practices and ecological conservation within different communities. Studying environmental engineering, there are three main ideas that should always be considered—the environmental, economic, and social impacts within sustainability (Zimmerman & Mihelcic, 2014). My current research this summer has focused on the equity analysis of monitoring wastewater

for COVID-19 presence in different communities throughout California. This project may be focused on epidemiology and public health, but the social impact of testing is just as important. By understanding the cultures, standard practices, and demographics of communities throughout the state, public health officials and local governments would be able to create effective methods of community-focused health tools to support their communities. COVID-19 has affected not only human life but has been detrimental to the environment and economy in California.

Tule weaving station at the Cache Creek Conservancy in Woodland, CA (2019).



Growing up with a family of farmworkers, I've been taught sustainable practices and the importance of knowing where your food comes from. Through my work in environmental engineering, I intend to create a platform for individuals in the community to voice their needs and work to create sustainable solutions for those problems. I would like to thank the Valley Land Alliance for selecting me as their Peter and Rochelle Koch Scholarship recipient. Through this scholarship, I am able to further my educational journey and emphasize my research. Opportunities like these allow students like myself to learn about organizations within my own community and appreciate the work they are doing to educate and bring awareness to locals. Thank you for all the amazing work you do!

**Clara Medina,**

Peter and Rochelle Koch Scholarship Recipient

#### References

"Leatherback Turtle." NOAA Fisheries, 2021, [www.fisheries.noaa.gov/species/leatherback-turtle](http://www.fisheries.noaa.gov/species/leatherback-turtle).

Zimmerman, J.B., & Mihelcic, J.R. (2014). Environmental Engineering: Fundamentals, Sustainability, Design. John Wiley & Sons Inc.

# A Course on "Ecology"

A course named "ecology" was a mandatory requirement for all biology majors. I had no idea what that meant at age 19, but it all started with the mustache. The professor, Dr. Wanek, had the most remarkable mustache. A kind I had only ever seen in cartoons. Slightly wider than his face, it had a perfect curl at each end that wrapped around to a near circle. As he spoke the mustache went up in down and I wondered how it could be. Much later, I learned that he used wax to create and preserve this mustache shape. It did not take long for the words of this professor to take my mind to other spectrums of this beautiful planet. He described some of the major biomes or ecological systems in great detail -what lived there, how they lived there, who ate whom, and most interesting of all- how they related to each other and how it all interconnected. The photographs of lifeforms and geography around the planet were mesmerizing. As our studies progressed and we grew familiar with the terminology used in ecology, our studies moved closer and outdoors.

We learned about the biomes surrounding our little school at the intersection of four succinct ecological areas, the Northwoods or coniferous forest, the tall grass prairie, the aspen parklands and the deciduous forest. We studied each of these carefully and went on field trips observing where they overlapped and where they separated based on climate, soil types, geography and precipitation. From there, the professor led us through many studies of how things are interconnected, such as the delicate balance between wolves and moose being studied on Isle Royale in Lake Superior. Protecting the island from overgrazing, wolves cull the weak moose from the herd, keeping the population in control and healthy. We learned about soils and how small trees needed to be inoculated with mycorrhizae (fungus) in order to be able to grow in plantations. Without the mycorrhizae, the saplings could not tap enough water and soil nutrients to survive. Professor then taught us about the youth and maturation of ecosystems, describing the processes by which soil was created from rock on the shores of Lake Superior, where 500 years are needed to develop a half inch of soil, enough to support a tree.

We learned about forest succession, with fast growing trees like birch filling in after a burn, maturing to old growth, trees whose young grow in the shade of the birch, eventually to replace them



The Enterprise Bridge crosses over a nearly waterless section of Lake Oroville on July 22, 2021. (Justin Sullivan/Getty Images)

and become giants with barely no understory. We studied the evolution of lakes, eutrophication- the process by which lakes fill with debris to become swamps, wetlands, grass lands and eventually forests. Typically, eutrophication takes centuries to millennium in nature, but humans have decreased the time to mere decades with fertilizer runoff. Another requirement of this course was reading, including Rachel Carlson's "Silent Spring" and "Aldo Leopold's Sand County Almanac".

**"...WE ABUSE LAND BECAUSE WE REGARD IT AS A COMMODITY BELONGING TO US. WHEN WE SEE LAND AS A COMMUNITY TO WHICH WE BELONG, WE MAY BEGIN TO USE IT WITH LOVE AND RESPECT.**

ALDO LEOPOLD

The complexity of what was being learned in the field of ecology and the types of relationships, synergistic, parasitic, symbiotic and everything in between captured my imagination and my attention, even with the mustache. It has held my attention for decades. The study of ecology is learning about how things relate to each other. Much like the balance of energy, for every action there's an equal and opposite reaction, for every interaction in the ecological world, there is a delicate balance we are still trying to learn, understand and live within. Dr. Wanek concluded his course on ecology with a gift of meal made entirely of wild, foraged food. It was a curiously delicious meal, a treasure, never to be repeated. His course in ecology was, by far, my favorite college course.

Ursula Stock

# Chocolate Chip Cookies

1/2 cup	Sugar
1 1/4 cups	Firmly backed brown sugar
1/2 lb	Butter
2 whole	Large eggs
1 tbsp	Vanilla
3/4 tsp	Salt
3/4 tsp	Baking soda
3 cups	Flour
1 cup	Chopped nuts
1 bag	Chocolate chips

1. Cream butter and both sugars together with mixer.
2. Beat in eggs and vanilla.
3. Add 2 cups flour with salt and baking soda.
4. Blend remaining flour with mixer on low.
5. Stir in as many chocolate chips and nuts as desired (careful not to overmix).
6. Form dough into 1-inch balls.
7. Place on cookie sheet; Preheat oven at 360\*
8. Bake for ~10 minutes.



Photo and recipe submission by Jake Magneson. Inspired by the cookbook "The Greek Gourmets".

# Chocolate Pixies

1/4 cup	Butter
4 ounces	Unsweetened chocolate
2 cups	All- purpose flour
2 cups	Granulated sugar
4 whole	Eggs
2 tsp	Baking powder
1/2 tsp	Salt
1/2 cup	Chopped walnuts or pecans
1 box/bag	Powdered sugar

1. In saucepan melt butter and chocolate over low heat for 8-10 minutes.
2. Let cool.
3. In large mixer bowl combine melted chocolate mixture, 1 cup of flour, granulated sugar, eggs, baking powder and salt.
4. Beat at medium speed, scraping bowl often until well mixed for 2-3 minutes.
5. Stir in remaining 1 cup of flour and walnuts by hand.
6. Cover and refrigerate until firm. (~2 hours or overnight)
7. Heat oven to 300°.
8. Shape rounded dough into 1-inch balls.
9. Roll in powdered sugar.
10. Place 2-inches apart on greased cookie sheets.
11. Bake for 12-15 minutes, or until firm to touch.
12. Remove immediately then let cool.



Photo and recipe submission by Jake Magneson. Inspired by the cookbook "Land o Lakes: Classic Cookies, Baking & More".



A total lunar eclipse occurred during a "supermoon" on May 26th, 2021. This composite image was edited using shots captured by Scott Magnuson.

If you have a photo or write-up you'd like to share, please send it to our email at [valleylandalliance209@gmail.com](mailto:valleylandalliance209@gmail.com)

We wish to thank all of you who have supported us with memberships and contributions. Your contributions allow us to educate people and policy-makers in our community. VLA is grateful for the support from the John & Nancy Cassidy Family Foundation, an advised fund of Silicon Valley Community Foundation.

Thanks to our board and other volunteers which put in many hours to make our world a better place to live.

We want all of you reading this to know that we want to hear from you! These newsletters are a result of community involvement. The Valley Land Alliance is supported by you.

## Sudoku

				4			1	
							5	
	3	2	1	9			8	
		5	3			9		4
		4	9				6	1
	2	9		7	4			
	9	6	7		1	5		
5				3			2	7
			5					

# Thank you for your support!

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