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University of La Verne students use science to influence



University of La Verne environmental biology students Olivia Ortola, 27, left, and Everlyn Gonzalez, 22, work together measure between tree tobacco as part of their research in a 200-acre space in La Verne on Thursday, April 25, 2024. The land serves as a living laboratory for the University of La Verne biology students and are working with the city of La Verne and the Department of Fish and Wildlife to write a policy for long-term care of urban wilderness spaces. (Photo by Stan Lim, Contributing Photographer)

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PUBLISHED: May 15, 2024 at 12:56 p.m. | UPDATED: May 15, 2024 at 3:16 p.m.

<u>University of La Verne</u> science students are helping city officials and the state Department of Fish and Wildlife craft future policy for wilderness spaces. Biology professor Victor Carmona has been taking his students and others to a 200-acre space the city may one day convert into walking trails while remaining a wildlife space.

The nature space backs up against a neighborhood and sits at the base of the foothills leading to the San Gabriel Mountains. According to city officials, it was a citrus orchard until the mid-1950s. Since then, the space has remained largely untouched, and

became an issue for the city to manage while trying to balance fire hazard mitigation with rules and regulations from the state Department of Fish and Wildlife.

The data Carmona and the students collect will aid in future decisions on how to manage the space effectively for all those involved, according to Carmona.









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University of La Verne environmental biology students from left, Katelynne Orton, 19, Everlyn Gonzalez, 22, and Olivia Ortola, 27, work together researching the tree tobacco in a 200-acre space in La Verne on Thursday, April 25, 2024. The land serves as a living laboratory for the University of La Verne biology students and are working with the city of La Verne and the Department of Fish and Wildlife to write a policy for long-term care of urban wilderness spaces. (Photo by Stan Lim, Contributing Photographer)

"We are used to an expert who comes in and lays down the law," Carmona said. "Instead, what you are seeing here is team-building."

Together, the professor and students are using their different perspectives and skills to help "re-wild the space," Carmona said, managing invasive grass on the property and fostering an environment where native plants and animals alike can flourish.

Students are working to formulate steps that can be taken by <u>La Verne</u> Parks and Recreation to mediate the fire risk posed by invasive tall grass while also satisfying Fish and Wildlife requirements for animal preservation in their habitat. With a diverse system of plants and animals in the space, finding a harmonious solution to satisfying conditions for plants, animals and homeowners requires a detailed approach.

Carmona and his students have been studying the different plant systems and native vegetation to determine if answers lie within them.

La Verne seniors Lauren Kostich, Mackenzie Castaneda, and Kendall Winn-Swanson were taking soil samples on a trip in late April to study the microbes within, looking for clues about a particular Laurel Sumac bush. The Sumac showed an interesting phenomenon of exhibiting its own form of grass control around its base.

For many students, this was a first-time experience in the field to conduct research outside of a controlled lab environment.

"I love being able to get out. This is one of my first classes where I have been able to get into the field," Kostich said. "It's so fun contributing to science when you have your good friends who are also contributing with you."

Winn-Swanson, who spent the majority of the day climbing into Laurel Sumac bushes for soil samples, emerged gleefully to hand off the probe to be swabbed and sanitized before diving into the next location.

"It's so exciting, I can't even describe it. This is why I chose biology," Winn-Swanson said, "to get this practical experience is nice and something I can carry into my career of nursing and maybe apply this to medicinal research."

She is hoping her research will provide further insight that may lead to a more natural route for grass suppression and foster a welcoming environment for other native plants.

The experience gained during the project is one Carmona hopes students will keep and expand on.

"I did not want the students to just speak science; I wanted them to also know how to *do* science, which includes things like field research and sharing it with the community," Carmona said.

For most students participating in field research, it's not only work for them but a fun and special opportunity to participate in research that will leave a legacy.

"I feel excited and hopeful that something really cool could come out of this research," Winn-Swanson said. "This could open more doors for additional research in this field because this is something that the city is working on. I feel really grateful to be working with the city and this legacy to possibly have more students come and build off this project we started."

Students were expected to present their findings to fellow peers at a symposium on May 10.

Carmona hopes those findings will be used this summer to construct a plan for the city and Fish and Wildlife to implement later this year.

"I see this space as something so positive for all of us," Carmona said. For him, it's a laboratory and teaching space. For the students, it's a place to conduct research. And for the city, it's a partnership with consultants — "the best kind," Carmona said, "we're free!"

Carmona is also hopeful that through this research project, which includes a virtual and interactive 3D map of the space, community members and neighbors will feel more engaged with the project and find the science less exclusionary for non-scientists.

Colin Purdy, acting manager for La Verne's public works department, said his current position is centered around communicating with the public and residents near the wilderness space. He is working to explain to residents the city's plans to keep it a wild nature space and how the city can approach maintenance.

Jose Salas has worked for the Parks and Recreation Department for over 16 years. He said the department has tried everything from weed whacking to allowing goats to roam the property but has yet to find a permanent solution to maintain land.

"The Department of Fish and Wildlife eventually told us we could only do maintenance from September to October, and we could not have goats do the job anymore," Salas said. The city was also told it could not use machinery to maintain the space due to nesting season. That means all future maintenance must be done by hand.

Everything, including the removal and relocation of a large fallen tree to adhere to fire code standards of 100 feet of defensible space around residences, has to be carried out by hand with a crew of six city workers.

Though research recently wrapped at the nature space for the semester, Carmona is looking to use the summer to formulate plans with the city that can aid in managing the space, he said.

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