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Citizen Scientists research wildlife in the Nature Area

By Megan Kennedy and Kathy Barrett



A raven called from an oak tree announcing that people had returned to the Nature Area. The woods were still wet from a recent rain, and local high school students were gathering for their monthly check of the camera traps. For the past year, about a dozen students participated as citizen scientists, in a research project to learn more about the wildlife of the Orinda Nature Area.

The Friends of the Wagner Ranch Nature Area (FWRNA) conducted the project with partial funding from the North American Association of Environmental Educators, Youth Learning as Citizen Environmental Scientists (YLACES). FWRNA was recently renamed Friends of Orinda Nature Area (FONA) to distinguish it from Wagner Ranch Elementary School.

A bobcat, a top carnivore, has never before been photographed in the Nature Area during daylight. Photos provided

Under the guidance of UC Berkeley Emeritus Professor of Wildlife Studies, Reg Barrett, students monitored cameras situated in the five habitats of the Nature Area: wetland, grassland, shrubland, woodland, and riparian.

Starting at the Sue Graf pond, they refilled the three bait stations across from each camera. Most months, they found the aluminum bait pans empty, so they filled them again with dog food, fresh blueberries, and hog chow, taking turns changing the camera chips so that animals visiting the bait had their pictures taken during the following month, which students viewed, studied, and proposed hypotheses to explain the activities of the wildlife.

During one of the sessions, two groups of the team carefully picked apart a number of owl pellets, finding the skulls of gophers, wood rats, and deer mice. Gophers and deer mice had not been captured on camera. Some of the most exciting photos were of a bobcat with a squirrel in its mouth, and a family of baby raccoons. Sometimes the students found slender salamanders under the 2-foot by 4-foot plywood boards supporting the bait pans. Worms, pill bugs and spiders also hid under the boards.

March and April of 2021, the first two months of the study, the group didn't put any bait in the aluminum pans to serve as a control period to allow them to observe the effect of bait on the activity of the wildlife. They continued monitoring the camera stations through March and April of 2022. During the control period, only three species were recorded. By the end of the study, 22 species had been documented visiting the bait. Ravens did not visit the bait stations during the Control Months, but starting in May, they were the first animals visiting the bait, and were very busy flying away with the dog food.

The group observed many changes in the creeks and vegetation over the 14 months of the study and using the data collected from the camera traps, they also noted several changes in the patterns of wildlife in the nature area. Each student participating in the study was tasked to write a hypothesis regarding some of these changes, and is now in the process of writing a research paper to convey their findings. Students, from Miramonte, Monte Vista, and California high schools hope that their findings will not only further the community's understanding of the species in the nature area, but also provide educators with information they can use when teaching about local organisms or the Orinda Nature Area.

Across the board, the students enjoyed the invaluable experience of being able to study the nature area like environmental scientists under the guidance of experienced educators.

The Orinda Union School District owns the Orinda Nature Area, which is the 18-acre historic homestead of Theodore Wagner, California's first Surveyor General. On Sundays during the school year, children and their parents volunteer to help Naturalist Toris Jaeger maintain the biodiversity garden, pond, and trails. Before Covid 19, FONA conducted public festivals, one in the fall, and the other around Earth Day. Hopefully these festivals can resume soon. Dogs and pets are not allowed in the Nature Area. If people want to volunteer, they can reach out to Jaeger (torisjaeger1@gmail.com) who teaches programs and supervises Scout projects and volunteers. Information at www.fona.org. Photos were taken with RECONIX cameras.



A raccoon visits the Sue Graf pond. Photos provided



Blacktail buck a few days before it was killed by a vehicle. Photos provided

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