

# COAL OIL POINT RESERVE

*2022 Year in Review*



**Featuring**  
COPR Staff  
Updates...

**Plus**  
Student  
Experiences...

**The Latest**  
Docent Stories...

Photo credit: Brian Smith

# Highlights from Coal Oil Point Reserve

*by Dr. Cristina Sandoval*

Our most exciting event of the year at Coal Oil Point Reserve (COPR) was to welcome Caio, Jessica's new baby. Little Caio has attended docent trainings and Snowy Plover surveys from his mom's backpack. This year we also started the CONservation and REstoration (CORE) internship program to provide field experiences to undergraduate students. In this 1-year rotational program, the students receive stipends to participate in COPR's various programs and receive one-to-one instruction from the three reserve staff. Our goal is to give the students a sample of the daily life of stewarding a natural area, and teach them skills to be better prepared for a future career in this field.



CORE interns propagate seeds in the shadehouse. From left to right: Oscar Martinez Saldivar, Jay Miranda, and Daira Chavez Hernandez.



CORE interns restore habitats at the reserve by planting native species.



Hanna Weyland and Mark Holmgren conduct a survey of shorebirds.

The best part of managing COPR is always the interactions with amazing people. We had the pleasure of hosting Joelle CantoAdams as the intern for the 2022 Henry W. Offen NRS Undergraduate Internship. Joelle shadowed the three reserve staff to learn the tricks of the trade in reserve management. We all agreed she is ready to be a reserve director. In turn, she taught me about the ice-cream sandwiched between two cookies at IV-Drip. We were lucky to have the help of Hanna Weyland, who recently graduated from Bren School, to conduct Snowy Plover wintering and breeding surveys. Hanna has been training with the reserve staff for two years and is now seeking to apply her skills to a career in conservation. As always, we had the amazing contributions of volunteers Rick Fellows and Bill Boelcke, who work at Coal Oil Point Reserve almost daily, ready to fix anything that needs fixing. We also appreciate the observations of Bill Crowe, who surveys the birds of COPR once a week and sends us detailed reports. Bill keeps track of the banded Snowy Plovers and knows their personal lives like no one else. Thank you Hanna, Joelle, Bill B, Rick, and Bill C!

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We hosted several important meetings in the Nature Center including an environmental justice workshop, faculty retreats, an international meeting of shark experts, and the Channel Island Marine Sanctuary strategic planning. The Nature Center is turning out to be exactly what we hoped for: an inspiring gathering place for environmental and science groups.

Research at Coal Oil Point Reserve was very active as well, with 25 different research projects studying important topics such as sea level rise, raccoon parasite ecology, and native bee biodiversity. UCSB and City College classes are returning to the reserve for field trips to apply the concepts the students learn in the classroom. We are planning to encourage more classes to visit the reserve next year. Recent studies at UCSC have shown that when biology students participate in field classes, they are more likely to stay in their chosen major and less likely to drop out of college. This is particularly true for students from under-represented groups. This illustrates the important role that all 41 UC Natural Reserves can play in improving student retention and contributing to more equity and diversity in the biological field sciences.

Looking forward to next year, we will be completing the 3rd version of the COPR Management Plan with a focus on how to protect our rare coastal resources in the face of challenges such as sea level rise and increased population density. COPR is known for its creative and balanced approach to conservation; I know we will find solutions to keep our coast rich in wildlife and available for people to enjoy it.



A plover docent refresher training, led by undergraduate student Shelly Chen, was held at the Nature Center in June. From left to right: Elise Phan, Stacey Kawabata, Makena Hanson, Maureen Battey, Jessica and Caio Gray, Rick Fellows, Bill Boelcke, and Janet Hunter.



CORE interns learn about the insect collections at the Cheadle Center. From left to right: Dr. Katja Seltmann, Oscar Martinez Saldivar, and Jay Miranda.



A group of volunteers, interns, donors, Santa Barbara Zoo staff and reserve staff gathered at Sands Beach to watch the release of captively reared Western Snowy Plovers.

# Snowy Plover Update

by Jessica Gray



A Snowy Plover chick runs along the beach. Photo credit: Brian Smith.

Coal Oil Point Reserve (COPR) had an above average breeding population (52) of Western Snowy Plovers in 2022. After some setbacks and a few helpful interventions, the plovers were able to achieve a successful and productive nesting season.

Exactly half (38) of all the chicks at COPR this year hatched as the result of egg replacement, an adaptive management strategy we utilized to help protect the plover nests from predation. This strategy involves temporarily replacing real plover eggs with fake wooden eggs, which prevents predators from being able to eat the eggs. During this replacement period, the real eggs were placed in the reserve's incubator while the parent plovers continued "incubating" the dummy eggs on the beach. Once the hatch date arrived, the hatching eggs were placed back into their original nest to be raised back in the wild by their parents. We began replacing eggs in response to high levels of skunk predation on nests. Nearly 20% of all the nests this year had been predated by skunks prior to implementing this method.

In other predator updates, this was the first year that this site has documented fox predation on plover nests. Fox tracks were found leading to two empty nests. Both Gray Fox and Red Fox were recorded in camera traps at COPR over the spring and summer, so we are unsure which species preyed on plover eggs this season.

Overall, a total of 47 chicks fledged this year at COPR, approximately half of which had the extra help of being incubated safely away from the threat of skunks, foxes, and other mammals. Every fledged plover chick achieves an amazing feat of surviving a very vulnerable period of 28 days before they can fly, regulate their own body temperature, and become independent from their parent.

In addition to the chicks that fledged on the beach, 32 fledges were released at COPR after being rescued from various beaches on the Central Coast and reared at the Santa Barbara Zoo. Plover eggs and chicks occasionally require rescue due to high tides, wind, or parental abandonment. We are fortunate to have a partnership with the Santa Barbara Zoo so that these plovers may have a second chance at survival.

Thank you to Cris Sandoval and Hanna Weyland for their vigilant plover monitoring and incubator tending this season. It is no small feat to conduct egg replacement and husbandry on top of the constant monitoring of the plover habitat for nests, chicks, and predators. Our dedicated team of Snowy Plover docents continues to increase awareness of the conservation status of Western Snowy Plovers and encourage visitors to appreciate what a unique habitat Sands Beach is for plovers and other wildlife.



# Habitat Restoration

*by Kipp Callahan*

The stewardship program kicked off 2022 in the winter with a lot of plantings thanks to the help of volunteer student groups like the Environmental Affairs Board and Goleta Coast Audubon Society, our restoration interns, and Angela Ma, the land steward assistant. We were able to plant over 1,500 plants as part of our ongoing efforts to restore coastal scrub at Coal Oil Point Reserve (COPR). In the spring and fall quarters, we had new groups of interns working on a variety of stewardship projects; these included invasive species removal, trail maintenance, and plant propagation for the following winter's planting season.



Interns for the Land Stewardship Program work on habitat restoration projects on the reserve. Over 1,500 native plants were outplanted this year.

We have also continued to grow our understanding of the biodiversity at Coal Oil Point Reserve. Camera traps were deployed as part of an ongoing project to monitor mammals in various habitats and we were excited to capture some exciting pictures of gray foxes, including a pair together. You can check out the results of our project on Wildlife Insights [here](#).

Our writing interns produced a field guide in iNaturalist to highlight the [mammals](#), [amphibians](#) and [reptiles](#) found at COPR. To better understand

the more elusive species of reptiles, we launched a new reptile and amphibian monitoring program, setting out coverboards to create habitats where we might find them in our visual surveys.



Photos of gray fox were captured on camera traps deployed in various habitats in the reserve. The fox in the top photo is carrying food in his mouth, possibly some rabbit kits. The second photo captures a pair of fox walking through the frame.

We continue to make our species lists more accessible and easier to find through the [UCSB collections portal](#). These lists are also more accurate than previous versions, as they are backed by museum specimens and other verifiable observations.

It has been really exciting to learn so much more about what organisms live at COPR and to expand our knowledge. We have been able to offer some great internships to help students training for careers in natural history.

# New Beginnings

by *Oscar Martinez Saldivar*

New beginnings: they are a common part of life. Some serve as pivotal moments in one's lifetime, others not so much. In any case, these opportunities to think, do, and—of course—live differently should always be appreciated for the fresh perspective they offer us on life itself. Being a CORE intern and acting as a Snowy Plover docent have been my new beginnings. Both of these programs have given me the chance to explore the outdoors whilst learning from it so that one day I may give back what it has given me: a new hope. My transition into environmental studies as an undocumented third-year student has been met by much uncertainty. Fortunately, the CORE internship, aiming to involve students of underrepresented communities in outdoor field experience, has cleared many of these doubts.

To better serve my own community and other marginalized groups, I hope to dive into the environmental consulting sector, with an emphasis on sustainability. Assisting historically underrepresented communities requires a certain skill set, “people skills” being one of them. Learning by doing, as a member of the internship team, has taught me everything from native plant growing to water quality testing and biodiversity data collection—the perfect synchronicity. The threatened Snowy Plover relies on public education and empathy, so it is up to docents to advocate for the species' resilience by encouraging an appropriate balance between beach recreation and the bird's conservation. These programs have thus allowed me to integrate my learning from the classroom into the outside world, to not only expand my knowledge, but also to support our planet and all of its inhabitants.

Below, Oscar enjoys a day of habitat restoration work with an ocean view.





# A Drama of Shakespearean Dimension

by William "Bill" Boelcke



Having been a volunteer docent at Coal Oil Point Reserve (COPR) for half a decade now, the Western Snowy Plover's sheer will to survive never fails to hold me in deep awe. Here is a tiny shorebird, confined to the ever-shrinking intertidal zone, with environmental challenges absolutely stacked against its very existence on this planet – and yet, it thrives at our half-mile stretch of Sands Beach.

Last March, when the nesting season began, it looked grim, though. The newly-hitched plover couples had just dug comfy scrapes among the kelp wrack and laid their clutches of three eggs when a furious windstorm deposited copious amounts of sand on the beach, completely covering the nests. Sure enough, our intrepid leader, reserve director Cris Sandoval, descended upon the scene immediately. Carefully digging with sensitive fingertips, Cris rescued about a dozen eggs; but scores of others were lost to the raging gales.

Unperturbed, the plovers paired up again and established fresh nests. Tragically, the next calamity lurked right around the corner – the dreaded full moon king tides of April! This time, the damage was devastating. Most eggs were mercilessly washed out to sea. Hardly a nest survived.

When the tides subsided, a curious scene unfolded. Pairing up for a third time, the plovers couples chose nesting sites higher up in the dunes, to be protected from surging tide waters. Bird brains? I think these little creatures are very smart!

A couple of weeks of calm ensued, but they didn't last long. All of a sudden, reports of crow sightings increased exponentially. Six dozen of the coal-black sky pirates descended onto Coal Oil Point. These deadly egg gourmets are not easily deterred and wreak havoc on plover nests. A battle royale ensued and I'm happy to report that the final result was team plover 1, team crow 0 – but not after considerable losses had been incurred.

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And so it went. The next threat arrived in the form of greedy skunks, sauntering from nest to nest, decimating eggs. Supported in their fight to survive by a few caring humans, the plovers prevailed one more time; and the first fluffy chicks could happily be observed running along the shore of Sands Beach in June. Now, sunbathers who were too close for comfort and unleashed visitors of the canine kind became our main concerns.

Here's where COPR's volunteer docents come in. Patrolling the beach from dawn to dusk, they untiringly protect our snowy plovers, educating the public about the birds' needs, struggles, and triumphs.

In the end, 47 Western Snowy Plovers fledged at COPR, and another 32 eggs were hatched at the Santa Barbara Zoo. The 2022 breeding season ended up being a success, but the struggle to survive approached truly Shakespearean dimensions at times!

I am deeply grateful to all my fellow volunteer docents and to the reserve staff, with a special "shout out" to Cris Sandoval, whose persevering vision makes it all possible.



A Snowy Plover stands at the tideline. Photo credit: Brian Smith

Funding for UCSB student internships and assistantships provided by generous donors and the UCSB Coastal Fund.





# Make a gift today to support local conservation!

We invite you to support Coal Oil Point Reserve with a year-end gift. Our treasured Reserve serves a unique function in the Santa Barbara community, facilitating research and classes, protecting and restoring a rare natural ecosystem, mentoring students in the environmental sciences, and sharing information on the latest discoveries from the Reserve. Your support will help advance innovations in science, conservation, and education at the Reserve while protecting this unique and important environment.

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we extend our heartfelt thanks.**

