

A photograph of Scorpion Rock in the ocean under a blue sky with clouds. The rock is a large, reddish-brown formation with a natural sea stack arch on its right side. The water is a deep blue with gentle ripples. The sky is a clear blue with some wispy white clouds near the horizon.

Story and Photos by Chuck Graham

Going to the Birds

Work nearing completion to return Scorpion Rock's inhospitable surface to the seabird haven it once was

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An island hiker on Santa Cruz Island gazes across to Scorpion Rock as the sun sets in the west. From where he stands, he can see the west end of Anacapa Island in the distance to the southeast.



Above: Tranquil sea conditions allow three kayakers to paddle along Santa Cruz Island and eventually circumnavigate Scorpion Rock in the background. Scorpion Rock is not only a favorite for seabirds but also for kayakers looking to explore its craggy sea caves. Opposite page: Scorpion Rock is a favorite roosting site for California Brown Pelicans. It is fun watching them posture and preen, showing off brilliant crimson-colored gullets and creamy-yellow heads.

The midnight pelagic concert of birdsongs played from atop Scorpion Rock, the prominent outcropping that rises from the ocean amidst a cluster of rocky formations just off the southeast tip of Santa Cruz Island. Under dewy, overcast skies a pair of kayaks glided through brilliant bioluminescent waters that percolated from deep below the surface and approached the volcanic crag. The kayakers were there to learn about the efforts to restore crucial seabird habitat on this portion of the Channel Islands National Park.

Nearly 100 feet above the ocean's surface at the apex of Scorpion Rock, a team of seabird biologist and environmental scientists gathered next to a 36-foot mist net that stretched suspended across the broad plateau. Using headlamps to see in the darkness, the three worked hurriedly but delicately to band, measure and weigh an Ashy storm-petrel that had become tangled in the nylon snare. Ashy storm-petrels are tiny dark nocturnal birds that nest in colonies on islands and flutter over the open ocean to feed just off the edge of the continental shelf. More than 20 were drawn to the net by the tape recording of petrel's birdsongs.

The Channel Islands National Park offers some of the most vital breeding, nesting and roosting habitat along the Pacific coast for a dozen species of seabirds. Scorpion Rock has developed a reputation as an important refuge for seabirds as well as for the restora-





tion effort taking place across the remote island park and California's other Channel Islands.

"Unlike mainland California, many of the Channel Islands are free of predators that would otherwise prey on seabirds," said Holly Gellerman, senior environmental scientist specialist for the California Department of Fish and Wildlife. "The 12 species of seabirds that nest on the Channel Islands are equally dependent on the rich surrounding marine waters for easily accessible food during their nesting season."

Scorpion Rock was monitored in the late 1990s and early 2000s due to a steady decline in the number of nesting Cassin's auklets. Habitat degradation and the unwanted colonization of crystalline ice plant had impacted habitat quality. Scientists identified it as a restoration site in 2005 and work began the following year.

The Ranching Era

All of California's Channel Islands experienced ranching of some sort from the 1820s to 1987, and residual effects still linger. When ranch animals are transported to islands they inevitably carry non-native plant seed with them. Strong northwest winds pick up loose seeds and scatter them across offshore rock outcroppings. Seeds from crystalline ice plant were carried on the wind and took hold on Scorpion Rock's craggy landscape. Over time they choked out native vegetation.

Left photo: CDFW environmental scientist Andrew Yamagiwa carefully removes an Ashy storm-petrel that became entangled in the mist net assembled along the crest of Scorpion Rock. Center: While a dozen seabird species nest across the Channel Islands, seven species—including Brandt's cormorants, like these—specifically nest on Scorpion Rock. Not the best flyers due to their thicker bone density, Brandt's cormorants are, however, superior divers and are able to plunge deep below the ocean's surface for their food. Right photo: Scientists conduct health checks at night because some seabirds are nocturnal. Handling the Ashy storm-petrel gently during the banding process helps avoid unnecessary stress.

"When we started restoration on Scorpion Rock," said Katy Carter, a seabird biologist for the Montrose Settlements Restoration Program (MSRP), "there was only one native plant left, a coreopsis."

Crystalline ice plant has a long, thick root ball that makes it difficult to extract from the ground. The plant also had a profound effect on the nocturnal Cassin's auklet. The little seafaring bird resembles a small penguin and burrows into the ground to build its nest. However, the thick root ball of the crystalline ice plant stalled the burrowing, so the black and white birds simply went away.

"The largest challenge has been in the tenacity, competitive strategies and seed bank persistence of crystalline ice plant," said David Mazurkiewicz, a U.S. National Park Service wildlife biologist monitoring seabirds at the park since 2006. "It contributes to its ability to out-compete with other plant species."



The Place to Be

For all its isolation and harsh environmental conditions, Scorpion Island appears a popular destination—at least for seabirds. Thick seabird guano cakes the northern side of the rock, where throngs of various seabirds, big and small, roost on the barren, knobby slab overlooking the eastern Santa Barbara Channel. Generally, a down-coast ocean current brings a variety of food for the seabirds to feast on, sometimes making it crowded on the weather-beaten sea stack.

Besides the Cassin's auklet, seabirds currently breeding and nesting on Scorpion Rock include raucous western gulls and both pelagic and Brandt's cormorants. Nocturnal species include Scripps's murrelets, Ashy storm-petrels, black oystercatchers and pigeon guillemots. There are historical records of California brown pelicans breeding on the island in the 1970s. During certain times of the year, other species like wandering tattlers and elegant terns can be spotted. Bird watchers along with scientists on the tiny island describe it a thrill to witness the opportunistic peregrine falcon disrupt the seabird nirvana.

Other than birds—and the intrepid kayakers who brave the waves on daytrips to the island—the only consistent presence is biologists who work crazy hours trying to remove any crystalline ice plants and restore the windswept grounds to what was once there.

During the day, seabird biologists keep the non-native flora at

bay and monitor the growing numbers of Cassin's auklets. Things are looking up for the hardy seabirds with the white crescents above and below their eyes. For years these seabirds had been missing from Scorpion Rock, but with a dedicated crew of seabird biologists eradicating the ice plant and building makeshift nests to attract the auklets back, the results have proved astounding.

Overall, Gellerman is pleased with restoration efforts on Scorpion Rock. She remembers what the landscape looked like in the early 2000s. "The surface consisted of bare, weathered soil and large mats of non-native crystalline ice plant," she said.

Things are beginning to turn around—even if Gellerman says her optimism has sprung via project reports and update presentations. "The results of restoration efforts that I've witnessed over the last few years are impressive," she said.

Mazurkiewicz said everyone felt ecstatic in 2008 when one of his National Park Service crews reported the first active nest for Cassin's auklets since restoration began. Today, there are roughly 40 nesting pairs of Cassin's auklets on Scorpion Rock.

"There was relief," Mazurkiewicz said, once the first of many little white eggs were revealed. "With the input of all the hard work, time, energy and resources, it was nice to see the potential for it to actually work. Habitat restoration is a long process that requires resources and commitment. It doesn't happen overnight."

He described the restoration work on Scorpion Rock as a mara-



thon, which seldom provides an instant return for the effort. He credits the commitment from MSRP for the project's success.

Flora and Fauna

The National Parks Service has nine biologists working for Mazurkiewicz, all housed in the California Institute of Environmental Studies. Through a cooperative agreement with the parks service and MSRP funding, five biologists and field technicians with a seasonal technician cover the day-to-day responsibilities of seabird restoration and the monitoring required across most of the islands.

The physical labor has proved grueling as thousands of pounds of ice plant have been removed from the turf, bundled together and then taken off the island for disposal back on the mainland. A nursery of native plants is kept in nearby Scorpion Canyon. When it's time to plant, everyone loads kayaks and paddles across to the windswept rock. They have taken the island back over the last several years and established 15,000 native plants—made up of 18 different types. Some of those include giant coreopsis, island deerweed, prickly pear cactus, lemonadeberry, giant rye grass, California sagebrush, seaside woolly sunflower, coastal goldenbush and island morning glory.

The plants have a solid foothold, but the stubborn crystalline ice plant hangs on, so Scorpion Rock requires maintenance. Native cover will persist on the rock at this point," said Mazurkiewicz. "We

Left photo: Sometimes hiding in plain sight works. But this attentive black oystercatcher parent chooses to err on the side of caution and continues to guard two nearly invisible chicks. Young oystercatcher coloring blends perfectly with the island's volcanic rock. Center: Scorpion Rock holds about 40 nesting pairs of Cassin's auklet. As this one received its checkup, other scientists checked the nearby nest to count eggs or hatchlings. Right photo: Three western gull chicks on Scorpion Rock appear to be serenading a parent to return with food. While the largest rookery for western gulls in the western U.S. is found on neighboring Anacapa Island, the gulls also nest on Scorpion Rock.

are just trying to continue to break the ice plant cycle as long as we can."

At the same time, Mazurkiewicz's crew diligently monitors the seabird populations that are attracted to Scorpion Rock.

When birds arrive during the day on Santa Cruz Island's south-east end, at Scorpion Anchorage, the crew will check the status of active auklet nests—count eggs, check in on downy-feathered chicks and when ready, weigh and measure the birds before a band is attached around an ankle. By night, the mist netting is rigged to catch, weigh, measure and band the rarely seen Ashy storm-petrels. Only an estimated 10,000 of these birds exist worldwide.

On the night the kayakers landed on the island and the concert of birdsongs played at the top of Scorpion Rock, MSRP's Carter teamed with CDFW environmental scientists Amelia DuVall and



Andrew Yamagiwa to band the elusive petrels. The operation usually extends past midnight and into the early morning hours. The recorded sounds of the bird's raspy *churr, churr, churr* serves as an effective lure.

The scientists recorded all the information from the birds that night in a ragged, yellow notebook.

"These are some of the ways to monitor populations, and then over time measure the health of these populations," Mazurkiewicz said. "Because these species are mostly pelagic, these types of monitoring are some of the only ways to get information into their life history, natural history and population trends. Some of that seabird data is collected but the colony data is of extreme importance, especially when it is collected long term."

The Price of Restoration

From 1947 to 1982, the Montrose Chemical Corp. was the world leader in manufacturing the pesticide *Dichloro-Diphenyl-Trichloroethane*, or DDT. The manufacturer released millions of pounds of the toxic substance into the Pacific Ocean, specifically into the Southern California Bight near Catalina Island. The bight is the curved California coastline between Point Conception and San Diego. The ongoing toxic releases disrupted the pelagic food web.

Following an 11-year lawsuit filed under the federal Superfund law, settlements were reached in 2001 and a federal judge ordered

\$140 million paid in restitution. The judge ordered \$40 million for restoration of natural resources. The MSRP was created and the return to a natural balance of the national park became a priority.

MSRP funds are managed and prioritized by a trustee council comprised of representatives from state and federal resource agencies. Gellerman serves as CDFW's representative on the MSRP board. She explained CDFW's role stems from its responsibility to manage plant forms as well as fish and wildlife. The responsibility includes the habitats that the resources depend upon—for their ecological values and for their use by the public.

Even with Scorpion Rock's major facelift, some are convinced the island will need continued work.

"The funding for MSRP does have a sunset within the next few years but we have built up strong partnerships with many collaborators and other agencies in the process of this work," Mazurkiewicz said. "We are all actively fundraising and getting creative in ways to continue these efforts."

Chuck Graham is a freelance writer who leads kayak tours around the Channel Islands National Park and lifeguards on the beach in Carpinteria. His stories have appeared before in Outdoor California.