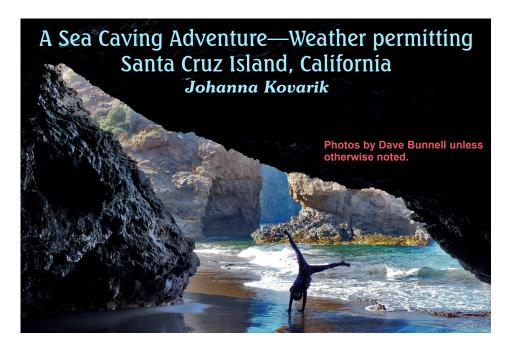
"That Dave Bunnell sure is audacious in a sea kayak," I thought circumspectly as I viewed him paddling headlong towards a yawning, dark opening where the sea met the cliffs of Santa Cruz Island. As the six-foot swell I had just crested in my own bright yellow kayak subsided, I lost sight of Bunnell momentarily as I scanned the approaching cliff face. He and I had paddled our hard-sided, sit-on-top kayaks west across the northern side of the island, while the rest of our crew in inflatable boats assailed other, apparently less prickly targets, nearer to our launch vessel, the 34-foot sailboat Emmanuel. More used to the sit-inside sea kayaks we used in southeast Alaska, I felt a bit exposed sitting precariously on the sit-on-top version, which seemed like it could easily be separated from me if rolling occurred. I idly thought about sharks. The water beneath my boat was clear and cold—nothing moving down there at the moment other than the kelp. This was our first day out of port from Channel Islands Harbor near Oxnard, California, and we had sailed and motored out to one of California's Channel Islands, approximately 18 nautical miles from the harbor. We had spent the previous day loading what seemed like a fantastic amount of gear and the five members of our crew onto the small, 34-foot sailboat that would be our home for the next week. Part of this collection included a 150-quart cooler of Tecate, PBR, and a twelve pack of some strange fruit beer hybrid containing a flavor threatening to taste of banana. Also on deck were Bunnell's and my hard-sided kayaks, Charlie Savvas's pack catamaran, and Matt Oliphant and Nancy Pistole's inflatable kayaks.

Bunnell has been mapping caves on and off the coast of California for years with various cavers along as crew. He has published two Channel Islands books to prove it; prolifically incorporating over 225 caves from two islands into the publications with maps and short summaries. His first trip to



Santa Cruz Island was in 1982 and the book on that island was published in 1988. Since then, sporadic trips have added several new cave surveys and lots of cave leads. Our trip was focused on investigating some of these.

Our first day out on November 8, 2015, I bowed to his previous years of experience while watching him paddle mightily towards the island, and followed in towards the cliff and the waiting entrance. However, as I crested the next swell I could see that he was now paddling back towards me. It was a false alarm—he thought perhaps they had mapped this particular cave on a previous voyage. We paddled a bit further out to the west, towards other prospective leads, and finding nothing unmapped, we headed back to our floating home.

Our plan was to spend five nights on the Emmanuel investigating the Santa Cruz Island coastline. Weather-dependent, the team anticipated investigating areas on the far western/ northwestern side of Santa

Cruz, anchoring in protected coves each evening. Santa Cruz Island is the largest of California's Channel Islands, with over 77 miles of shoreline to search for caves. The geology of Santa Cruz is roughly split down the center by the Santa Cruz Island Fault, which has formed a northwest-southeast trending central valley. The northern shore of the island mainly consists of Miocene igneous rocks, while the southern half of the island exhibits primarily Miocene tuffs, conglomerates, and breccias. Tectonic movement in the region produced faults which combined with sea level change as the likely drivers of sea cave formation. These processes have resulted in significantly large and long sea caves on the island with 26 caves over 300

After pulling our kayaks back aboard the Emmanuel, we headed over to Scorpion Bay, which has two cave-riddled sea stacks and numerous caves in the adjacent cliffs. Most all of these had been mapped before



Entering the large cave at Scorpion Bay



Seaward view of the entrance seen at the left



The 34-foot sailboat Emmanuel, our sea caving home



Captain Nancy at the wheel while celebrating our departure

but photo-documentation of existing caves is also one of Bunnell's goals in the renewed project. These caves are some of the more popular caves with visitors and we ran into a large group of sea kayakers who were also doing the 160-foot through trip in the big cave in the larger stack. While this is also a decent anchorage, with some significant winds expected we opted to navigate around the eastern side of the island, looking for uncharted caves and heading for Smuggler's Anchorage off the southern coast of Santa Cruz the evening November 8. As we had sailed out of the harbor that Sunday morning, we were warned that the next day would bring a small craft advisory, with 30+ knot winds, and so the next morning we returned to the mainland and anchored in the harbor. In order to save funds, the crew decided to remain with the ship, sleeping squished up below decks but with the advantage of a hot shower to wash off the salt at the main marina building.

The winds on the evening of November 9 whistled through the mast as we slept, and in the morning we woke to the flags of the marina whipping and cracking in the wind. The high winds meant no sea cave exploring that day. Never a group to be in low spirits, at the suggestion of Bunnell, the

sailors headed inland to explore the treasure shops (thrift stores) of Ventura and all had a delightful time. The next morning, the mighty skipper Nancy attempted to brave the roiling seas, however the winds were still too high and the seas too ferocious. And so, that day dumplings were had at a local purveyor of such delicacies. Other fun distractions included investigating Neil Young's 101-foot Baltic trading schooner, the W.N. Ragland, tied up at the end of our pier. Nancy and Matt were unimpressed with the rope skills of Young's crew. There are points for style in sailing, after all, and their lines were heaped in dumpy piles instead of swirled in proper order. Beer was taken as a nightcap on the deck of the boat at the marina while hunkering away from the wind.

Finally, on November 11 the team was able to once again return to the southern shores of Santa Cruz Island. The overall goal of reaching the far western coast, and perhaps even the far northwestern portion of the island was not to be on this trip, as the island is a good 25 miles in length and sailboats are relatively slow. However, many caves that Bunnell and his teams had not yet mapped were still attainable. We set anchor and launched boats about midday around the Coches Prietos area, one of the most



Charley paddling through a cave

popular anchorages on the south shore. Dave had been advised of a cave here by a reader of his book, who sent him photos and a description of a virtually hidden cave



Cave-riddled sea stacks at Scorpion Bay. Anacapa Island is visible in the distance. Right, Nancy Pistole emerges from one of the caves.







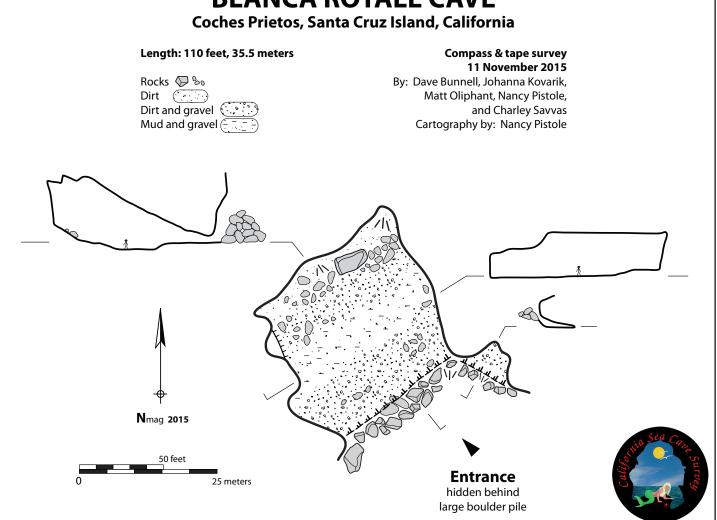
Top: Overview of Santa Cruz Island with the 3 main anchorages visited on this trip marked. The island is about 25 miles long. The central valley running along the east-west fault is clearly visible.

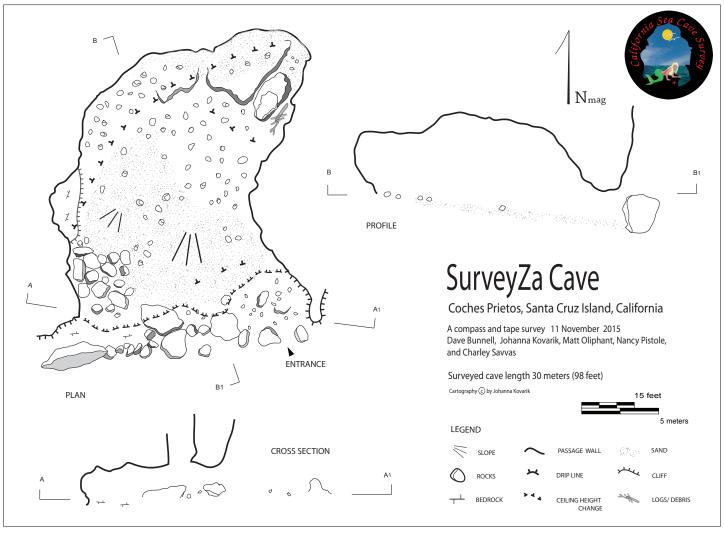
Below left: Coches Prietos Anchorage and the 3 caves mapped on this trip.

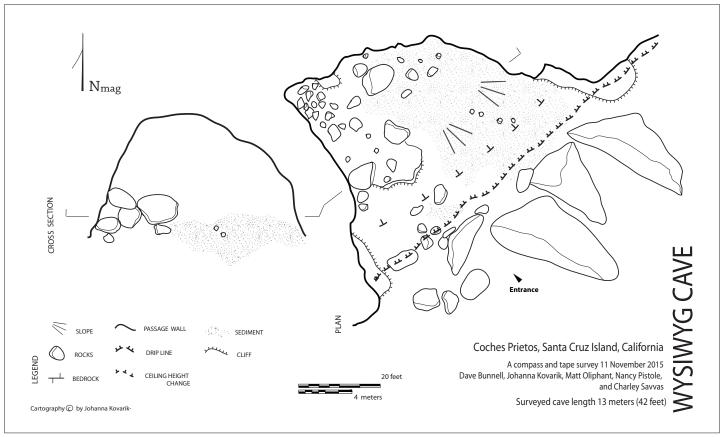
Below: California sea lions lounging at the dock. They are frequently seen in many of the island caves.



## **BLANCA ROYALE CAVE**











Johanna Kovarik



View from the back of SurveyZa looking out

here, said to be a huge chamber. Little did we know there were several. After an exciting seal landing in our kayaks near the most obvious entrance, Dave and I began mapping the first cave, SurveyZa. Matt, Nancy, and Charlie caught up with us after several minutes, having first found the big, hidden cave. The entrance to SurveyZa was low and long, and the cave was mapped to 30 meters (98 feet). Matt joined in on the survey with Dave and I, and Nancy and Charlie scouted for more caves, quickly finding another. We joined them and mapped a second cave with a steeply sloping floor, WYSIWIG, or "what you see is what you get", which also had a large opening revealing all there was to see of the cave. The last cave we mapped that day was the largest, Blanca Royale, in the Blanca tuff. This cave was voluminous, with a ceiling height of approximately 13 meters (42 feet), and a length just beating that of SurveyZa at 35.5 meters (110 feet). Unlike most of the sea caves, its entrance is indeed virtually hidden from view from sea, behind a large boulder. Most of the floor is out of the surf zone and probably only sees any wave action in storms. Sea lion bones littered part of the floor. As we finished this final survey, we headed back to the ship as the sun began to dip below the horizon. These caves are

the largest yet found on the island that are not in the volcanics that make up much of the north shore. Instead of developing along faults, they have developed along contacts between two different layers in the sedimentary rocks here.

On November 12 we motored to Willows Anchorage a bit further to the west to light winds and sunny skies. During high tide Dave and Nancy took the hard-sided kayaks out and made quick work of investigating a cave formed along a dike cutting through the San Onofre Breccia. The rest of the team went ashore later that afternoon and walked east to investigate potential caves. Walking along the tide line the group found nothing but hot sun, boulders, and remnants of sea creatures, and reversed course. On the western side of the beach, a great sea cave with an approximately 5 meter long surge channel ended in what appeared to be a large room, from the echoing sounds of crashing surf and the beckoning darkness. Without fins and with the crashing waves, it was not feasible for us to map this cave. We were able to enjoy the sight of a lithe, graceful harbor seal swimming quickly out of the channel as we perched high above it. Again, racing the setting sun, Charlie, Dave, and I mapped another small cave on our way back to our kayaks. Our last evening on the boat was a lovely one, with calm seas and bright stars high above.

The next morning we headed back to the harbor against a surpsingly stiff west wind throwing lots of choppy seas against us. These proved to be some Santa Ana wind conditions, which tend to blow seaward from the mainland and can be seriously strong.

While high winds were a hallmark of this year's sea caving efforts by our team on the west coast, we were still able to map four caves, drink a giant cooler full of beer, and stuff five cavers, four kayaks, and a pack cat onto a 34-foot sailboat for six days with no one losing their lives or their sanity (although perhaps a few cookies). Many thanks to Nancy Pistole and Matt Oliphant for organizing the sailboat rental logistics and skippering, to Dave Bunnell for guiding the expedition and bringing a kayak for me, and to Charlie Savvas for being available at the last minute. A return trip is in the works, as there are many caves awaiting a proper survey.



Panorama of the red wall in SurveyZa with Johanna sketching



Matt in WYSIWYG Cave



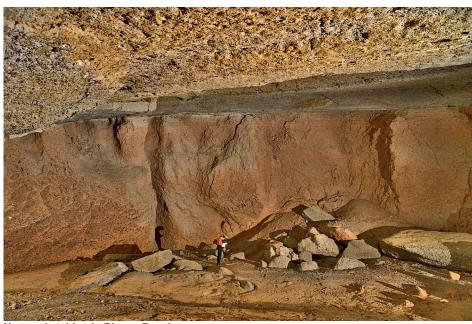
Nancy climbing up the slope in WYSIWYG Cave for a reading



Matt in Blanca Royale



Sea lion bones in Blanca Royale



Nancy sketching in Blanca Royale





Short but scenic cave at Willows Anchorage

Left, top image: Johanna takes a bearing into a sea cave at Willows Anchorage

Left, lower image: View of our sailboat from inside the partially explored cave at Willows Anchorage; the photo at right is the view in.



Looking into the mysterious cave at Willows Anchorage. We could hear waves crashing and echoing in a larger chamber beyond the narrows and a seal swam out from inside, but we deemed it too dangerous to explore.