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Conserve & Protect

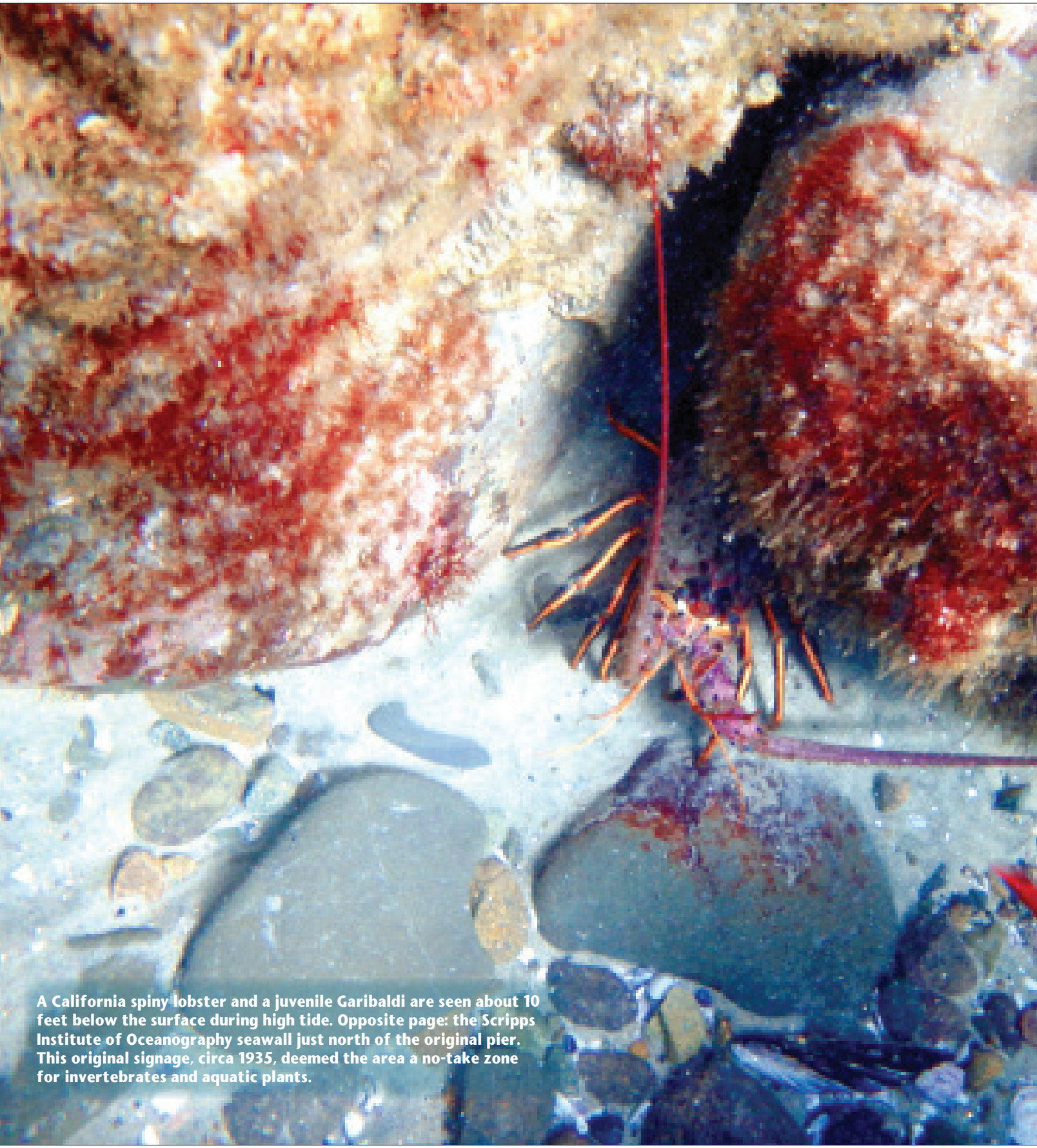
California's Oldest Marine Protected Area Safeguards Resources for Generations to Come

Story and Photographs
Amanda Van Diggelen

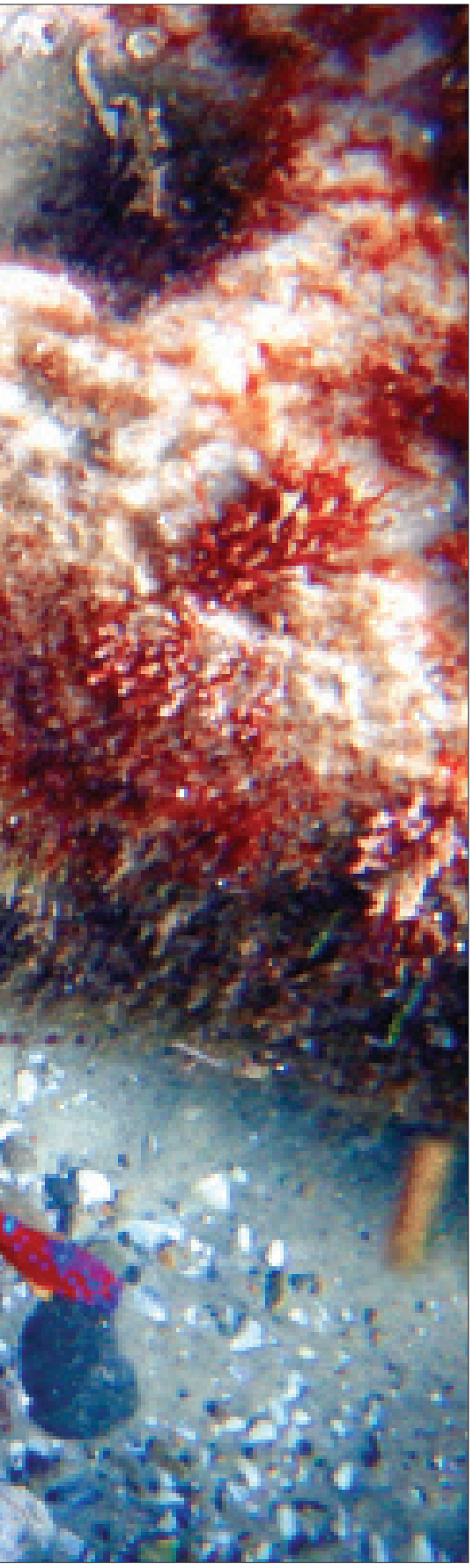
Stretching more than 1,100 miles, the Golden State's shoreline is home to a variety of coastal features and biodiversity that captures the unique beauty of North America's Pacific Coast. Whether you seek the remote beaches of California's Lost Coast, itch to dive the dense kelp forests of Monterey, dream of catching the perfect wave at Huntington Beach, fantasize about reeling in a trophy fish off the Channel Islands, hope to spy a migrating whale at Dana Point or simply want to relax on San Diego's expanses of soft sandy beaches, the California coast has something to offer everyone.

To safeguard these unique places, the California Legislature mandated the creation of a network of marine protected areas, or MPAs. The California Department of Fish and Wildlife led an eight-year process of designing new MPAs and updating California's existing system of MPAs. With the completion of that process in 2012, the statewide network now consists of 119 MPAs, 5 state marine recreational managed areas and 15 special closures that are designed to conserve and protect marine resources for generations to come.

Fish prosper in the deeper rocky subtidal of Scripps State Marine Conservation Area. California´s official marine fish, Garibaldi, can be quickly identified by its orange coloring, while opaleye have more cryptic shading.



A California spiny lobster and a juvenile Garibaldi are seen about 10 feet below the surface during high tide. Opposite page: the Scripps Institute of Oceanography seawall just north of the original pier. This original signage, circa 1935, deemed the area a no-take zone for invertebrates and aquatic plants.



Marine protected areas are nothing new. In fact, the establishment of any type of marine protection started more than a century ago, long before the Legislature created the Marine Life Protection Act in 1999. There are numerous accounts of localized protection dating as far back as the early 1900s for species such as abalone and crab. And knowing that begs the question, which MPA is the oldest? The search to identify the inaugural California MPA leads to San Diego County in Southern California.

Off the coast of La Jolla lies a rich marine environment teeming in biological diversity, where rocky intertidal areas give way to shallow, sandy plains that are intersected by a deep-water canyon. These habitats, along with the cold, nutrient-rich water that flows down from the north to mix with the warmer southern waters create dynamic conditions that are favored by an array of marine plants, fish and other creatures. The annual plankton bloom that occurs here in the spring forms the base of the area's food web and allows populations to persist here for generations.

The La Jolla area first garnered research interest in the early 1900s. The University of California's Department of Zoology established a seaside research station on the La Jolla shoreline, which was initially known as the San Diego Marine Biological Station. The name changed to the Scripps Institution of Oceanography, and the research institution is now affiliated with the University of California, San Diego.

The intertidal and submerged lands adjacent to Scripps received their first form of protection in 1929. In acknowledgement of the marine research conducted there, the state granted UC San Diego "the sole and exclusive right of possession, occupation and use of certain lands bordering on the Pacific Ocean in the county of San Diego, State of California, and state waters adjacent thereto." These lands and waters encompassed the first 1,000 feet of offshore habitat along 2,700 feet of the oceanfront. Then, in 1957, the Legislature designated this stretch of coastline as the San Diego Marine Life Refuge. Under this designation, aquatic plants and invertebrates within the boundaries were granted state protection, which meant they could not be removed for any reason other than scientific research.

In 1974, a large area off the San Diego coast, which included the San Diego marine refuge, was decreed by the state as an area

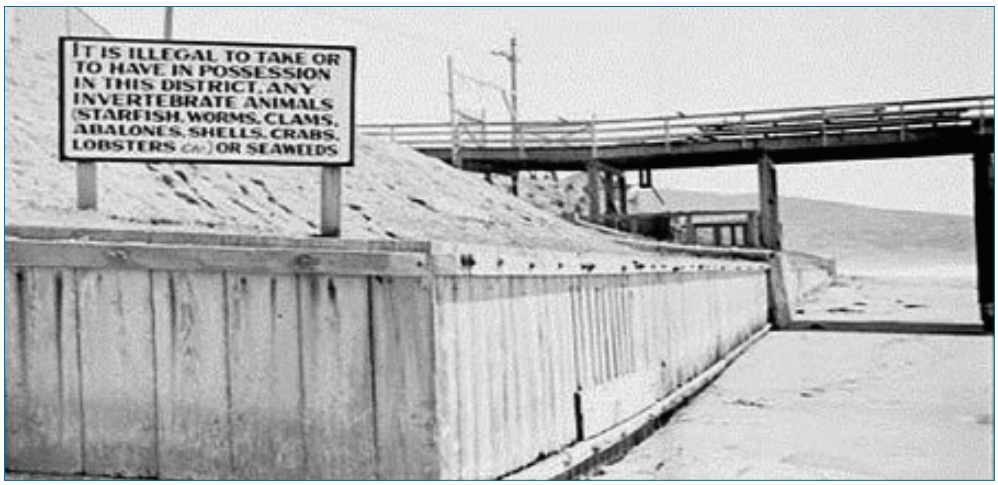
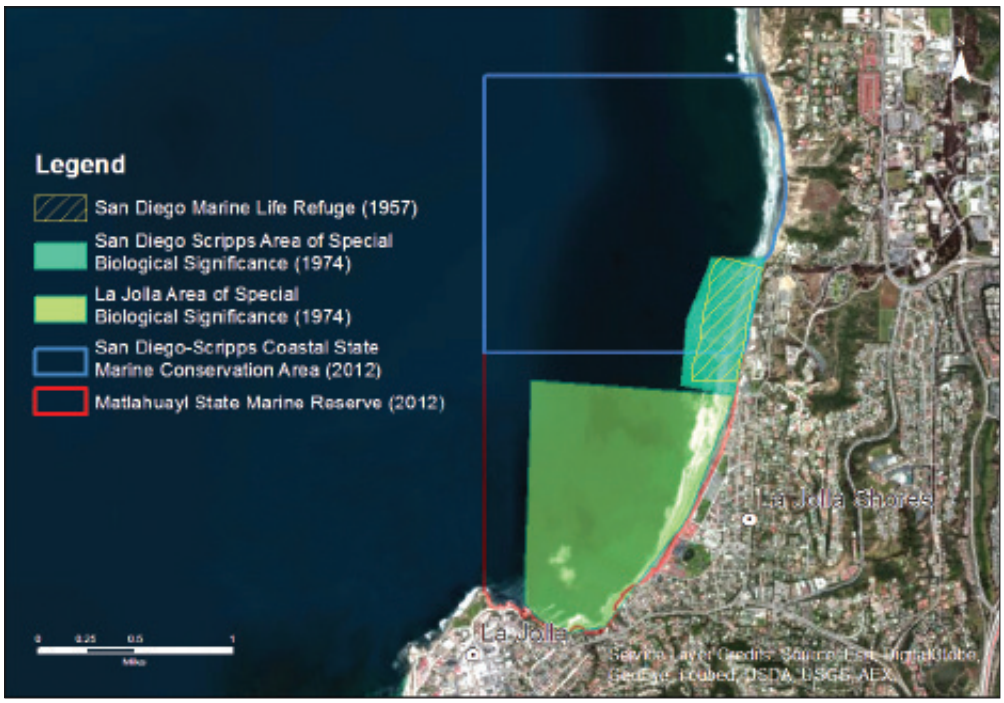


Photo © Scripps Institution of Oceanography Archives, UC San Diego Libraries



CDFW Map by Paulo Serpa and Lindsey Gatlin

of special biological significance. This designation accomplished at least two things: it protected the area from the discharge of wastes and required maintaining the natural water quality as well as offered protection to marine waters by minimizing pollution and runoff from the fast-growing urban areas adjacent to the coastal habitat.

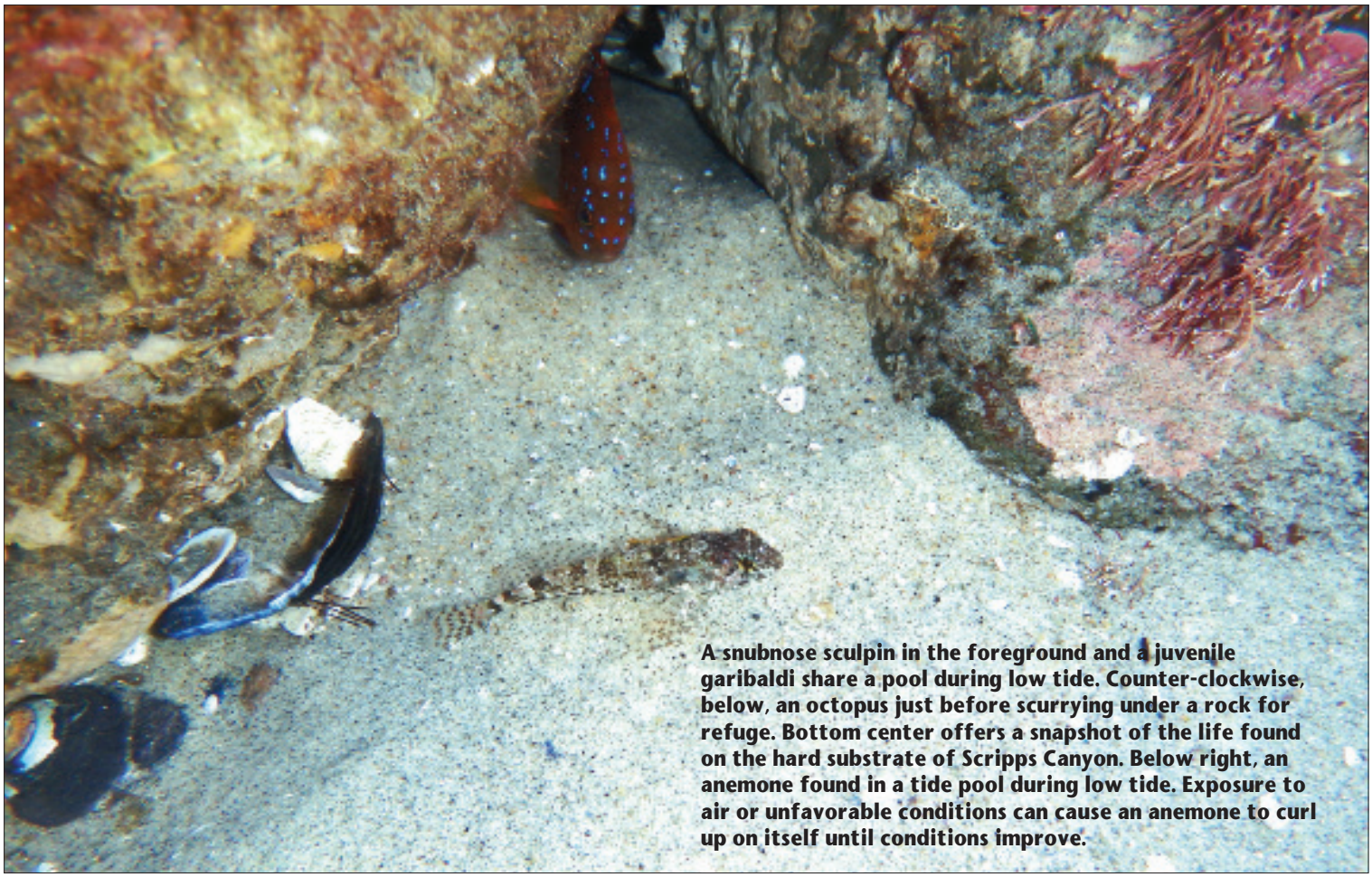
The most recent protection evolved in January 2012, and with it the refuge received a final name change to the San Diego-Scripps Coastal State Marine Conservation Area.

"This most recent designation was the result of a robust, innovative public planning process that involved local stakeholders, scientists and state agency representatives," said Steve Wertz, a CDFW senior environmental scientist who helped lead the process. The new MPA is larger—expanding northward—and maintained its designation as a no-take zone for aquatic plants and invertebrates.

The San Diego-Scripps Coastal SMCA shows just how effective decades of protection can be. Today, birds soar along the shore, seeking prey in the air and surf. Beachgoers explore the tide pools, as well as surf, snorkel and sunbathe. One such pilgrim to the beach, Tim Soto, marveled at the vast array of attractions. On a family outing to explore the MPA's tide pools, Soto confirmed the region's popularity. "This area is wonderful," he said. "It was our first visit and we loved it. We were amazed by what we could see. It was like visiting an aquarium out in nature."

The rough surface of the MPA's rocky intertidal area is pocked with pools of water left behind by the retreating tide. Below the surface, these pools are miniature ecosystems teeming with life. Numerous invertebrates—animals that lack a spinal column, such as crabs, snails and limpets—move amongst the

Previous page: a comprehensive look at the different names and boundaries established prior to the current Scripps State Marine Conservation Area. Although there was no official name for the area until 1957, protection for marine life and aquatic plants had been established within the same boundaries for the San Diego Marine Life Refuge dating back to 1929. This page: a school of Pacific sardines swim over the sandy plain. Bait fish are extremely common within this area and feed a number of larger predators.



A snubnose sculpin in the foreground and a juvenile garibaldi share a pool during low tide. Counter-clockwise, below, an octopus just before scurrying under a rock for refuge. Bottom center offers a snapshot of the life found on the hard substrate of Scripps Canyon. Below right, an anemone found in a tide pool during low tide. Exposure to air or unfavorable conditions can cause an anemone to curl up on itself until conditions improve.

immobile mussels, barnacles and anemones. Vertebrates—animals with a spinal column—are also present in the tide pools. The most common vertebrates are small fish, such as young Garibaldi and various species of sculpin. A few yards offshore in deeper waters, this rocky subtidal habitat offer a secure grip for surfgrass and algae. Thriving among the seagrass and rocks are colorful and fanciful-looking nudibranchs, sea urchins, sea stars, spiny lobster and several types of fish.

The San Diego-Scripps SMCA protects more than just tide pools. The sandy beach is refuge to numerous creatures up to the mean high tide line. Intertidal organisms such as the sand crab are found beneath the telltale holes that spot the sand near the water. Birds dive into schools of bait fish or forage along the water's edge. Sometimes during spring and summer nights following a new or full moon, California grunion are spotted as they move onshore to spawn.

Around the Scripps Pier pilings, jack mackerel and surfperch swim and interact as part of a captivating display of color and marine life. Giant green anemones and club tipped anemones abound on the pilings, and sea stars appear in an amazing number of colors. Several species of crabs and nudibranchs crawl amongst the barnacles, mussels and algae. A pile of rocks or discarded shells on the bottom may serve as a home for a two-spot octopus.

Surrounding the pier and encompassing the majority of this MPA is a sandy plain. The sandy bottom of the San Diego-Scripps Coastal SMCA attracts a number of vertebrates and invertebrates. Worms love the soft sand, as do species of sea stars and snails. Hornyhead turbot may be found gliding above the bottom, or camouflaging themselves against it. Bat rays are also seen flying above the sand here, as well as leopard sharks looking for their next meal.

The most unique habitat protected within the boundaries of the San Diego-Scripps Coastal SMCA is a portion of Scripps Canyon. This submarine canyon descends beyond 700 feet, and has a dynamic role within the marine environment. Schools of market squid use the canyon as a passageway from the depths up to shallow spawning grounds. The canyon walls are covered with colorful corals known as gorgonians, as well as orange and yellow sponges and more of the vibrant nudibranchs. Swell sharks appear in the deeper waters, and eels hide in crevices. Although the canyon may be the least accessible habitat due to its depth and offshore location, marine life abounds in these deeper waters.

As the oldest MPA in California, the San Diego-Scripps Coastal SMCA is a valuable component of the statewide network. The decades of protection it has provided have helped to preserve the area's ecological value while giving visitors an opportunity to enjoy this unique coastal area for its intrinsic value. Beach goers are ever-present, educators are encouraged to use the area for teaching purposes and authorized scientific research still persists. While all invertebrates and algae are still protected—and commercial fishing is not allowed—recreational fishing is allowed for anchovy, sardine and mackerel using only hook-and-line gear. Despite this limited recreational take, the San Diego-Scripps Coastal SMCA helps to protect marine diversity and productivity, while remaining open year-round to visitors who come to enjoy this hidden world lying just beneath the surface.

Amanda Van Diggelen is an environmental scientist with the California Department of Fish and Wildlife's Marine Region. This is her first story in Outdoor California. *For more information about California's network of MPAs, visit* www.wildlife.ca.gov/Conservation/Marine/MPAs.