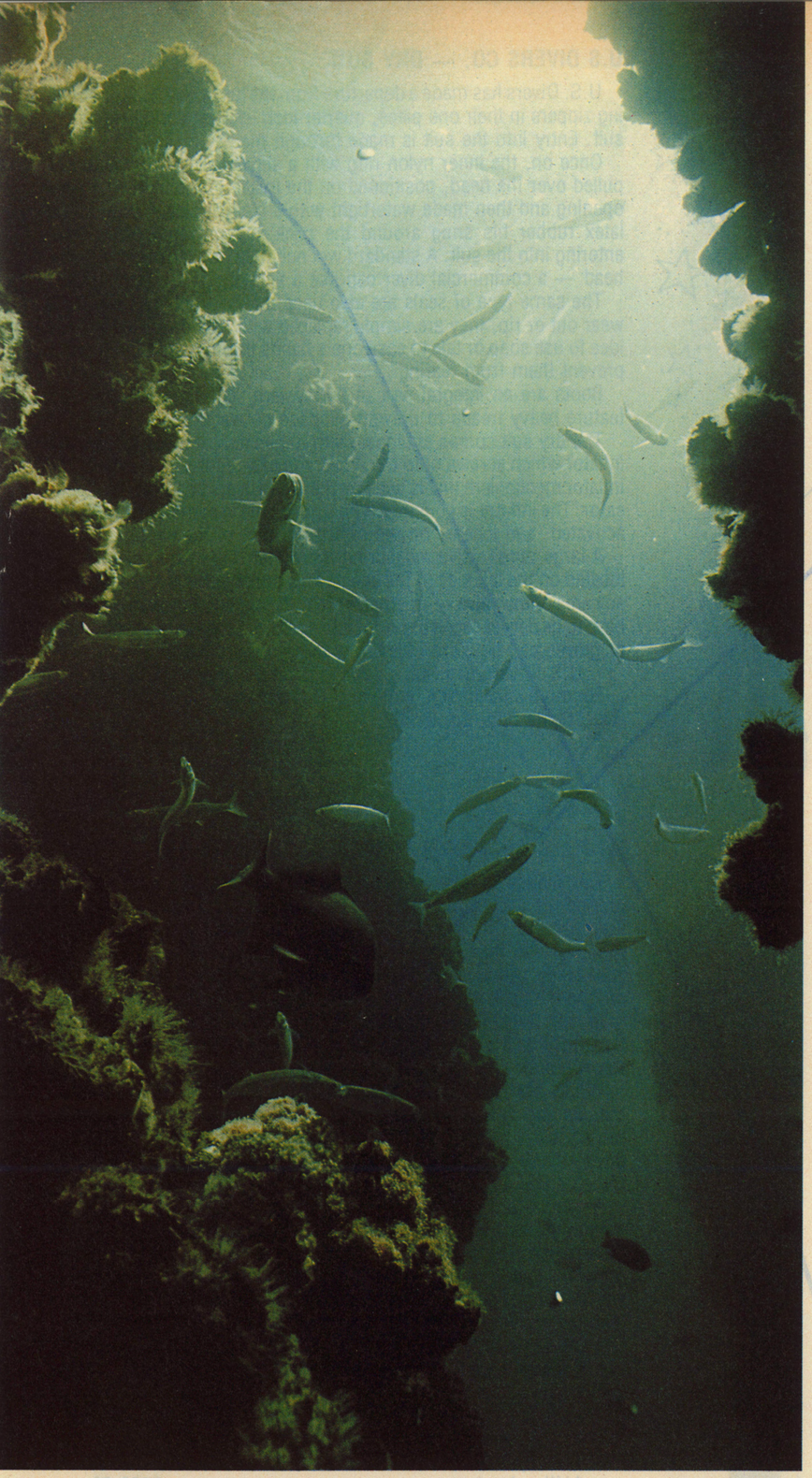
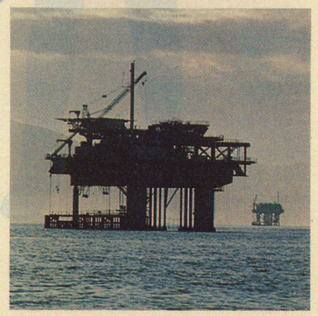
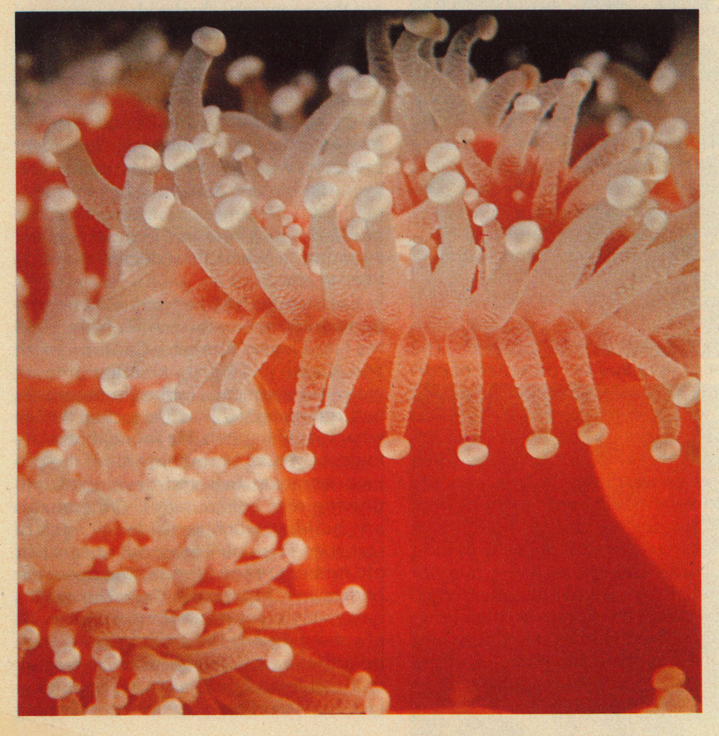
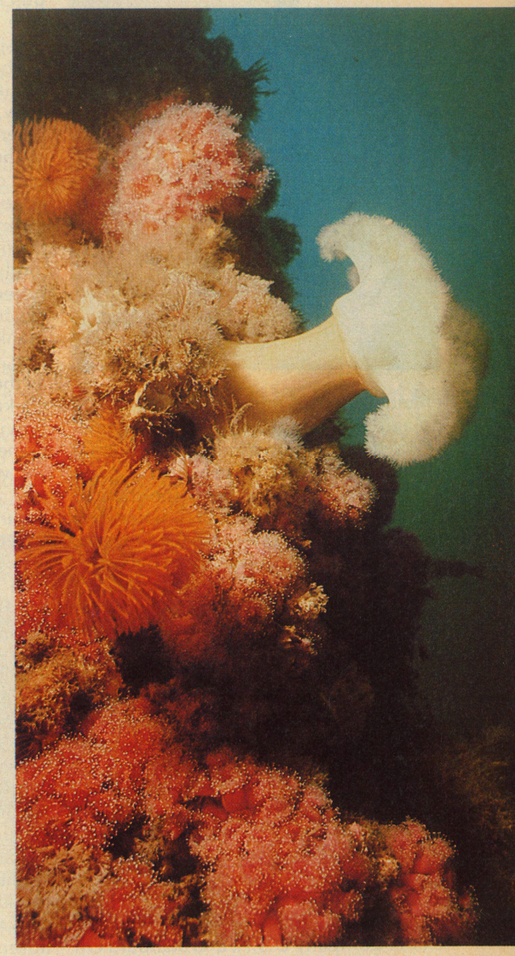


AN OASIS IN THE SEA



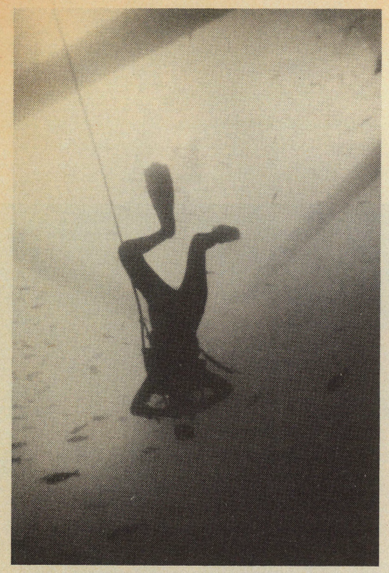
The Santa Barbara channel is a unique chunk of ocean. Where most of the California coast runs along more or less in the expected north-south manner, at Point Conception it takes a sharp cut to the east for about 50 miles. The towns along this east-west stretch, including Gaviota, Santa Barbara and Carpinteria, face directly south onto the California Channel Islands. By itself, the Santa Barbara Channel has never been considered as anything much more than a body of water over which to get from Point A to Point B. Dive boats cross it north to south, and navigators have steamed and sailed east and west on their way down the California coast. Most of the channel is deep and relatively devoid of life. Even in shallow areas the bottom is barren, swept by southbound currents from the Bering Sea and northbound currents from Mexico. In normal cases a diver would not choose to dive in the





In most cases a diver would not choose to dive in the Santa Barbara Channel. An exception to this is Platform Hilda, an oasis in the sea where fish come to congregate and feed by the thousands, where nudibranchs have proliferated, where lively mussels and barnacles crowd each other for space, where different varieties of sea anemones have sprouted, urchins have colonized and corals have taken root.

By Hillary Hauser — Photography by Bob Evans



channel. All he might see would be a pelagic fish or two, and suspending oneself over an unknown and unseen bottom is the fastest ticket to insecurity.

However, there is a spot in the channel which is an oasis in the sea — where fish come to congregate and feed by the thousands, where nudibranchs have proliferated, where lively mussels and barnacles crowd each other for space, where different varieties of sea anemones have sprouted in a riot of colors, where crabs creep about, where urchins have colonized, and where corals have taken root. All this life and activity is surrounded by acres of barren water and sea bottom. It is truly an isolated sea aquarium without walls, and it is known as Platform Hilda.

There are a number of oil production platforms in the Santa Barbara channel, and recently photographer Bob Evans and I were given an assignment that took us beneath Hilda. Hilda belongs to Exxon Company U.S.A. and Standard Oil of California, with SOCAL as operator. The platform is located about two miles out to sea off Summerland, California. We were to take notes and photograph what was going on under Hilda's massive gray structure, paying attention to the types of marine life that had congregated and observing where most of the subsea activity was taking place.

Bob and I were totally unprepared for what we saw. In spite of Hilda's remote location, she bustled with activity. Down to about 60 feet, on every inch of available leg space was a mussel or barnacle, very alive, very active and elbowing each other for growing room. We most often consider both of these animals in terms of the lifeless forms we see in tidepools. Here, underneath Hilda's underpinnings, they were almost jumping around. Thousands of barnacles performed miniature fan dances as we watched, their feather-like feelers quickly popping in and out of their eye-like orifices, twisting to catch the passing plankton.

The mussels weren't as entertaining, but it was obvious that they had been as busy, because they were literally everywhere. As Bob and I observed a section of these black-shelled bivalves, we saw one of them release a milky white cloud of something. It turned out to be life in the making! What we were watching was the first step in mussel reproduction. The mollusks release sperm and eggs into the water where the two unite. The fertilized egg becomes a floating larvae, floats with plankton, and finally settles to the bottom, or substrate, where it begins its life as the typical black-shelled mussel that we know. These mollusks may not have provided us with a dance or any fancy maneuvers, but both Bob and I felt that we were experiencing something very rare as we watched this unusual bit of nature at work.

With the huge quantity of barnacles and mussels in evidence, the resident fish were having a heyday. They swarmed around Hilda's legs by the thousands. There were sea perches (white, black, rubberlip and pile perches), as well as numerous varieties of rockfish, sculpin and basses. We noticed that most of these fishes stayed in the 30-40 ft. range, and that this was where most of the subsea life was concentrated. As we went deeper the water became cloudier, darker and less inhabited. Also less inviting. At the bottom of Hilda the water is 106 ft. deep, but it might as well be 1000 feet because it is murky and a bit unnerving since you can only see inches in front of your nose. The absence of light and the presence of currents make the deeper ranges less compatible with marine life forms.

But where there was life, there was life! Everywhere we looked was some living, growing thing. In between the ubiquitous barnacles and mussels were dense colonies of club anemones in bright oranges, deep reds, shocking pinks. Here and there were heavily planted colonies of white anemones, protruding from the pilings on their long, thick stems. Even Hilda's stanchions and underpinnings were breathing, and we couldn't put our hands anywhere without squashing something.

How all this stuff got to Hilda in the first place poses some interesting questions. The prevailing theory, as offered by Shane Anderson of Western Marine Labs, Santa Barbara, is that these sessile life forms (non-traveling animals that are anchored to something) drifted to the platforms in the larval state by way of currents. Upon arrival they attach themselves and commence their adult lives. "Certainly," says Shane, "they couldn't crawl across the bottom and up the pilings." It is interesting to speculate what would happen to all of these potential animals should there not be spots in the channel on which they could attach themselves, and this speculation brings up the whole idea of the oil platforms as artificial reefs.

It has been observed that any solid thing, when placed in the ocean, will attract marine life to it and that fish and invertebrates congregate around such havens. This discovery was made just after World War II, when divers returned to wrecked airplanes and ships and found them literally bustling with marine life. The first thing that happens in such situations is that plant life, such as algae, begins immediately to grow on the foreign object. The sessile organisms that need a solid surface on which to anchor themselves come close behind and these drift to the site in their larval state. These are the anemones, hydroids, corals, barnacles, mussels and other shell forms. The little fish come next, first because of the available food supply, but secondly because the foreign object, now a reef, offers protection — cracks and crevices in which they can hide from the bigger predators which come around soon after. Even the bigger, pelagic fishes that normally stay in the open ocean will circle around such a reef in the outer waters, zooming in when they decide that it is time to eat.

California has for some time experimented with artificial reefs. In 1958 the late Charles Turner, a California Fish and Game biologist, began dumping worn-out street cars, junked automobiles and quarry rocks into the ocean to see what would happen. He found that in the midst of virtual barrenness all of the objects attracted fish and developed into thriving reef communities. Other states are building such reefs today, out of scrapped ships off Texas, out of cars and old rubber tires off Florida, and out of car bodies in Chesapeake Bay. The results have been close to startling. In the midst of subsea deserts the artificial reefs have become oases for great varieties of marine life and thousands of fish, and in fact have become popular sport fishing areas. While skeptics have labeled the whole idea of artificial reef building as nothing but a license to dump trash in the ocean, the fact that the "trash" attracts multitudes of fish and other marine life forms cannot be disputed.

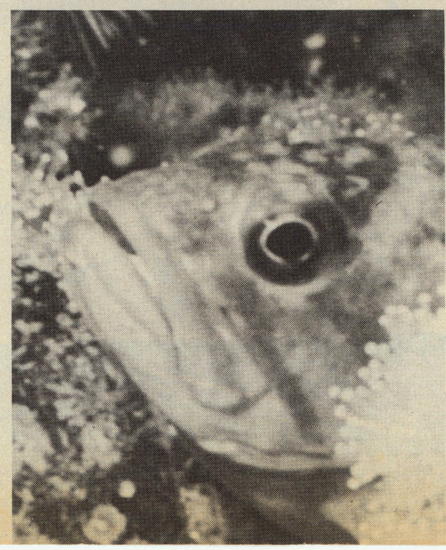
The oil platforms in the Santa Barbara channel have served as artificial reefs. While oil companies discourage pleasure diving beneath the rigs because of obvious liability, underwater scientific expeditions have been conducted around the rigs and in each case the evaluation is the same: things are hopping down there. When Hilda was installed in 1959, a Department of Fish and Game study was inaugurated to monitor consequent subsea changes. Within the first month after installation the hydrozoans had already begun to grow. In the second month, schools of sardines, mackerel and bonito had moved in. At the same time the scallops, barnacles and mussels had sprouted and were competing for space on the pilings. Nudibranchs by the thousands were depositing their eggs on the understructure. Hilda was so cluttered with different life forms that the oil companies found that they had to clean the pilings every two years, to reduce resistance of ocean currents on the structure. This cleaning practice may sound like a crime at the outset — a waste of perfectly good marine life. However, the animals that are cleaned off are instant food for the fish inhabitants, and new growth always begins immediately. If left to grow unchecked, the existing animals would eventually die and their shells or skeletons would take up space that is instead occupied by new, living things.

A diver can always expect to see a fabulous array of subsea life beneath Hilda, or any of the other oil platforms. I had to admit to Bob that nowhere, in all my years of diving off California, had I seen such an incredible concentration of such vastly different forms of life. And the types of life sometimes even vary between the different platforms. For example, on the rigs that are further out to sea in 300 feet of water, we noticed several different species of fish that did not occur on the inshore platforms. This is because the outer rigs are exposed to different currents. We were amazed to find bright orange, iridescently spotted baby garibaldis on one of the outer platforms, where none existed on Hilda.

The real treat in any diving experience comes when something totally unexpected takes place, and such an event occurred during our dive on Hilda. Bob was focusing on some vibrant red strawberry anemones when suddenly we both noticed some bigger-than-usual fishes slowly swimming out of the gloom toward the platform. We looked at each other and looked again; there were five big ocean sunfish (mola molas), lazily cruising nearly as if suspended in liquid space. Their big eyes rolled back and forth, watching us as carefully as we were watching them. The mola mola is a strange-looking, disc-shaped fish that looks as if it had been born without a tail. "Mola" in Spanish means "mill wheel," and the fish obviously got its name due to the fact that it resembles a circular milling stone. They are not frequently seen by divers because they usually stay in the open ocean, sunning themselves on the surface and flopping away at the sight of a boat. They are shy and will flee at the slightest hint of danger, but even when they are in a hurry the mola molas look as if they needed swimming lessons. The alternate fanning of the dorsal and anal fin is its major method of propulsion, and the whole procedure is awkward at best.

Bob and I moved toward these strange fishes. They didn't seem perturbed. We slowed our breathing, hoping that whatever bubbles we produced would not scare them off. I extended my hand toward one of them. It didn't move. I began to stroke its side, and it actually seemed to enjoy it. Soon we were engaged n a full-scale massaging game. I was thrilled and the fish was probably just feeling good. Mola molas are often plagued with parasites and the reason that they frequently jump entirely out of the water and slap their bodies on the surface is to enjoy a good scratch and to knock a few parasites asunder. They are often serviced by cleaner fishes such as the wrasses, and California blacksmiths (pomacentrids) have been seen swarming around mola molas, picking at their silvery hides.

The mola molas drifted off into the gloom, and Bob and I swam back to the platform. A huge purple jellyfish, its gigantic tentacles trailing behind, undulated by. We swam to the interior of Hilda to take an overall look at this giant underwater labyrinth. The loud hum of the wells reminded us that this huge artificial reef was actually an oil-producing rig — at the rate of 8000 barrels of crude oil and 40,000 cubic feet of natural gas per day. Hilda was no dead lady. Her inner machines were vibrating, her outer environment buzzing with life. All in all, she was, and is, a strange dichotomy of industry and nature.



In the midst of subsea deserts like the Santa Barbara Channel, oil platforms such as Hilda serve as artificial reefs attracting great varieties of marine life and thousands of different fish. Within a month after the installation of Hilda, the hydrozoans had begun to grow. Other encrusting organisms followed, as did fish, looking for food and shelter.