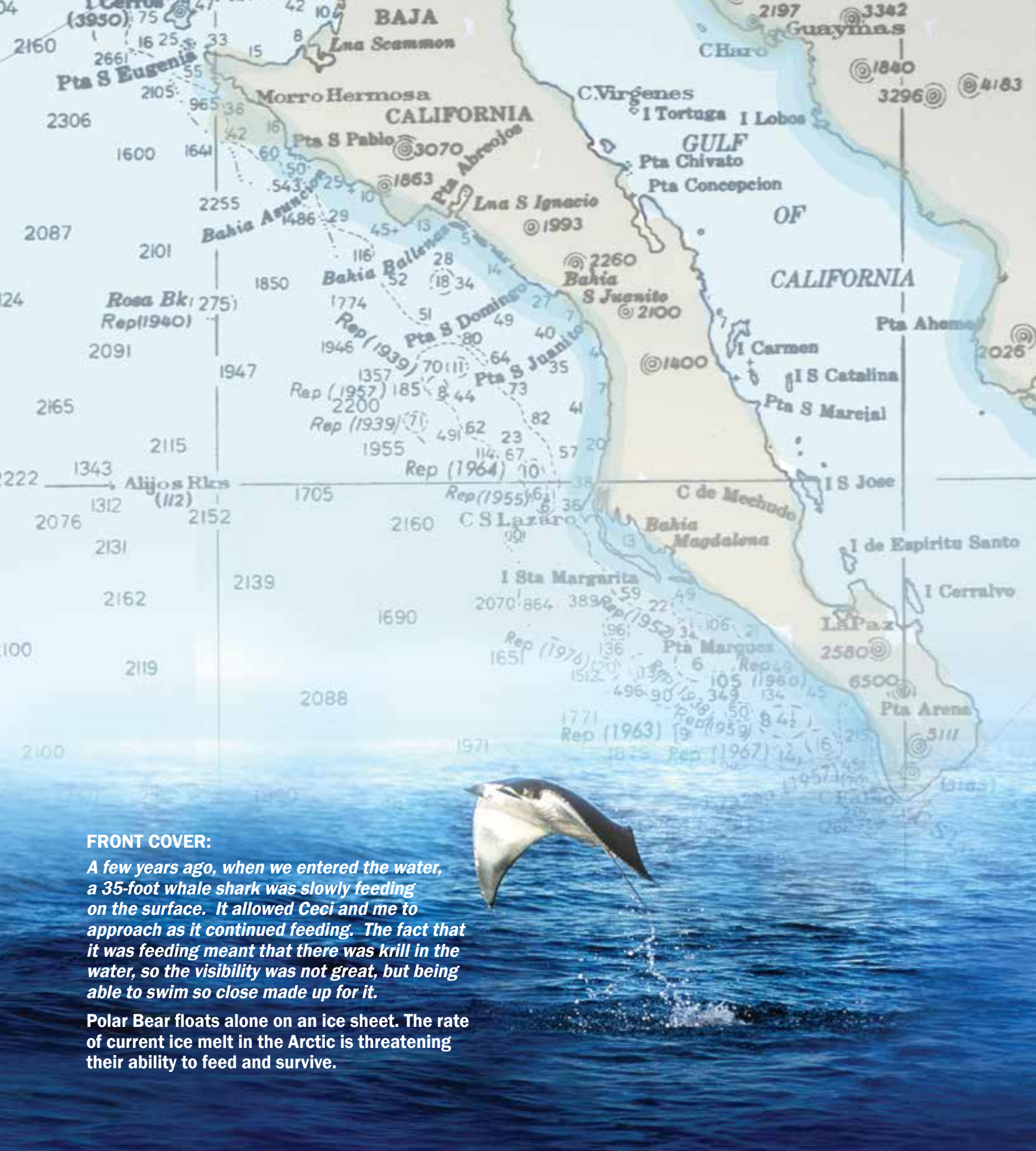
Baja to Bering

The Perilous Beauty

With Doc and Ceci White



FRONT COVER:

A few years ago, when we entered the water, a 35-foot whale shark was slowly feeding on the surface. It allowed Ceci and me to approach as it continued feeding. The fact that it was feeding meant that there was krill in the water, so the visibility was not great, but being able to swim so close made up for it.

Polar Bear floats alone on an ice sheet. The rate of current ice melt in the Arctic is threatening their ability to feed and survive.

Draft Sample Chapters

Doc White 'shoots' a marlin.

All Photos Courtesy of Doc White unless otherwise noted.

You don't take a trip; a trip takes you.
—John Steinbeck

Welcome Aboard

Allow me to introduce myself and my wife, Ceci. I'm Doc White and I have spent my life either around, over, under, or on the ocean. I started out in small boats off the Outer Banks in my home state of North Carolina. In 1958, I fell in love with Mike Nelson, played by Lloyd Bridges, on the TV show "Sea Hunt". That summer, when we visited my uncle at Naval Air Station Key West, I asked to learn to scuba dive, though in those days we called it "skin diving".

Doc and Ceci White spent several months at Monterey Bay Aquarium, in preparation for the publication of *Saving Sea Otters*, featuring Doc's photographs. The couple is holding a six-day old orphan sea otter, aptly named "Doc".

I was eleven years old; this was before scuba training was readily available. My uncle called the Underwater Demolition Team, and I got my dive training in one whole day. I had my duck-feet fins, twin 38 tanks, a double-hose single-stage regulator and my snorkel, with a ping-pong ball at the end. Since it was before color TV ("Sea Hunt" was filmed in black & white in 1958), I wasn't prepared for the amazing underwater colors, with myriad shades of sea life. I was enthralled, and I still am.

I spent twelve years in the Navy, first as a skipper of a Swift boat, in the Mekong Delta of Vietnam, and later as a fighter pilot, flying the F-4 Phantom off the USS *Ranger* (CV-61). I left the Navy, but not the ocean.

To pursue my passion for delving into the ocean environment and, in particular, photographing whales; I built *Mystique*. It is an 87′ dive/research vessel, which allowed me to spend my life on the ocean (covering more than a million sea miles), constantly learning and sharing the beauty and expansiveness of this magical place.

Ceci came from an entirely different background; she was a cowgirl. She grew up in the mountains of Arizona, where she and her sister rode rodeo. Ceci's events were ribbon roping and barrel racing.

We met in San Diego in 1985, when she was a manager at Nordstrom. An adventurer at heart, she jumped at the chance of learning to dive. For her first ocean dive, we took our boat to San Clemente Island, some 55 miles west of San Diego; it was a gorgeous day with smooth seas. About halfway across, we were intercepted by a pod of dolphins. Over the engine noise, I yelled to Ceci, "We have dolphins on the bow." Excited, she yelled back, "I've always wanted to see dolphins. What's the bow?"

That moment started our life at sea together. Since then, Ceci has earned her 200-ton-vessel Master's license and together we've traveled over 160,000 nautical miles. And yes, she did get to see and swim with many dolphins over the years. It turns out that animals love her. They seek her out, even swimming close to her to be touched. And not just dolphins seek her out—whales, sea otters, manta rays, manatees, and whale sharks have entered my frame as Ceci swims with them. This makes being an underwater photographer much easier. I have a beautiful wife and model, who naturally invites guests over.

Mystique has been our home, classroom, laboratory, and transportation for our expeditions. She has carried us safely on many adventures in the Pacific Ocean, including the Galapagos, Papua New Guinea and the Solomon Islands, as well as the Eastern Pacific.

We are embarking, once again, on an expedition aboard RV *Mystique*. She is a sturdy, steel-hulled vessel equipped with state-of-the-art electronics and safety equipment. We will begin our voyage in the warm, tropical waters of the Sea of Cortez, head south to the tip of the Baja Peninsula, round Cabo San Lucas, then cruise north along the Pacific Coast. The water will change from tropical to sub-tropical as we head north, then temperate as the miles northward pass under our hull.

The landscape transforms gradually from the spartan vistas of dry desert and cactus in the south, to Southern California's semi-desert, more populace coastline. An estimated sixty-million people live within 100 miles of the Pacific coastline, from Baja to the Bering Sea, with relatively few people able to see and experience firsthand, as we have, life at sea.

As we close the Pacific Northwest, the waters become colder still, bringing with them the nutrients and plankton blooms that portend the return of millions of salmon to the rivers and streams of their birth. There they lay their eggs and protect them until death. With their death, their bodies nourish the largest temperate rainforest on the planet. Over 200 animals, including wolves, bears, birds and insects, depend on their return.

Along our route, we will be in the company of whales, dolphins, seals, sharks, sea otters…to name just a few of our friends. We will be cruising alongside the blue whale, the earth's largest mammal. The whale's sound has been measured to travel more than a 1,000 miles.

While in transit, we will see varying types of kelp that make up our precious underwater "forests". The kelp forests provide food and shelter for thousands of fish, invertebrates, and marine mammals. Exploring these forests underwater is a mystical, other- worldly experience, which we hope to share with you.

As with all such voyages, there are great challenges to be met; there is an element of risk; a test of stamina and courage. Even though we are utilizing high-tech instruments and accurate charts, the sea and Mother Nature remain unforgiving and capricious.

Preparation is paramount. Innumerable details have to be considered: a sturdy vessel is a good start. Then follows all the spare parts that we need to have at the ready, for any system failure.

The award-winning photo by Doc White was the first ever to show, full frame, a blue whale with its throat pouch expanded, the pleats forced open by the engulfment of a gargantuan amount of water and shrimp-like krill. Having lunged through the krill swarm, the whale is expelling the water, forcing it through the massive sheets of hair-like baleen material, which hang from its mouth. To find large enough aggregations of krill, a blue whale is forced to travel great distances. Ironically, this photo illustrates how the world's largest animal is dependent upon the smallest crustacean— the 2-inch krill.

We are depending on two stalwart voyagers to be our navigators. They are eminently qualified and particularly well-adapted to the marine environment; they manage the 10,000 NM transit round-trip, not once, but twice a year throughout their lifetime—the gray and humpback whale.

There are no yacht repair facilities in the middle of the ocean. We will need the necessary safety equipment, onboard navigation and communication systems, and food storage—the galley and cooking are always a focal point on long journeys.

Then there is the question of our purpose—diving, observing, researching, photographing, and recording the mysterious sea below our keel…more equipment is needed!

…Dive gear/compressor, cameras, lenses, watertight casings, drones, underwater lights, recording devices, battery packs, and back-up parts and systems, in case something fails.

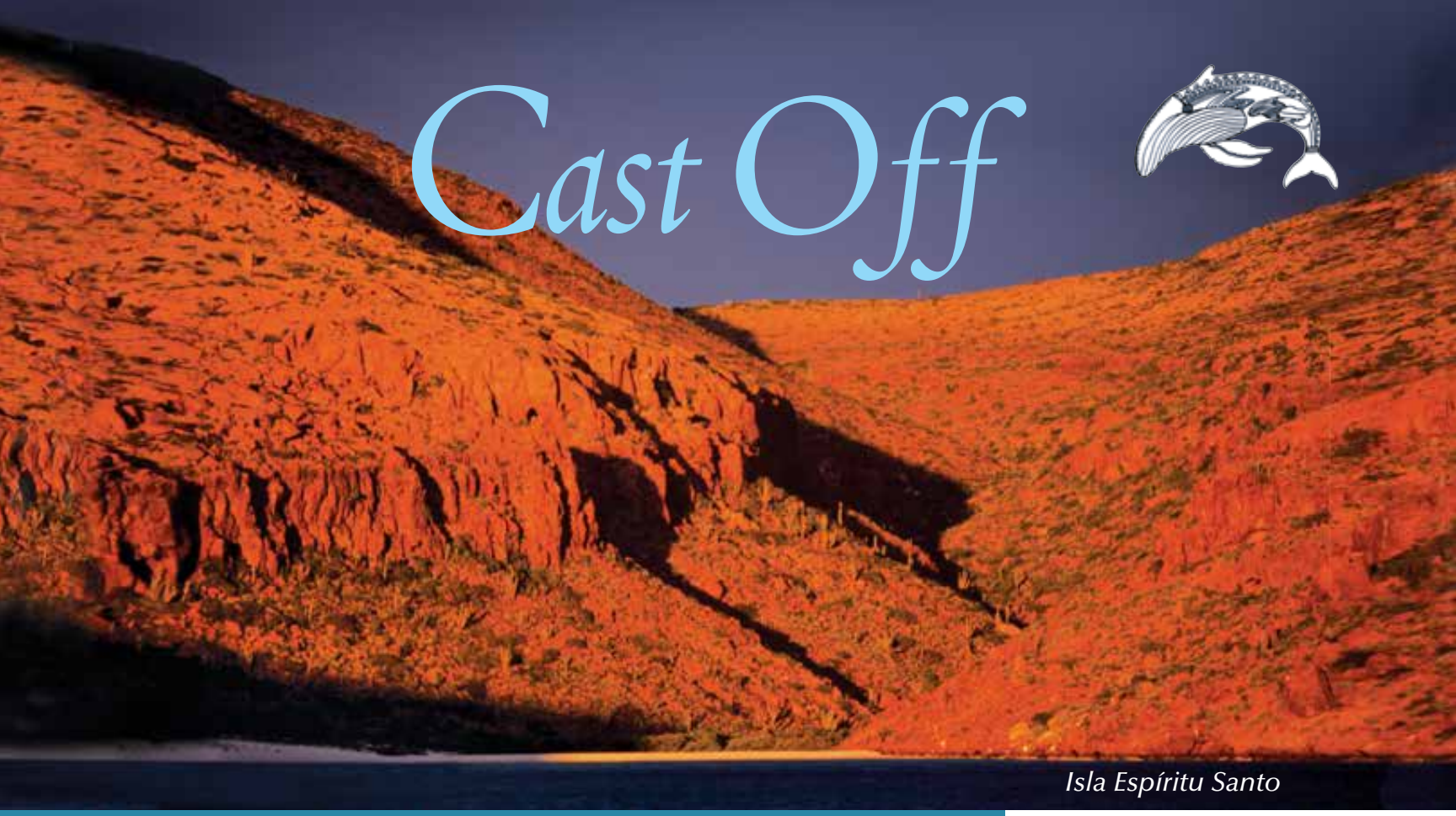
And it's not a bad idea to have equipment for catching your favorite seafood.

These two voyagers, the gray and humpback whale, will be our muse, our guides, to introduce us to the geography, the flora and fauna, the hazards and the beauty of their ocean migration. We will come to understand how the ocean environment influences life along the coast of North America: how it supplies us with oxygen and absorbs carbon; how it affects our food source, our weather; how it produces medicine, energy, and many commercial products; how the ocean has shaped our history and how it influences the course of our everyday lives.

You've had your safety briefing. Your bags are stowed. You've selected your berth for the voyage.

We hope you enjoy the journey,
Doc and Ceci White

Cast Off



Isla Espíritu Santo

While nomadic tribes inhabited Baja California Sur from 11000 B.C., Europeans didn't enter the Sea of Cortez until the 1500s. The first Spanish attempt at a settlement was La Paz, on the peninsula, though at the time they thought it was an island. The Spanish Conquistador Hernán Cortés sent ships, in two separate voyages, to explore the Pacific Coast of Mexico (in 1532 and 1533). The crews noticed the inhabitants wearing beautiful ornaments and returned to mainland Mexico with anything they thought of value, including black pearls. Cortés voyaged to La Paz from the mainland in 1535, realizing the potential worth of the black pearls. Thus, began a long and storied history of the black pearls of the Sea of Cortez. One prized black pearl sits upon Queen Elizabeth's crown—George IV State Diadem. Pearls were harvested for 400 years, until the 1940s, when they had all but disappeared due to over-harvesting and disease.

We have cast off from the beautiful coastal city of La Paz, in the Sea of Cortez, of Baja California. As we depart La Paz harbor our sights are not set on pearls, but the largest fish in the ocean, the whale shark. From October through May, they arrive for their seasonal feast of plankton in the Bay of La Paz. Amazingly, the two largest fish in the ocean, the whale shark and basking shark, are filter feeders, swimming through the krill with their mouths open, straining out their prey. The largest specimen measured was 55 feet, but a "small" one can easily be 35 feet.

Before turning south, we've decided to visit the northern end of Isla Espíritu Santo and the small rock called Los Islotes, which was named a UNESCO World Heritage Site (2005). In many previous trips to the Sea of Cortez, Los Islotes was a mecca for California sea lions. We had good luck then; the rock was full of sea lions. Ceci had red gloves which she took off for the sea lions; they immediately swam by and grabbed one, swimming around, then bringing it back for her to wave again for another round of play. This has become a favorite tourist spot, so the animals are used to humans and seemingly amused by our feeble attempts to engage them.

California Sea Lion

East of Los Islotes is El Bajo, a seamount some three miles off Isla Espíritu Santo. In waters of over 1500 to 3000 feet, the mount rises to 55 feet below the surface. I first heard about the mount from renowned filmmaker Howard Hall (in 1979). Later that year, we searched for it, but with no luck. It was before GPS, and in open ocean so deep we couldn't get a reading on

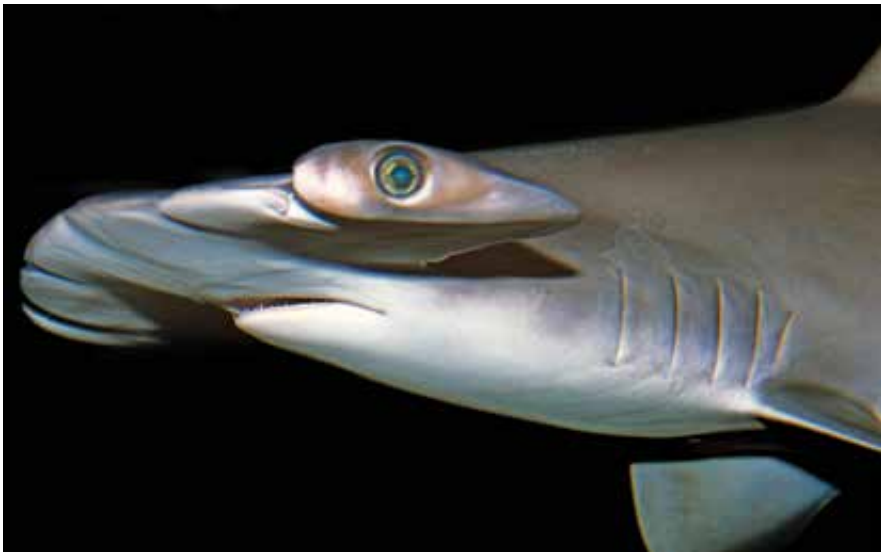
Ceci plays with a California Sea Lion

Such was the case a few years ago, when we entered the water, a 35-foot whale shark was slowly feeding on the surface. It allowed Ceci and me to approach as it continued feeding. The fact that it was feeding meant that there was krill in the water, so the visibility was not great, but being able to swim so close made up for it.

our fathometer. Luckily for us, a fishing panga showed us the location by lining up several landmarks. Sure enough, the fathometer showed an ocean floor rising rapidly to 55 feet. The water was calm and clear; we anchored on the high spot and stayed there for 5 days, exploring the environs.

My first dive was early afternoon; there was no current. I entered the water and started swimming to the highest point of the seamount. Without realizing it, I had been holding my breath as I reached it. Hundreds of hammerhead sharks swam around me. I had never seen so many sharks. When I realized I had been holding my breath, I exhaled loudly. Instantaneously, all the sharks scattered and disappeared. I looked over my shoulder to see what had frightened so many sharks. Watching my own bubbles rise to the surface, I understood. The sudden sound-burst was me trying to breathe, with the accompanying gurgling from my scuba tank.

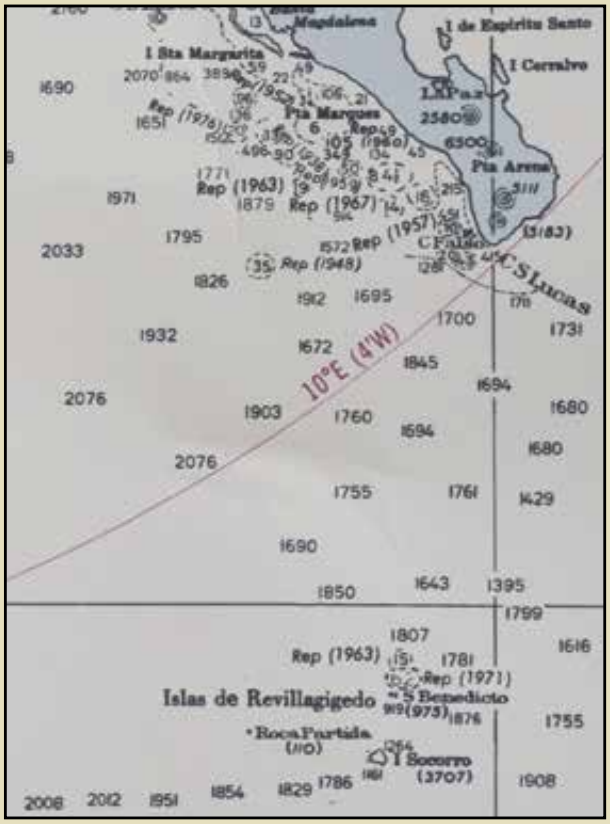
For the remainder of that trip, we used snorkels so as not to frighten the animals. We were then better equipped to approach and photograph them.



A hammerhead shark is perhaps the most unique and distinctive of all sharks. Fossils of genera *Sphyrna* have been dated to 23 million years ago. The peculiar shape of the flattened and expanded head is hydrodynamically advantageous, allowing quick sharp turns to attack prey. Their nostrils are more expanded compared to other groups of sharks, giving them a keener scent to locate their prey. The broad spacing of their eyes offers a panoramic view of their environment, while the underside of the head offers more sensory receptors for locating their prey. Needless to say, they are excellent hunters, feeding on stingrays and other bottom dwelling fish.

Our Guides

After departing these waters, we will head farther south along the Baja Peninsula, toward the eastern Pacific. Our guides for this part of the journey are newly born gray whale and humpback whale calves. Gray whales breed and bare their young in the protected waters of several lagoons and bays along the Baja Peninsula. The Eastern North Pacific humpback breed and birth their progeny in the warm shallow waters along the southern coast of Baja and the offshore islands of Socorro and Tres Marias.



The Humpback whales' journey is the longest migration of any mammal on earth. While humpbacks are found worldwide, the gray whale is only found along the Eastern Northern Pacific. In the 1800s, whalers headed to the warm waters off Baja California for the bounty of whales seeking the shallow breeding lagoons.

GRAY WHALE

Eschrichtius robustus
Approximately 50 feet in length
80,000 pounds

The gray whale is a baleen whale but not a rorqual. Alone in its family *Eschrichtiidae*, gray whales are easily identified by their gray skin and lack of a dorsal fin. Instead, knuckles parade down the rear third of their backs. Barnacles further mark a gray whale's body—it hosts the most parasites of any whale, probably because they swim slowly and feed off the bottom.

A rorqual refers to any of a family (*Balaenopteridae*) of large baleen whales that have relatively small heads, short broad plates of baleen, and the skin of the throat is marked with deep longitudinal furrows (the humpback whale is in this family)

An interesting contradiction to our observations about gray whales in the Atlantic, occurred in May 12, 2010, when a gray whale was sighted just north of Tel Aviv, Israel, and was followed for over two hours—the first time a gray whale had been sighted in the Atlantic Ocean since the 18th century! A couple of years later a gray whale was sighted and photographed off the coast of Namibia, Africa, in 2013. Researchers suggest that with the Arctic melt, gray whales may begin to find their way into the Atlantic again.

Gray whales feed in the Beaufort, Bering, and Chukchi Arctic seas, then travel about five thousand miles south to their breeding grounds along the Baja Peninsula, where they linger from February to April. They return to feeding grounds for the summer, timing their migrations with ice formations. Mothers with new calves leave later, allowing the young to grow strong enough for the five-thousand-mile journey.

Originally, an Atlantic gray whale swam along the east coast of North America, but it's considered extinct. Two Pacific populations took different routes. One swam along the west coast of North America, the other along the east coast of Asia. Through extensive preservation measures, the California population has made a remarkable comeback and is quite possibly the most observed whale of all. From Alaska to Baja, traveling in shallow waters near the coast; the gray whale is a celebrity, drawing charter boats loaded with tourists to observe the migration.

Mother whales no longer race away from boats in the shallow lagoons of Baja where whalers once slaughtered them. They boldly swim closer to boatloads of tourists and rub their barnacle-clad heads under the bellies of the boats, as if to scratch an itch.

Ceci's experience with a gray whale calf in San Ignacio Lagoon still sends chills up my spine. A gray whale mother nudged her week-old calf up to the rubber boat, allowing Ceci to touch it. This is the same species that whalers called the "devilfish," because mothers would attack boats when their calves were harpooned.

HUMPBACK WHALE

Megaptera novaeangliae~
58 feet 90,000 pounds

Our other guide is the humpback whale. The Eastern Pacific humpback makes the same journey as does our gray whale, albeit somewhat shorter, not going all the way to the Bering sea, but generally feeding in Alaska.

Arguably the most iconic of all whales, the humpback derives its name from its dorsal fin, which resembles a hump. Its scientific name, *Megaptera novaeangliae*, means "great winged New Englander," describing long pectoral fins resembling wings. These long fins help the humpback perform all the aerobatics of whales—breaching, spy hopping, pec slapping and tail lobbing. These whales also sing and work in concert with other whales to surround small fishes with air bubbles, netting them. This "bubblenet" allows the whales to capture and eat small fishes.

A fifty-five foot, sixty-thousand-pound adult humpback may be black or dark gray on top of the pectoral fins, belly, and underside of the flukes, but colors vary depending on where the whale lives. Whales in the southwest Pacific tend to have more white on their bodies than those of the northeast Pacific.

Humpbacks migrate up to ten thousand miles from their feeding grounds. In the Northern Hemisphere they travel to their feeding grounds in the north, then south to mating and calving grounds in the tropics, but they are not thought to cross the equator. In the Southern Hemisphere they travel to the colder waters near Antarctica, and then north to the mating and calving grounds in the tropics.

Slower swimming than some whales, humpbacks tend to attract parasites. Like many whales, they have whale lice but also sport three different kinds of barnacles on their skin. One type only grows on another type of barnacle. As the whales migrate through waters of different temperatures, some barnacles fall off.

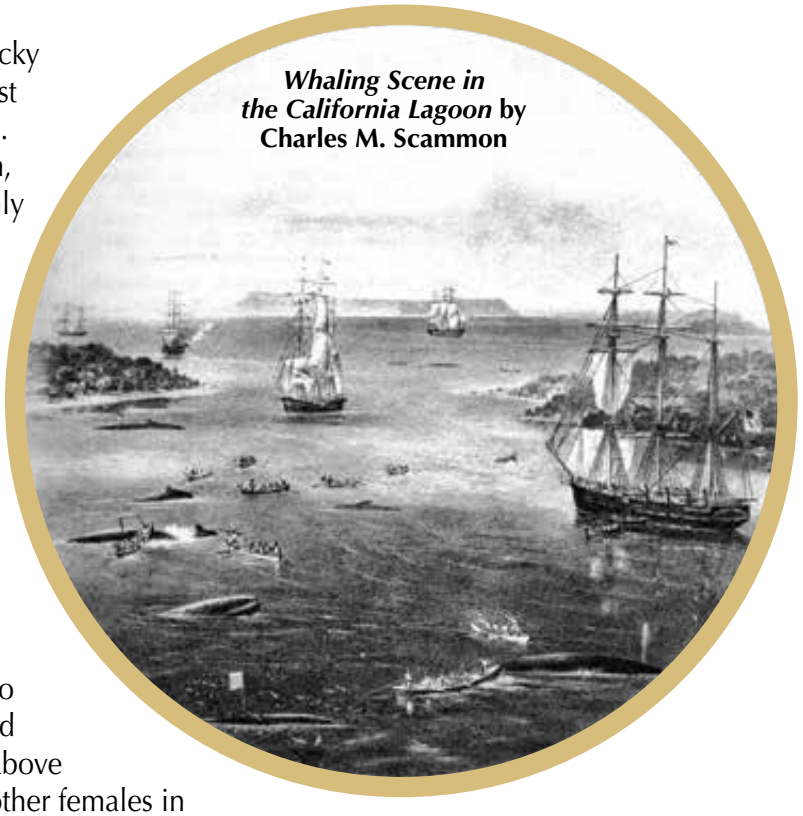
Humpback breeching

Humpback's barnacles

Sperm whales are the largest of the toothed whales and have one of the widest global distributions of any marine mammal species. They are found in all deep oceans, from the equator to the edge of the pack ice in the Arctic and Antarctic.

They are named after the waxy substance, spermaceti, found in their heads. Spermaceti was used in oil lamps, lubricants, and candles. Sperm whales were a primary target of the commercial whaling industry from the 1800s to the 1980s. Whaling greatly reduced all sperm whale populations. While whaling is no longer a major threat, sperm whale populations are still recovering. The sperm whale is listed as "endangered" under the Endangered Species Act and "depleted" under the Marine Mammal Protection Act.

Sailors aboard whalers often passed the time creating scrimshaw – etchings on sperm whale teeth.



Whaling Scene in the California Lagoon **by Charles M. Scammon**

Ceci and I have been lucky to swim eye to eye with most species of marine mammals. We have come to love them, learn from them and certainly consider them intelligent and caring creatures.

On many occasions whales and dolphins have shown maternal and group protective instincts that humans think only belong to our species. One example, which occurred off the Azores in the 1990s, a mother pilot whale bore a stillborn calf. She swam it to the surface in hopes it would breathe. She held the calf above water for over a week; the other females in the pod aided her and the males formed a protective circle around them.

In 2019, in the waters of Puget Sound, a female orca kept her calf on the surface for over two weeks in hopes it would resuscitate, but to no avail. Fortunately, that mom has had another calf, which is surviving.

Sperm Whale

Today, it seems cruel and inhumane that these animals were slaughtered, and their maternal and family instincts were used to aid in their killing. It was common practice to harpoon the calves so that the family group would stay close to the crying calves, in vain hopes of rendering aid, only to be harpooned in turn.

WHALING

Why did we hunt whales? It is hard to overstate the importance of whaling or, more precisely—whale oil—in the nineteenth and early twentieth century. Early on, whale oil was primarily an illuminant; it was the main source of light until kerosene replaced it, after the American Civil war in the 1860s.

Whale oil was used in everything from fuel for lamps, lubricants, soaps, even margarine. Baleen was a precursor to plastics, and bones were used for fertilizer. Until the mid-twentieth century's invention of synthetic oils, sperm whale oil was used in watches and chronometers and other precise instrument products. Another favorable quality of sperm whale oil is it remains liquid in sub-zero temperatures, resistant to heat and pressure.

Whale Oil Uses

- **Illuminant— in lamps including railroad signal lamps, until replaced by Galena Signal Oil from a Franklin, Pennsylvannia, oil refinery**
- **Candles (first made from sperm head oil in the 1750s, in Newport, Rhode Island, by Jacob Rodriguez Rivera**
- **Watch oil (at $5.00 per ounce in 1957)**
- **Additive in motor oils**
- **Automatic transmission fluid**
- **Lubricant for delicate high altitude instruments**
- **Glycerine**
- **Cosmetics (imparted a rich glossy sheen)**
- **Rust-proofing compounds**
- **Chemical fibers**
- **Detergent**
- **Vitamins**
- **Glaze (on photographs)**
- **In addition, whale oil was used in well over 70 pharmaceutical compounds.**

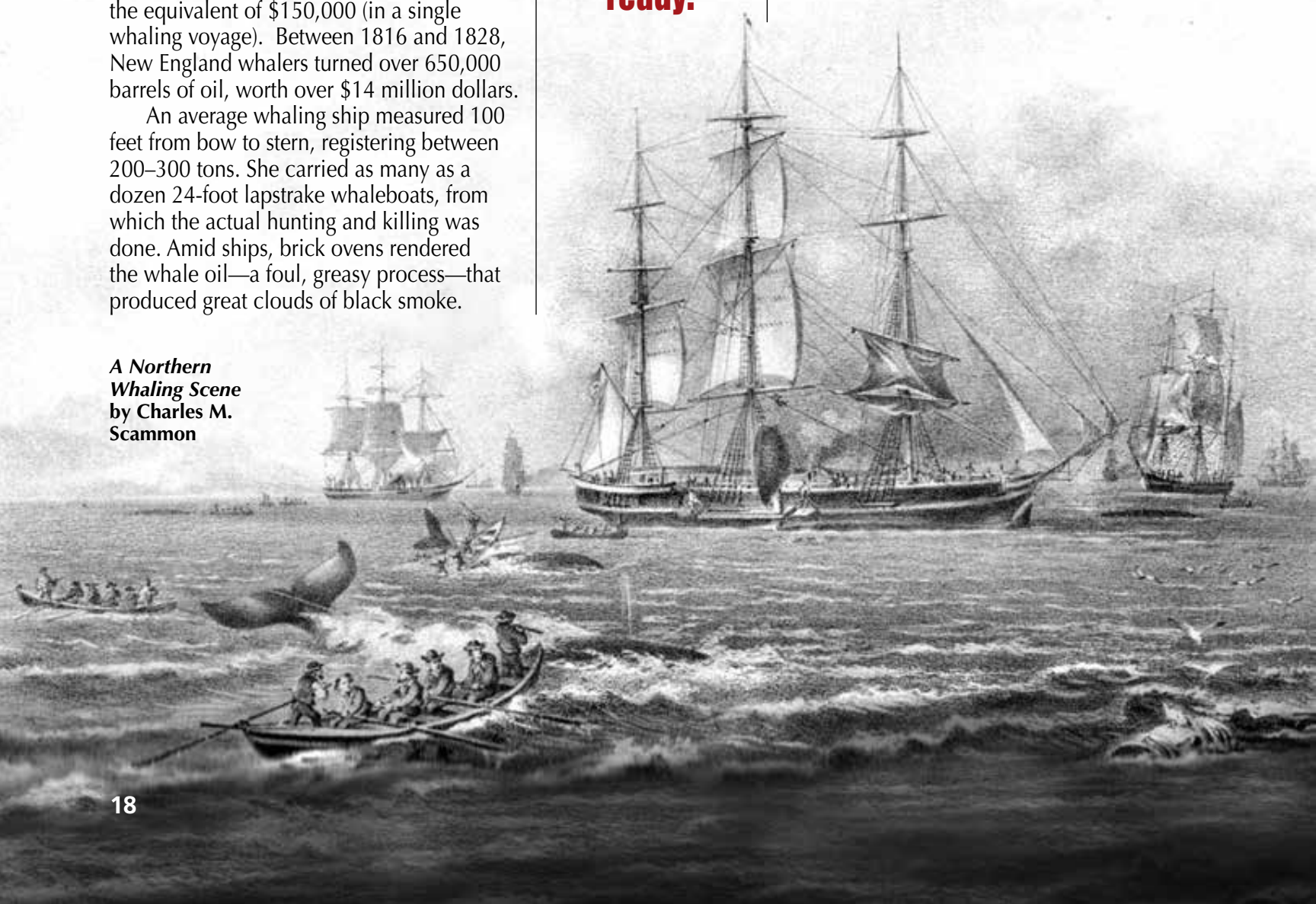
In the early days of the American colonies, Nantucket had the wealthiest community in the New World, with well-known Quaker families like Macy, Folger and Starbuck owning many of the whaling companies. Back then, the whales lived close to Nantucket and New Bedford, the favorite of the right whale, so named because when killed it would float. Even with the primitive harpoons of the day, the populations of whales were soon decimated. Longer voyages were necessary; by the 1800s ships were traveling from the East Coast to the northern Pacific to find sufficient populations of whales. The profitable whaling was grueling, dirty, and a dangerous business. A captain might make the equivalent of $150,000 (in a single whaling voyage). Between 1816 and 1828, New England whalers turned over 650,000 barrels of oil, worth over $14 million dollars.

An average whaling ship measured 100 feet from bow to stern, registering between 200–300 tons. She carried as many as a dozen 24-foot lapstrake whaleboats, from which the actual hunting and killing was done. Amid ships, brick ovens rendered the whale oil—a foul, greasy process—that produced great clouds of black smoke.

Once the whale came into view, sailors lowered the small wooden boats and rowed toward the whale, harpoons ready.

Once the whale came into view, sailors lowered the small wooden boats and rowed toward the whale, harpoons ready. Once struck with a line attached from the small boat to the whale, the "Nantucket sleigh ride" took off. The whale pulled the wooden boat through the waves and sometimes into the depths. Mortally wounded whales spouted blood as the whaling boats towed them back to the shop where the animal's baleen was flensed for rendering the oil. The oil was then put into barrels for the trip home.

The whaler *Charles W. Morgan* was one of the most profitable whaling vessels of her day and, after several years of restoration, she is still afloat in Mystic, Connecticut.



***A Northern Whaling Scene* by Charles M. Scammon**

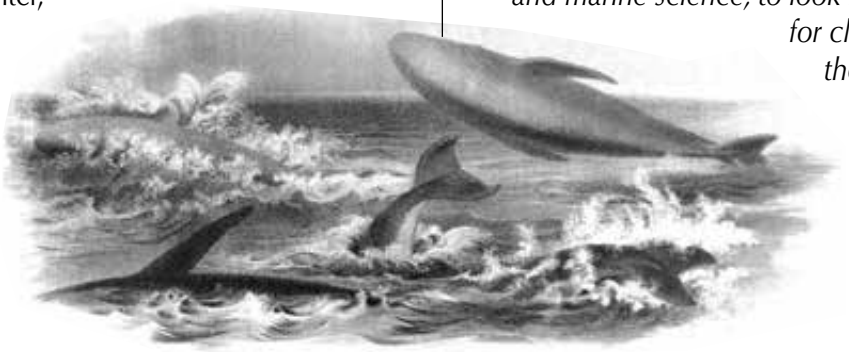
Sperm Whale

The Civil War Reached the Whalers in the Aleutian Islands

During the American Civil War, the Confederacy gave orders to its commerce raider, CSS *Shenandoah* , to seek out and destroy the whaling fleet of New England. *Shenandoah* traveled to the Bering sea, burning or capturing 36 whaling ships, thus causing decades of economic hardship for the New England States. Ironically, *Shenandoah* fired the last shot of the Civil War, across the bow of a whaler in the waters off the Aleutian Islands, some three months after the surrender at Appomattox (April 9,1865).

After ravaging the waters of the Atlantic, whalers headed to the warm waters off Baja California, for the bounty of whales seeking the shallow breeding lagoons. Charles Scammon was perhaps one of the best-known whaling captains. Born in Maine in 1825, Scammon sailed for California in 1850, and earned the command of the brig *Mary Helen,* homeported in San Francisco, in 1852. Hunting whales and seals along the eastern Pacific, he discovered the hidden, shallow lagoon along the Pacific coast of Baja, in 1855.

Though a successful hunter, Scammon became a great naturalist and collector, and made numerous contributions to the Smithsonian that can still be studied today. His accounts and sketches were published under the title: *The Marine Mammals of the Northwestern Coast of North America* (John H. Carmany & Co., San Francisco, and G.P. Putnam's Sons, New York, 1874).



Scammon's book is surprisingly accurate; the drawings depict the animals, their descriptions and various hunting techniques used by Native Americans, Eskimos, and commercial whalers. His descriptions of animal behavior and physical characteristics are quite astute, and he details the techniques for hunting each type of whale and seal.

I must take the watch and set our course for Socorro Island. You are, no doubt, anxious to get your sea legs and to move about the ship, study the coastline and try to spot a whale or dolphin.

As you can tell, it can be difficult to keep a good sea story short, and even harder not to drift off and wonder about all those who have sailed before us. And it is nigh on impossible to resist the urge to search through the pages of history and marine science, to look in every direction, for clues…answers to the mysteries that surround us… we might well be the ones to unlock those very mysteries.

—Doc White

***Humpbacks Lobtailing, Bolting, Breaching and Finning* by Charles M. Scammon**

Ojo de Liebre Lagoon (meaning 'hare eye lagoon'), formerly named Scammon's Lagoon, is now within *the Vizcaíno Biosphere Reserve* UNESCO World Heritage site.

Ceci and I would like to Welcome you Aboard and invite you to join our Expedition from Baja California to the Bering Sea, Alaska.

A Whale Shark Strikes a Pose for Doc White

These draft sample chapters represent our book project, in concert with the short film productions produced by Ocean Magic Productions – a companion project with Doc's Ocean Magic Photography.

You can view a sampling of Doc's short films on his Blog at Ocean Magic Productions: oceanmagicpro.com

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