

# THE EPIC

by Charles C. Hofer



The Pacific Gray Whale's Long Path to Recovery

# JOURNEY



**A** small boat drifts in the shallow waters of San Ignacio Lagoon in Baja California Sur, Mexico. The motor has been cut off. The six passengers sit in silence, bobbing in the gentle waves, scanning the waters in breathless anticipation.



*Poosh!* Right next to the boat, a spout of water shoots into the air. It's followed by the booming exhale of a giant underwater beast. It's a Pacific gray whale breaking the water's surface.

Each year, Pacific gray whales gather in these waters to spend the winter months. For some females, it will be time to give birth to a single calf. The young will grow strong...and they'll need to.

Just weeks after their birth, the whales will feel compelled to go north to their summer feeding grounds

off the coast of Alaska. Pacific gray whales complete an annual migration of more than 10,000 miles (16,100 km) roundtrip, making it one of the longest annual migrations in the entire animal kingdom.

But the Pacific gray whale's story is so much more than a tale of migration. It's an epic journey that has taken the species from the edge of extinction to becoming one of the world's greatest conservation success stories. Today, the Pacific gray whale is the only marine mammal to ever be

removed from the endangered species list due to population recovery.

### A Deadly History

Whales and humans have had a long and complicated relationship. *Whaling*—the hunting of whales for food or products—dates back more than 4,000 years. From Japan to Canada, native communities relied on the giant animals for meat while their bones were fashioned into tools. For centuries, these small whaling efforts had little effect on whale populations worldwide. This was *subsistence hunting*, where people only killed what they needed to survive.

By the 1700s, however, Europeans had turned whaling into a lucrative industry. Whale blubber, a thick fatty layer that keeps the massive mammals warm in chilly ocean water, provided oil to power lamps. Whale oil brought precious light to a dark world.



By 1930, whaling left the Pacific gray whale on the brink of extinction.

### THE MIGRATION ROUTE OF THE PACIFIC GRAY WHALE



Each year, Pacific gray whales travel round trip more than 10,000 miles (16,100 km), one of the longest annual animal migrations.

mother's milk, growing strong enough to begin their first journey north.

By March, it's time to leave the lagoon.

This migration will take about two months and cover 5,000 miles (8,046 km). While adult whales will rarely feed during the journey, calves will still nurse from mom, packing on 60 pounds (27 kg) per day! Eventually, the young whales will weigh up



With equipment like these cameras, NOAA monitors the movements of Pacific gray whales off California.

oil was no longer needed to light cities and homes. But the whaling industry simply changed its focus. The giant mammals were now hunted for other products like soap and pet food.

At first, whalers mostly hunted right whales, bowhead whales, and blue whales—slow-moving species that produced high-quality oil. When these species became increasingly rare, the whaling industry turned its sights on more common species. The timid gray whale soon became a prime target for whalers. Within decades, the gray whale population crashed to about 1,000 individuals. By 1930, the species was teetering on the brink of extinction. Without drastic action, the Pacific gray whale would soon disappear forever.

### Spring: Danger Ahead

In April to May, the gray whales reach coastal Canada. Here, a new danger awaits. "Wolves of the sea"—orcas, also known as killer whales—hunt together in pods in these cold waters.



The Pacific gray whale grows to nearly 50 feet (15 meters) and weighs about 80,000 pounds (36,290 kg).

In the mid-1800s, the whaling industry was booming with the advent of the steam whaler, or steamship, and the "explosive harpoon." From Scandinavia to New England, whaling fleets scoured the most remote waters of the Earth. It wasn't long before common species of whales became scarce.

### Winter: The Journey Begins

In the warm waters of San Ignacio Lagoon, the end of December marks the beginning of calving season. The lagoon is the perfect nursery for young gray whales. These waters are shallow, protected from many dangers like great white sharks that lurk in the open ocean. Weighing about 1,500 pounds (680 kg) at birth, the young calves will spend their first months in nursing from their

to 40 tons (about 80,000 pounds, or 36,290 kilograms).

From late March through May, small groups of gray whales are passing Northern California and moving past Oregon. During this stretch of the migration route, whales are easily spotted off the coast. But how they know where they're going remains a mystery.

"We do not know the specific mechanism by which [gray] whales navigate," says Aimée Lang. She's a researcher with the NOAA Southwest Fisheries Science Center in La Jolla, California. She says that scientists think the marine mammals might use the Earth's magnetic field, underwater landmarks, or sound cues.

### The Edge of Extinction

With the invention of electric lights in the late 1800s, whaling subsided as the





The baleen of a young gray whale

These swift predators won't hesitate to prey on a young gray whale—if they can separate the calf from the adults. Adult gray whales are fiercely protective of their young. When orcas appear nearby, adult gray whales will surround their young. One mother has even been seen putting her young calf on her back to protect it from a pod of hungry orcas.

Yet other dangers await gray whales along their migration route. The West Coast of North America experiences heavy traffic of cargo ships and other large vessels speeding in and out of ports. During their migration, gray whales are in constant danger of crossing into shipping lanes and getting hit. A vessel strike can be devastating, resulting in death or serious injury.

Motorized vessel traffic also greatly increases noise in the ocean waters. These added sounds can affect the whales' ability to safely communicate with one another.

### Summer: The Feeding Grounds

In May, the gray whales complete their journey north when they reach the cold waters of the Bering Sea that separates Alaska from Siberia in Russia. Here, the whales will stay in the shallow waters that are rich in food and nutrients. The young calves have begun to wean off their mother's milk. It's time to start feeding for themselves.

Instead of large teeth, a gray whale's mouth has plates of hard bristles called *baleen*. Unlike other



One Pacific gray whale that has reached Alaska breaches.

baleen whales that feed near the surface of the ocean, gray whales feed on the bottom of shallow waters. They can dive as deep as 250 feet (75 m), scraping their mouths through the mucky ocean floor and scooping up thousands of pounds of water and mud in every gulp. Using their massive tongue—which can weigh up to 3,000 pounds (1,300 kg)—they squeeze out the water and mud, using their baleen as a sieve. Left behind is a mouthful of yummy *amphipods*—tiny shrimp-like creatures—and other small, tasty ocean animals.

### The Journey to Recovery

By the 20th century, humans began to recognize that the whaling industry was destroying whale populations. One estimate found that nearly three million whales of all species were killed during the 20th century alone. But few species were as close to disappearing forever as the Pacific gray whale. Eventually, humans took action to protect these giant animals. In 1946, the major whaling nations formed the International Whaling Commission, creating one governing body to help regulate whaling on a global scale.

By the 1960s, the environmental movement laid the groundwork for strong laws and protections. In 1973, the US Congress passed the Endangered Species Act, giving unprecedented protections to species facing extinction. The Pacific gray whale would be one of the founding species listed as “endangered”—in danger of going extinct. Thanks to its newfound protections, the gray whale slowly began to recover.

Specific actions, like keeping ships from speeding, have helped reduce



An individual is spotted off the coast of Oregon as it returns to Mexico.

conflicts with whales. “Slowing ships in areas where there are vulnerable species like whales...reduces the risk of whales being struck,” says Lang. “It's kind of like a slow zone near schools to protect children coming and going to school.”

Decades later, the Pacific gray whale made history. In 1994, the species was officially removed from the endangered species list. Once teetering on the brink of extinction, the gray whale had “officially” recovered.

### Fall: A Long Trip Complete

The summer is short in the Arctic waters. October brings frigid temperatures. It's time to return south, back to the warm waters of San Ignacio Lagoon and complete the epic migration. The whales will once again run the gauntlet of orcas and shipping lanes and other dangers.

After two months of swimming, the gray whales reach their wintering grounds in December. Some females will give birth to a new brood of calves and the cycle of life will begin again.

Humans also return to this lagoon. Not long ago on their boats, they might have been armed with deadly harpoons. Today, they instead wield cameras, feeling a deep appreciation that they are witnessing the miraculous journey of the Pacific gray whale.

**Charles C. Hofer** is a biologist and writer living in southern Arizona. Although he lives in the Sonoran Desert, he makes regular trips across the border to the Sea of Cortez to explore its amazing biodiversity.