

Gray Whale Migration - Witness the Annual Winter Journey

Each winter, the Pacific gray whales pass by the western overlooks of Cabrillo National Monument. After spending the summer feeding in the food-rich waters of the Arctic, the whales swim south along the coast to the bays of Baja California, where they mate and nurse their young. Along the way, they pass Point Loma and Cabrillo National Monument, where you can witness their annual winter journey.

Interesting Whale Facts

Adult Pacific gray whales are 30 to 50 feet long and weigh from 20 to 40 tons.

Baby gray whales average 15 feet in length and weigh about a ton.

A mother gray whale's milk is more than 50% fat.

Gray whales live 20 to 40 years on average, and some live 60 years. They reach sexual maturity at eight years.

Gray whales make a series of grunts, clicks and low rumbles to navigate and communicate among themselves. They don't 'sing' elaborate songs like humpback whales.

Instead of teeth, gray whales have long sheets of baleen (made of the same material as your fingernails) hanging from the roofs of their mouths. They use these comb-like sheets to filter food from the water.

Gray whales eat tiny animals called amphipods. Millions of amphipods live in the muddy Arctic seafloor. Lying on its side, a gray whale slurps up mouthfuls of mud and water, then filters out the amphipods through its baleen.

A gray whale's skin is dark gray. But it is mottled with scars and patches of light-colored barnacles growing on its back. Each whale has its own distinctive pattern of barnacles and scars, and scientists use these patterns to identify individual whales.

Gray whales have six to 12 knobs, or bumps, along the tops of their tail ridges instead of a fin like some other whales.

Killer whales, large sharks and people are the gray whales only known predators.

Gray whales were nearly hunted to extinction in the 19th century.

Gray whales have been protected from exploitation by the International Whaling Commission since 1946. As a result, current populations are considered close to their pre-exploitation numbers.

A Gray Whale's Year

When gray whales appear off our coast in December, they are nearing the end of a long journey from Arctic waters to the lagoons of Baja California. It's one leg of a round-trip migration of nearly 12,000 miles—the longest of any mammal:

Summer: Gray whales summer in the waters off Alaska and Siberia. The Arctic seas produce tons of amphipods that are the staple of a gray whale's diet. Feasting on this bounty, the whales build up a layer of blubber that serves as insulation and as a food reserve. In late September, grays begin the southern migration. Except for an occasional meal along the way, they won't eat again until they return the following summer.

Fall: Migrating whales arrive along the Oregon and northern California coasts in late November and early December. Most pass San Diego in late December, January and February.

Winter: Grays mate and give birth in the warm, shallow lagoons of Baja California from January through March. A cow mates one year, then returns to give birth the next.

Spring: In late February, some grays begin swimming north. Cows with calves are the last to leave the lagoons, remaining until March or April.

When To See Whales

Mid-January is the peak time for migration, but whales are visible from mid- to late December through March. The heights around the park's Kelp Forest Overlook and Old Point Loma Lighthouse offer the best viewing. Bring binoculars if you have them: binoculars make viewing much easier and more enjoyable. A limited number of binoculars are available with a picture ID at the Visitor Center during whale season; ask for them at the information desk.



Kelp Forest (Whale Watch) Overlook

As the whales swim 24 hours a day, it's possible to see them at any time during daylight hours. Park staff will gladly help you spot a whale. Check at the Visitor Center for information about ranger talks and whale watching. A movie about the Pacific gray whale is shown several times a day during whale season.

Where to Look

Look west from the park overlooks, toward the ocean. The whales are migrating from the Arctic to the warm bays of Baja California and mainland Mexico, so they will be moving from the north (right), to the south (left) as you look from the park. Expect them to be moving at a steady speed of four or five knots, or about five miles per hour. Although some swim close to shore, most whales swim in an area that extends from the kelp beds (about three quarters of a mile out) to the

horizon. Later, in the spring, gray whales will migrate north again, but they are generally too far out in the ocean to see from the park, even with binoculars.

What to Look For

The Blow or Spout

When warm, moist air exhaled from the whales' lungs meets cool air at the ocean surface, it creates a bushy column we call a blow, or spout. A gray whale's blow is up to 15 feet high, and each blow is visible for about five seconds. Anticipate that the whale will dive for three to six minutes, then surface for three to five blows in a row, 30 to 50 seconds apart, before diving deep for three to six minutes again.

The Flukes (Tail)

Before making a long, deep dive, a gray whale often displays its 12-foot wide fan-shaped flukes, or tail. The weight of the tail above the whale's body helps the whale to dive deep. The flukes have no bones and connect to the body and tail muscles by banks of tendons. The gray whale normally swims about five miles per hour, about the speed of a child on a bicycle.

The Knuckled Back and Footprint

If the lighting is right, and if the whale is close enough, it is possible to see the back of a gray whale during and after the blow. It is shiny and black or gray, with a knuckled ridge along the spine. After the whale submerges you may note an elongated, smooth oval of calm water, known as a footprint, where the whale has been.

Breach and Splash

Gray whales occasionally hurl themselves out of the water and plunge back in with a tremendous splash. This is called breaching. Scientists do not know why gray whales do this, but it is a very exciting sight to see. Sometimes other whales in the area will copy this behavior, so keep your eyes open.

Once You Have Spotted a Whale...

Remember that they are migrating south, which is to your left as you look west out over the ocean from Cabrillo National Monument. Once you have spotted a whale, you can expect that it will surface again to the south. After watching an individual gray whale for a while, you will be able to anticipate its unique rhythm of breaths and dives, and where it will surface next.

How Come We Don't See as Many Whales as We Used To?

At the overlooks, park rangers hear it all the time: "How come we don't see as many whales as we used to?" Many visitors remember seeing more gray whales from Cabrillo National Monument during the 1970s. Are they seeing fewer whales? The answer is yes, despite an

overall increase in the gray whale population. Do we know why? No, but researchers are trying to find out.

Several years ago, biology students under the guidance of Dr. Jim Sumich, a whale biologist with Grossmont College in San Diego County, observed the annual winter gray whale migration from Cabrillo National Monument. Each Monday, Wednesday, and Friday morning during the season (December through February), these diligent biologists could be seen at the whale overlook patiently recording the direction, numbers, and behavior of the passing whales.

So what did we learn? Gray whale census counts by the National Marine Fisheries Service from Cabrillo National Monument in 1979 did report more whales - up to 40 whales in one hour during the mid-January migration peak. Today, only about eight whales are visible each hour. Curiously, this drop in shore sightings coincides with a dramatic increase in the overall population of gray whales. In 1979, 15,000 gray whales were estimated to exist. Today that number is more than 25,000. A large percentage of whales in recent years, about 65% in 1993-94, migrate too far off the Southern California coast for watchers to see from shore. This does not seem to have occurred in the late 1970s.

Some San Diegans believe the whales are swimming farther out because they are being harassed by a growing number of boaters in the waters off San Diego, particularly whale-watching boats. Dr. Sumich, however, believes many reasons could account for the whales' behavior, including water quality changes, military and commercial boat activity, natural shifts in migration routes, or all of the above. Nevertheless, he believes that at least part of the reason involves whale-watching boats. Of particular impact, he feels, is the increasing number of private vessels hoping to get a closer look. Federal law does not allow boaters to move within one hundred yards of whales (unless the animal moves closer on its own), but the rule is ignored by some boat captains. From the whale overlook it is not uncommon to see a whale being pursued by a dozen or more boats on a busy weekend, or to see whales take evasive action to avoid boats.

Are the boats responsible for us seeing fewer whales today than 15 years ago? Only the whales know for sure. In the 1976 gray whale census report, referring to San Diego, Dale W. Rice wrote that "The marked decline in the Point Loma counts in the late 1960s was thought to be due to harassment of the whales by increasing boat traffic, causing them to migrate farther offshore. Even considering the better weather [in 1976], the [higher than average] count at Point Loma this year is unexpected." This seems to indicate that the whales have migrated far off shore in the past, too. If this is so, perhaps we will see 40 whales an hour again soon!

The National Park Service supports long-term research efforts, like the gray whale census, because good data collected over a long period helps us better understand whale migration trends and avoid jumping to conclusions about gray whale behavior today and tomorrow.

If you visit the park on a clear sunny morning, mid-December to mid-February, you may see the passing gray whales for yourself--and develop your own theory about why the whales do what they do.

CNM hosts a Whale Watch Weekend and Intertidal Festival every year during late January or early February. The festival includes lectures, exhibits, presentations, demonstrations, kids'

activities, films and more. Rangers and VIPs are on hand to assist visitors in spotting whales (and giving out stickers), and doing walks and talks in the tidepools. Check the event calendar for dates and times, and sign up to volunteer!

What to look for when Whale-watching:

SPOUTS

Look first for a whale's spout or "blow"—it's easiest to see. As a whale surfaces to breathe, it exhales, sending a plume of air, sea water and moisture condensed from its breath into the air. A gray whale's spout is bushy and about 15 feet high. It sometimes appears heart shaped. Watch for blows about 30-50 seconds apart. The whale usually travels a short distance between blows.

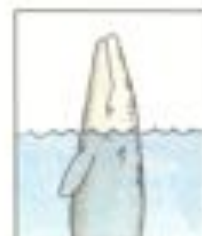


SOUNDING

Watch a whale through a series of blows, and you may see it "sounding"—raising its tail flukes out of the water as it prepares to dive. Dives last 3 to 7 minutes. Time the dive, scan the water in the direction the whale was heading, and you can find it again as it surfaces for its next blow.

BREACHING

Occasionally a gray whale will burst from the water, twisting three-fourths of its body into the air before crashing back into the water with a giant splash. It's called "breaching," but no one's really sure why whales do it. It may be courtship, communication, play, an attempt to knock loose skin parasites, or a combination of all of these.



SPYHOPPING

Gray whales sometimes thrust their heads straight up out of the water and scan the world around them for 30 seconds or so. This behavior—called "spyhopping"—is more common in the shallow lagoons of Baja California, where the whales rest their flukes on the bottom. In the deeper waters here, whales hold themselves up by "treading water" with their powerful tail flukes.

"Gray Whale Behavior" illustration adapted from *The Ocean Society Field Guide to the Gray Whale*.

A winter parade of whales

Each year, a parade of distinguished visitors marks the coming of winter to southern California. Starting in December, and continuing through late February, more than 20,000 gray whales, *Eschrichtia robusta*, pass by just off our shores on their annual southern migration from Alaska to the warm lagoons of Baja California. These same animals signal the arrival of spring in February and March during their return trip north.

Whale-watching at Cabrillo National Monument

The high cliffs of Point Loma in Cabrillo National Monument make a wonderful vantage point to watch the grays as they parade by close to shore. An overlook near the old Point Loma lighthouse offers whale-watchers a glassed-in observatory with telescopes.

How to find a whale

It's not hard to see a whale—once you know when and where to look. Your chances are best in good weather in January and February. Earlier or later in the season, you'll need a little more patience. A pair of binoculars will give you a closer look. Calm days or mornings, before winds whip up the waves, make for the best viewing. And overcast skies reduce glare from the water, making it easier to spot whale spouts and flukes.

