Zalophus surfing - Channel Islands

Common Marine Mammals of southern California

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name

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NOTE: SPECIES IN **RED** ARE COMMON AT ZUMA BEACH, MALIBU

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Tursiops truncatus
Common Bottlenose Dolphin

Tursiops truncatus means “the cut off porpoise,” referring to its stumpy nose (Latin).

***Tursiops* is by far the most common toothed whale seen along the beach.** There are two separate populations: an inshore type (those that we see playing in the surf), and an offshore type (seen from boats far from the coast).

Tursiops is distributed world wide in tropical and temperate oceans. It is a chunky, mid-to-large dolphin, reaching lengths of 13 feet. Inshore types are uniformly dark grey with lighter belly, with proportionately large flippers.

Offshore types are larger, darker, and have flippers that appear proportionately smaller.

These dolphins are very agile and acrobatic, and are often collected for wild animal shows at sea aquariums. Scientists have photo ID data regarding individuals in Santa Monica Bay and have tracked their movements and behaviors.

Delphinus sp.
Common Dolphins

Delphinus, which comes from the greek word for “dolphin,” is the most common species of toothed whale seen offshore, away from the mainland. They often form very large herds containing hundreds or thousands of individuals. *Delphinus* (8 to 9 feet long) ...much smaller than *Tursiops.*

As the name implies, these dolphins are “common” throughout the tropical and temperate Atlantic and Pacific Ocean.

There are two species of *Delphinus,* however it may be challenging to distinguish between them in the field:

•Short-beaked Common Dolphin
Delphinus delphis

Short-beaks may be slightly longer, have a rounder heads and shorter beaks. The dark eye is clearly visible on a light background. The dark dorsal is distinctly separated from the white-yellow sides and belly. There is NO dark eye-anus stripe.

•Long-beaked Common Dolphin
Delphinus capensis

Long-beaks may be slightly shorter, have a narrower heads and longer beaks. The eye is within a dark area. The white-yellow sides and belly have a dark eye-anus stripe. Pods often form long front lines. Some believe “long lines mean long beaks.”

Lagenorhynchus obliquidens
Pacific White-sided Dolphin

Lagenorhynchus obliquidens, which means “flask shaped snout” and “diagonally compact,” reaches 8 feet in length, and is distinguished its stubby beak, and a very large, hooked black-and-white dorsal fin. Local observers often call them “lags.”

White-siders are distributed throughout the temperate and cold waters of the north Pacific, and along the California coast are more common from the central regions northward. They are primarily fish and squid eaters preying on large schools of squid, sardines and anchovies. Some experts report that they are also nocturnal feeders on fish found in the deep scattering layer (DSL) of the sea which rises up under the cover of darkness night. Regional differences in diet are also reported.

They are fast, agile swimmers that often ride the bow of boats and breach. They may form herds of hundreds or thousands.

Quick ID of Dolphin Heads/Beaks

DID YOU KNOW that the only difference between a “porpoise” and a “dolphin” lies in the shape of their teeth?

Dolphins have conical pointed teeth and porpoises have spade shaped teeth.

Many people often interchange the words dolphin and porpoise in common, day-to-day non-scientific language.

Phocoenoides dalli
Dall's Porpoise

The scientific name of the Dall's Porpoise, Phocoenoides dalli, means Dall's little porpoise, named in honor of the American biologist W.H. Dall. Dall's Porpoise are found throughout the north Pacific and are dark black on top, white below. They have a uniquely shaped black and white dorsal fin (see above) that is very broad, and almost straight in front, with a broad slope in back. There is little or no beak present and the pectoral fins are located far forward (image C).

Dall's are found mostly in deep water and are among the fastest swimming cetaceans, creating a characteristic "rooster tail" splash (image B) as they rocket across the surface of the ocean. Stomach content analysis evidence indicates that this species prefers to feed on small surface fish such as sardines and anchovies, but will switch to very deep water fish if necessary.

Grampus griseus
Risso's Dolphin

The name *Grampus griseus* translates to mean "big gray fish." Risso's dolphin (not a fish), sometimes called the "Grampus," is a stocky dolphin with no beak. They have a large, blunt head, big dark eyes, and a very tall, curved dorsal fin. The reach a maximum length of 12 - 13 feet. Juveniles are dark grey dorsally and light grey ventrally, but adults become much lighter in color due to scars which arise from intra-specific activity.

Risso's pods usually contain around a dozen or so individuals, but larger groups are sometimes found. They hardly ever jump or breach, rarely ride the bow, and less rarely swim alongside boats..

They are said to feed primarily on squid and are nocturnal feeders. They are distributed worldwide in temperate and tropical seas, but prefer to stay offshore and away from land.

Orcinus orca
"Killer" Whale

Image on Left: Adult female *Orca* and juvenile attacking an adult female Grey Whale, *Eschrichtius robustus,* seen in background. Photo taken in the Santa Barbara channel.

Image on Right: Adult male *Orca*. Photo taken 100 miles off southern California coast.

The name *Orcinus orca* literally means "whale from Hades." The Orca, or "killer whale," is the second largest Odontocete...only the Sperm Whale is larger among the toothed whales. Adult males reach a length of 30 feet, females are slightly smaller. They are distinguished by having no beak, a large, rounded body, dark grey or black dorsal side with white ventral, and very tall dorsal fin which reaches 6 feet in males, 3 feet in females.

According to Shirihai and Jarrett[1], three types of Orcas are recognized in the northeastern Pacific Ocean:

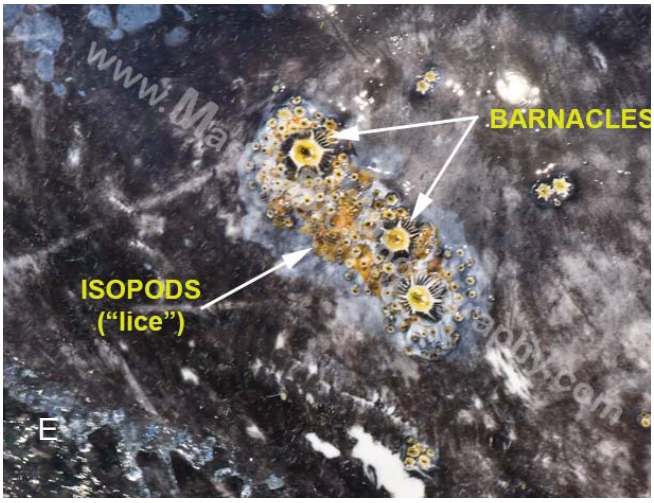
1. "Residents" which are coastal fish-eaters and form medium-sized groups.
2. "Transients" which are mammal-eaters and form small groups.
3. "Offshores" which have smaller bodies, larger schools and unknown diets.

Even though some populations of *Orcas* are called fish-eaters, they have been seen to attack and kill marine mammals. Orcas may live to be over 90 years old.

Image on Right: dorsal fin of male *Orca*. Photo taken near San Juan Island, WA.

[1]Shirihai, H and B. Jarrett, Whales, Dolphins and Other Marine Mammals of the World. Princeton University, 2006.

Eschrichtius robustus
Gray Whale



Eschrichtius robustus (after Danish naturalist Daniel Eschricht, and "strong" or "robust") or the Gray whale (after John Gray) can grow over 45 feet long. It is a stout, "robust" whale, with no dorsal fin. The skin is mottled light and dark, and has numerous patches of white barnacles, *Cryptolepas rhachianecti*, and yellow amphipod crustaceans, *Isocyamus* sp., (called "lice").

Gray whales spend the summer feeding on benthic amphipod crustaceans (*Ampelisca macrocephala*) in the Bering and Chukchi Seas. Before these Arctic oceans freeze, the whales migrate thousands of miles south to warm, shallow lagoons along the Pacific coast of Baja California, Mexico where they breed and calve. Along southern California, Gray's move southward from late December through February, taking a direct, and offshore route. Then from late February through early May, they migrate north again, traveling close to the shore (to avoid *Orca* attacks?) with their young. This near shore migration made Grays an easy target for shore-based whalers who hunted them to near extinction. Since their protection in 1949, their population has rebounded to the point where some experts believe they may have exceeded their food supply.

Gray whales are the only baleen whale that feeds on animals in the bottom sediments. This is done by rolling over and taking in large scoops of sand, silt and sea water. By pressing the tongue against the roof of the mouth, the amphipods are filtered out by the baleen plates which hang from the upper jaw, and the water and silt are ejected upward to make muddy plumes that can often be seen on the surface.

Megaptera novaengliae
Humpback Whale

Megaptera novaengliae, (“Big wings” and “from New England”) appears to have wings (image F). The long pectoral fins, which they often slap repeatedly against the ocean surface, are one of the main characteristics of this species. The name “Humpback” comes from the fact that these whales “hump up,” or arch their backs, before diving (image D). The dorsal surface of the head has large knobs or tubercles (image B), and the ventral surface is a pleated, accordion-like, expandible bag that is used to engulf large schools of anchovies or sardines in one gulp.

After several noisy, bushy spouts (image A) and breaths, the animal may show its tail fluke as it gets vertical for a deeper dive. The flukes are heart shaped (image E) and individuals can be photo-identified by the color patterns they contain. Females can grow to a length of 52 feet in our region, and males are slightly shorter. Whereas the humpbacks from Alaska migrate to Hawaii for the winter, our local population travels south. A few go to Baja California, Mainland Mexico, the Revillagigedo Islands of Mexico, and a large percentage end up near Costa Rica and Panama. Humpbacks are great to watch because their behavior is more unpredictable than other large whales. They may throw their tails violently, slap their pectorals, lunge feed, spy hop, play with kelp (image F) and may even completely breach (image C).

Humpbacks are also famous for their “songs,” which are made by males on the mating grounds. In our waters, where they feed and do not breed, no such songs have been recorded.

Balaenoptera musculus
Blue Whale

Balaenoptera musculus (means “muscular fin whale”) is the largest animal that has ever lived on the planet Earth. Blue Whales in southern California waters can grow nearly 90 feet long. In Antarctic waters a female 110 feet long and weighing 389,760 pounds was measured. The Blue Whale is the largest carnivore that ever lived and consumes thousands of pounds of krill every day during their feeding season. Our local krill consist of four species of euphausiid “shrimps,” two species of these inch long planktonic crustaceans (*Euphausia pacifica* and *Thysanoessa spinifera*) are regularly consumed by Blue Whales. Blue Whales use the Santa Barbara Channel and waters around the southern California islands as their summer feeding grounds, moving to the subtropical waters of the Gulf of California (Sea of Cortez) and a rich region of upwelling further south known as the Costa Rica Dome, to breed and calf in the winter.

Blue whales are actually light grey (see image B), but get their name from their appearance underwater (image C). Their spouts (image A) are the tallest of all local whales, often reaching heights of 25 feet in the air. They show their 20 foot wide tail flukes (image B) only rarely. A very short dorsal fin (image D) can be seen far back towards the tail. The most common behavior observed is spouting.

Balaenoptera acutorostrata
Minke Whale

The Minke Whale, aka Common Minke and Northern Minke Whale, *Balaenoptera acutorostrata* (meaning pointed-nose fin whale) is the second smallest species of baleen whale, reaching a maximum length of 32 feet in the north Pacific, although the average size is closer to 25 feet. Only the Pygmy Right Whale, found in Antarctic waters, is smaller. Besides the small size, Minke's are characterized by their sharp V-shaped nose and sickle-shaped dorsal fin.

Northern Minke Whales are gulp feeders that consume thousands of krill, squid and small bait fish such as anchovies and sardines. They prefer offshore waters and generally travel alone. In our area Minke's are very shy animals that usually avoid boats and may only be seen once, when they surface to breathe, making them hard to follow, photograph or study.

In 1994 the IWC re-opened commercial whaling for Minke Whales, and countries that reportedly hunt them today are Japan and Norway.

The Minke whale was named after an 18th-century Norwegian whaler named Miencke, who allegedly had a habit of killing these small whales, mistaking them for Blue Whales. His fellow whalers began calling all small whales "Minke's whales" Eventually, it was formally adopted as the name for this small rorqual species.

QUICK I.D. GUIDE - WHALE SPOUTS

Megaptera novaengliae - Humpback
Spout pear shaped, 10 feet tall.

Balaenoptera musculus - Blue
Tall cone shaped, can be over 30 feet tall.

Eschrichtius robustus - Gray
Bushy V-shaped, 10 - 15 feet tall.

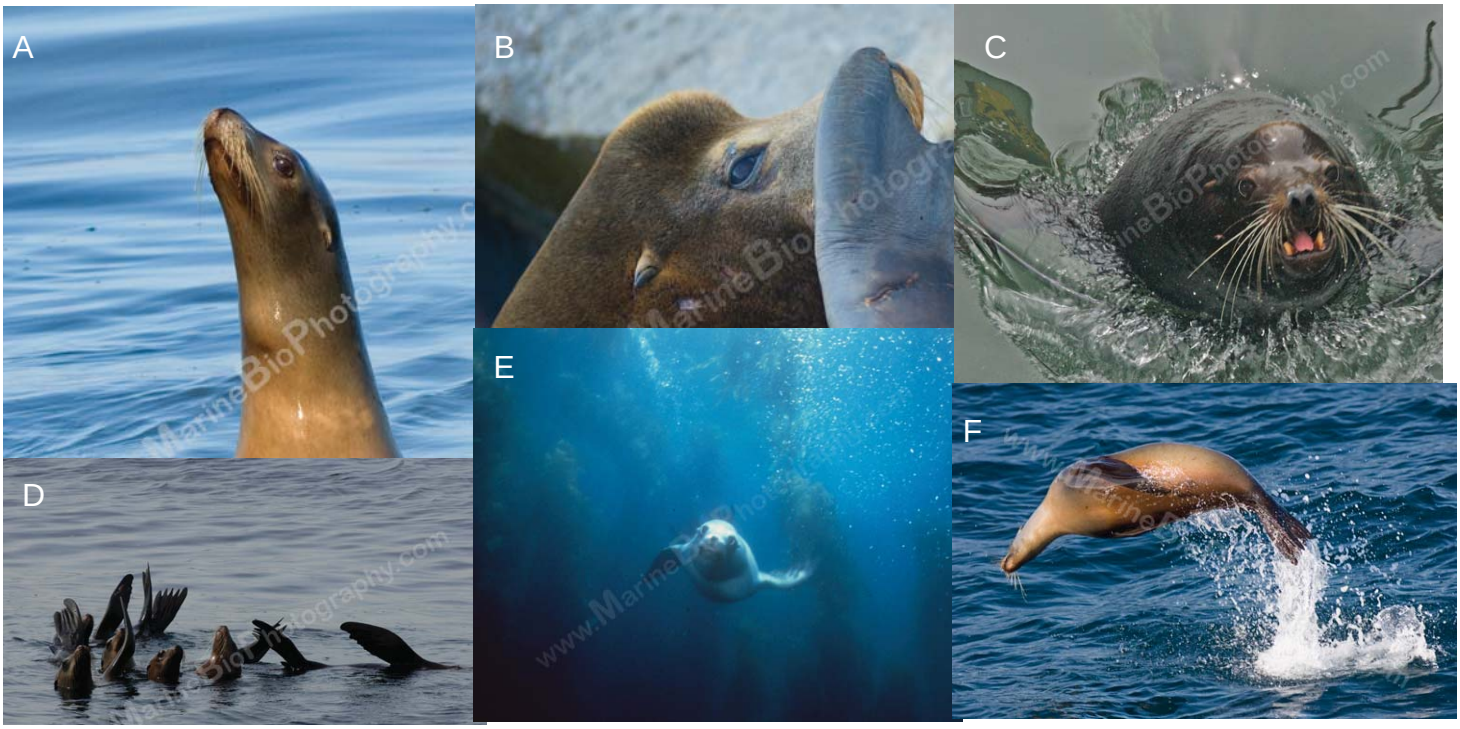
Balaenoptera acutorostrata - Minke
Spout is a low, plume shape.

Phoca vitulina
Harbor Seal

The Harbor Seal, *Phoca vitulina*, is widespread throughout the arctic, cold and temperate waters of the Pacific and Atlantic coasts. The scientific name comes from the Latin for “seal calf.” Harbor seals are common along the shore and may be distinguished by their rather globular, rounded head that has no external ear flaps. They are rather timid animals. It is a member of the family Phocidae, or “true seals.” Like all true seals, *Phoca vitulina* can swim at a moderate speed, but must drag across the beach pulling itself along slowly by its pectoral flippers, and has no external ear flaps The Harbor Seal comes in various shades of grey, with a variable amount of spotting unique to each individual. Dry animals are lighter in color than wet ones. They reach a maximum length of about 6 feet.

Harbor Seals feed on a variety of crustaceans, shelled mollusks, squid and fish which they bite into chunks and swallow. These seals are, in turn, preyed upon by white sharks, *Orcas*, and humans. Native Alaskans take a few thousand each year for their meat and fur.

Zalophus californianus
California Sea Lion



The most common Pinniped in our area is the California Sea Lion, *Zalophus californianus*. This is the highly intelligent trained "seal" seen in aquarium shows and used by the Navy. The term "pinniped" means "flipper footed." As you can see (images B, D, E, F), pinnipeds limbs are shaped like flippers. The sea lion is further classified as member of the family Otariidae, which also includes fur seals. Otariids have external ear flaps (see images A, B, C), and also have the ability to reflex their hind limbs under their body for easy walking on land. One can easily tell the difference between a sea lion and a harbor seal, which is not an Otarrid, by the streamlined body, and general agility of the sea lion. The scientific name *Zalophus* means "crested," and refers to the bump that male sea lions develop on their foreheads as they mature (see images A and B) and *californianus* refers to California. These sea lions range from Alaska to the Galapagos Islands.

Sea lions feed on fish and squid which they hunt, then tear into bite-sized chunks to swallow. They are relatively slow on land, but in the water they are like furry torpedoes (image B). These animals are often found among whales and dolphins, and can be observed imitating dolphin porpoising behavior (image F). At a distance, they may be confused with dolphins leaping. They are often observed alone or in groups exhibiting rafting behavior (image D), where they rest and float at the surface with one pectoral flipper held up in the air. Some believe this helps them regulate their body temperatures by providing a lot of surface area to be warmed by the sun.

Bulls establish territories on beaches by posturing and fighting with other males. The real estate won by bulls attracts numerous females during the breeding season. Hauling out, mating and birth takes place on isolated island beaches where they are safe from humans and terrestrial predators.

Mirounga angustirostris

Northern Elephant Seal

(aka, N. Sea Elephant)

Mirounga angustirostris, the Northern Elephant Seal, is the largest Pinniped in the northern hemisphere. Males may grow as long as 17 feet and weigh up to 4,800 pounds. It is a member of the Phocidae, or true seals, thus has no external ear flaps and must drag its hind limbs (image B) when on land. *Mirounga* migrates to deep water where they feed on sharks, bony fish and squid. They may dive as deep as 14,000 feet and hold their breath for over 1.5 hours, although most diving is shallower and shorter. When seen at sea (image D) only the head is visible, and they appear to be vertical in the water.

Males are much larger than females, and develop an expanded proboscis (nose, or trunk) as they mature (image B and F). Juveniles (image C) and females (image E) do not possess such a large trunk. The thick neck of an adult male may be red, inflamed and show abundant scars of battle (image B).

Elephant seals may come ashore to rest a couple of times a year. In April, males come ashore and fight other males (image F) for beach territory. Next, females come ashore and both sexes occupy the same beach (image A). During late April and early May, females have their pups (image E) and beaches with hundreds or thousands of Elephant Seals can be found in our region at San Nicolas Island, San Miguel Island, Piedras Blancas beach, and farther to the north at Año Nuevo Island.

Enhydra lutris
Southern Sea Otter


A


B


C

Enhydra lutris, meaning “in water otter,” lives along the Pacific coast. One subspecies lives in Japan, a second in the Aleutian Islands, and a third subspecies in central and southern California.

The sea otter is not a Pinniped, it is a member of the Order Carnivora, which includes dogs, weasels, badgers and skunks. They may reach a length of just under 5 feet and weigh almost 100 lbs.

In California, sea otters spend their lives at sea, and very rarely come ashore. When resting (image A) they often wrap their bodies in giant kelp, *Macrocystis*. They swim using hind limbs, tail and by undulating their body. Their forelimbs are used to manipulate objects and food. They feed on benthic animals, especially large sea urchins such as *Strongylocentrotus franciscanus* (image B), crabs, clams and other mollusks. Otters are unique in that they pick up rocks and use them to smash the hard shells of their prey while floating on their backs.

Enhydra lutris was hunted during the 18th and 19th century for its luxurious fur. The species was thought to be extinct until a very small group was discovered in an inaccessible cove along the Big Sur coastline in the 1920’s. Under federal and state protection, the population has slowly increased in size and has expanded its range. Otters in California may now be found as far north as San Francisco, and south to Santa Barbara. Its historic range has been estimated to have been one continuous population from Japan, across the Aleutians, and south along the coast of Baja California, Mexico. It’s northern range was limited by sea ice (approx 57^{O}N) and the southern limit of kelp beds (approx 22^{O}N).

Otters provide food for Great White Sharks and Orca whales.