

CETACEANS

An Introduction

Cetaceans are mammals categorized into two groups: toothed whales (*odontocetes*) and baleen whales (*mysticetes*)

Cetaceans (whales, dolphins, porpoises) have completely adapted to a life at sea. They feed, mate, bear and suckle their young at sea. All cetaceans have pectoral fins (flippers). They lack rear appendages but have powerful flukes that move up and down to propel them through the water. A layer of blubber, just below the skin, helps maintain body temperature. Although they may have a few whiskers on their faces, they have lost their fur coats.



Bottlenose Dolphin



Orca

TOOTHED WHALES (*odontocetes*)

The toothed whales include dolphins, porpoises, beaked whales and the sperm whale. They use their teeth for grabbing and piercing, not for chewing. They swallow prey whole or tear it into pieces.

Toothed whales have single blowholes and the males are larger than the females. Echolocation is common among toothed whales. During echolocation, high-frequency sounds are produced and transmitted, which bounce off objects and the returning sound wave, or "echo", provides information.

The best way to tell a dolphin from a porpoise is by tooth shape. Dolphins have conical teeth and porpoises have spade-shaped teeth. Other differences are that dolphins usually have a beak and usually have a falcate (curved) dorsal fin, although some have none. Porpoises never have a beak and usually have a triangular dorsal fin, although some have none.

The toothed cetacean most likely to be seen from Piedras Blancas is the bottlenose dolphin. Occasionally orcas (killer whales) are seen.



Sperm Whale



Beaked Whale



Minke Whale



Blue Whale



Humpback Whale



Gray Whale

BALEEN WHALES (*Mysticetes*)

Baleen is used to filter food from the water. Plates of fringed baleen hang down from the upper jaw of the Mysticetes, like curtains or overlapping rows of combs that strain food from the water. Baleen is made of keratin, a substance that is similar to the human fingernail. All baleen whales have double blowholes (nostrils). Females are generally larger than males. Baleen whales are further categorized according to the method of feeding they use: gulping, skimming, or bottom feeding.

Engulfing or gulping: The blue whale and the humpback whale use the engulfing, or gulping, method of feeding. Numerous throat grooves, or pleats, allow for expansion of the throat when feeding. Huge quantities of water containing prey are taken in. The baleen acts as a filter trapping food when the water is expelled. Whales with numerous throat grooves are referred to as *rorquals*.

Skimming: The bowhead and right whales utilize a different feeding style. They are skim feeders, using their baleen to filter prey from the surface of the water. Their baleen plates are quite long, up to 12 feet long in the bowhead whale. These whales do not have throat grooves.

Bottom feeding: Gray whales are unique among baleen whales in that they predominately engage in bottom feeding. They suck in sediment containing small shrimp-like crustaceans from the bottom of the shallow arctic seas. Using powerful tongues, they expel the water and sediment, trapping the food inside the baleen. Although this bottom-suction method is their primary feeding strategy, they have also been observed using the gulping and the skimming methods.

The baleen whales most likely to be seen from Piedras Blancas are the gray whale and the humpback whale. Occasionally blue whales and minke whales are seen.