

Guide to the Most Common Whales and Dolphins of Abaco

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Bahamas Marine Mammal Survey

The Bahamas is an archipelago that boasts many natural attributes, none more spectacular than its marine life. The shallow carbonate banks and deep-water channels and basins of The Bahamas provide important habitat for marine mammals and an ideal study site for the Bahamas Marine Mammal Survey (BMMS). Since 1991, BMMS has been conducting small vessel surveys primarily around Abaco Island using a well-known technique called photo-identification to document the occurrence, distribution and abundance of marine mammals in The Bahamas.

By photographing the pattern of natural nicks and scars on each animal's dorsal fin or tail flukes, we are able to keep track of individuals—gaining an understanding of their social structure, habitat requirements and population status. The majority of species found here are deep diving toothed whales that inhabit the pelagic waters surrounding the shallow Bahama banks. Many migrate through The Bahamas, but some species are year-round residents, including some of the world's least known whales.



BMMS Researchers and EarthWatch volunteers photo-identifying a sperm whale from the R/V Chimo.



The pattern of nicks in the dorsal fin allow researchers to identify individuals and document their life history, such as how many calves they have.

The main goal of the project is to contribute to the conservation of marine mammals by learning more about them and sharing information with other scientists and interested parties. The Bahamas Marine Mammal Survey also concentrates on community education and has developed the Sandy Point Environmental Camp for local children. BMMS is based in Sandy Point, Abaco, and created this program in the hopes that young Bahamians will grow up with a better understanding of their environment.

Our research efforts have been greatly enhanced by sighting reports which boaters have contributed over the years. As cruisers, you have a unique opportunity to observe rarely seen marine mammal species and it is important to keep an accurate log, take photographs and/or video, while respecting the animals' needs for space; and, please never try to touch or feed them as this may cause harm to you or the animal.

While The Bahama Islands are home to at least twenty-three species of marine mammals, the following is a guide to the most commonly seen whales and dolphins in the Abacos and is intended to aid and encourage boaters to continue to report sightings. The species shown represent four groups of whales and dolphins, separated into their taxonomic families: oceanic dolphins, dwarf and pygmy sperm whales, sperm whales and beaked whales. All photographs were taken in The Bahamas.

Family Delphinidae – Oceanic Dolphins

The family Delphinidae is a large diverse group of species that may not appear all that similar externally, but they share features of their internal anatomy. For example, some dolphins have a pronounced beak or rostrum while others, lack a beak entirely, but internally they all have sharp, conical teeth. These highly social animals can be found in groups ranging in size from a few individuals to several thousand; and, some species are known to live in complex societies consisting of related individuals. Twelve oceanic dolphin species are currently known in The Bahamas.

Atlantic bottlenose dolphins (*Tursiops truncatus*) are the most common marine mammals seen in Abaco. It should be noted, however, that there are at least two distinct “breeding populations” or “ecotypes” of this species: coastal or inshore bottlenose dolphins that inhabit the shallow waters of Little Bahama Bank; and, oceanic or offshore bottlenose dolphins found in the deep waters surrounding Abaco. These populations diverged genetically several hundred thousand years ago and have since developed different physiological adaptations to their respective marine environments.



A coastal bottlenose dolphin jumps out of the water at Rocky Point.

The coastal ecotype is smaller in length reaching just over 8 feet and has relatively larger pectoral fins and dorsal fin which helps them to manoeuvre more readily around rocks and reefs to catch fish, and to regulate their internal body temperature (the temperature of the shallow Bank waters fluctuates much more than the deeper Atlantic Ocean). The inshore dolphins do not travel much beyond the barrier reefs of Abaco; and, while some individuals remain in the same area for years, others are known to range all over Little Bahama Bank. The deeper diving oceanic ecotype can reach 10 feet or more in length and can remain at depth for longer than their coastal cousins due to their ability to store more oxygen in their blood. They are usually seen in larger groups and appear to have an extensive range. Photographs of individual oceanic bottlenose dolphins have shown that they move between Abaco, Bimini and Exuma Sound.



Oceanic bottlenose dolphins inhabit the pelagic waters surrounding the shallow Bahama banks.

Atlantic spotted dolphins (*Stenella frontalis*), (photo next page), are the more frequently seen of two different species of spotted dolphins found in the Abacos. Atlantic spotted dolphins are a resident species and are commonly seen in groups of 20-50 dolphins in the oceanic waters of Abaco where they feed on flying fish and squid. In some parts of Little Bahama Bank this species can also be found along the edge of the banks during the daytime where they come to rest and socialize. Pan-tropical spotted dolphins (*Stenella attenuata*) are more oceanic in their distribution and can be seen occasionally as they migrate through the islands. Spotted dolphins are not born with spots, but actually



Atlantic spotted dolphins are highly social and are usually found in groups of 20 or more individuals.

accumulate them as they mature, becoming quite mottled looking as adults. Young spotted dolphins are often confused with bottlenose dolphins, and sometimes the two species interact, which adds to the confusion. Spotted dolphins have a more slender snout, and although they can almost reach the same length as bottlenose dolphins, they have a smaller girth and body weight.

Risso's dolphins (*Grampus griseus*) are large light grey dolphins that can reach over 13 feet in length and have a relatively tall, dark dorsal fin. Adults are typically covered with overlapping white scars caused by the teeth of their con-specifics making them look quite battered. They have a rounded head, lacking a beak, but have a deep vertical crease down the centre of the forehead. As they mature, their forehead becomes prominently white, making them one of the easiest species to recognize at sea. Risso's dolphins are commonly seen in the Abacos each winter and spring, primarily on the Atlantic side of the islands. It is unknown where these groups range the rest of the year, but some individuals have been seen in Abaco repeatedly over the years.



The prominent white forehead of the Risso's dolphins makes it a relatively easy species to recognize at sea.

Short-finned pilot whales (*Globicephala macrorhynchus*) can grow to 18 feet long and weigh over 5,000 pounds, with males being significantly larger than females. They have a bulbous forehead with no perceptible beak, a faint grey diagonal stripe behind each eye and a faint grey "saddle" behind and below the dorsal fin. The rest of their body dorsally is jet black, which prompted whalers to name them "blackfish", a term that also includes three other species known from The Bahamas (melon-headed whales, pygmy killer whales and false killer whales). Pilot whales can be distinguished from the other blackfish species by the position of their large, broad-based dorsal fin, which is set quite far forward on their body. They live in matrilineal pods consisting of up to three generations of related females and their offspring. Pilot whales are seen in Abaco year-round but are more common during the spring and summer months. On calm days, they can be seen in tight groups lying abreast, resting at the surface for hours.



The bulbous head and forward position of the dorsal fin helps us to distinguish pilot whales from the other "blackfish".



Resting group of pilot whales.

Killer whales (*Orcinus orca*), or orcas, are probably the easiest cetacean species to recognize at sea due to their striking black and white pigmentation patterns. Orcas are the largest member of the oceanic dolphin family, with males reaching 30 feet in length and weighing 8 tons, while females reach only 23 feet and weigh 4 tons. The most conspicuous feature of these whales is the dorsal fin, which can grow over 5 feet tall in adult males. These top predators are found in all the world's oceans but are more abundant in higher latitudes where prey resources are more plentiful. Orca pods are seen each year in Abaco usually in the late spring and summer, including one group that has returned repeatedly over 11 years. While they have been observed feeding on dolphins and dwarf sperm whales around Abaco, they are most likely in the area in response to prey migrations such as tuna.

Family Kogiidae – Dwarf and Pygmy Sperm Whales

Dwarf and pygmy sperm whales are small whales which share similar characteristics with sperm whales. All possess an under-slung toothed lower jaw, and a toothless upper jaw. The head shape ranges from triangular to square, becoming blunter with age, and all have a single nostril found on the left side of the head.



An orca lunges out of the water with a dwarf sperm whale in its mouth.



The orca is one of the easiest species to identify at sea.

Dwarf sperm whales (*Kogia sima*) are the most common marine mammal seen in the oceanic waters around Abaco. Adults reach only 8-9 feet in length, and the dorsal fin is set mid-way down the body and is falcate or triangular in shape, so they can easily be confused with dolphins at a distance. Pygmy sperm whales (*Kogia breviceps*) are slightly larger reaching up to 10 feet in length, but the dorsal fin is smaller and set further back on the body, making it easy to confuse this species with beaked whales (photo next page). These small whales are often found solitary or in small groups in extremely deep water environments, and have adapted numerous ways to avoid predators such as killer whales. Both species have counter shading, being dark grey dorsally and white to pink on the underside making it more difficult to see them from the surface or from below. They also have a white line of pigmentation on each side behind the head, known as a false gill, making them look like a shark. When threatened, they are able to expel ink which they have ingested from squid, their primary prey, creating a dark cloud in which they can escape. Their behaviour while at the surface is very cryptic, and they are most typically seen logging, or lying motionless. When a vessel approaches them, they dive and swim away, making them very difficult study subjects!

Family Physeteridae – Sperm Whales

The sperm whale is the only species in the family Physeteridae. Sperm whales are the largest toothed whales in the world and are the only common great whale seen year-round in The Bahamas.

Sperm whales (*Physeter macrocephalus*) have dark brown, wrinkled-looking skin and an enormous square-shaped head that comprises one third of their total body length. Males can attain a body length of 60 feet while females are considerably smaller,



The characteristic blunt forehead of a dwarf sperm whale breaks the water as it logs at the surface.

reaching 35-40 feet in length when mature. Their single blowhole on the left side of the head at the front causes a distinctive “blow” which angles to the left and forward. When a sperm whale prepares to dive, it raises its massive tail, allowing us to photograph the distinctive pattern of notches in the trailing edge of the tail flukes. Sperm whales dive to great depths (>1000 metres) for more than an hour at a time where they feed on large squid, their primary prey. Adult females form nursery groups that can be found in the Abacos year-round, while the mature males frequent the islands only during the winter breeding season and spend the rest of the year in more productive Arctic waters to feed.

Family Ziphiidae – Beaked Whales

The beaked whale family is characterized by having reduced dentition, with typically only two teeth located in the lower jaw and erupting above the gum line of sexually mature males. These teeth are more appropriately described as “tusks”



The distinctive blow of the sperm whale can be seen for several miles.



The natural pattern of notches in the tail flukes allows us to tell individual sperm whales apart.

because they are actually used for combat with other males and not for feeding purposes. Beaked whales can be shy whales found generally in small groups that inhabit extremely deep water, making field studies difficult. As a consequence, beaked whales represent the least studied large mammals that exist today; in fact, some species have never been seen at sea, and are known only from old weathered skull fragments. Of the 21 recognized species of beaked whales found worldwide, three are known from The Bahamas, with Blainville's beaked whales being the most common.

Blainville's beaked whales (*Mesoplodon densirostris*) are found in all the world's tropical and temperate waters and are one of the most common species seen around Abaco. These medium-sized whales reach 14-16 feet in length, with males being larger, are brownish-grey in colour and have a spindle-shaped body that tapers at both ends. They have a small dorsal fin found almost two thirds of the way back along their body and a well-defined beak or snout, which usually breaks the water first as the whale surfaces to breathe. Older whales have numerous white oval scars caused by cookie cutter sharks and multiple paired linear scars caused by the “tusks” of their con-specifics. Adult males look quite bizarre as they often have clusters of stalked barnacles growing on their protruding “tusks”. There are resident groups of Blainville's beaked whales inhabiting the deep submarine canyons around Abaco, although adult males seem to have a greater range than females.

For additional photos and information regarding how to report sightings of marine mammals in Abaco please see the next page.



Blainville's beaked whales have a spindle-shaped body and their small dorsal fin is almost two-thirds of the way back.



An adult female Blainville's beaked whale surfaces showing its well-defined beak or snout.

An adult male Blainville's beaked whale displays two prominent tusks on an extremely arched lower jaw.



pilot whale calf

Please report your marine mammal sightings to:

**Bahamas Marine Mammal Survey
P.O. Box AB-20714
Marsh Harbour
Abaco, Bahamas**

Email: bmms@oii.net

www.bahamaswhales.org

**Or call
“Dolphin Research”
VHF Ch65A**