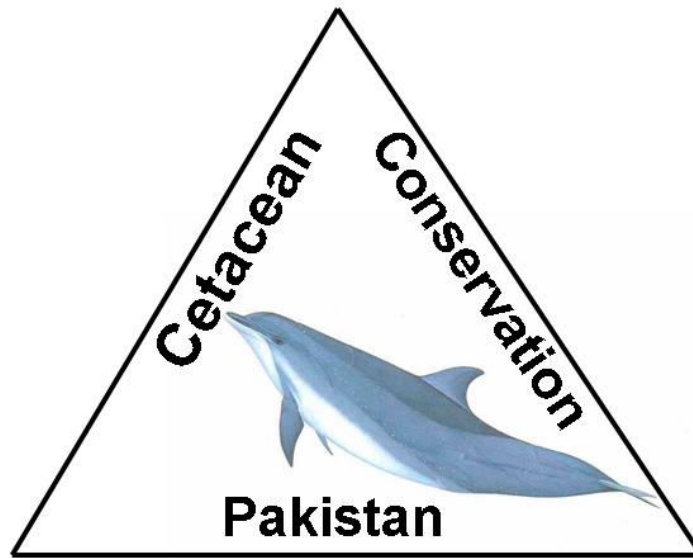


Cetacean Conservation Pakistan



A Field Guide to Cetaceans in Pakistani Waters*

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○ **Spinner Dolphin (*Stenella longirostris*) (Male – 2.35m / Female – 2.11m)**



Photo: Louisa Ponnampalam

Description

- Flat melon and a long, narrow, well-defined beak
- Slightly falcate or triangular dorsal fin
- Head is a variation of grey, white, and dark colours
- Upper jaw is grey and the lower jaw is white
- Beak has a dark tip and there is a dark border along the mouth line



Photo: Brandon D. Cole

Social & Behavioural

- Group sizes can reach several thousands
- In a single breach a dolphin can achieve 4 full revolutions
- Jumps often begin with a large breach with the following breaches in succession becoming less and less vigorous

○ **Striped Dolphin (*Stenella coeruleoalba*) (Male – 2.65m / Female – 2.4m)**

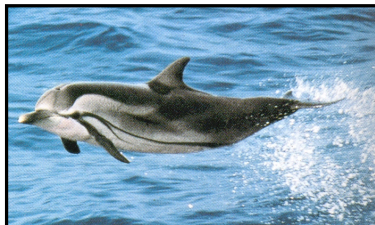


Photo: Robert L. Pitman

Description

- Slender body with a long dark beak
- 3 stripes on the flank stemming close to the eye and beak
- Lower stripe goes to the flipper, Middle goes nowhere, and Upper goes to the anus
- Boldly patterned in bluish grey and white
- The sides are pale grey, as are the tail flukes
- Dorsal fin is falcate
- Flippers are small and slender with pointed tips



Photo: Doug Perrine

Social & Behavioural

- Group sizes vary between 25 and 100 animals
- Fast swimmers
- Highly active, breaching, somersaults, tailspins and backward flips

○ **Common Dolphin (*Delphinus delphis* / *D.capensis*) (Male – 2.7m / Female – 2.6m)**



Photo: Ross M. Culloch

Description

- Hourglass pattern on the flanks from overlapping of the contrasting dorsal and ventral patches
- V-shaped saddle below the dorsal fin
- Body is fine and streamlined with a narrow rostrum
- Dorsal fin is tall and falcate
- In the long beaked common dolphin the body is more slender, the melon is flatter, and the beak is noticeably longer



Photo: Louisa Ponnampalam

Social & Behavioural

- Schools of hundreds to thousands
- Groups within schools consists of 30 or fewer individuals
- Active at the surface, jumping and splashing, bow-riding
- Frequently slap the water surface with their head and flippers
- Several members of a group will often surface together

○ **Pantropical spotted dolphin (*Stenella attenuata*) (Male – 2.57m / Female – 2.4m)**

Description



Photo: Robert L. Pitman



Photo: Doug Perrine

- Relatively small falcate dorsal fin
- Moderately long, slender beak
- Dark back and lighter ventral region with a very complex and variable pattern of spots and strips
- Basic pattern includes a dorsal cape dark grey in colouration that dips low on to the flank of the animal
- Lighter grey colouration on the ventral side of the animal that sweeps upwards onto the tail stock well behind the dorsal fin
- Individuals may appear to have no spots.

Social & Behavioural

- Schools range from hundreds to thousands
- Groups within schools consists of around 20
- Groups can be split via sex, i.e. all female or all male
- Very active, breaching high and are also likely to bow ride

○ **Rough-toothed Dolphin (*Steno bredanensis*) (Male – 2.65m / Female – 2.55m)**



Photo: Robin W. Baird

Description

- The fore head slopes smoothly from the blowhole to the beak
- Moderately falcate dorsal fin
- Pattern is complex but muted
- The under-belly and throat of the rough-toothed dolphin are white
There is often dark spotting all over the animal's body giving it a mottled appearance.

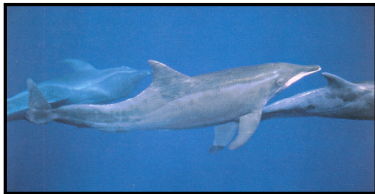


Photo: Robert L. Pitman

Social & Behavioural

- Close-knit groups of around 10 to 20 animals
- Groups over 50 are rarely recorded
- Occasionally found to associate with pilot whales, common bottlenose dolphins, pantropical spotted dolphins, and spinner dolphins

○ **Risso's Dolphin (*Grampus griseus*) (Male – 3.83m / Female 3.66m)**



Photo: Doug Perrine

Description

- Robust, stocky body becoming more slender behind the dorsal fin
- Bulbous head with no beak and a large melon
- Adults are typically silver-grey and the body is covered with scratches and scars
- The dorsal fin is tall and falcate and at the mid-point of the body



Social & Behavioural

- Travel and surface slowly
- Can be highly active breaching and slapping their heads, tails or sides on the surface
- When travelling they generally show the top of the head and dorsal fin as they blow

- When diving they may raise their tail flukes out of the water and descend vertically

○ **Bottlenose Dolphin (*Tursiops truncatus* / *T. aduncus*) (Male – 2.45m-3.8m / Female – 2.4m-3.7m)**



Photo: Ross M. Culloch

Description

- Indistinct cape which runs from the top of the melon to the dorsal fin, narrowing to a thin line behind the fin
- Flanks are lighter than the cape and graduate laterally to a pale grey ventral surface
- Individuals are commonly scarred
- The dorsal fin is falcate and located mid-back
- In general, the *aduncus* type is smaller and paler in colour



Photo: Ross M. Culloch

Social & Behavioural

- Schools sizes range from solitary individuals to hundreds
- Highly social forming close-knit groups
- Active including breaching, tail slaps and bow-riding

○ **Pygmy Killer Whale (*Feresa attenuata*) (Male – 2.6m / Female 2.5m)**

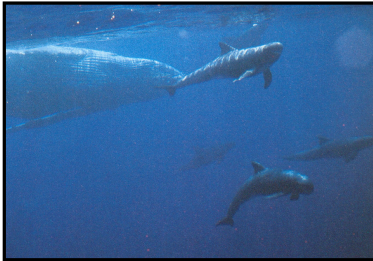


Photo: Hiroya Minakuchi

Description

- Relatively robust in the front half of the body, while the back half is slender
- No beak and the rounded melon extends marginally past the front of the mouth
- Dorsal fin is tall, upright, and falcate
- Black in colour along the flank and dorsal region, but the underside is typically white



Photo: Philip Rosenburg

Social & Behavioural

- Groups generally contain less than 50 individuals
- Not often observed to be active
- Do occasionally bow ride
- Very rarely will they fully breach

○ **Melon-headed whale (*Peponocephala electra*) (Male – 2.65m / Female – 2.75m)**



Photo: Doug Perrine

Description

- Relatively robust body that tapers noticeably at both ends
- Small head, little or no beak, rounded melon that slopes downward
- Dorsal fin is tall, falcate, and pointed
- Body appears largely back in colour, with light grey/white lips

Social & Behavioural

- Schools of several hundred incorporate a collection of smaller, movements and activities are and do breach and are also known to between melon-headed whales and other similar species include the

- A school appears to more compact groups whose coordinated
- They are relatively active, bow ride
- **NOTE:** hard to distinguish pygmy killer whales at sea; false killer whale, and the pilot whale



○ **False killer whale (*Pseudorca crassidens*) (Male – 6m / Female – 5m)**

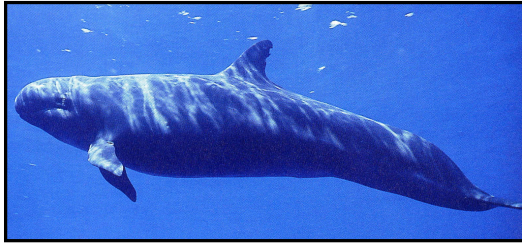


Photo: Cawardine, *et al.*

Description

- Slender-bodied, with a round or bluntly conical head and a long straight mouth-line
- Melon overhangs the lower jaw
- Dorsal fin is slender and falcate
- Body is almost entirely black in colour, with the exception of the light areas on the throat and chest and along the ventral midline



Photo: Louisa Ponnampalam

Social & Behavioural

- Large schools consisting of hundreds of individuals
- Groups within schools of 10 or 20
- Known to be particularly active and will bow ride.

○ **Pilot Whale (*Globicephala* Spps) (Males – 6.5 / Female – 4.7m)**



Photo: Robin W. Baird

Description

- Elongated body, bulbous forehead and a short, almost imperceptible, beak
- Blowhole is slightly to the left of centre on the top of the head
- Dorsal fin is prominent and falcate, with a low profile and long base, and is about a third of the way back from the head
- Tail stock has a thick keel
- Adults are almost completely black in colour and most have scars



Photo: Robin W. Baird

Social & Behavioural

- Schools of hundreds of individuals
- Form close-knit groups of between 10 and 20 animals within schools
- Surface resting behaviour in bouts of 15 minutes is common
- Often calm and fairly inactive at the surface
- Schools do gather in log-like rafts or lines with little apparent motion and just the dorsal fin and blowhole exposed
- Sometimes hang vertically with the head and forepart of the flippers exposed
- Relatively active, spy-hopping common, rarely breach

○ **Killer Whale (*Orcinus orca*) (Male – 9m / Female 7.9m)**



Photo: HWDIT



Description

- Very robust with stocky body (broad in girth relative to length) and powerful musculature
- Rounded head that tapers to a conical snout with a blunt, indistinct beak
- Dorsal fin is conspicuous and situated in the middle of the back
- Adult males - fin is erect or tilted and can be 1.8 m or more tall
- Females and juveniles – fin is more modest and is generally moderately falcate and less than 1 m tall
- Flippers are large, broad, rounded and paddle-shaped, and are particularly obvious when breaching or spy hopping

- Colouration is a striking combination of black and white, with sharp colour changes between light and dark zones: black is dominant on the back and flanks, and white on the belly.
- Most have a light grey saddle marking just behind the dorsal fin
- There is a large white patch on the side of the head just above and behind the eye



Photo: Brandon D. Cole

Social & Behavioural

- Pods are formed around matriarchal links, generally between 2 to 4 generations
- Pods may travel in tight formation or be spread across more than 1 km, often breathing and diving in one co-ordinated movement
- Killer whales often breach, spy-hop, and slap their flukes and flippers.

○ Cuvier's Beaked Whale (*Ziphius cavirostris*) (Males & Females – 7m)



Photo: Todd Pusser

Description

- Relatively robust body with a small conical head
- Indistinct beak that becomes less distinct with age
- Adult males have two small, conical teeth in the tip of the lower jaw
- Body is a mottled golden tan to reddish brown often with scarring
- Head and neck are often white, especially in adults, with a dark patch around the eye
- Dorsal fin is small and falcate, and two-thirds down the back



Photo: Matthew Hobbs

Social & Behavioural

- Usually seen alone, or in small groups of up to seven animals
- Their blow is very low, and they are often very cryptic at the surface
- On a few occasions they have been seen breaching
- They are deep divers and can stay down for an hour and a half

○ Pygmy & Dwarf Sperm Whales (*Kogia breviceps* / *K. sima*) (Male & Female – 3.5m / Male & Female 2.7m)



Photo: Christine O'Sullivan

Description

- These species are very similar in appearance, with only a few significant differences
- Both species are small but have a very robust body form, which tapers between the dorsal fin and flukes
- Dorsal fin is small and falcate, it is set in the mid of the body of the dwarf species, and slightly farther towards the posterior in the pygmy species
- Body colouration is relatively dull, with a grey/dark colouration, shading to a white/pink colour on the belly



Photo: Bernie Tershy

Social & Behavioural

- Do not generally swim fast, and nor do they regularly partake in aerial displays
- Often mill at the surface, and they dive without raising their fluke
- Not thought to be gregarious

○ **Sperm Whale (*Physeter macrocephalus*) (Male 16-18m / Female 12-14m)**



Photo: Louisa Ponnampalam

Description

- Usually dark grey to black colouration with ‘prune-like’ appearance
- Large head approximately 1/3 of the body length
- Single ‘S-shaped’ blowhole on the left side of head
- Bushy blow points to left and is high 15 metres
- Dorsal fin is 2/3 down body and is typically short



Photo: Louisa Ponnampalam

Social & Behavioural

- Strong social groups
- Can log at surface motionless with tail stock hanging down
- Regularly raises fluke out of water and slaps it on surface
- Dives are typically 30-45 minutes

○ **Minke Whale (*Balaenoptera acutorostrata*) (Male – 9.8m / Female 10.7m)**



Photo: Ross M. Culloch

Description

- Sharply pointed snout with a slender, streamlined body
- Dorsal fin is tall and falcate positioned slightly less than 2/3 of the way back from the tip of the rostrum
- Back is generally black, whereas the belly and underside of the flippers are usually white
- The most conspicuous feature useful in identification is a diagonal white band on the upper surface of each flipper, which is unique



Photo: ORES

Social & Behavioural

- Usually seen alone or in small groups
- Blow is small and not very obvious, even in the calmest of conditions Surfacing rates tend to be less regular than those of the large baleen whales, and may be affected by environmental conditions/parameters
- When diving they arch their tail stock, but never raise their fluke out of the water
- They are known to full breach, i.e. leaping clear of the surface

○ **Bryde’s Whale (*Balaenoptera edeni*) (Male & Female – 15.6m)**

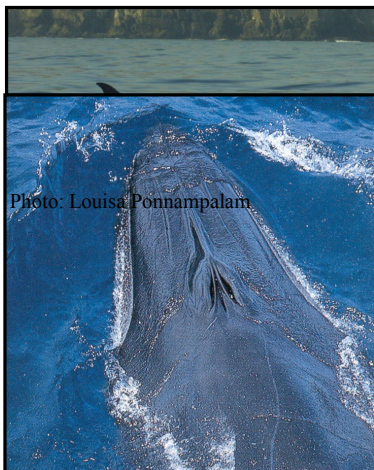


Photo: Louisa Ponnampalam

Description

- Slender and sleek whale
- Body is dark grey above, and grey and white below
- Dorsal fin is tall and extremely falcate
- There are 3 rostral ridges, which is characteristic of this species, although not easily seen
- Arches back before diving but does not raise its fluke
- Blow appears as either bushy or columnar
- **NOTE:** Can be confused with the fin and sei whale: main difference is that both the fin and sei whale only have one rostral ridge. It is not

likely to be confused with minke whales, as they are much smaller and do not often appear to blow

Social & Behavioural

- Little known about social organisation and behaviour
- Generally travel alone or in small groups
- Aggregations may occur in feeding areas
- They are known to breach occasionally

○ Humpback Whale (*Megaptera novaeangliae*) (Male – 16m / Female – 17m)



Photo: Husavick Whale Museum

Description

- Flippers are long and narrow and measuring up to 30 % of the total body length
- Anterior margin of each flipper is scalloped and each knob usually has barnacles on it
- Dorsal fin is low and widely variable in shape from falcate to a slight nub
- Generally black with white markings on the throat, abdomen and sides
- Tail flukes are characteristic of the species, both in shape and colour



Photo: Husavick Whale Museum

Social & Behavioural

- Typically seen alone or in small groups
- Known for acrobatics, including breaching and flipper slapping
- Bushy blow is distinctive even from distance
- When diving, humpbacks generally remain submerged for less than 6 or 7 minutes
- Short dives - blows tend to be irregular and the tail flukes are not lifted
- Before a long dive the fluke is often raised

○ Fin Whale (*Balaenoptera physalus*) (Males – 27.1m / Females – 25.1m)



Description

- Very streamlined, head is about 1/4 of its body length, and is triangular and flat
- Colouration is dark grey to brownish black dorsally changing to pale or white ventrally
- Body is free of mottling or extensive scarring
- Large jaw that protrudes beyond tip of the snout
- Dorsal fin is set 2/3 of the way along the back and is falcate, often sloping backwards and may be pointed or rounded
- The flippers are slender and relatively short with a pointed tip

- The tail flukes are about 1/5 the length of the body with a distinct median notch and slightly concave trailing edge
- Undersides of flippers and fluke are white



Photo: François Gohier



Photo: Mike Nolan

○ **Blue Whale (*Balaenoptera musculus*) (Males – 30.3m / Females 33.3m)**

Social & Behavioural

- Usually found alone, or in small groups
- On submerging blowholes submerge before the dorsal fin becomes visible
- Arch their backs as they dive but do not usually show their flukes
- Difficult to judge when and where they will surface
- When moving slowly, a fin whale exposes the dorsal fin soon after the blowhole
- **NOTE:** Surfacing from a deep dive, it emerges at a steeper angle; top of the head surfaces first, blows, submerges the blowhole, and then rolls forward arching the back and dorsal fin above the surface
- A series of 2 to 5 blows with 10 to 20 seconds between followed by a longer dive, typically 15 minutes long, is common
- Dives ranges from 25 seconds to 15 minutes



Photo: Husavick Whale Museum



Photo: Louisa Ponnampalam

Description

- Long, sleek body with a broad flattened head with a U-shaped “splashguard”
- Flippers are long and slender and are approximately 1/7 of the body length
- Dorsal is tiny and stubby, which is usually located 3/4 of the way along the back
- Colouration is pale-blue grey with a pale blue-grey or white underside
- Underside may also be covered in tiny algae
- Extremely thick tailstock and their flukes have either slightly concave or smooth trailing edges with a slight notch in the middle

Social & Behavioural

- Blue whales tend to travel alone or in small group

OTHER LARGE MARINE VERTEBRATES OF INTEREST

○ **Whale shark (*Rhincodon typus*) (Between 12m to 15m maximum length)**



Description

- It is the largest fish in the world
- Five large pairs of gills
- Two small eyes are located towards the front of the shark's wide, flat head

- The body is mostly grey with a white belly; three prominent ridges run along each side of the animal and the skin is marked with a 'checkerboard' of pale yellow spots and stripes
- The shark has two pairs each of dorsal fins and pectoral fins
- As a filter feeder it has a large mouth which can be up to 1.5 m



Social & Behavioural

- The whale shark is solitary and rarely seen in groups unless feeding at locations with an abundance of food
- It does not need to swim forward when feeding; it is often observed in a vertical position, 'bobbing' up and down swallowing water and actively filtering it for food