

## *Peponocephala electra* (Melon-headed Whale)

Family: Delphinidae (Oceanic Dolphins and Killer Whales)

Order: Cetacea (Whales and Dolphins)

Class: Mammalia (Mammals)



**Fig. 1.** Melon-headed whale, *Peponocephala electra*.

[<http://www.arkive.org/melon-headed-whale/peponocephala-electra/> downloaded 10 October 2015]

**TRAITS.** Melon-headed whales are members of the oceanic dolphin family of toothed whales. This species is closely related to the killer whales and the pilot whale. Adult melon-headed whales can weigh up to 210kg and reach to lengths of 2.7m (Nmfs.noaa.gov, 2015). This whale gets its name from the lump of fatty tissue on its forehead that resembles a melon, it is suggested that this lump is necessary for echolocation. They are usually grey to light brown in colour with their belly area being darker than the rest of their body, and their head has a rounded cone shape with no distinguishable beak (Fig. 1) (Whalefacts.org, 2015). They have large dorsal fins and tapered pectoral fins (flippers) (Gray, 1846). The male melon-headed whale is bigger and has a taller dorsal fin, longer flippers and a longer tail than that of the female (Arkive.org, 2015). The melon-headed whale is capable of making low short jumps if threatened (Nmfs.noaa.gov, 2015). The melon-headed whale can be distinguished from other whales by the number of teeth in its mouth. In its lower jaw there are approximately 22-25 teeth whereas in the upper jaw there are 20-25 teeth (Gray, 1846).

**ECOLOGY.** They are found mostly in deep warm waters where prey is easily found, they are abundant throughout tropical areas and are found in lower numbers in subtropical areas (Fig. 2). They are not known to carry out long migration trips (Nmfs.noaa.gov, 2015). Melon-headed whales' diet consists mainly of fish, squid and crustaceans, their preferred prey is squid (WDC, Whale and Dolphin Conservation, 2015). They are rarely found near the shore unless they are trapped or if the water is very deep.

**SOCIAL ORGANIZATION.** The melon-headed whales are very social animals and live in large groups of 100-1000 individuals (Brownell et al., 2009). These whales may also travel and socialize with other dolphins they are normally found close to Fraser's dolphins. They also travel with the spinner and bottle nose dolphins. They tend to change the direction of their travel quickly thus they travel in tight packs, swimming besides each other (Fig. 3). Many are seen touching the flippers of other dolphins. Sometimes some individuals in groups of approximately 5-10 whales may leave the group however they do not stray far from the group (Gray, 1846). Larger whales in the group may be aggressive to the smaller male whales.

**ACTIVITY.** These are fairly inactive animals spending most of their time resting on the surface of the water, they will only move if threatened by passing ships (Nmfs.noaa.gov, 2015). They can feed both in the day and night; at night they use echolocation to find their food. However they can become particularly energetic occasionally splashing rapidly making small quick jumps in the water. This period of high activity is supplemented with occasional whistles and click bursts (Mullin et al., 1994).

**FORAGING BEHAVIOUR.** Melon-headed whales hunt in groups, they feed mostly on squid and prefer to hunt for their prey in deep warm water. This may be difficult as it would be relatively darker in deeper waters however the melon-headed whale has the use of echolocation which can easily distinguish prey from other objects thus making it easier for the whales to capture their prey (Nmfs.noaa.gov, 2015). When melon-headed whales find their prey in the deep warm waters, they chase it up to the surface of the water thereby trapping it and making it easier to catch (Jefferson and Barros 1997).

**COMMUNICATION.** Melon-headed whales communicate by a series of clicks known as a click sequence and whistles. Whistles are mostly in the range of 8–12 kHz with low-level tones. When the whales get excited or scared the whistles can reach up to 20–40 kHz (Scheville and Watkins, 1962). The amount and intensity of clicks and whistles is based on the level of activity of the animal. Higher intensities were seen during periods of extreme activity which are periods when they are jumping (Fig. 4) and diving whereas low-level sounds are heard the rest of the time when they are resting at the top of the water (Scheville and Watkins, 1962). It is also seen that these whales communicate by touching flippers while swimming.

**SEXUAL BEHAVIOUR.** The gestation period for a melon-headed whale is approximately 1 year. Birth usually takes place between the months of August to December. The number of young produced by a single individual is not yet determined, however it may only be one young for a female melon-headed whale. At birth a calf can measure approximately 1.1m in length. It is seen during the mating period that the melon-headed whales touch their flippers to other whales more frequently. A male melon-headed whale reaches sexual maturity at

approximately 15 years and a body length of 2.6m whereas a female reaches sexual maturity at 10-12 years and 2.2m (Bryden et al., 1977). A female melon-headed whale will feed its calf milk for approximately 1-2 years until it is able to hunt and survive on its own.

**JUVENILE BEHAVIOUR.** Melon-headed whale calves spend most of their young life swimming close to their mother as they suckle milk from their mother for the first few years of their life until they are able to hunt for themselves. They spend most of their time swimming with the group of whales and will only stray if their mother leaves the group. Once the calves reach the age to feed by themselves they stay with the group but will spend less time by their mother's side (Arkive.org, 2015).

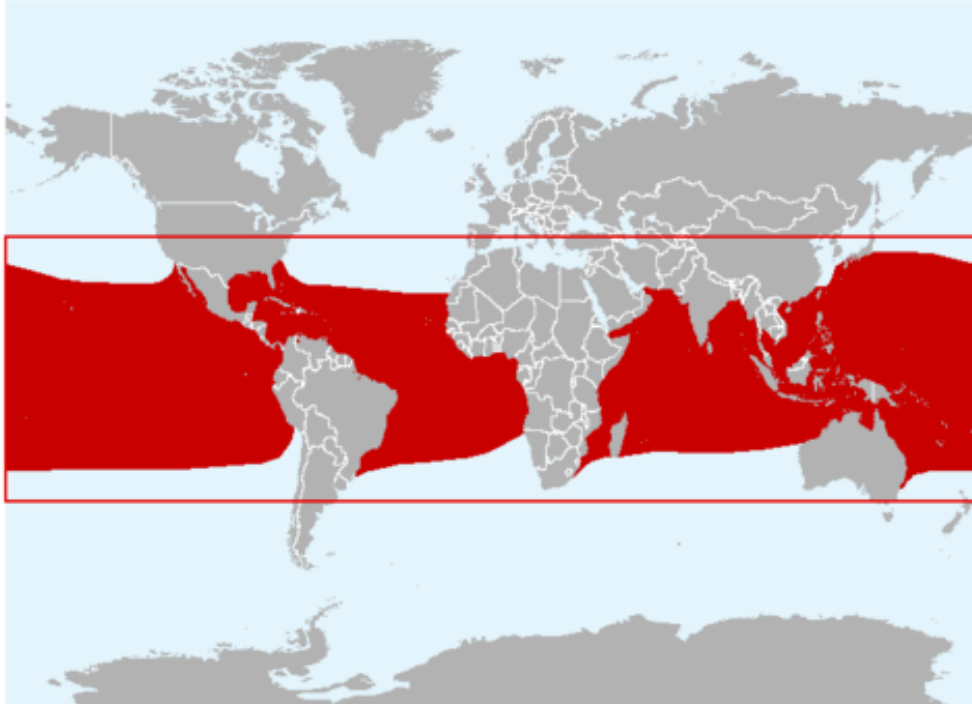
**ANTIPREDATOR BEHAVIOUR.** Melon-headed whales are typically shy animals and live far in the open water where there are few predators. Melon headed whales if threatened by large ships or fishing boats will dive deep into the sea and resurface in tighter groups, this is a means to ward off bigger predators as predators will less likely attack larger groups. They will also make high pitch clicks (Arkive.org, 2015). Whether or not this is a warning for other whales has not yet been determined. The most dominant threats to melon-headed whales being hunted for their meat as well as being captured in nets while fishermen troll the sea.

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**Fig. 2.** *Peponocephala electra* (melon-headed whale) distribution.

[[http://www.cms.int/reports/small\\_cetaceans/data/P\\_electra/p\\_electra.html](http://www.cms.int/reports/small_cetaceans/data/P_electra/p_electra.html) downloaded 10 October 2015]



**Fig. 3.** *Peponocephala electra* (melon-headed whales) swimming together.

[<http://www.savethewhales.org/Melon-Headed.html> downloaded 10 October 2015]





**Fig. 4.** A melon-headed whale jumping in the open water.

[[whaleopedia.org](http://whaleopedia.org) downloaded 12 October 2015]

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