



THE MARINE MAMMALS OF **TANZANIA & ZANZIBAR**

An Illustrated Guide and Natural History



By Tim R B Davenport
Illustrated by Sarah Markes

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INTRODUCTION



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This guide '*The Marine Mammals of Tanzania and Zanzibar*' was conceived in 2013 during the writing of '*A Guide to the Large Mammals of Tanzania*'. At that time we identified 18 species of marine mammal (including 16 cetaceans) in Tanzanian waters, although it was clear the information available was scant, and there had been little work to pull together a definitive list based on comprehensive nationwide research. Since then, there have been taxonomic, nomenclature and conservation status changes, the Wildlife Conservation Society (WCS) carried out a six-week survey in 2015, and over the last five years more research has been carried out and new records added. Moreover, TD is compiling a complete annotated list to all Tanzania's mammals (> 430 spp). Here we now list 28 species of marine mammal in Tanzania, although it is likely that more will be added with time and further study. Of the 26 cetaceans, six are baleen whales (*Balaenopteridae*), and the remaining 20 are toothed whales, including one true sperm whale (*Physeteridae*), two sperm whales (*Kogiidae*), three beaked whales (*Ziphiidae*) and 14 dolphins (*Delphinidae*). In addition, there is one dugong (*Dugongidae*) and one eared seal (*Otariidae*), although the latter is a vagrant.

The Guide is the first of its kind specifically targeting the United Republic of Tanzania, and by definition therefore, both the waters of mainland Tanzania and the archipelago of Zanzibar. In addition to general information on natural history, conservation, carbon capture and tourism, each species entry provides taxonomy, a

description with maximum adult weights and lengths, habitat preference, distribution, the primary diet, the latest IUCN Red Listing, behaviour, and information pertinent to Tanzania. The illustrations are all original works, drawn exclusively by SM specifically for conservation work by WCS in Tanzania. The aim of this Guide is simple; to list and provide information and illustrations on all Tanzania's marine mammals and to illustrate more of the country's extraordinary biodiversity. Mostly, however, we hope this inspires Tanzanians and non-Tanzanians alike to enjoy, appreciate and help care for the nation's seas and seascapes, and the extraordinary wildlife within them.



NATURAL HISTORY



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Marine mammals comprise the cetaceans (whales, dolphins and porpoises), the pinnipeds (seals, sealions and walruses) and the sirenians (manatees and dugongs), with the latter two groups represented by just one species each in Tanzania; the vagrant fur seal and the dugong. There is no scientific rationale for splitting cetaceans (order **Cetacea**) into whales, dolphins and porpoises, as the names were initially intended to describe differences in size from the large whales to the small porpoises. In reality however, there are dolphins bigger than whales and smaller than porpoises. Furthermore, six of the family **Delphinidae** are called whales, but more confusingly also called 'blackfish'. Technically there are just two main cetacean groups (suborders), the toothed whales (**Odontoceti**) and the baleen whales (**Mysticeti**).

The first ancient whales (**Archeoceti**) evolved approximately 40 million years ago, and the baleen and toothed whales split about 15 million years later. Most of the groups as we know them today had evolved by five million years ago. There are currently 90 species of cetacean known globally to science (76 toothed and 14 baleen) and they exhibit vast diversity in almost all aspects of their biology. They range in size from one to 33 metres in length and dwell in habitats as diverse as beneath polar ice to tropical reefs to far upstream in freshwater rivers. Some species are restricted to less than 30 metres depth, while others may dive as much as 100 times that. Most species eat fish, squid and crustaceans although some eat much larger prey even other whales. Indeed, killer whales (or

orcas) have no limit on the size of animal a pod may hunt, although blue and humpback whales may respond aggressively to such attacks. In turn, all cetaceans may be preyed upon by large sharks or killer whales.

Many baleen whales migrate, spending the 'summer' months (November to May in the southern hemisphere) feeding on schooling fish in high-latitude, cold waters. In 'winter' (June to October in the southern hemisphere) they move to low-latitude warm waters for courtship, mating and calving. Food is only present in large numbers in the summer, but young calves cannot tolerate the cold temperatures, so feeding and breeding areas tend to be thousands of kilometres apart. Humpback whales have been recorded traveling as much as 18,000 kilometres in a year. However, much remains a mystery as to whale behaviour during migration, including how they navigate over such vast distances, how much they feed, and at what depths they swim.

Sexual maturity in cetaceans ranges between three and 25 years of age, often depending on the size of the species. Courtship may often be complex and lengthy, and can involve days of acrobatics, fin slapping and splashing. In some species, such as humpback whales, the males may fight and cause serious wounds. Generally cetaceans are not monogamous and may have several partners in a breeding season. Sperm competition has been recorded in many species. Gestation is not dependent on size of the species, but can

coincide with migration habits to ensure calves are born in suitable waters at optimal seasons. Mothers give birth near the surface and the offspring are born with their eyes open, normally about a third of the size of mother. Males play no role in parental care and generally toothed whales have fewer young and look after them longer (so-called 'k strategy'), whereas baleen whales generally have more young with shorter parental care ('r strategy').

Most cetaceans have complex social lives which are only partially understood. Their senses, many of which are particularly acute, have evolved to cope with this complexity, but also to function in their unique aquatic habitats. For example, sight is unsurprisingly less important than for most mammals and some species are even blind. Smell is also relatively weak, but their sense of taste and hearing are both extremely acute. They also have highly sensitive skin affording them a strong sense of touch.

Many species vocalise in order to communicate, the best known examples being the extraordinary and complex repertoire of whale song from humpback and blue whales, linked mostly with sexual selection. Other baleen whales also produce sounds, and toothed whales produce a range of whistles and squeaks used for individual recognition and communication. In addition, toothed whales echolocate by means of ultrasonic clicks produced and emitted from the nose which echo off objects and bounce back to the melon on the animal's forehead. Information then reaches the brain via

the lower jaw. This highly sophisticated form of sonar can even detect other individual pod members or a fast-moving fish's size, speed, shape and texture.

The least understood sense is the use of geomagnetism - detecting the earth's magnetic flux density - as a means of navigation. Geomagnetic topography is 'read' like a map and cetaceans generally move parallel to geomagnetic contours as they swim between feeding grounds. One of the biggest mysteries surrounding whale and dolphin behaviour, is why thousands strand on beaches and coastlines across the world each year. Single deceased individuals washed up may simply be natural mortality or the result of disease or ship-strike. But often strandings are of live animals *en masse* with dozens or even hundreds of animals involved.

There continues to be growing evidence that live strandings can happen when the geomagnetic fields being used (or their detection) are interfered with, or when the contours cross land or occur in shallow areas and low tides. There have been various other reasons put forward for live strandings, including particularly cold or aberrant weather conditions, disease, pollution, parasites, seismic activity, or sunspots and their impact on electromagnetic energy. The reality is that whilst electromagnetic confusion or acoustic interference may be the most likely, many of these varying factors may be involved.

CONSERVATION

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The world's cetaceans (whales, dolphins and porpoises) are probably more threatened now with national and global extinction than at any time in history, including during the whaling era. Of the 90 known species, 27 are currently classified in the IUCN Red List as threatened (**critically endangered**, **endangered**, **vulnerable** or **near-threatened**). Three notable species, the North Atlantic right whale, vaquita and baiji are all now on the verge of global extinction. A further 24 species are described as **data deficient**, and given the considerable challenges of quantifying the status of far ranging, widely distributed, low density marine mammals, it is likely that many of these are threatened too. There are of course success stories, the humpback whale and other species that were the target of the whaling industry throughout the 18th to 20th centuries have come back and are in some cases flourishing. However, new and potentially more detrimental threats now face them and most other species, meaning that without considerable and concerted efforts, the future looks bleak for most of the world's whales and dolphins.

For decades, the principal threat facing cetaceans was direct exploitation as part of the centuries-old whaling industry. It has been estimated that between the late 18th and mid-20th centuries, hundreds of thousands of humpback whales, half a million blue whales and three-quarters of a million fin whales were killed, the latter in the southern hemisphere alone. Less than 10% of the 1900 population of blue whales now exist. The International Whaling Commission (IWC) was set up in 1946 to determine hunting quotas

for 13 species of large whales, based on the findings of its Scientific Committee. The IWC voted on July 23rd 1982, to establish a moratorium on commercial whaling of great whales, which began in the 1985–86 season. This had a significant positive impact on whale numbers, although Canada, Iceland, Japan, Norway, Russia, South Korea, USA and the Danish dependencies of the Faroe Islands and Greenland continue to hunt whales today. Iceland, Norway and Japan catch many hundreds of whales yearly, largely ignoring IWC quotas.

These days, all cetaceans the world over are adversely affected by many interacting factors, including direct exploitation, chemical and noise pollution, loss of habitat and prey, climate change and ship-strikes. For many, foremost among these threats is incidental take in fishing gear, both artisanal and local operations but especially industrial tuna fishing. It has been estimated that at least four million dolphins have been killed since the 1950s in the Indian Ocean alone, with a concomitant 87% collapse in Indian Ocean dolphin populations since the 1980s. As many as 80,000 individuals a year are still being caught annually.

Cetaceans in rivers and those of restricted range may, in theory, be easier to protect, assuming there is the political will to do so, because the threats and their limitations are plain to determine. However, where economies still take precedence over the environment, applying interventions to protect largely unseen and poorly understood marine animals - without any real knowledge of

the specific threats or means to avert them - is unrealistic. Of course, there needs to be global awareness of the issues facing cetaceans and their role as proxy species (flagship, umbrella, indicator), but like so much in conservation, interventions are largely at the national level and must be targeted appropriately (and supported globally). If each nation sees the plight of cetaceans as another country's issue, numbers will continue to fall. And if countries are unaware of the specific problems or have no data to justify intervention, little will happen.

The situation in Tanzania exemplifies the issues outlined above. Whilst one could assume all marine mammals are threatened in Tanzanian waters, the details, extent and specific causes are unclear. The global criteria defined by the IUCN Red List (2020) are indicative of broad threat such that in Tanzania there are three Endangered (EN), three Vulnerable (VU), two Near Threatened (NT), 19 Least Concern (LC) and one Data Deficient (DD). But of these, four are listed as having populations increasing, one stable, two decreasing and worryingly, 21 unknown. How and why and which species in Tanzanian waters are endangered is hard to determine. Quantifying marine mammals is problematical not least because they spend 95% of their time under water and out of sight. Errors in surveys therefore can often be too great to elucidate national situations accurately. As a consequence – and with little reliable baseline data – trends and monitoring, unless of well-known individual pods such as the bottlenose dolphins of

Kizimkazi in Unguja, are rarely possible. Perhaps the only surety is the dugong which is now probably functionally extinct in Tanzania, with at best only a dozen individuals remaining.

Regarding specific threats, it is safe to assume that reduction in prey and pollution are influential, based on the persistent decline in fish stocks over the past few decades, as well as the considerable rise in chemical and plastic pollution (and ghost nets) since the 1970's. Untreated sewage remains a challenge. Research on incidental catch of cetaceans in Tanzania indicated that it is/was significant although no trends are known and this applies to perhaps 40% of the marine mammal fauna.

The term 'by-catch' is often used, although in Tanzania the term may be loose because nets are often deliberately indiscriminate and dolphin/whale meat is sometimes targeted, eaten or used as shark bait. It is probable that noise pollution has - and will have - a growing impact, but only now is that being researched. It is likely to increase with increased shipping and a major new port in Tanzania being developed. Similarly, ship-strikes are an issue and many animals observed in Tanzanian waters are scarred. Perhaps the greatest threat is climate change although the real impacts are yet to be elucidated. Reports in 2020 of dolphins in Australia and the USA dying of freshwater skin disease are likely a result of a climate change induced increase in fresh water in a usually salty water system.

CETACEANS AND CARBON



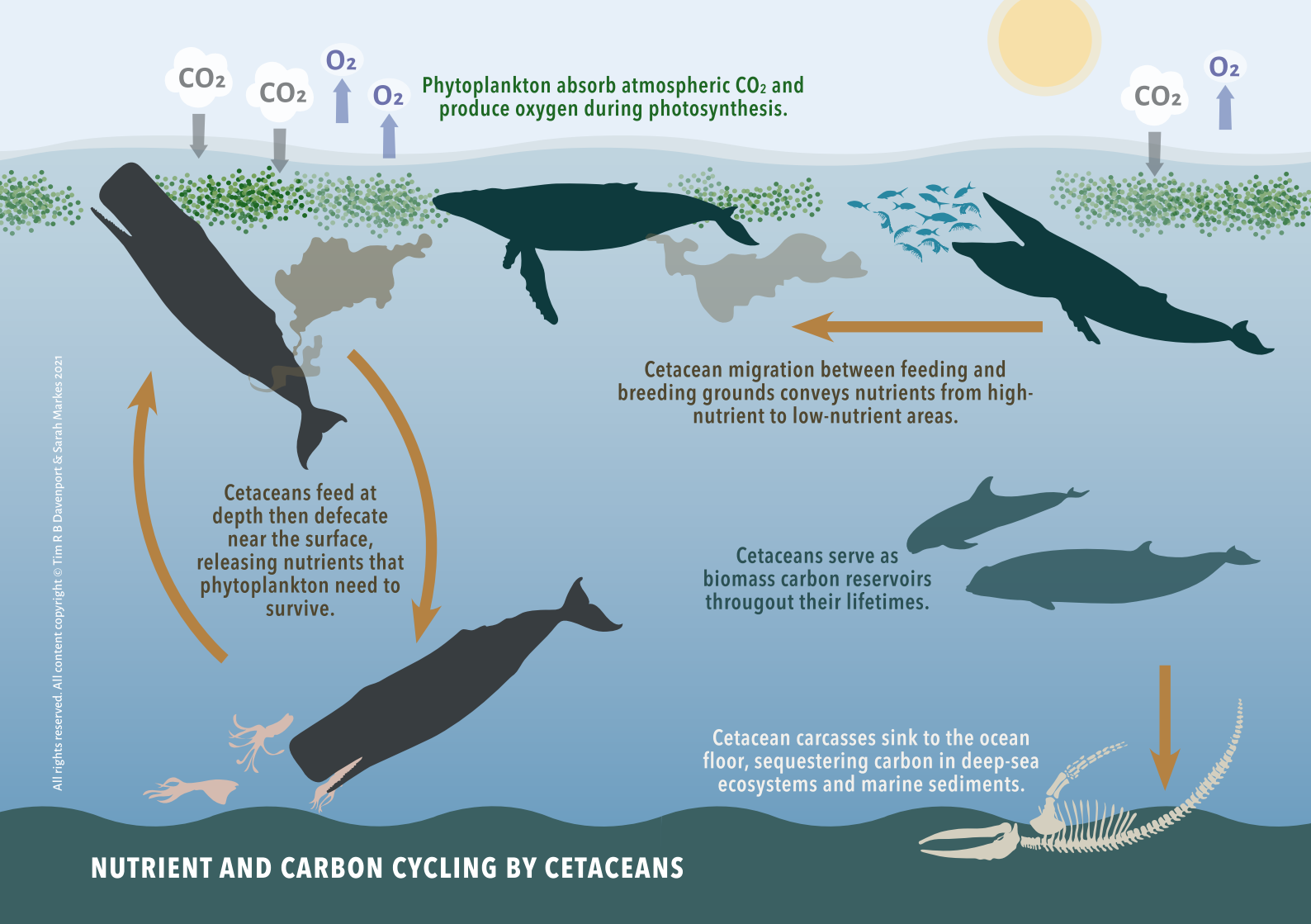
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There is a growing body of evidence demonstrating how important marine mammals are for carbon sequestration in the sea, and that protection of cetaceans can greatly reduce greenhouse gases and climate change. There are various ways this happens, but the most significant is via phytoplankton that absorb carbon dioxide (CO₂) and release oxygen (O₂) back into the atmosphere as a by-product of photosynthesis. These microscopic marine algae capture more than 35 billion metric tons of CO₂ (~ 40% of all CO₂ produced), and equivalent to the amount of CO₂ captured by 1.70 trillion trees. In turn, they contribute at least 50% of all O₂ to the atmosphere through this oxygen flux.

Marine mammals feed on iron-rich krill and fish and their faeces release vast amounts of nutrients including iron and nitrogen, both of which are essential for phytoplankton growth. More phytoplankton means more carbon capture. And cetaceans disperse nutrients in this way in three dimensions. Whales and dolphins often dive to great depths to feed and thus the so-called 'whale pump' circulates nutrients vertically. Meanwhile, migration helps move nutrients from richer to poorer areas, transporting nitrogen-rich urea from feeding grounds to breeding grounds. If we progress up the trophic cascade, zooplankton feed on the phytoplankton and in turn provide nourishment for fish and thence dolphins and whales. This 'marine vertebrate mediated carbon' is stored as faeces' aggregates sink and are deposited on the sea bed.

In addition, cetaceans serve as carbon reserves (biomass carbon). They are numerous and large and the larger and more long-lived the better. Each great whale, for example, sequesters on average 33 metric tons of CO₂, taking that carbon out of the atmosphere for centuries. By comparison a tree absorbs only up to 20kg of CO₂ a year. Once the animals die their carcasses usually sink to the ocean floor. This 'deadfall carbon' is absorbed by scavengers and into seafloor sediments.

As mentioned, the global populations of cetaceans, especially of the largest great whales is only a small percentage of what it once was. If whale populations returned to former numbers of five million (from ~ one million today) it would add significantly to the amount of phytoplankton in the oceans and to the carbon they capture each year. At a minimum a 1% increase in phytoplankton due to whale activity would capture hundreds of millions of tons of additional CO₂ a year, equivalent to two billion more trees. With the average lifespan of a whale being 60 years the total is impressive. If whales returned to pre-whaling numbers they may capture as much as 1.7 billion tons of CO₂ annually. In August 2021, the Intergovernmental Panel on Climate Change (IPCC) stated that human activity is "changing the Earth's climate in ways unprecedented in many thousands of years. Only rapid and drastic greenhouse gas reduction can prevent climate breakdown". Protecting the world's cetaceans has an important role to play.

The diagram illustrates the role of cetaceans in ocean nutrient and carbon cycling. At the top, the sun is shown. On the left, phytoplankton are depicted as green dots near the surface. Arrows show CO2 entering the water and O2 being released. A whale is shown feeding at depth, with an arrow indicating it defecates near the surface. In the center, a whale is shown migrating, with an arrow indicating the movement of nutrients from high-nutrient to low-nutrient areas. On the right, another whale is shown feeding, with an arrow indicating it defecates near the surface. At the bottom right, a whale carcass is shown sinking to the ocean floor, with an arrow indicating the sequestration of carbon in deep-sea ecosystems and marine sediments. The background is a light blue gradient representing the ocean surface and water.

Phytoplankton absorb atmospheric CO₂ and produce oxygen during photosynthesis.

Cetacean migration between feeding and breeding grounds conveys nutrients from high-nutrient to low-nutrient areas.

Cetaceans feed at depth then defecate near the surface, releasing nutrients that phytoplankton need to survive.

Cetaceans serve as biomass carbon reservoirs throughout their lifetimes.

Cetacean carcasses sink to the ocean floor, sequestering carbon in deep-sea ecosystems and marine sediments.

NUTRIENT AND CARBON CYCLING BY CETACEANS

WHALE AND DOLPHIN TOURISM



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Until the Covid-19 pandemic, tourism was a key sector in Tanzania and one that continued to grow. In 2018 it was worth \$2.43 billion, accounting for 25% of all foreign exchange, and up to 17% of GDP. Whilst there are negative aspects on the environment in terms of consumption and pollution, tourism revenue is fundamental to conservation in Tanzania in the terrestrial realm. This has yet to be realised, however, in the marine environment, although with adequate measures the potential is huge.



Whale and dolphin watching is one such activity that could, if properly managed, provide considerable support to ocean wildlife. Indeed, worldwide it is a \$2.1 billion industry. Currently there is only one 'dedicated' cetacean watching site operational in Tanzania, in the Kizimkazi area of southeast Unguja, Zanzibar. Although dolphins are often seen off Mnemba Island and on 'Safari Blue' trips off Fumba. Given the annual humpback whale migration and the diversity of cetaceans in Tanzanian waters, there is great opportunity for more. However, there is a need to ensure that any such operations are managed responsibly.

Up until the 1980s, coastal communities in Kizimkazi and other areas of Zanzibar used to hunt dolphins for consumption. Starting in 1992 however, dolphin tours targeting Indo-pacific bottlenose dolphins and occasionally Indian Ocean humpback dolphins provided communities with additional direct and indirect revenue. Hunting began to decline. Over the last 20 years dolphin tours have increased in popularity and more than 50 small boats are now involved, each able to take up to 8 tourists at a time. Unfortunately, competition for business and access means that many boats often chase and harass the dolphins simultaneously. International codes of conduct for operating safe and responsible dolphin tourism are rarely followed. Given the Kizimkazi population is small and resident, and that studies have shown that dolphins rest less often, travel more frequently, are more stressed with negative impacts on reproduction, this is a concern.

A number of suggestions have been made concerning changes that could transform the Kizimkazi dolphin tours into a more positive experience for both dolphins and tourists, and a more sustainable and profitable one for the community. These include using one or two large boats rather than numerous small ones; adherence to the Codes of Conduct produced by the Zanzibar Department of Fisheries and to the 'Global Best Practice Guidance for Responsible Whale and Dolphin Watching'; provision of licences to operators that could be revoked for irresponsible behaviour; establishment of village cooperatives to share benefits appropriately; and the presence of trained guides to provide tourists with reliable information on dolphins, and their ecology and conservation.

Whale and dolphin watching in other parts of Zanzibar, as well as off mainland Tanzania such as in the Pemba Channel, provide considerable opportunities for local and national revenue, for education, awareness raising and conservation support. The thousands of humpback whales that swim through Tanzanian waters (and possibly mate or breed here) between July and November each year are a particular example. They are a remarkable sight which very few Tanzanians get to see and which many tourists would pay handsomely to witness. However, it is imperative that all the appropriate safeguards are put in place to ensure any such tours are managed sustainably and with the welfare of the animals as a priority.

CETACEAN TOURISM DOS AND DONTs

BOAT-BASED DO NOT:

- chase or corall cetaceans
- separate or 'leap-frog' cetaceans
- feed cetaceans
- make loud noises or use jet skis
- throw rubbish or food overboard
- change speed of boat if dolphins bowride
- stay longer than 30 mins

BOAT-BASED & SWIMMING DO:

- ensure tourists are informed about impacts
- use a qualified guide on each boat
- approach cetaceans from parallel direction to the rear
- remain 100m from a whale and 50m from a dolphin
- slow down and identify behaviour within 300m
- stay > 300m if calf nursing or resting
- have no more than three boats < 300m at one time
- keep all vessels on same side of cetacean

SWIMMING DO NOT:

- touch, dive or chase cetaceans
- swim when there are any calves present
- use SCUBA for diving or swimming with cetaceans
- use artificial light sources, including flash photography
- tow swimmers behind boats
- take any objects into the water except cameras and floatation devices.

GLOSSARY

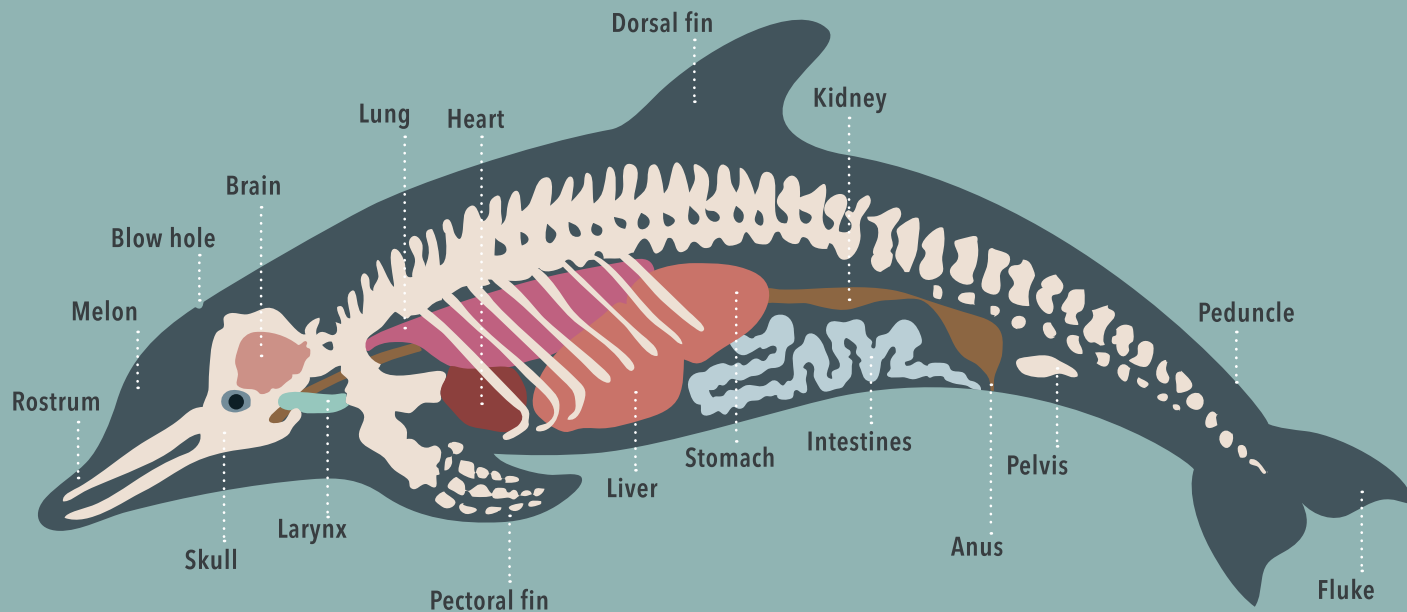
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Baleen	Comb-like plates that hang from jaws of most large whales that act as a filter-feeding system for capturing prey.
Baleen Whale	Sub-order of whales (Mysteceti) that possess baleen plates instead of teeth
Beak	Elongated snout in many cetaceans
Beaching	Becoming stranded out of the water
Blackfish	Colloquial name for six members of family Delphinidae, subfamily Globicephaliae including false and pygmy killer whales and pilot whales.
Blow/Spout	Exhalation of carbon dioxide and water vapour from the blowhole of cetaceans
Blowhole	Nostril(s) or dorsal openings on the top of the cetacean head
Bow-riding	The use by cetaceans of the pressure wave in front of a moving boat or big whale to swim
Breaching	Leaping partially or completely out of the water
Bubble Netting	Method of feeding, mostly by humpback whales, in which exhaled air bubbles are used to coral fish
Cetacea	The order that includes all whales, dolphins and porpoises.
Cryptic	Hidden, little-known or perplexing behaviour
Echolocation	Imaging sound by some cetaceans using a process of emitting noise and interpreting the echos. Used for navigation, predation and defence.
Falcate	Curved or hooked like a sickle

Flipper	Paddle-shaped limb of a marine mammal. Especially the forelimb (pectoral fin) in cetaceans
Fluke	Boneless cetacean tail, horizontally flattened
IWC	International Whaling Commission
Krill	Dozens of species of small shrimp-like Euphausiacea crustaceans. The staple food of many large whales.
Mesoplodont	Toothed whales
Melon	Fatty organ in a cetacean's forehead. Used to focus sound for echolocation
Pectoral Fin	See Flipper
Pod	Group of socially-connected cetaceans, usually refers to larger toothed whales
Porpoising	Emerging from, or leaping out of, the water while swimming fast
Phytoplankton	Microscopic marine algae
Rostrum	Upper jaw of the skull, may include the beak/snout
Rorqual	Baleen whales of the genus Balaenoptera. Includes humpback, blue and fin whales
Stranding	See Beaching
Toothed Whale	See Mesoplodont
Tubercles	Bumps found on many cetacean species, often on the flippers or head
Zooplankton	Microscopic marine animals

CETACEAN BASIC ANATOMY

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BALEEN WHALES



COMMON MINKE WHALE

Balaenoptera acutorostrata

Lacépède, 1804

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: BALEEN WHALES – BALAEONOPTERIDAE

MAX ADULT LENGTH: M 7-9m , F 9-10m

MAX ADULT WEIGHT: 9,200kg

HABITAT: COASTAL, INSHORE WATERS

PRIMARY DIET: KRILL, SMALL SCHOOLING FISH

GESTATION: 10-11 MONTHS

DISTRIBUTION: TROPICS, SUBTROPICS TO ICE EDGES

GLOBAL NUMBERS: ~ 200,000

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI WA GHUBA

REFERENCES: 2,9

Description

Variable, small and sleek for a baleen whale. Dark grey dorsally, white ventrally, head V-shaped with a sharply pointed snout. There is a prominent median head ridge, falcate fin, often bright white bands on the flippers, and the flukes are tapered with a smooth trailing edge and distinct notch. Blow is indistinct.

Behaviour

Sometimes aggregate to feed. Group sizes are usually small; mostly singletons, pairs or trios. Complex social structure with groups often segregated by age, sex and/or reproductive condition. The fluke is not raised on diving, although breaching does occur. Currently the species most often hunted by commercial and 'scientific' whalers in both hemispheres.

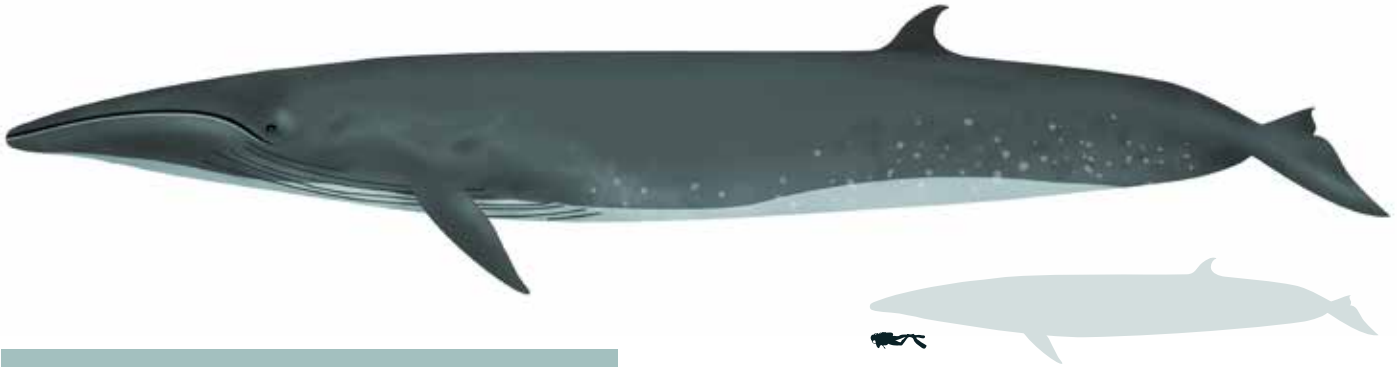
In Tanzania

Little is known about the common minke whale in Tanzanian and Zanzibari waters. It is believed they follow the seasonal migration patterns and routes of other large cetaceans between the Antarctic and the Western Indian Ocean, and are thus mostly absent between December and June.

SEI WHALE

||| *Balaenoptera borealis*
Lesson, 1828

|||  IUCN RED LISTED AS
ENDANGERED (A1abd)



FAMILY: BALEEN WHALES – BALAENOPTERIDAE

MAX ADULT LENGTH: M 17m F 19m

MAX ADULT WEIGHT: 45,000kg

HABITAT: OPEN OCEAN

PRIMARY DIET: COPEPODS, KRILL, SARDINES

GESTATION: 11-12 MONTHS

DISTRIBUTION: TEMPERATE, SUBTROPICS, SUBPOLAR

GLOBAL NUMBERS: ~ 50,000

POPULATION TREND: INCREASING

SWAHILI NAME: NYANGUMI DAGAA

REFERENCES: 2,12

Description

Large, sleek body, dark grey or brown-black above, cream white below, often heavily scarred. Dorsal fin is tall and falcate, and there is a single longitudinal (rostral) head ridge. Blow is tall (3m) and columnar. May be confused with Bryde's whale (which has 3 rostral ridges).

Behaviour

Poorly known, unpredictable and elusive. Prone to population surges and collapses. Groups of 2 to 5 mostly seen. A fast swimmer (up to 25 knots) and tends to feed mostly at dawn. The tail fluke is not raised on diving. May hybridise with fin whales.

In Tanzania

Listed for Tanzania in WoRMS and known from across the Western Indian Ocean (as well as the Atlantic and Pacific Oceans). Almost nothing is known about its presence and distribution in Tanzanian waters.

BRYDE'S WHALE

||| *Balaenoptera edeni*
Anderson, 1879

|||  IUCN RED LISTED AS
LEAST CONCERN



FAMILY: BALEEN WHALES – BALAENOPTERIDAE

MAX ADULT LENGTH: M 15m, F 16.5m

MAX ADULT WEIGHT: 40,000kg

HABITAT: OFFSHORE & COASTAL

PRIMARY DIET: SARDINES, MACKEREL, HERRING, ANCHOVY, PILCHARD

GESTATION: 12 MONTHS

DISTRIBUTION: GLOBAL

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI TROPIKI

REFERENCES: 1,2,9,12

Description

A dark whale; smoky grey or mottled brown dorsally and white ventrally. There are 3 longitudinal rostral ridges on the head. The dorsal fin is falcate and prominent. Blow is narrow and indistinct. May be confused with the Sei whale (which has 1 rostral ridge).

Behaviour

Little known. Usually solitary or in pairs but aggregates in groups of 10 to 20 individuals in feeding grounds. The fluke is not raised on diving and breaching is uncommon. Can reach a depth of 300m. Breeding occurs throughout the year. Known to use bubble nets to fish on occasion.

In Tanzania

Bryde's whale occurs throughout the year in Tanzanian waters, but mostly in deeper offshore waters and so is not often seen.

BLUE WHALE

||| *Balaenoptera musculus* |||

Linnaeus, 1758



IUCN RED LISTED AS

ENDANGERED (A1abd)



FAMILY: BALEEN WHALES – BALAEONOPTERIDAE

MAX ADULT LENGTH: 33m

MAX ADULT WEIGHT: 180,000kg

HABITAT: OPEN OCEAN

PRIMARY DIET: KRILL

GESTATION: 11 MONTHS

DISTRIBUTION: GLOBAL

GLOBAL NUMBERS: 5-15,000

POPULATION TREND: INCREASING

SWAHILI NAME: NYANGUMI BLUU

REFERENCES: 1,2,12

Description

Largest animal ever known. Slender streamlined and individually mottled blue-grey. Tiny variably-shaped fin far down the back. Broad flattened U-shaped head. Very large blowhole with splashguard. Single longitudinal head ridge. Blow is tall (10m) and slender. Flippers long and pointed with a white border on both surfaces. Tail fluke is ventrally striated.

Behaviour

Usually solitary or in pairs but aggregations at feeding grounds of up to 12 are known. Dives may last 30 minutes. Occasionally breach completely despite size. Calves born in (sub)tropical breeding areas and can hybridise with fin or humpback whales. May live to 90 years. Loudest voice in animal kingdom. Throat pleats expand hugely on feeding.

In Tanzania

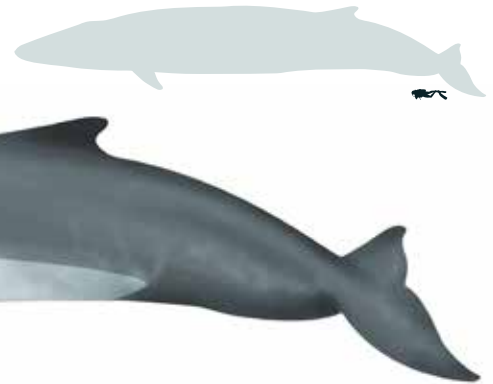
There have only been a couple of sightings of the blue whale in deeper Tanzanian waters, although more is currently being learned in the Indian Ocean through recordings of their song.

FIN WHALE

||| *Balaenoptera physalus* |||
Linnaeus, 1758



IUCN RED LISTED AS
VULNERABLE (A1d)



FAMILY: BALEEN WHALES – BALAENOPTERIDAE

MAX ADULT LENGTH: M 25m, F 27m

MAX ADULT WEIGHT: 120,000kg

HABITAT: OCEANIC WATERS

PRIMARY DIET: INVERTEBRATES, SCHOOLING FISH

GESTATION: 11-12 MONTHS

DISTRIBUTION: GLOBAL

GLOBAL NUMBERS: ~100,000

POPULATION TREND: INCREASING

SWAHILI NAME: NYANGUMI PEZI

REFERENCES: 2,12

Description

Very large, sleek, dark upperside and light below. Unusual asymmetrical head colouration with lower jaw, mouth cavity and some baleen plates white on the right, but grey or black on the left (possibly to confuse prey or predators). Females 10% longer. There is a grey-white chevron, small backward sloping dorsal fin far down the back. Blow is tall and narrow. A single rostral head ridge.

Behaviour

A fast swimmer. Does not raise the fluke on diving and breaches occasionally. More social than other rorqual whales and pods of up to 7 are not uncommon. Associate with other species such as humpback and common minke whales. Calving areas usually subtropical. Can live up to 80 years. Very loud vocalisations including the famous 20-Hz calls that may travel hundreds of kilometres. Active lunge feeders and often on their sides.

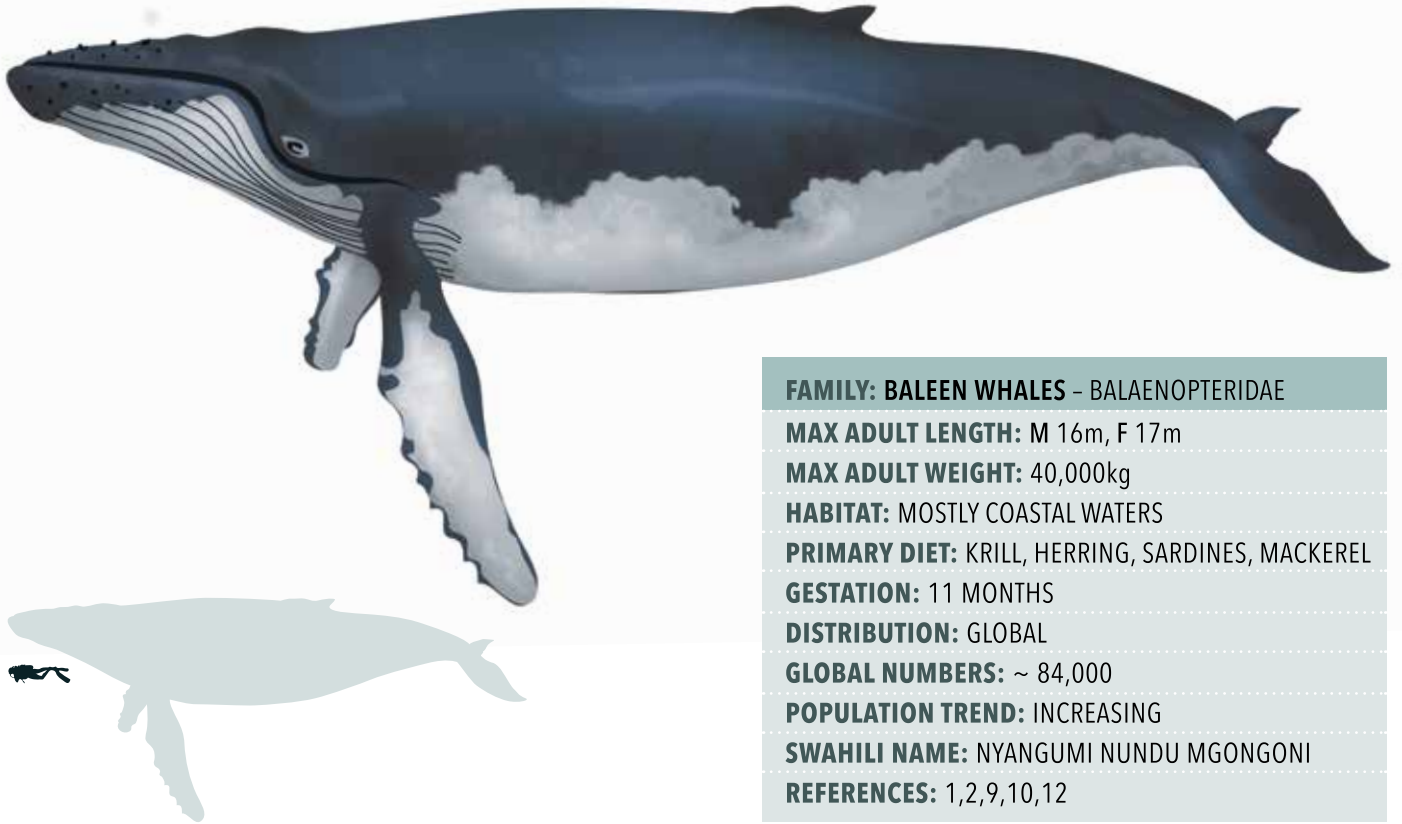
In Tanzania

Although the fin whale may be confused with sei or blue whales and is usually associated with more temperate waters, its secondary range includes the deeper waters of Tanzania.

HUMPBACK WHALE

||| *Megaptera novaeangliae* |||
Borowski, 1781

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: BALEEN WHALES – BALAENOPTERIDAE

MAX ADULT LENGTH: M 16m, F 17m

MAX ADULT WEIGHT: 40,000kg

HABITAT: MOSTLY COASTAL WATERS

PRIMARY DIET: KRILL, HERRING, SARDINES, MACKEREL

GESTATION: 11 MONTHS

DISTRIBUTION: GLOBAL

GLOBAL NUMBERS: ~ 84,000

POPULATION TREND: INCREASING

SWAHILI NAME: NYANGUMI NUNDU MGONGONI

REFERENCES: 1,2,9,10,12

Description

Large distinctive black-grey whale with varying amounts of white below (more in the southern hemisphere). The flippers are a third of body length, and white or dark above and white below, with a series of bumps (tubercles). The dorsal fin is small, variable in shape and set on a small hump. The tail fluke has a deep notch and serrations on the leading edge. The humpback often shows its back, dorsal fin and fluke before it dives. Blow (~3 m) is profuse and highly visible.

Behaviour

Humpback whales are lunge-feeders and may use bubble nets, bubble clouds or tail flicks to concentrate prey. Breaching is common. The East African population migrates annually between feeding grounds in the Antarctic and breeding grounds in the Western Indian Ocean's tropical and subtropical waters. Often seen alone, or in mother-calf pairs, they congregate in groups of up to 15 animals in their breeding grounds.

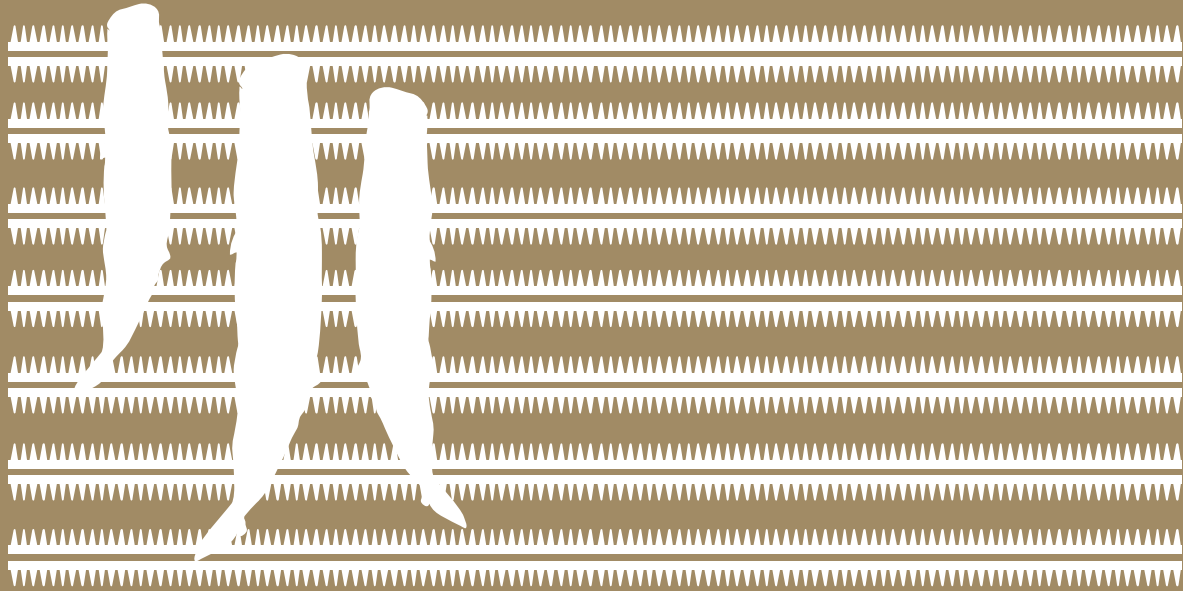
In Tanzania

This species migrates through Tanzanian waters between July and mid-November (with most sightings in August), moving up through the Mozambique Channel from the Antarctic. In Tanzania and Zanzibar, humpbacks seem to travel in both southerly and northerly directions, appearing usually a few weeks after they do in Kenya. This raises the possibility that they migrate into Tanzania south from Kenya and north from Mozambique, with courtship occurring in places such as southern Zanzibar.





TOOTHED WHALES



SPERM WHALE

Physeter macrocephalus

Linnaeus, 1758



IUCN RED LISTED AS

VULNERABLE (A1d)



FAMILY: TRUE SPERM WHALES - PHYSETERIDAE

MAX ADULT LENGTH: M 19m, F 12.5m

MAX ADULT WEIGHT: M 57,000kg, F 24,000kg

HABITAT: DEEP WATER, OPEN SEA

PRIMARY DIET: DEEP WATER SQUID, OCTOPUS

GESTATION: ~15 MONTHS

DISTRIBUTION: GLOBAL

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI SPAMU

REFERENCES: 1,2,9,10,12

Description

A large, dark-grey whale, with a huge rectangular head, and both upper and lower lips white. The dorsal fin is rounded and comparatively small, and there are often a series of bumps along the back between the fin and the tail. The skin is usually lightly wrinkled throughout. The sperm whale has a single blowhole at the front of the head, angled to the left and the blow is therefore directed leftwards and rising between 1 and 5m in height.

Behaviour

This is a deep-sea animal, rarely found in waters less than 200m deep. Sperm whales live in relatively stable groups of 10 to 20 females and their young, with males being either solitary or forming bachelor groups of up to 50 individuals. They can dive to depths of 3,000m or more in search of cephalopods.

In Tanzania

Sperm whales are found in the Western Indian Ocean (including Tanzania) year-round, although animals migrate to feeding areas further south between October and April, generally returning to warmer tropical waters in from May to September.

PYGMY SPERM WHALE

Kogia breviceps

Blainville, 1838



IUCN RED LISTED AS

LEAST CONCERN



FAMILY: SPERM WHALES – KOGIIDAE

MAX ADULT LENGTH: M 3m, F 3.8m

MAX ADULT WEIGHT: 450kg

HABITAT: DEEP WATER, OFTEN OVER CONTINENTAL SLOPE

PRIMARY DIET: DEEP WATER SQUID, OCTOPUS

GESTATION: 9-11 MONTHS

DISTRIBUTION: GLOBAL TROPICAL/WARM TEMPERATE

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI RUBA MBILIKIMO

REFERENCES: 1,2,9,10,12

Description

Dark blue-grey dorsally and white, tinged with pink, ventrally. The head has a prominent snout, a small lower jaw and a white, sickle-shaped band running between the eye and the flipper, known as a 'false gill'. The head and body shape and false gill give the animal a 'shark-like' appearance. The dorsal fin sits behind the centre of the back, is small, variably shaped and usually slightly falcate.

Behaviour

This species is usually found far off shore and is rarely seen. It often lies motionless on the surface, and can be easily approached. Its movements are often slow and lethargic and there is no visible blow. Most sightings are of single individuals, but groups of up to 6 are known. Ejects up to 12 litres of ink when threatened (like the dwarf sperm whale). Little is known about its behaviour.

In Tanzania

Little is known about this species in Tanzania, with the only records coming from strandings. They can become entangled in fishing nets and some stranded whales have been found to have ingested plastic bags, a growing problem in squid-eating cetaceans.

DWARF SPERM WHALE

Kogia sima

Owen, 1866



IUCN RED LISTED AS
LEAST CONCERN



FAMILY: SPERM WHALES – KOGIIDAE

MAX ADULT LENGTH: M 2.7m, F 2.5m

MAX ADULT WEIGHT: 275kg

HABITAT: CONTINENTAL SLOPE EDGE

PRIMARY DIET: MID/DEEPWATER SQUID

GESTATION: 10 MONTHS

DISTRIBUTION: (SUB)TROPICAL ATLANTIC, PACIFIC, INDIAN

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI RUBA KIBUSHUTI

REFERENCES: 1,2,12

Description

Small, stocky bluish-grey upperside, dull white or pinkish below. The head is square with an underslung lower jaw and a dark ring around the eyes. The dorsal fin is prominent and falcate, flippers are small and there is a false shark-like gill slit. Blow is low and inconspicuous. May be confused with pygmy sperm whale but smaller, with larger dorsal fin and blowhole more anterior.

Behaviour

Like its congeneric, often floats motionless. Very little known with information mostly from strandings. Cryptic and not commonly seen at sea. Group sizes small usually <6 individuals, but 10 known. Ejects up to 12 litres of ink when threatened (like the pygmy sperm whale). Lives to 25 years. Calving peak in the southern summer. There is no visible blow.

In Tanzania

Little is known about the dwarf sperm whale in Tanzania, with one or two sightings and a few records coming from strandings and fishing by-catch.

INDO-PACIFIC BEAKED WHALE

Indopacetus pacificus

Longman, 1926

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: BEAKED WHALES - ZIPHIIDAE

MAX ADULT LENGTH: 6.5m

MAX ADULT WEIGHT: ~2,000kg

HABITAT: DEEP WATER, OPEN SEA

PRIMARY DIET: SQUID, CUTTLEFISH

GESTATION: 10-12 MONTHS

DISTRIBUTION: CENTRAL PACIFIC & INDIAN OCEANS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI NDOMO LONGMAN

REFERENCES: 1,10,12

Description

Also known as Longman's beaked whale or tropical bottlenose whale. A grey-brown or tan back and paler undersides with a large, creamy-buff melon. The long beak is dark above and white below. Dorsal fin in adults large and triangular, whereas in juveniles small and swept back. Similar to mesoplodont and bottlenose whales.

Behaviour

Indo-Pacific beaked whales live in tight-knit groups of between 10 and 100 individuals but usually between 15 and 20. They sometimes associate with pilot or humpback whales, bottlenose and spinner dolphins. Their dives can last up to 45 minutes. Breaching occurs. Blow is visible but short.

In Tanzania

This is one of the world's most poorly known cetacean species, it is known in Tanzania from just a couple of records.

BLAINVILLE'S BEAKED WHALE

Mesoplodon densirostris

Blainville, 1817

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: BEAKED WHALES - ZIPHIIDAE

MAX ADULT LENGTH: M 4.5m, F 4.9m

MAX ADULT WEIGHT: 1,000kg

HABITAT: OFFSHORE DEEP WATERS

PRIMARY DIET: DEEP SEA SQUID

GESTATION: UNKNOWN

DISTRIBUTION: TEMPERATE & TROPICAL OCEANS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI NDOMO BLENVILI

REFERENCES: 1,2,12,13

Description

Also known as the dense-beaked whale. Brownish-grey above and lighter below. Dorsal fin is prominent small, and set two-thirds along the dappled, scarred or scratched back. Body is spindle-shaped with a characteristic strongly-arched lower jaw, longish beak, large horn-like teeth and a flat forehead. The tail fluke is tapered with no notch. There is a single pair of throat grooves and an anteriorly-hinged crescent-shaped blowhole.

Behaviour

Better known than other beaked whales. Groups of 3 to 7 are known, but singletons and pairs most common. Harems of several adult females and one adult male have been recorded. Subadults separate often in less productive waters compared to adults. Dives of 1500m lasting almost an hour have been documented. Breach occasionally.

In Tanzania

Confirmed only from a sighting and photographs in 2015 in the Pemba Channel.

CUVIER'S BEAKED WHALE

Ziphus cavirostris
G. Cuvier, 1823

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: BEAKED WHALES - ZIPHIIDAE

MAX ADULT LENGTH: 7m

MAX ADULT WEIGHT: 3,000kg

HABITAT: DEEPER WATERS OVER CONTINENTAL SHELF

PRIMARY DIET: DEEP SEA SQUID

GESTATION: 12 MONTHS

DISTRIBUTION: GLOBAL OFFSHORE WATERS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI NDOMO CUVIER

REFERENCES: 1,2,9,10,12

Description

A medium-sized stout whale with a light brown to dark grey scarred body, white head, and white or lighter upper-parts sometimes extending back to the dorsal fin. There is a short ill-defined beak and gently sloping forehead. The top of the head is characteristically concave, especially in older individuals and the melon is bulbous in adult males. The lower lip protrudes beyond the upper lip, and males have two large teeth on the tip of the lower jaw, visible with a closed mouth. The dorsal fin is small and falcate. Blow is inconspicuous (<1 m).

Behaviour

A deep-water animal, it is usually seen alone or in small groups up to 10 individuals. The species is elusive, rarely breaches and sightings are usually brief. Cuvier's beaked whales may be the deepest divers of all cetaceans, known to be capable of reaching 3,400m and diving for up to two hours.

In Tanzania

Little is known about this cetacean in Tanzania, but there are known sightings off the coast of Zanzibar (both Unguja and Pemba).

PYGMY KILLER WHALE

Feresa attenuata

Gray, 1875

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.6m, F 2.3m

MAX ADULT WEIGHT: 225kg

HABITAT: OFFSHORE WATERS

PRIMARY DIET: FISH & SQUID

GESTATION: 10-12 MONTHS

DISTRIBUTION: TROPICAL & SUBTROPICAL WATERS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI MBILIKIMO MUUAJI

REFERENCES: 1,2,12

Description

Dark grey to black moderately stout body, narrowing after the fin. Slightly lighter flanks and light patch below and darker cape visible in certain light conditions. Rounded head with no beak. White lips. The dorsal fin is prominent, tall and relatively falcate. Flippers are rounded, with convex leading and concave trailing edges.

Behaviour

Little known about the behaviour and it is one of the least-known of all dolphin species. Groups between 10 to 50 individuals are normal, though several hundred have been seen. Slow and lazy swimmers. Rarely bow rides but leaps occasionally. Considered aggressive and known to attack other dolphins. Feeds mostly by night.

In Tanzania

Very little is known about the pygmy killer whale in Tanzania, and it is known from two sightings only.

SHORT-FINNED PILOT WHALE

Globicephala macrorhynchus
Gray, 1846

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 7.2m, F 5.5m

MAX ADULT WEIGHT: 3,600kg

HABITAT: DEEP OFFSHORE WATERS

PRIMARY DIET: SQUID

GESTATION: 15-16 MONTHS

DISTRIBUTION: WARM TEMPERATE TO TROPICAL SEAS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI PEZI FUPI

REFERENCES: 1,2,10,12,13

Description

Long thick-set black, brown or dark grey body with lighter coloured saddle behind dorsal fin. Large rounded head with a bulbous prominent melon, light diagonal stripe behind each eye and another anteriorly. No visible beak. The flippers are short and the dorsal fin is low and broad-based, far forward on dorsum, and sweeping backward. Striking sexual dimorphism with males considerably larger.

Behaviour

Highly social, live in permanent groups of 15 to 90 individuals which may congregate into huge gatherings. Few leave their groups although males breed outside. Live up to 70 years of age. Can dive to 500m and uses whistles and clicks for navigation, hunting and communication. Females become lactating grandmothers after their 40s.

In Tanzania

Short-finned pilot whales are rarely seen in coastal Tanzanian waters, but are not uncommon in offshore and deeper habitats.

RISSO'S DOLPHIN

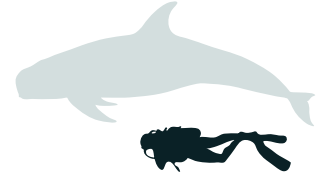
Grampus griseus

G. Cuvier, 1812



IUCN RED LISTED AS

LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: 3.9m

MAX ADULT WEIGHT: 500kg

HABITAT: DEEPER COASTAL WATERS

PRIMARY DIET: CRUSTACEANS, SQUID, OCTOPUS

GESTATION: 13 MONTHS

DISTRIBUTION: GLOBAL ESP. 30-45° LATITUDE

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: POMBOO KOMO

REFERENCES: 1,2,9,10,12,13

Description

Pale brown to dark grey with light grey or white on the underparts. Most adults have diagnostic heavy scarring on the back and sides making them look almost white. Scarring is heaviest in males and older animals, often caused by fights and also squid or octopus. The head is bulbous and squarish with no beak. The dorsal fin is tall and curved. Fin, flippers and flukes are dark grey or brown.

Behaviour

Usually found in groups of between 10 and 100 individuals, with groups of less than 15 most common. They are typically found in deeper water (<180 m), and occasionally ride boats' bow waves. Often lethargic and slow, they do occasionally breach. It is thought that they feed mostly at night. Teeth used for display during mating conflicts.

In Tanzania

The main records in Tanzania are from Zanzibari waters and the Pemba Channel, where it seems relatively uncommon. It is not known if this species is a seasonal visitor or a permanent resident.

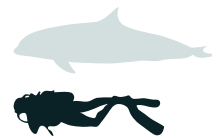
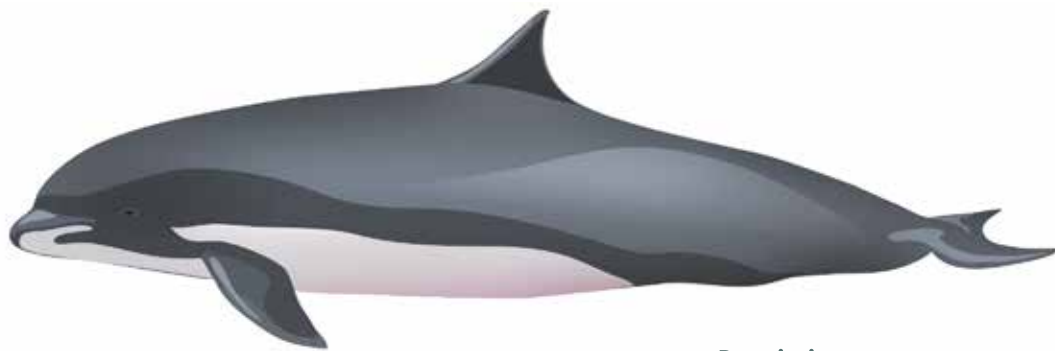
FRASER'S DOLPHIN

Lagenodelphis hosei

Fraser, 1956



IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.7m, F 2.6m

MAX ADULT WEIGHT: 210kg

HABITAT: DEEP OCEANIC WATERS

PRIMARY DIET: MIDWATER FISH, CEPHALOPDS, CRUSTACEANS

GESTATION: 11 MONTHS

DISTRIBUTION: PANTROPICAL

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: POMBOO NDOMO FRASER

REFERENCES: 1,2,9,10,12,13

Description

Stocky and very distinctive with a short beak, flippers and dorsal fin. The dolphin has a blue-grey back, pale grey sides and a distinctive black band extending from the upper part of the beak, past the eye to the anus. This band is often absent in juveniles. The belly is white or pink.

Behaviour

This cryptic species is usually found in the high seas and is rarely observed in shallow water or close to shore. It travels in large schools of between 50 and 1,000 individuals, and these large pods produce a distinctive frothy wake when on the move. Often associates with spinner, pantropical spotted and common bottlenose dolphins, and false killer whales. They can dive to almost 600m and often strand *en masse*.

In Tanzania

Although widely distributed, this species is only known in Tanzania from the Zanzibar Archipelago, where it has been recorded quite often as by-catch in fishing nets.

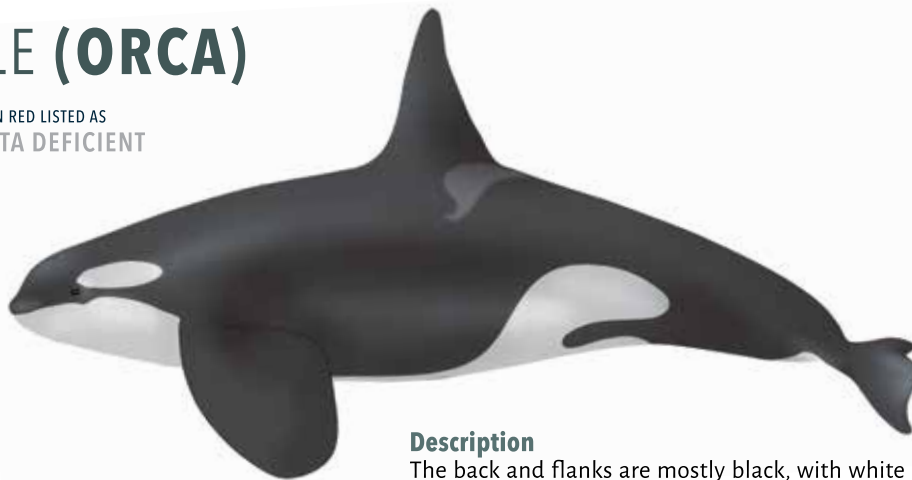
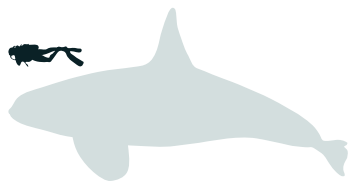
KILLER WHALE (ORCA)

Orcinus orca

Linnaeus, 1758



IUCN RED LISTED AS
DATA DEFICIENT



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 9.8m, F 8.5m

MAX ADULT WEIGHT: M 10,000kg F 7,500kg

HABITAT: WIDESPREAD, MOST COMMON IN NEARSHORE WATERS

PRIMARY DIET: MARINE MAMMALS, LARGE FISH, CEPHALOPODS

GESTATION: 15-18 MONTHS

DISTRIBUTION: ALL MARINE REGIONS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI MUUJAJI (OKA)

REFERENCES: 1,2,10,12

Description

The back and flanks are mostly black, with white on the chin to the abdomen, the rear sides and a patch behind the eye. Considerable regional variation. The largest dolphin and both sexes have a very large dorsal fin, which may grow up to 1.8m in mature males. Most individuals have a grey patch on the saddle behind the dorsal fin. The beak is short and blunt and teeth are large. Cannot be confused with any other species.

Behaviour

Killer whales live in multi-sex family units or pods of 2–25 individuals, which usually remain together for life. Adult males are often solitary. Several related pods form clans that develop their own cultural characteristics such as distinct call ‘dialects’ and hunting techniques. Some clans specialize on feeding on fish, while others may eat primarily marine mammals.

In Tanzania

Killer whales are one of the most widespread vertebrates on earth. There have been a handful of records in both Tanzanian and Zanzibari offshore waters including at least 2 strandings.

MELON-HEADED WHALE

Peponocephala electra

Gray, 1846



IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.8m, F 2.4m

MAX ADULT WEIGHT: 275kg

HABITAT: DEEP OFFSHORE WATERS

PRIMARY DIET: FISH, SQUID, CRUSTACEANS

GESTATION: 12 MONTHS

DISTRIBUTION: TROPICAL & SUBTROPICAL WATERS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI KICHWA CHA TIKITI

REFERENCES: 1,2,12

Description

Small torpedo-shaped body, grey to very dark-grey dorsally, lighter on underside. Darker dorsal cape that characteristically dips steeply behind the dorsal fin. Young lighter grey. The head is triangular with little or no beak. The melon is large in some adult males. Lips are white, grey or pink and dorsal fin is tall and falcate. Flippers are sickle shaped. There are prominent keels and post anal humps.

Behaviour

Highly social animal with pods usually between 100 and 500 individuals (maximum 2,000). Often associate with other dolphin species including spinner and common bottlenose. Fast swimmers that enjoy bow riding. Prone to mass strandings. They can live to at least 45 years.

In Tanzania

There is very little known about this dolphin in Tanzania.

FALSE KILLER WHALE

Pseudorca crassidens

Owen, 1846



IUCN RED LISTED AS

NEAR THREATENED (A2d)



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 6m, F 5m

MAX ADULT WEIGHT: 2,000kg

HABITAT: DEEP WATERS

PRIMARY DIET: BILLFISH, TUNA, DOLPHINFISH

GESTATION: 11 – 16 MONTHS

DISTRIBUTION: GLOBAL TROPICAL/WARM TEMPERATE

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: NYANGUMI MUUJAJI MUONGO

REFERENCES: 2,9,10,12,13

Description

Large slender-bodied and uniformly dark-grey or black, hence being one of the species known as 'blackfish'. There is a faint light-grey patch on the throat, chest and belly. Dorsal fin is tall (40 cm), erect and located mid-back. The head is small and round and the forehead projects beyond the lower jaw. The flippers are S-shaped with a diagnostic bulge half way down the front edge. Males may be 1 m longer than females.

Behaviour

A very social species, the false killer whale lives in groups of 10–60 individuals, forming strong communal bonds. When moving, they raise much of their body above water and may breach in a low flat arc just above the surface. Individuals in groups often move in a wide front while travelling, possibly as a hunting strategy. They often associate with other dolphins, particularly bottlenose dolphins, and yet have also been recorded to attack other cetaceans. They are frequently found stranded in large numbers.

In Tanzania

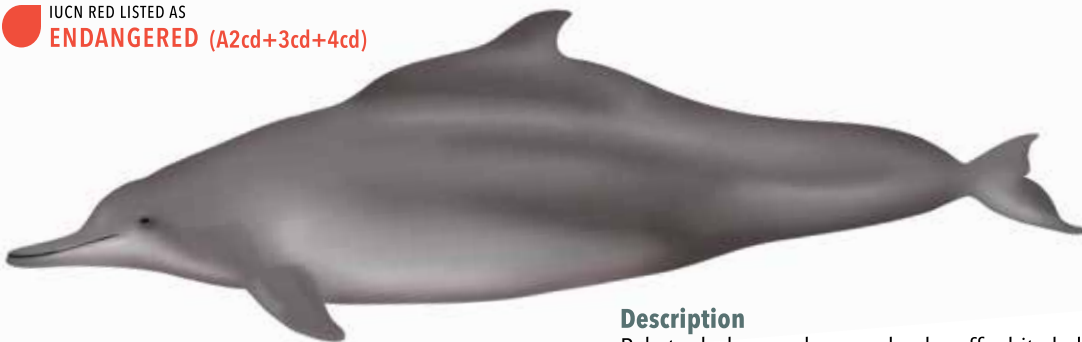
Known mostly from the Pemba Channel. Some 44 individuals were stranded near Stone Town, Zanzibar in December, 1933.

INDIAN OCEAN HUMPBAC DOLPHIN

Sousa plumbea

G. Cuvier, 1829

IUCN RED LISTED AS
ENDANGERED (A2cd+3cd+4cd)



Description

Pale to dark grey above and paler off-white below. There is a characteristic hump in the middle of the back crowned by the small, falcate dorsal fin. Both often have a white margin. The size of the hump varies, but is usually larger in older individuals. The beak is long and well defined with no crease.

Behaviour

Group sizes are usually small. In one study off western Unguja, Zanzibar, groups ranged from 1 to 8 individuals whereas another study off the south coast groups averaged 5 to 8 individuals. This species often associates with the Indo-Pacific bottlenose dolphin and tends to be resident, with groups foraging parallel to shore. Rarely found in waters deeper than 30m rendering them highly susceptible to negative human interactions including by-catch. They rarely bow-ride, being shy of boats.

In Tanzania

Tanzania's rarest and most endangered cetacean, it is the most vulnerable to human impact and often caught in inshore fishers' nets. However, it can still be regularly observed in Chumbe, off Stone Town, Bububu, Mwangapwani, Kizimkazi, Mnemba, and there are groups in southwestern and western Pemba, Tanga, Pangani, Bagomoyo, and north Kilwa. That said, there may only be a couple of hundred individuals nationwide.

FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.8m, F 2.6m

MAX ADULT WEIGHT: M 285kg F 260kg

HABITAT: NEARSHORE WATERS <30m DEEP

PRIMARY DIET: NEARSHORE, REEF, ESTUARINE FISHES

GESTATION: 10-12 MONTHS

DISTRIBUTION: COASTAL WESTERN INDIAN OCEAN

GLOBAL NUMBERS: ~15,000

POPULATION TREND: DECREASING

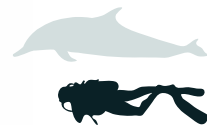
SWAHILI NAME: POMBO NUNDU MGONGONI

REFERENCES: 1,9,10,12,13

PANTROPICAL SPOTTED DOLPHIN

Stenella attenuata
Gray, 1846

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.6m, F 2.4m

MAX ADULT WEIGHT: 120kg

HABITAT: OFFSHORE DEEPER WATERS

PRIMARY DIET: SMALL & BOTTOM-LIVING FISHES

GESTATION: 11 MONTHS

DISTRIBUTION: PANTROPICAL

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: POMBOO MADOTO

REFERENCES: 1,2,9,10,12,13

Description

Dark back and a pale underside, although may appear all black. Adults are usually heavily spotted on the back, sides and underside, but the extent of spotting varies significantly. Juveniles may be unspotted or have ventral spots only. Spots may not be visible from a distance. The body is slender and the beak long and slim. The tip of the beak and the lips are usually white. The dorsal fin is sharply falcate..

Behaviour

Millions of individuals of this species were killed in tuna purse seine nets until the introduction of more dolphin-friendly fishing in the 1980s. They are now one of the more common dolphins in the ocean, although by-catch threat is increasing once again. They prefer deeper water (>200m) and travel in schools of 20–300 animals, although they can occur in herds numbering thousands. They often associate with spinner dolphins.

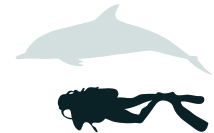
In Tanzania

The offshore (*S. a. graffmani*) subspecies occur in Tanzanian waters, although it is rarely seen as it favours deep water. They are often caught in drift nets around the Zanzibar Archipelago and have been recorded quite regularly off Pangani.

STRIPED DOLPHIN

||| *Stenella coeruleoalba* |||
Meyen, 1833

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.6m, F 2.5m

MAX ADULT WEIGHT: 160kg

HABITAT: DEEP OFFSHORE WATERS

PRIMARY DIET: SMALL PELAGIC FISH, SQUID

GESTATION: 12 MONTHS

DISTRIBUTION: WARMER ATLANTIC, PACIFIC, INDIAN WATERS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: POMBOO MISTARI

REFERENCES: 1,2,12

Description

Blue-grey dorsal, pale grey sides and tail base, white or pinkish belly. Characteristic long dark side stripe, from eye to flipper (and accessory stripe between them). Light grey thorax, pale shoulder blaze up towards the dorsal fin which is tall and slightly falcate. Moderately prominent beak with a crease between the beak and melon. Flippers recurved and pointed.

Behaviour

Pods usually between 30 and 500 individuals (up to thousands on occasion). Herds may be segregated in terms of age and/or sex. Fast swimmers and very acrobatic. Frequently breach and leap, and perform a variety of aerial displays including belly flops, chin slaps, backwards somersaults, tail spins and reverse porpoising. They also roto-tail, whirling the tail whilst leaping in a high arc. Polygynous breeders and can live to 60 years.

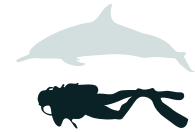
In Tanzania

Not uncommon in Tanzanian waters but not often seen due to their preference for deep water and their nervousness around boats.

SPINNER DOLPHIN

||| *Stenella longirostris* |||
Gray, 1828

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.4m, F 2m

MAX ADULT WEIGHT: 85kg

HABITAT: MEDIUM DEPTH WATERS

PRIMARY DIET: SMALL FISHES (<20 CM), SQUID

GESTATION: 10 MONTHS

DISTRIBUTION: PANTROPICAL

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: POMBOO MZUNGUKO

REFERENCES: 1,2,9,10,12,13

Description

Medium and variably-sized with three colour tones, dark grey on the back, light grey on the sides, and white ventrally. Dark grey hood extends from the top of the head to midway between the dorsal fin and tail fluke. The light grey side pattern runs from the head to the fluke, passing through the eye and covering the top of the beak. The lower jaw, chin, and belly are white.

Behaviour

This species is named for its habit of leaping as much as 3m out of the water and spinning longitudinally, like a corkscrew, up to 7 times. They also breach, side-slap, fluke-slap and flipper-slap. Typically occurring in large groups of 100 or more individuals, they feed mostly at night in medium-depth waters.

In Tanzania

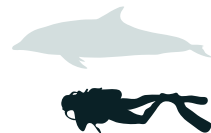
Spinner dolphins are relatively common in the Pemba and Zanzibar Channels and there are many records from Maziwe Island near Pangani, as well as around Unguja, Zanzibar, particularly around Matemwe and Nungwe. Pods of up to 1,000 animals may be seen west of Pemba.

ROUGH-TOOTHED DOLPHIN

Steno bredanensis

Lesson, 1828

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.8m, F 2.6m

MAX ADULT WEIGHT: 160kg

HABITAT: DEEP OCEANIC WATERS

PRIMARY DIET: CEPHALOPODS, FISHES INC. DORADO

GESTATION: UNKNOWN

DISTRIBUTION: TROPICAL & SUBTROPICAL

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: POMBOO MENO MABAYA

REFERENCES: 1,2,9,10,12

Description

Large body with dark grey dorsal cape, light grey sides and white or off-white belly. There are often light scars on the back and sides. The head is cone-shaped and lacks a prominent frontal melon distinctive of most other oceanic dolphins. The beak is long and thin (*Steno* means narrow) and tapers from the blowhole. Lips are white or pinkish white. The dorsal fin is large and set in the centre of the back.

Behaviour

Usually found in open oceans and rarely close to shore. Mostly found in groups of 10 to 20 animals, although occasionally in larger herds of up to 100 individuals. Pods tend to swim shoulder-to-shoulder with synchronized movements, often with their beaks and lips out of the water. They often associate with other species including common bottlenose and, less often, spinner and pantropical spotted. The body scarring is caused by shark attacks or interactions with other dolphins.

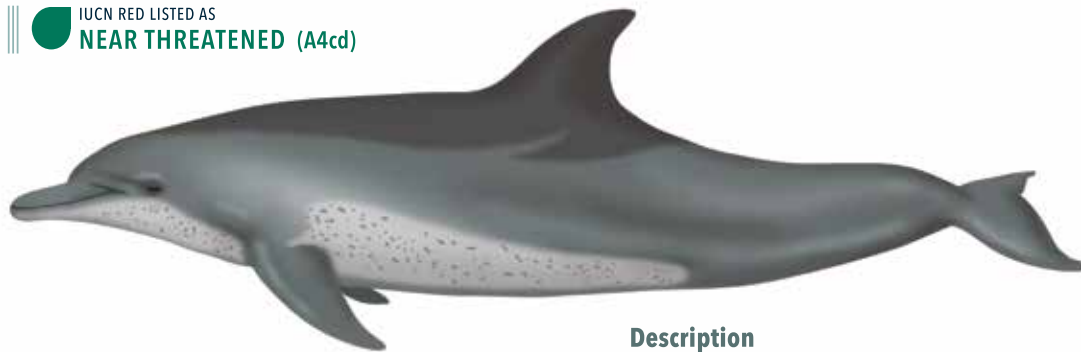
In Tanzania

This species is difficult to follow at sea as it can stay submerged for up to 15 minutes during deep dives. Its preference for deep water means that there is little information on rough-toothed dolphins in Tanzanian waters.

INDO-PACIFIC BOTTLENOSE DOLPHIN

Tursiops aduncus
Ehrenberg, 1833

IUCN RED LISTED AS
NEAR THREATENED (A4cd)



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 2.7m, F 2.5m

MAX ADULT WEIGHT: 230kg

HABITAT: INSHORE SHALLOW WATERS

PRIMARY DIET: SMALL SCHOOLING OR REEF FISH

GESTATION: 12 MONTHS

DISTRIBUTION: INDIAN & WESTERN PACIFIC OCEANS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: POMBOO PUA YA CHUPA

REFERENCES: 1,9,10,12,13

Description

Dark-grey with a pale grey or off-white underside. Similar to the common bottlenose dolphin but smaller, more slender in the body and with a longer, more slender beak and less convex melon. Older individuals have dark spots or flecks on the ventrum, although this is usually absent in juveniles. The dorsal fin is tall and falcate. The tail fluke is broad with a median notch.

Behaviour

This species is usually found in shallow water less than 40m deep and within 1 km of the shore. Groups usually range between 5 and 15 animals. On Zanzibar, group size varies from 1 to 65 individuals, with groups of 8 to 20 being the most common. Often associate with Indo-Pacific hump-backed dolphins. They can live up to 40 years.

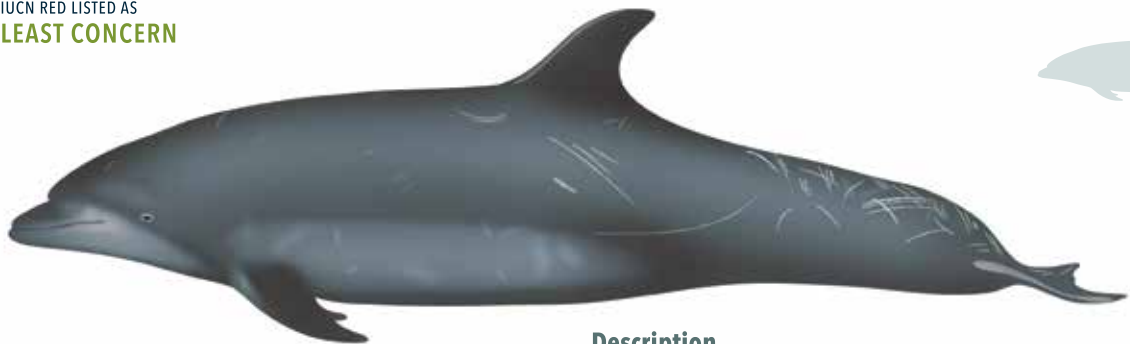
In Tanzania

The Indo-Pacific bottlenose dolphin is found throughout the coast of Tanzania including Zanzibar and is the most commonly observed cetacean in the country's waters. They are less commonly seen between January and June, and more often encountered in the latter half of the year. Unregulated cetacean watching activities have also been shown to negatively affect dolphin behaviour, feeding and movement patterns.

COMMON BOTTLENOSE DOLPHIN

||| *Tursiops truncatus*
Montagu, 1821

|||  IUCN RED LISTED AS
LEAST CONCERN



FAMILY: DOLPHINS – DELPHINIDAE

MAX ADULT LENGTH: M 3.8m, F 3.2m

MAX ADULT WEIGHT: 430kg

HABITAT: BAYS, LAGOONS, RIVERMOUTHS, DEEPER WATERS

PRIMARY DIET: GENERALISTS, FISH, SQUID, SHRIMP

GESTATION: 12 MONTHS

DISTRIBUTION: ALL TROPICAL & TEMPERATE REGIONS

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: UNKNOWN

SWAHILI NAME: POMBOO PUA YA CHUPA

REFERENCES: 1,2,9,10,12,13

Description

Large, grey with a subtle three-toned colour. A dark grey cape extends from the head to half way between the dorsal fin and the fluke, and sometimes on the top of the beak. The side of the body is often a lighter grey, while the undersides are off-white or even pinkish. The beak is relatively short. The dorsal fin is tall and sickle-shaped. Similar to the common bottlenose dolphin but larger, a fuller body and with a shorter broader beak.

Behaviour

Many forms of the common bottlenose dolphin have been described including inshore and offshore forms that differ in behaviour. It is unclear which variety is found in Tanzania. Group sizes vary from singletons to over 1,000 individuals with an average group size of 15. Mostly associated with deeper water.

In Tanzania

Confusion of this species with the Indo-Pacific Bottlenose Dolphin means that there is little accurate information in Tanzanian waters. Most records are from strandings or accidental captures. In 2006, some 600 individuals were stranded on the northwest coast of Unguja in Zanzibar.

DUGONG

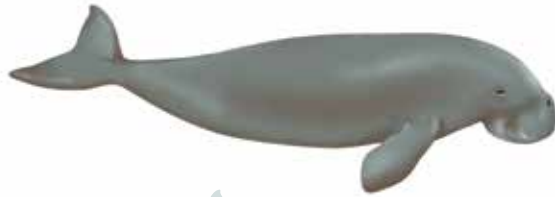
Dugong dugon

Müller, 1776



IUCN RED LISTED AS

VULNERABLE (A2bcd+4bcd)



Description

Smooth, nearly naked slate-grey skin, lighter below. Dugongs have two small, paddle-like flippers and a fluke-shaped tail. The head is small and pig-like with sensitive bristles on the upper lip and a broad flat muzzle. The nostrils are on the top of the snout and have flaps that close when the animal is submerged.

Behaviour

Dugongs used to congregate in herds of over 300 individuals, but due to population declines, sightings of single individuals or mother-pair groups are now most common. They swim slowly below the surface of the water, rising every 2–3 minutes to breathe by lifting the muzzle out of the water. Typically diurnal, they now feed mostly at night due to heavy hunting pressure. Dugongs are slow breeders and may live to over 70 years.

In Tanzania

Formerly widespread along the coast, the dugong may now be functionally extinct in Tanzania, with just a handful of individuals left in the Rufiji Delta area. In 2003 they occurred south of the Kenyan border and in Pangani. However, they are now extinct there, as well as in Lindi, Mtwara and the Zanzibar Archipelago. A single individual was seen several times near Tumbuju, western Mafia Island in 2009 and 2011. Interviews with fishers in 2002/3 in 57 villages along Tanzanian coast produced just 32 records, of which 8 were live animals and 24 were accidental net captures. The majority occurred in the southern part of the Rufiji Delta around Mohoro Bay, where groups of 3 to 4 individuals were occasionally seen in July and August. Since 2015 only a few individuals have been seen. Dugongs have been extensively hunted for their meat and they are usually killed if encountered. With the species now so rare, there is little active hunting and the greater threats are entanglement in fishing nets and loss of seagrass habitat, as a result of commercial prawn trawling. It is sadly probable that the dugong will be extinct in Tanzania in the next couple of years.

FAMILY: DUGONGS – DUGONGIDAE

MAX ADULT LENGTH: 3.3m

MAX ADULT WEIGHT: 570kg

HABITAT: SHALLOW COASTAL SEAGRASS BEDS

PRIMARY DIET: SEAGRASSES

GESTATION: 12 MONTHS

DISTRIBUTION: INDIAN OCEAN

GLOBAL NUMBERS: UNKNOWN

POPULATION TREND: DECREASING

SWAHILI NAME: NGUVA

REFERENCES: 1,2,9,10,12,13

SUBANTARCTIC FUR SEAL ||| *Arctocephalus tropicalis*

J.E. Gray, 1872

IUCN RED LISTED AS
LEAST CONCERN



FAMILY: EARED SEALS – OTARIIDAE

MAX ADULT LENGTH: M 1.8m, F 1.5m

MAX ADULT WEIGHT: M 165kg, F 65kg

HABITAT: INSHORE WATERS

PRIMARY DIET: FISH

GESTATION: 11.5 MONTHS

DISTRIBUTION: SUBANTARCTIC

GLOBAL NUMBERS: ~200,000

POPULATION TREND: STABLE

SWAHILI NAME: SILI

REFERENCES: 10

Description

Dark brown on the back and sides with a creamy yellow chest and face. The top of the head is dark brown, contrasting with the face and creating a mask. The snout is short. Pups are dark brown or black and moult to the same colour as the adults when 3 months old.

Behaviour

Mostly found in Subantarctic waters, the nearest colonies are in the Antarctic Ocean 4,500km south of the Zanzibar Archipelago. Subantarctic fur seals are polygynous with a harem mating system of males defending 6 to 20 females. Breeding sites are populated by breeding bulls and females with newborn pups. Non-breeding haul-out sites consist mostly of subadult males, with a few adult males and females.

In Tanzania

This is a very rare vagrant to Tanzania waters. In July 2002, a fur seal was killed by fishermen at Chokocho, Pemba Island. Meanwhile, in June 2008 fishermen captured a juvenile near Matemwe in Unguja, Zanzibar. The animal died and is now preserved at the zoo in Stone Town, Unguja.

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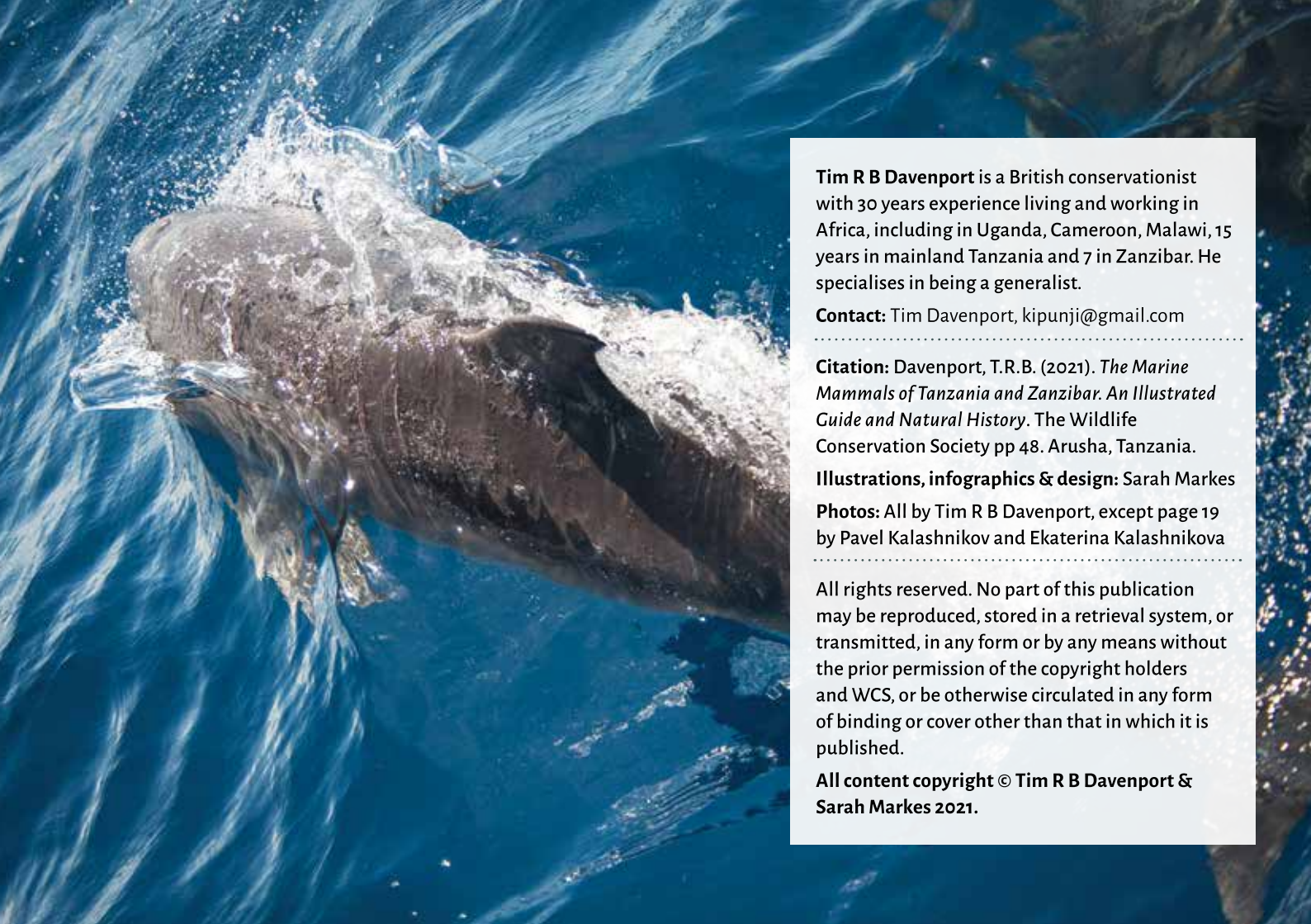
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TAXONOMIC LIST

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BALEEN WHALES		BALAENOPTERIDAE	GRAY, 1864	RED LIST	TREND
1	Common Minke Whale	<i>Balaenoptera acutorostrata</i>	Lacépède, 1804	LC	UNKNOWN
2	Sei Whale	<i>Balaenoptera borealis</i>	Lesson, 1828	EN A1abd	INCREASING
3	Bryde's Whale	<i>Balaenoptera edeni</i>	Anderson, 1879	LC	UNKNOWN
4	Blue Whale	<i>Balaenoptera musculus</i>	Linnaeus, 1758	EN A1abd	INCREASING
5	Fin Whale	<i>Balaenoptera physalus</i>	Linnaeus, 1758	VU A1d	INCREASING
6	Humpback Whale	<i>Megaptera novaeangliae</i>	Borowski, 1781	LC	INCREASING
TRUE SPERM WHALES		PHYSETERIDAE	GRAY, 1868		
7	Sperm Whale	<i>Physeter macrocephalus</i>	Linnaeus, 1758	VU A1d	UNKNOWN
SPERM WHALES		KOGIIDAE	GILL, 1871		
8	Pygmy Sperm Whale	<i>Kogia breviceps</i>	Blainville, 1838	LC	UNKNOWN
9	Dwarf Sperm Whale	<i>Kogia sima</i>	Owen, 1866	LC	UNKNOWN
BEAKED WHALES		ZIPHIIDAE	GRAY, 1850		
10	Indo-Pacific Beaked Whale	<i>Indopacetus pacificus</i>	Longman, 1926	LC	UNKNOWN
11	Blainville's Beaked Whale	<i>Mesoplodon densirostris</i>	Blainville, 1817	LC	UNKNOWN
12	Cuvier's Beaked Whale	<i>Ziphius cavirostris</i>	Cuvier, 1823	LC	UNKNOWN
DOLPHINS		DELPHINIDAE	GRAY, 1821		
13	Pygmy Killer Whale	<i>Feresa attenuata</i>	Gray, 1874	LC	UNKNOWN
14	Short-finned Pilot Whale	<i>Globicephala macrorhynchus</i>	Gray, 1846	LC	UNKNOWN
15	Risso's Dolphin	<i>Grampus griseus</i>	Cuvier, 1812	LC	UNKNOWN
16	Fraser's Dolphin	<i>Lagenodelphis hosei</i>	Fraser, 1956	LC	UNKNOWN
17	Killer Whale	<i>Orcinus orca</i>	Linnaeus, 1758	DD	UNKNOWN
18	Melon-headed Whale	<i>Peponocephala electra</i>	Gray, 1846	LC	UNKNOWN
19	False Killer Whale	<i>Pseudorca crassidens</i>	Owen, 1846	NT A2d	UNKNOWN
20	Indian Ocean Humpback Dolphin	<i>Sousa plumbea</i>	Cuvier, 1829	EN A2cd+3cd+4cd	DECREASING
21	Pantropical Spotted Dolphin	<i>Stenella attenuata</i>	Gray, 1846	LC	UNKNOWN
22	Striped Dolphin	<i>Stenella coeruleoalba</i>	Meyen, 1833	LC	UNKNOWN
23	Spinner Dolphin	<i>Stenella longirostris</i>	Gray, 1828	LC	UNKNOWN
24	Rough-toothed Dolphin	<i>Steno bredanensis</i>	Cuvier, 1828	LC	UNKNOWN
25	Indo-Pacific Bottlenose Dolphin	<i>Tursiops aduncus</i>	Ehrenberg, 1833	NT A4cd	UNKNOWN
26	Common Bottlenose Dolphin	<i>Tursiops truncatus</i>	Montagu, 1821	LC	UNKNOWN
DUGONGS		DUGONGIDAE	GRAY, 1821		
27	Dugong	<i>Dugong dugon</i>	Müller, 1776	VU A2bcd+4bcd	DECREASING
EARED SEALS		OTARIIDAE	GRAY, 1825		
28	Subantarctic Fur Seal	<i>Arctocephalus tropicalis</i>	Gray, 1872	LC	STABLE



Tim R B Davenport is a British conservationist with 30 years experience living and working in Africa, including in Uganda, Cameroon, Malawi, 15 years in mainland Tanzania and 7 in Zanzibar. He specialises in being a generalist.

Contact: Tim Davenport, kipunji@gmail.com

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THE MARINE MAMMALS OF **TANZANIA & ZANZIBAR**


An Illustrated Guide and Natural History



By **Tim R B Davenport**

Illustrated by Sarah Markes



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