



# Guidelines for watching Whales & Dolphins in Oman

Boats can disturb, stress or injure whales and dolphins.

Please follow these simple guidelines:

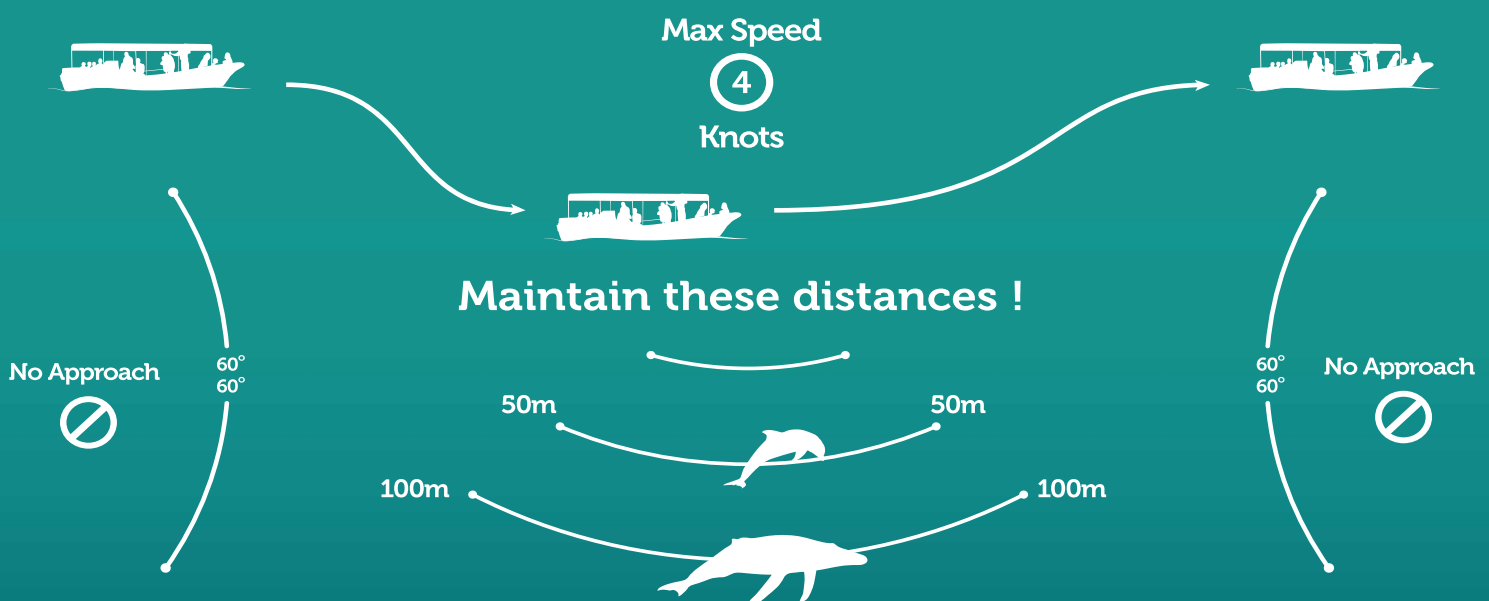
## Approaching Whales & Dolphins

- Slow down at 500 m and maintain a constant speed ( $< 4$  knots) & direction.
  - Approach from side and slightly behind.
- Never chase, harass or overtake whales or dolphins.

## While Watching

- If approached remain stationary until the whales or dolphins move away.
- Do not bang on the hull, shout, whistle or swim with whales or dolphins.
  - Limit viewing time to 30 minutes.

## Only 3 boats at a time - View from the same side



## When Leaving

- Leave if signs of disturbance: sudden or prolonged dives, frequent change of direction or behaviour.
- Carefully choose your moment to leave considering the proximity of the whales & dolphins.
  - Leave slowly ( $< 4$  knots) until at least 100 m away.

# Guidelines for watching Whales & Dolphins in Oman

At least twenty species of whales and dolphins occur in Oman including some which are resident year round. The best times to watch whales and dolphins are early morning and late afternoon, when the sea is often calmest. Remember that boats can disturb, stress or injure whales and dolphins. You can responsibly enjoy watching them by following some simple guidelines.

# إرشادات لمشاهدة الحيتان والدلافين في سلطنة عمان

تحتضن المياه العمانية عشرين نوعاً على الأقل من الحيتان والدلافين، منها الموطن الدائم ومنها الزائر العابر، وتعتبر فترتي الصباح وما بعد العصر أفضل فترات مشاهدة هذه الحيوانات إذ يكون البحر في أهدأ حالاته. وعلينا أن نتذكر أن القوارب يمكن أن تززع الحيتان والدلافين أو أن تصيبها بالتوتر أو الجروح، كما يجب أن نعلم أن المسؤولية لا تسقط عنا حتى أثناء الاستمتاع بمشاهدة الدلافين والحيتان، لذا فإنه يجب علينا اتباع الإرشادات التالية:

## Approaching Whales & Dolphins

- Slow down at 500m & maintain a constant speed (less than 4 knots).
- Approach from the side and slightly behind and follow their direction of travel.
- Avoid approaching from directly behind or in front, or cutting across their path.
- Avoid sudden changes in speed and direction.
- Never chase or harass them or try to provoke a reaction by revving engines.
- Avoid calves, and whales and dolphins that are foraging or resting.
- Only 3 boats should be watching at a time. Wait your turn.
- Keep your distance. Allow at least 100 metres between you and a whale and 50 metres between you and a dolphin.
- Position your vessel on the same side as other vessels that are also watching.
- Avoid overtaking them, waiting in their path or drifting onto them.
- If you are approached by a whale or dolphin when stationary, remain where you are. Do not re-engage your props until the animals move away.
- If dolphins choose to bow ride, maintain course and speed.
- Allow groups of whales or dolphins to remain together: never drive through or between them.

## Behaviour on board

- Do not bang on the hull, shout or whistle to provoke a reaction
- It is dangerous to attempt to swim with, touch or feed whales and dolphins
- Take extra care to avoid collisions with whales and dolphins in your path
- Avoid using noisy equipment, such as echo sounders or sonar and bow or stern lateral thrusters

## Knowing when to leave

- Minimise the amount of time you spend viewing to 30 minutes.
- If you have to keep changing direction, then the animals may be trying to avoid you and should be left alone.
- Look out for other signs of disturbance, such as sudden, repeated or prolonged dives, frequent changes of direction, formation of tight groups that swim away from you, or aggressive slaps and slashes of tail flukes and flippers.
- If you have cut your engines choose the right moment to restart them to avoid disturbance.
- Move away slowly when leaving, keeping to the 4 knot speed limit until you are at least 100 metres away.

## الاقترب من الحيتان والدلافين

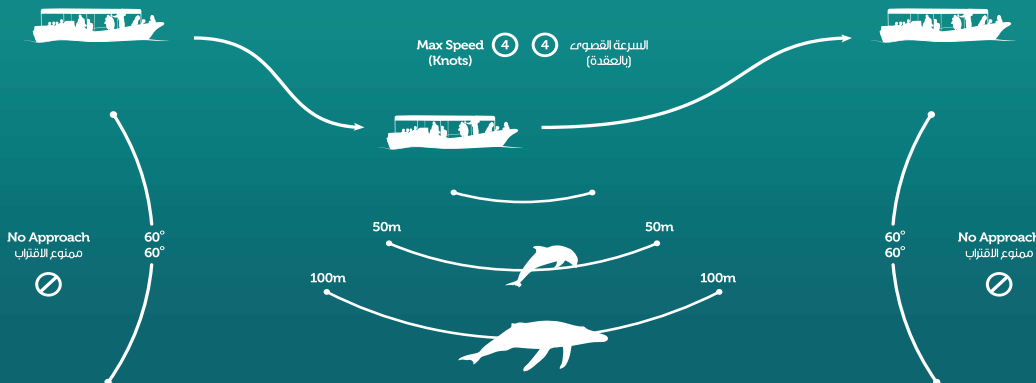
- يجب تخفيف السرعة عند الاقتراب من ٥٠٠ متر وتكون السرعة بطيئة وثابتة (أقل من ٤ عقدات).
- أحرص على أن يبقى القارب خلف المجموعة وعلى أحد الجانبين مع اتباع خط سيرها.
- تجنب الإقتراب من الخلف أو الامام مباشرة، أو قطع مساراتها.
- تجنب تغيير السرعة أو الاتجاه بشكل مفاجئ.
- لا تطاردها أو تضيقها على الإطلاق، ولا تحاول إثارة ردة فعلها عن طريق زيادة سرعة المحركات.
- تجنب الحيتان الصغيرة والحيتان والدلافين التي تبحث عن الغذاء أو تخذل للراحة.
- يجب أن لا يتعدى عدد القوارب في الرحلة الواحدة ٣ قوارب.
- مراعاة المسافة الفاصلة، أحرص على ترك مسافة ١٠٠ بين القارب والحيتان ومسافة ٥٠ متر بين القارب والدلافين.
- يجب أن تكون القوارب كلها في نفس الجانب.
- تجنب الظهور المفاجئ أو الوقوف في مسارها أو الانجراف في اتجاهها.
- في حال اقتراب أحد الحيتان أو الدلافين من القارب فأحرص على عدم تحريك القارب أو تشغيل المحرك حتى ابتعاد الحيوان.
- في حالة اقتراب الدلافين من القارب فحافظ على ثبات السرعة والاتجاه.
- يجب عدم اقتحام أسراب الحيتان والدلافين، ويجب عدم فصل أفراد السرب الواحد عن بعضها.

## السلوك على متن القارب

- تجنب إحداث أصوات عالية لإثارة الحيوانات (الضرب على هيكل القارب، الصفيح، الصراخ).
- السباحة مع الحيتان والدلافين أو إطعامها أو لمسها أمر يتضمن على خطورة شديدة ويجب تجنبه.
- تصرف بمزيد من الحيلة والحذر لتجنب حالات التصادم مع الحيتان أو الدلافين الموجودة في طريقك.
- تجنب استخدام المعدات المثيرة للضوضاء مثل أجهزة الفحص بموجات الصدى أو الدواسر الجانبية الموجودة في مؤخرة القارب.

## الوقت المناسب للابتعاد والرحيل

- قلل من مقدار الوقت الذي تقضيه في مشاهدة الحيتان والدلافين إلى ٣٠ دقيقة.
- إذا كان يتعين عليك الإستمرار في تغيير اتجاهك، فقد تحاول الحيوانات تجنبك وعندها يجب تركها وحيدة.
- راقب تصرفات الحيوانات التي تدل على ازعاجها، مثل الغسقات المفاجئة والمتكررة والمطولة، وتغيير الاتجاه بشكل متكرر، وتشكيل مجموعات صغيرة تسبح منفردة، وضربات الذيل أو الزعانف على سطح الماء التي تدل على عدوانية الحيوانات.
- عند توقف محركات القارب، فاختر اللحظة المناسبة لإعادة تشغيلها تجنباً لإزعاج الحيوانات.
- ابتعد ببطء عند المغادرة، وحافظ على حد السرعة البالغ ٤ عقدات إلى أن تصبح على بعد ١٠٠ متر على الأقل.





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## Responsible Whale and Dolphin Watching Guide Sultanate of Oman

This Responsible Whale and Dolphin Watching Guide combines efforts from the Environment Society of Oman (ESO), its collaborators<sup>1</sup>, and the International Whaling Commission (IWC)<sup>2</sup>. It includes information on the following:

- A. Guidelines for responsible whale and dolphin watching in Oman**
- B. Difference between a shark and a dolphin**
- C. Difference between a whale and a dolphin**
- D. Echolocation**
- E. Marine food web**
- F. Cetacean habitats**
- G. Threats to whales and dolphins**
- H. Most common species of Oman factsheets**
  - 1. Spinner dolphin (*Stenella longirostris*)
  - 2. Common dolphin (*Delphinus delphis tropicalis*)
  - 3. Bottlenose dolphin (*Tursiops truncatus*)
  - 4. Humpback dolphin (*Sousa plumbea*)
  - 5. Bryde's whale (*Balaenoptera edeni*)
  - 6. Killer whale (*Orcinus orca*)
  - 7. False killer whale (*Pseudorca crassidens*)
  - 8. Sperm whale (*Physeter macrocephalus*)
  - 9. Blue whale (*Balaenoptera musculus indica*)
  - 10. Humpback whale (*Megaptera novaeangliae*)

*Disclaimer: 20 species of whales and dolphins are known to occur in the waters of Oman, and this list represents the most common species likely to be observed on a whale and dolphin watching trip. Only a few of those species may be commonly observed together and local conditions, such as timing, weather and season, can influence the various sightings.*

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<sup>1</sup> Environment Authority, Five Oceans Environmental Services LLC

<sup>2</sup> For more information, please visit the IWC Whale Watching Handbook website:  
<https://wwhandbook.iwc.int/en/>





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## دليل المُشاهدة المسؤولة للحيتان والدلافين في سلطنة عُمان

إن دليل المُشاهدة المسؤولة للحيتان والدلافين هو نتاج للجهود المجتمعة لجمعية البيئة العُمانية والجهات المُتعاونة معها<sup>1</sup> والمُفوضية الدولية لصيد الحيتان<sup>2</sup>، ويتضمن معلومات عما يلي:

- أ. إرشادات للمُشاهدة المسؤولة للحيتان والدلافين في عُمان
- ب. الفرق بين سمكة القرش والدلفين
- ت. الفرق بين الحوت والدلفين
- ث. تحديد الموقع بالصدى
- ج. شبكة الغذاء البحري
- ح. موائل الحوتيات
- خ. التهديدات التي تتعرض لها الحيتان والدلافين
- د. حقائق عن الأنواع الأكثر شيوعاً في عُمان من الحيتان والدلافين
  1. الدلفين الدوار (*Stenella longirostris*)
  2. الدلفين الشائع (*Delphinus delphis tropicalis*)
  3. دلفين قاروري الأنف (*Tursiops truncatus*)
  4. الدلفين الأحدب (*Sousa plumbea*)
  5. حوت برايد (*Balaenoptera edeni*)
  6. الحوت القاتل (*Orcinus orca*)
  7. الحوت القاتل المزيف (*Pseudorca crassidens*)
  8. حوت العنبر (*Physeter macrocephalus*)
  9. الحوت الأزرق (*Balaenoptera musculus indica*)
  10. الحوت الأحدب (*Megaptera novaeangliae*)

إبراء الذمة: من المُتعارف عليه أن المياه العُمانية تحتضن 20 نوعاً من الحيتان والدلافين، وهذه القائمة تستعرض الأنواع الأكثر شيوعاً المُحتمل رؤيتها عادةً خلال الرحلات البحرية لمشاهدة الحيتان والدلافين، ولكن البعض منها فقط يُمكن أن تُشاهد مجتمعةً في آنٍ واحدٍ، وذلك تبعاً لموسم تنفيذ الرحلة البحرية ووقتها وأحوال الطقس المرافقة.

<sup>1</sup> هيئة البيئة، شركة المحيطات الخمسة للخدمات البيئية

<sup>2</sup> للمزيد من المعلومات، يرجى زيارة موقع دليل مشاهدة الحيتان التابع للمُفوضية الدولية لصيد الحيتان:

[/https://www.handbook.iwc.int/en](https://www.handbook.iwc.int/en)





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## What is the difference between a shark and a dolphin?

**Blowhole** to breathe air.

**Horizontal tail fluke** creates up and down propulsion to swim.

Dolphins are mammals and give birth to live young. They nurse their calves with milk that is very rich in fat. Sharks are fish. Most lay eggs and do not care for their young.

**Flippers** containing bones similar to human hand bones.

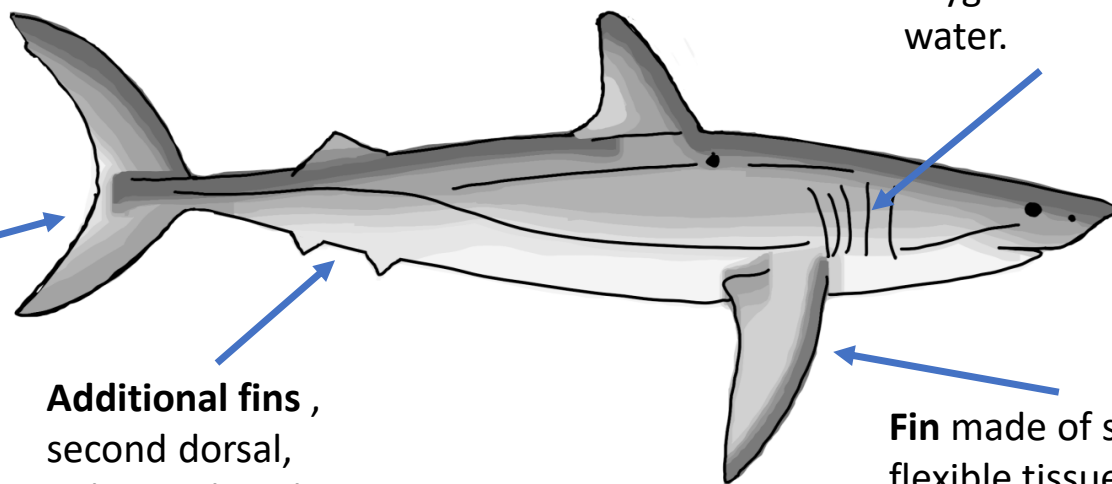
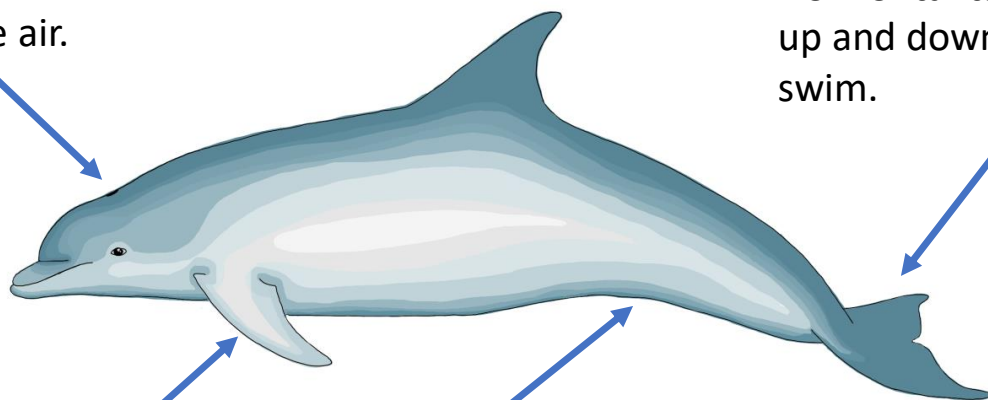
**Mammary glands** to produce milk for calves.

**Vertical tail fin** creates side to side propulsion to swim.

**Additional fins**, second dorsal, pelvic and anal.

**Gills** to extract oxygen from water.

**Fin** made of strong, flexible tissue called cartilage.





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## What is the difference between a whale and a dolphin?

### Baleen Whale

**Two blowholes**  
to breathe air.

**Baleen** is the bristle like structure  
in a whale's upper jaw which it  
uses to filter small fish or  
crustaceans from the water.

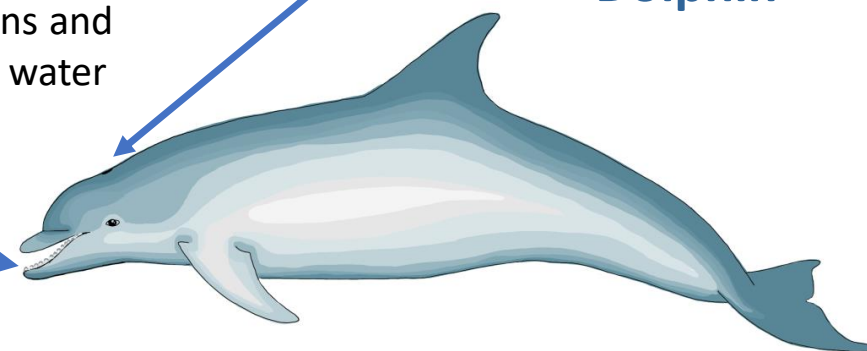
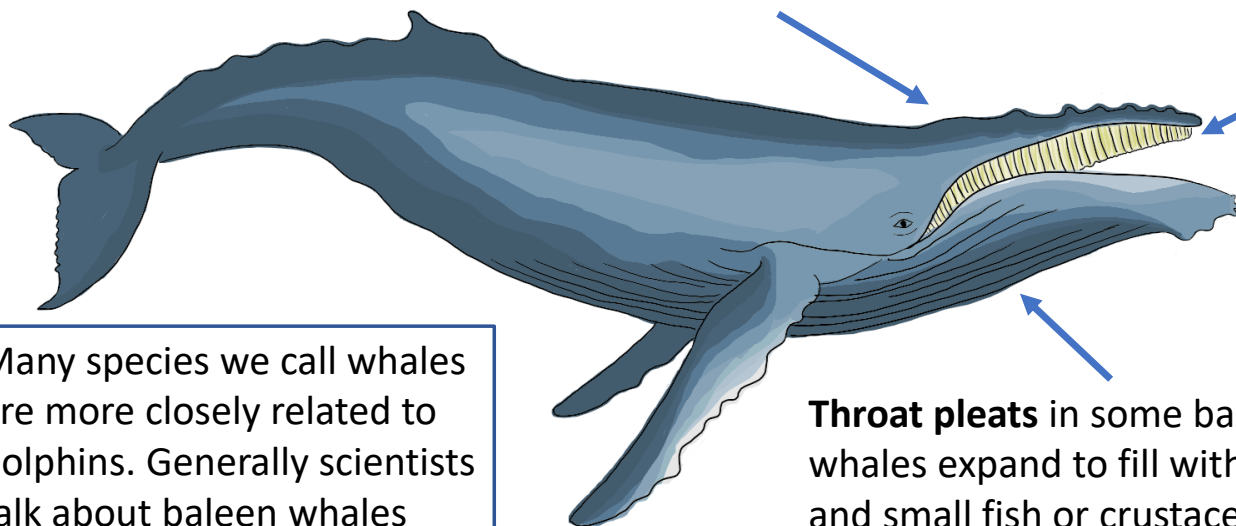
**Throat pleats** in some baleen  
whales expand to fill with water  
and small fish or crustaceans and  
then contract, pushing the water  
back through the baleen.

**Teeth** on the upper and lower  
jaws to grab fish, squid or other  
prey. They use **echolocation** to  
find their food.

Many species we call whales  
are more closely related to  
dolphins. Generally scientists  
talk about baleen whales  
and toothed  
whales. Toothed whales  
include sperm whales,  
beaked whales, and all  
porpoises and dolphins.  
Killer whales and pilot  
whales are actually dolphins.

**Single blowhole** to  
breathe air.

### Dolphin





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## Echolocation

**Brain** processes signals to form an image.

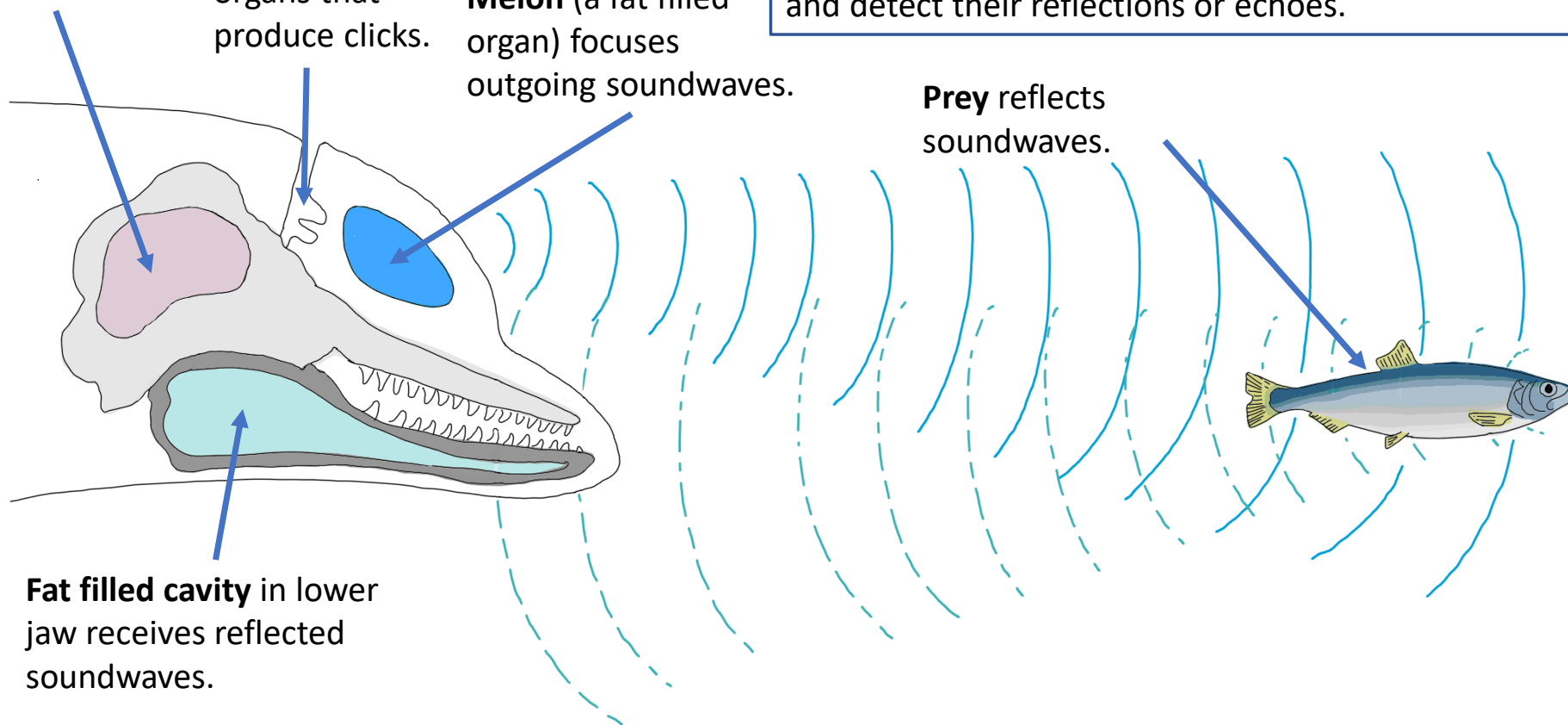
**Nasal passage** contains organs that produce clicks.

**Melon** (a fat filled organ) focuses outgoing soundwaves.

Toothed whales (dolphins, porpoises and species like pilot whales and killer whales) use echolocation to navigate and find their food. They emit a series of soundwaves in the form of clicks and detect their reflections or echoes.

**Prey** reflects soundwaves.

**Fat filled cavity** in lower jaw receives reflected soundwaves.

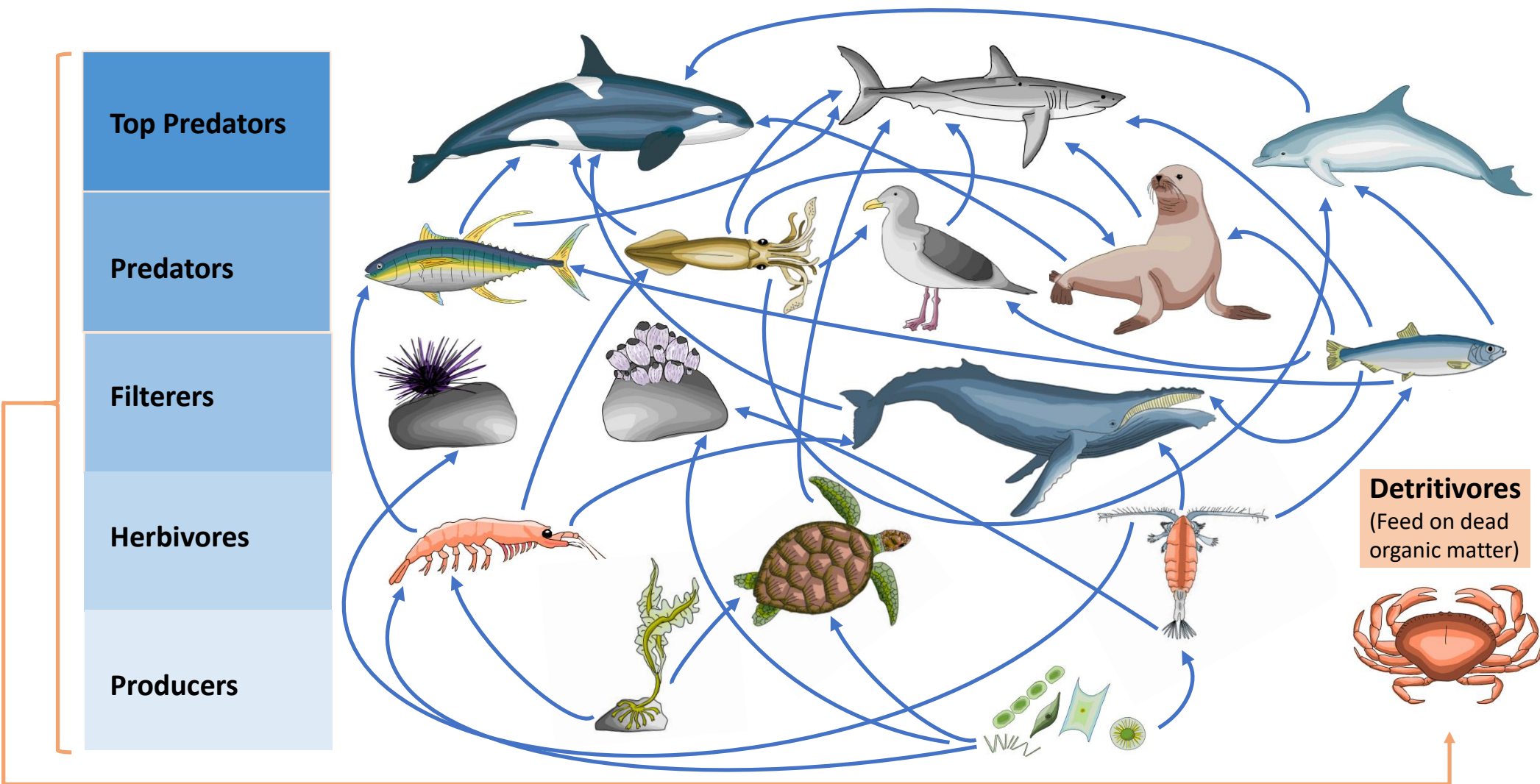






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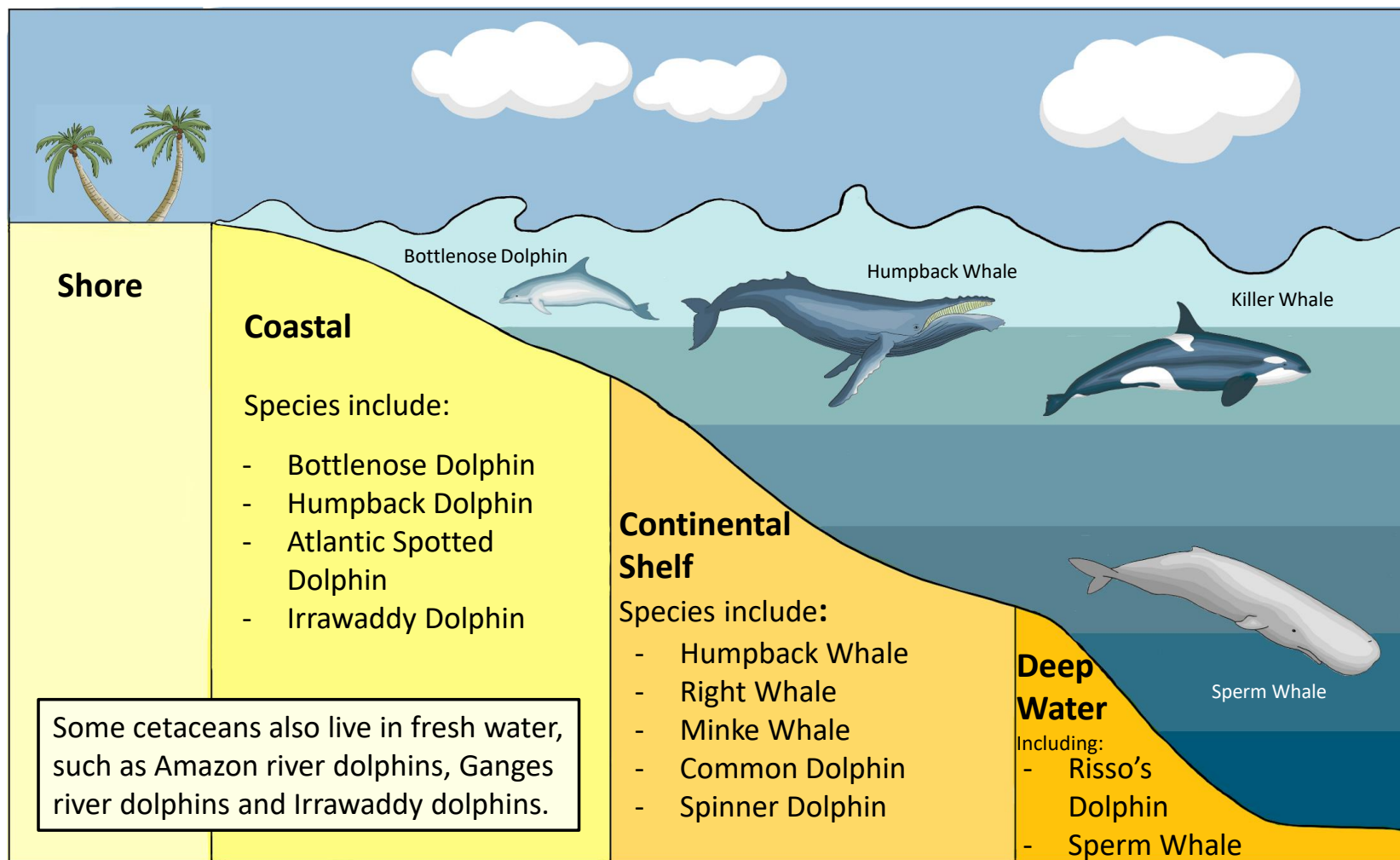
## Marine Food Web





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## Cetacean Habitats



Many species have clear habitat preferences, determined by their feeding strategies. For example, sperm whales dive to great depths to catch squid, while other species feed on fish and crustaceans in shallow, coastal waters. Other species target large schools of fish or crustaceans on the continental shelf. However, some cetaceans, like bottlenose dolphins and killer whales, can be found in almost any marine environment.



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## Some threats to whales and dolphins

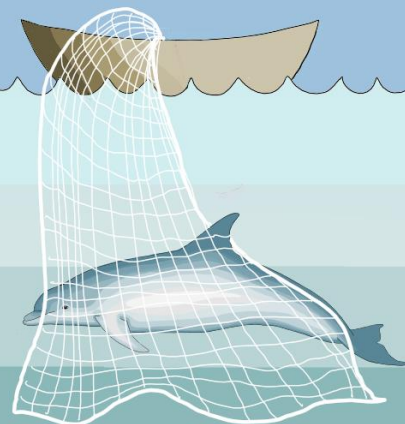
**CLIMATE CHANGE** causes the oceans to warm which can result in shifts and changes in food resources for whales and dolphins.

### POLLUTION

and harmful contaminants build up in the food chain reaching high levels in top predators like dolphins and killer whales.

### ENTANGLEMENT

in fishing gear leads to immediate death from asphyxiation or long-term injuries and inability to feed or reproduce.

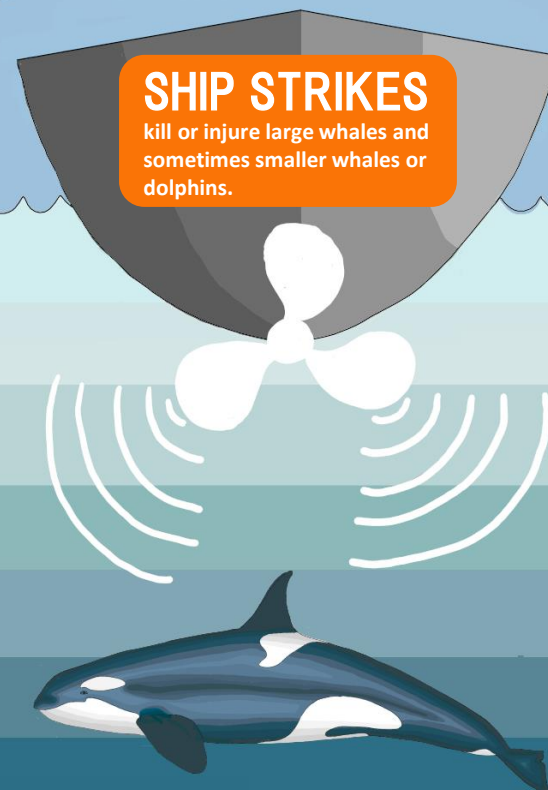


### UNDER WATER NOISE

can damage hearing, mask communication and echolocation, and cause stress, driving cetaceans away from feeding or resting habitats.

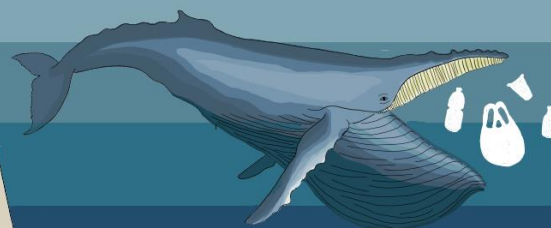
### SHIP STRIKES

kill or injure large whales and sometimes smaller whales or dolphins.



### MARINE DEBRIS

such as plastic is often found in stomachs of stranded cetaceans.





# Spinner dolphin (*Stenella longirostris*)

Distribution: Tropical waters of Pacific, Indian and Atlantic Oceans: (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/spinner-dolphin>)

## Gray's spinner dolphin

Adult length: up to 2.35m (male)

Adult weight: up to 82kg (male)

Newborn: 75-85cm

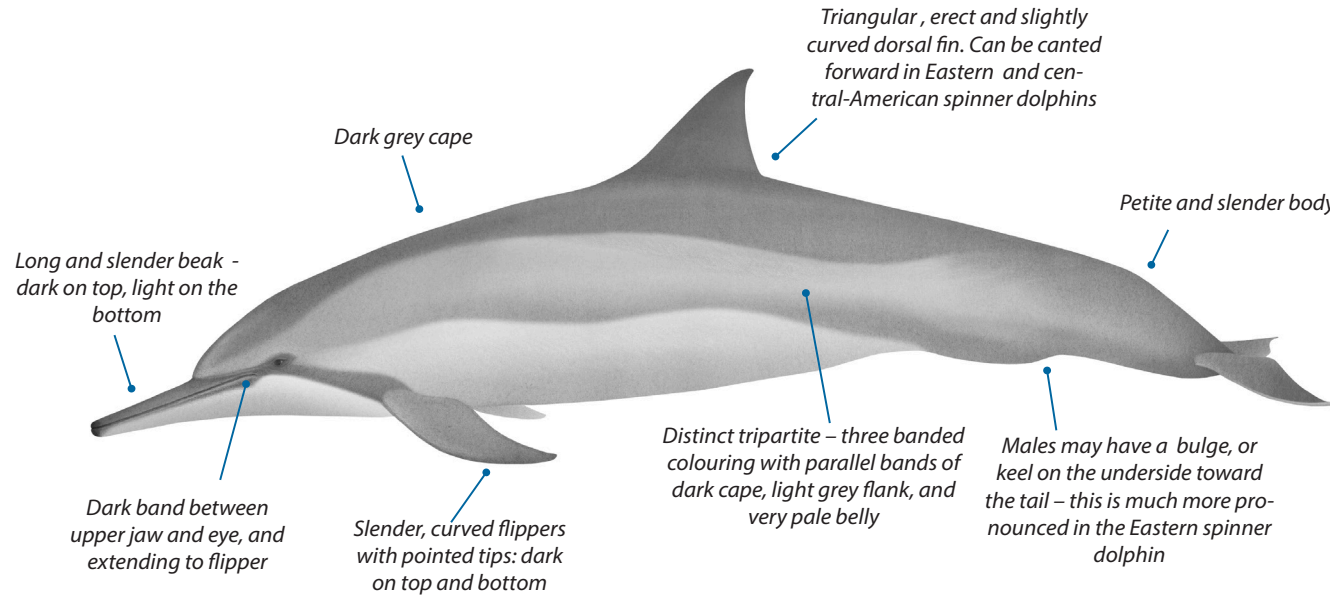
Threats: Bycatch

Habitat: Continental shelf, offshore

Diet: Small schooling fish

IUCN Conservation status: **Data Deficient**

Eastern spinner dolphin: **Vulnerable**



Gray's spinner dolphin in the Indian Ocean. Note the clear three-part colour pattern, with the dark dorsal cape dipping down under and slightly behind the dorsal fin.

Photo courtesy of Chris Johnson

## Fun Facts

- Spinner dolphins can spin on their lateral axis—making up to 7 full rotations in one leap.
- Spinner dolphins can form mixed groups with other dolphin species, numbering thousands of individuals.
- Spinner dolphins in Hawaii move offshore to feed in deep waters at night, and come back to protected shallow bays to rest during the day

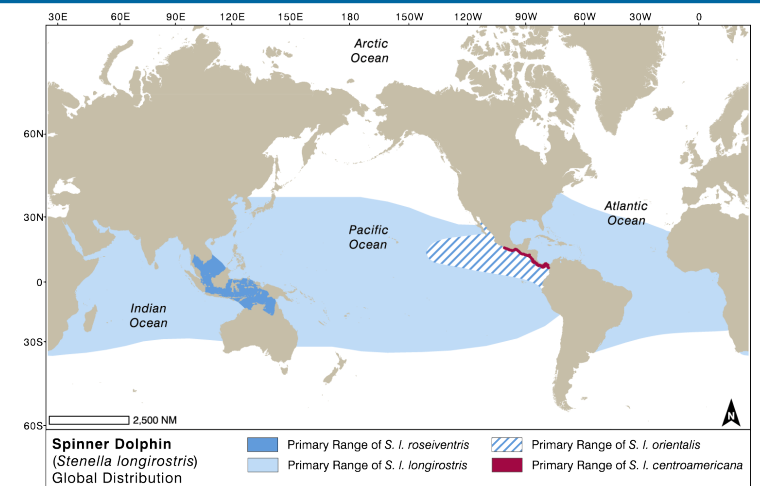
Dwarf spinner dolphins reach a maximum length of 1.58m, and have a pinkish belly (the reason for their Latin name - 'roseiventris'). They are found primarily in Southeast Asia.

Photo courtesy of Rubaiyat and Liz Mansur



Eastern spinner dolphins are more elongate, are evenly grey all over their bodies, and have a dorsal fin that looks as if it were placed backward, curving forward toward the head rather than back toward the tail.

Photo courtesy of Robert Pitman



Spinner dolphin distribution map. Adapted by Nina Lisowski from Jefferson, T.A., Webber, M.A. and Pitman, R.L. (2015). "Marine Mammals of the World: A Comprehensive Guide to Their Identification," 2nd ed. Elsevier, San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>.

There are four recognised subspecies of spinner dolphins throughout the species' tropical range: Gray's spinner dolphin (*Stenella longirostris longirostris*), Eastern spinner dolphin (*S. l. orientalis*), central American spinner dolphin (*S. l. centroamericana*) and the Dwarf spinner dolphin (*S. l. roseiventris*).



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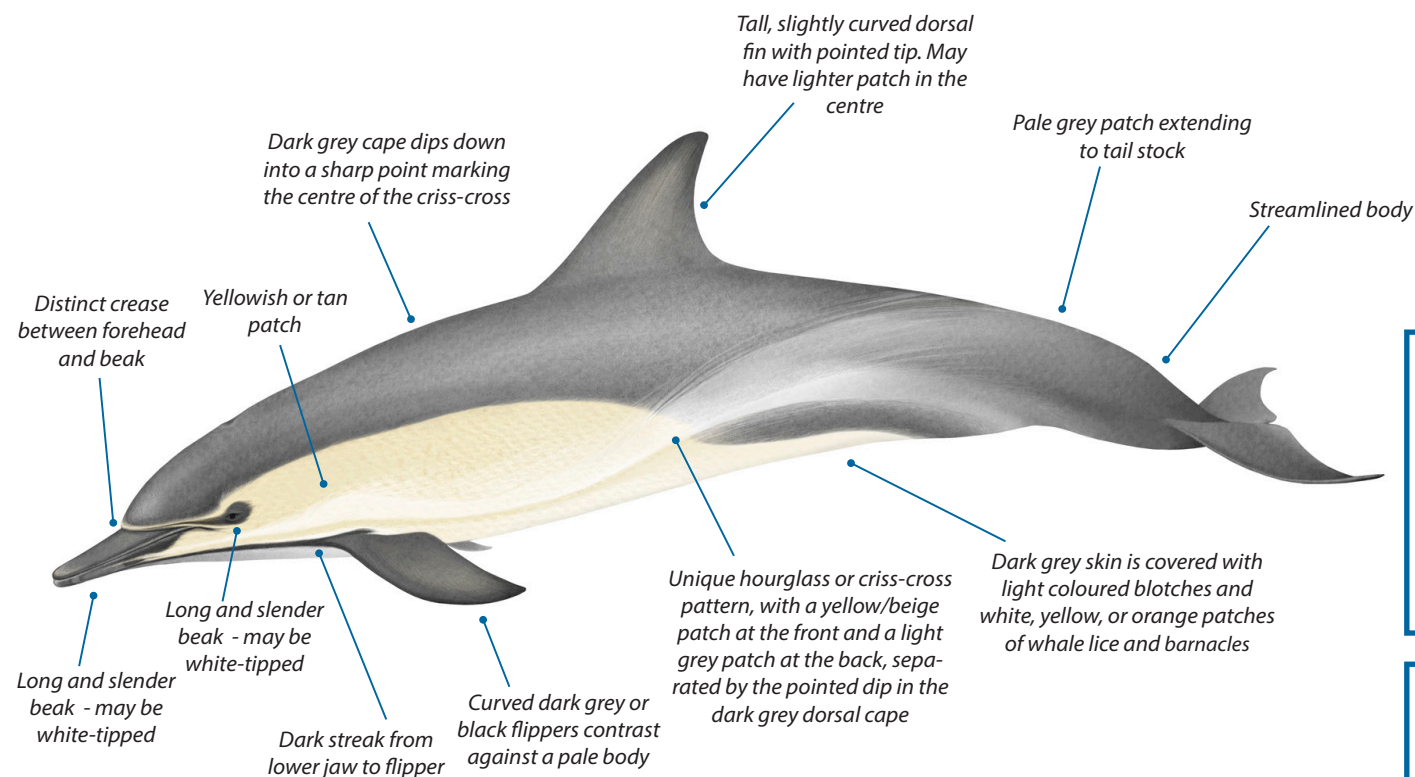
# Common dolphin (*Delphinus delphis*)

Distribution: Tropical and temperate waters of Pacific, Indian and Atlantic Oceans and many seas: (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/common-dolphin>)

Adult length: 2.7m (male)  
Adult weight: up to 200kg (male)  
Newborn: 80-93

Threats: bycatch, contaminants, habitat loss  
Habitat: nearshore, continental shelf, offshore  
Diet: fish, squid

IUCN Conservation status: **Least Concern**  
Mediterranean subpopulation: **Endangered**  
Black Sea subspecies: **Vulnerable**



Common dolphins (*D. d. delphis*) in Spain. Photo courtesy of IWC POWER



## Fun Facts

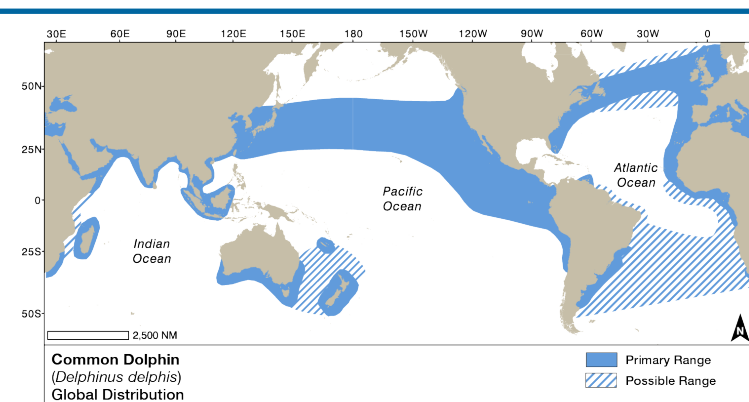


Common dolphin groups are extremely vocal, and their squeaks and whistles can sometimes be heard from above water or through a boat hull.



Common dolphins are highly active and acrobatic, able to leap as high as 3m before slapping back down in the water.

Common dolphin off the coast of Oman displays the typically long beak and a pronounced hour-glass pattern. Photo courtesy of Tim Collins



Common dolphin distribution. Adapted by Nina Lisowski from Würsig, B., Thewissen, J.G.M. and Kovacs, K.M. Editors (2018) "Encyclopedia of Marine Mammals", 3rd ed. Academic Press, Elsevier: San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>.

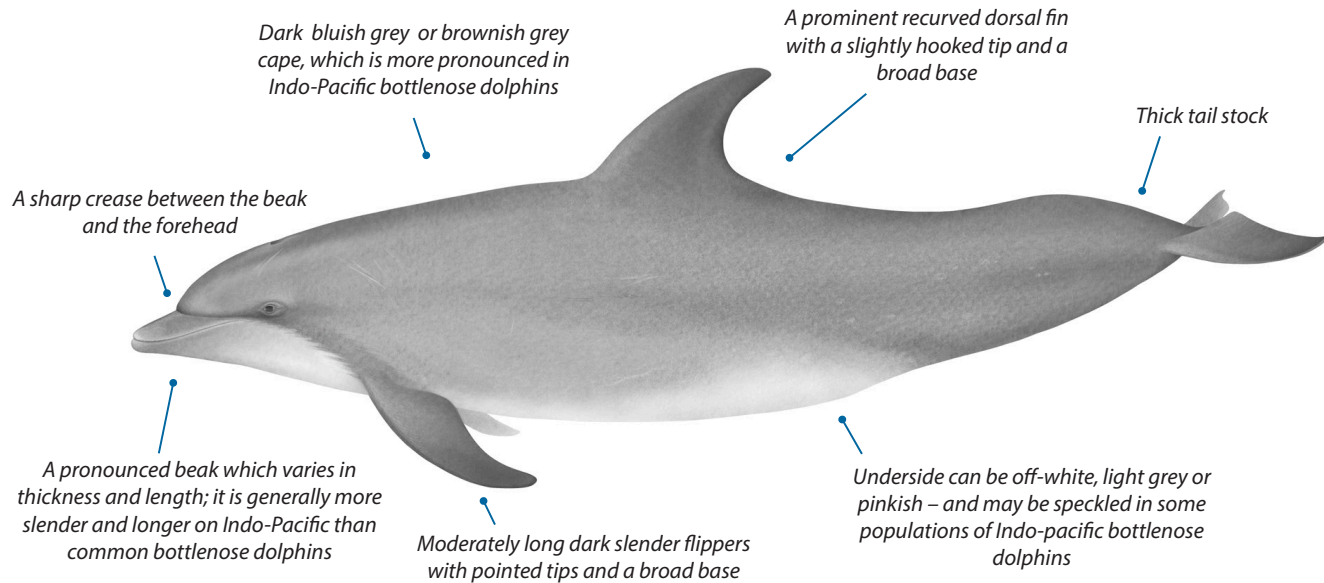
There are four recognised subspecies of common dolphins throughout the species' range: The common dolphin (*D. d. delphis*); Eastern North Pacific long-beaked common dolphin (*D. d. bairdii*); the Black Sea common dolphin (*D. d. ponticus*); and the Indo-Pacific common dolphin (*D. d. tropicalis*).



# Bottlenose dolphin (*Tursiops* sp.)

Distribution: Worldwide (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/bottlenose-dolphin>)

Adult length: 2.6m  
Adult weight: up to 230kg (male)  
Newborn: 84-112cm /9-20kg



Threats: bycatch, contaminants, habitat loss  
Habitat: estuarine, nearshore, continental shelf, offshore  
Diet: fish, crustaceans, squid

IUCN Conservation status:

Common Bottlenose dolphin: **Least Concern**

Indo-Pacific bottlenose: **Data deficient**



Individual bottlenose dolphins can be recognised by the nicks and scars on their dorsal fins, through a process called photo-identification. Some dolphins in well-studied populations have been re-sighted over periods of more than 40 years. (photos Gianna Minton/WWF Gabon)

Males and females are difficult to distinguish at sea – but only females will accompany calves, and males may have more scarring from aggressive interactions with other males.

## Fun Facts



Bottlenose dolphins have a range of feeding techniques: some use 'tools' like sponges to protect their beaks when they dig in the sand, others hunt in formation temporarily beaching themselves to chase fish onto the land.

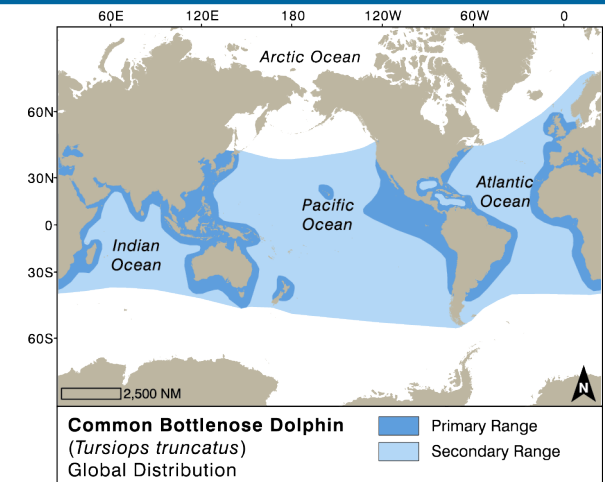


Many male dolphins have 'toothrakes' on their bodies – the result of aggressive behaviour between males.



Photos courtesy of Chris Parsons (Left), Chris Johnson (centre) and Fabian Ritter (right)

Bottlenose dolphins are often more approachable and more active than other species of dolphins, sometimes engaging in aerial displays or 'bow-riding' on the waves in front of vessels.



Blue whale global distribution. Adapted by Nina Lisowski from Jefferson, T.A., Webber, M.A. and Pitman, R.L. (2015). "Marine Mammals of the World: A Comprehensive Guide to Their Identification," 2nd ed. Elsevier, San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>.

There are two recognised species of bottlenose dolphins that occur in different parts of the world –sometimes with overlapping ranges. These are the common bottlenose dolphin (*Tursiops truncatus*), and the Indo-Pacific bottlenose dolphin (*Tursiops aduncus*). There is also a great deal of variation between inshore and offshore populations of common bottlenose dolphins in different parts of the world.





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# Humpback Dolphin (*Sousa spp.*)

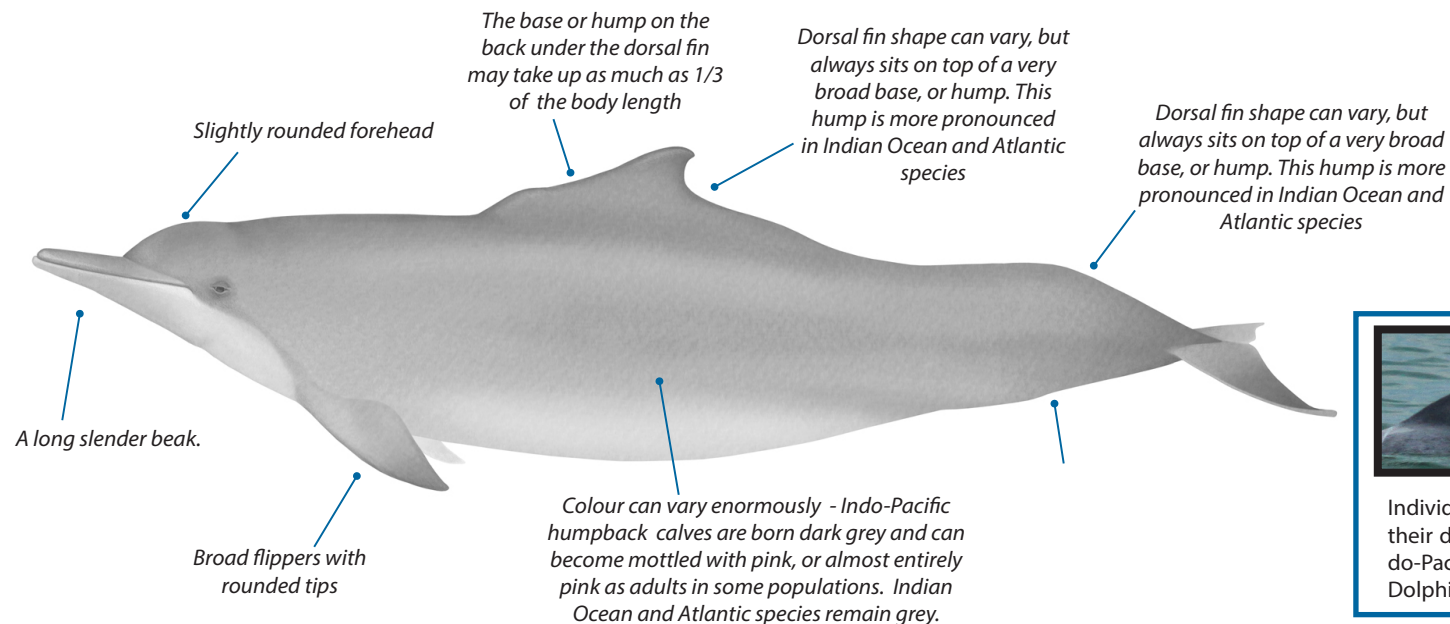
Distribution: Coastal waters of Africa, Australia and Asia (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/humpback-dolphin>)

## Indo-Pacific humpback dolphin

Adult length: 2.7m (male)

Adult weight: up to 240kg (male)

Newborn: 100cm / 14kg



Threats: Bycatch, habitat loss

Habitat: Estuarine, nearshore

Diet: Fish, cuttlefish

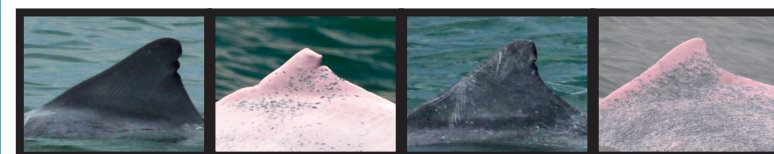
IUCN Conservation status:

Indo-Pacific : **Vulnerable**

Indian Ocean: **Endangered**

Atlantic : **Critically Endangered**

Australian : **Vulnerable**



Individual humpback dolphins can be recognised by the nicks and scars on their dorsal fins, through a process called photo-identification. These are Indo-Pacific humpbacks from Malaysian Borneo. (photos courtesy of Sarawak Dolphin Project).

## Indian Ocean humpback & Atlantic humpback

Adult length: 2.8m (male)

Adult weight: up to 280kg (male)

Newborn: 100cm / 14kg



Indian Ocean and Atlantic humpback dolphins are all grey and do not have the pink mottling of Indo-Pacific humpbacks. They also have a more pronounced hump under their dorsal fin.

Indian Ocean humpback dolphin in Oman:  
Photo courtesy of Graeme Hornby



Australian humpback dolphins have a distinct diagonal dorsal 'cape' visible in this photo from northern Queensland.

Photo courtesy of Guido Parra.



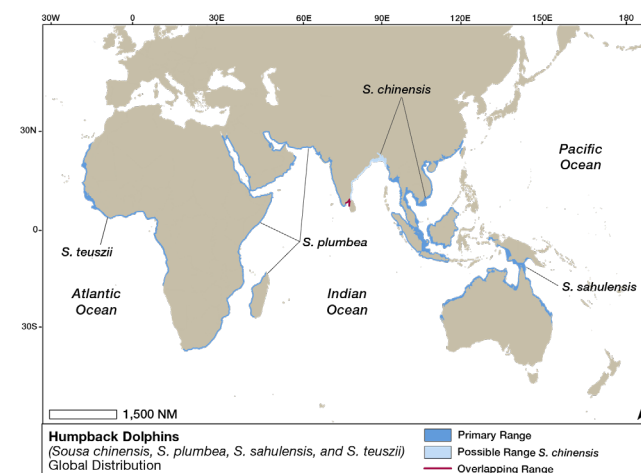
In some populations of Indo-Pacific humpback dolphins, calves are born grey, but can become increasingly mottled until they are almost fully pink as adults.

Photo courtesy of Sarawak Dolphin Project



Male Atlantic and Indian Ocean humpback dolphins can have extremely pronounced humps under their dorsal fins, like this Individual from Gabon.

Photo Gianna Minton, WWF Gabon



Humpback dolphin distribution. Adapted by Nina Lisowski from Würsig, B., Thewissen, J.G.M. and Kovacs, K.M. Editors (2018) "Encyclopedia of Marine Mammals", 3rd ed. Academic Press, Elsevier: San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>

There are four recognised species of humpback dolphins that occur in different parts of the world : the Indo-Pacific humpback dolphin (*Sousa chinensis*), the Indian Ocean humpback dolphin (*S. plumbea*) the Atlantic humpback dolphin (*S. teuszi*) and the Australian humpback dolphin (*S. sahalensis*).

# Bryde's whale (*Balaenoptera edeni*)

Distribution: Almost world wide (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/brydes-whale>)

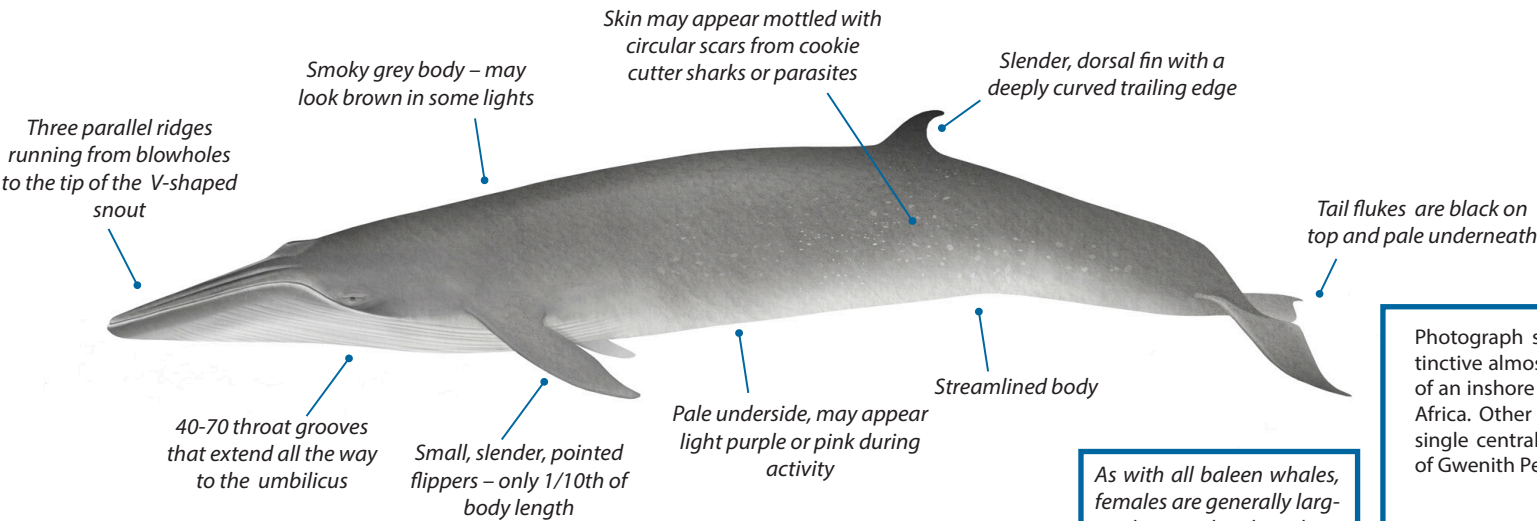
Adult length: up to 15.5m (female)  
Adult weight: approximately 20,000kg (female)  
Newborn: 4m /680kg

Threats: Entanglement, habitat loss

Habitat: Continental shelf

Diet: Small schooling fish

IUCN Conservation status: **Data Deficient**





As with all baleen whales, females are generally larger than males, but there is no way to distinguish them at sea.

Photograph showing the three distinctive almost parallel head -ridges of an inshore Bryde's whale in South Africa. Other species have only one single central ridge. Photo courtesy of Gwenith Penry



## Fun Facts

 Bryde's whales are named after Johan Bryde, a Norwegian whaler working in South Africa. The name should be pronounced "Broodah's".

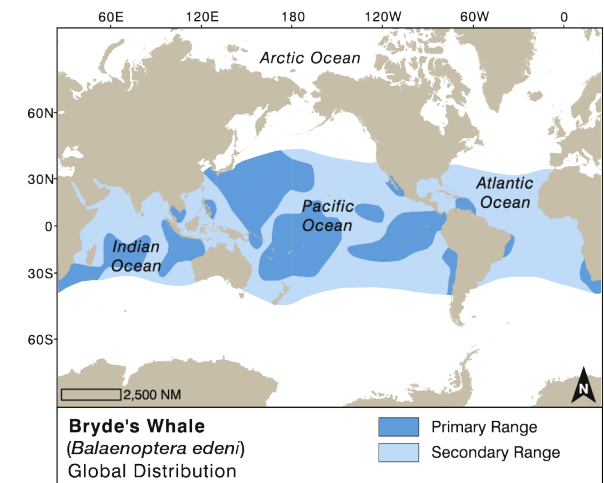
 Bryde's whales and sei whales are difficult to distinguish and were often confused at sea and even in whaling records for many years.

Bryde's whale off the coast of Oman. Notice the parasitic fish attached to the base of the dorsal fin.

Photo courtesy Tim Collins/Environment Society Oman.



Bryde's whales normally have fairly conspicuous blows. (3-4m high), but can also surface with almost no visible blow when resting or traveling slowly.



Bryde's whale global distribution. Adapted from Nina Lisowski from Jefferson, T.A., Webber, M.A. and Pitman, R.L. (2015). "Marine Mammals of the World: A Comprehensive Guide to Their Identification," 2nd ed. Elsevier, San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>

Bryde's whales are also known as 'tropical whales' due to their distribution in tropical and temperate areas between 40° south and 40° North. There are two recognised subspecies of Bryde's whales with partially overlapping ranges: Eden's whale (*Balaenoptera edeni edeni*), and Bryde's whale (*B. e. brydei*).



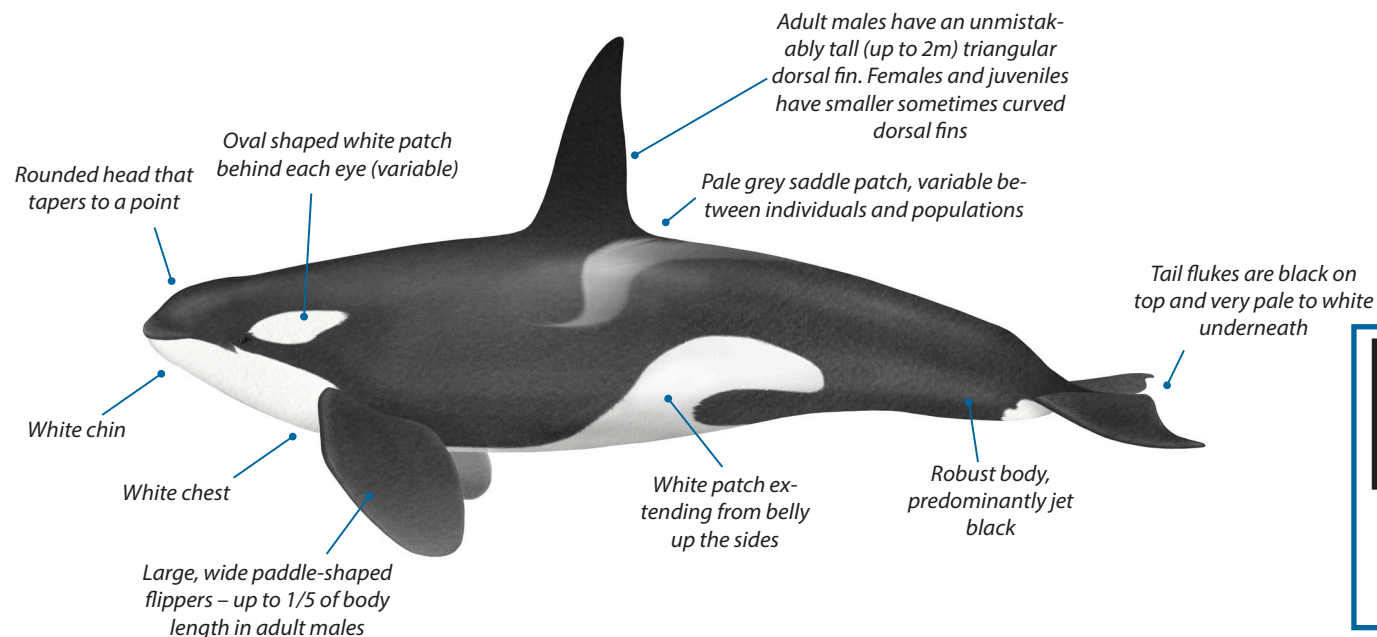
# Killer whale (*Orcinus orca*)

Distribution: Worldwide (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/killer-whale>)

Adult length: up to 9.8m (male)/8.5m (female)

Adult weight: up to 10,000kg (male)

Newborn: 2.1-2.6m / 160 – 180kg



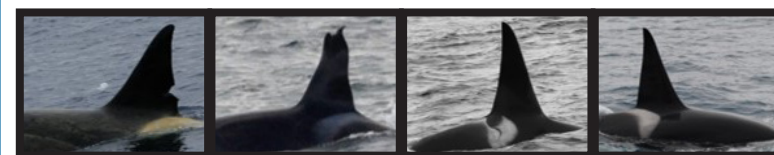
Threats: habitat loss, contaminants, prey depletion

Habitat: estuarine, nearshore, continental shelf, offshore

Diet: fish, squid, marine mammals


IUCN Conservation status: **Data deficient**

Resident fish-eating killer whales NE Pacific: **Endangered** under US ESA




Examples of killer whale photographs used to recognise individuals over time through their dorsal fin and the saddle patches/blazes behind their dorsal fins. (photos courtesy of the IWC)

## Fun Facts

 Different killer whale populations speak different 'languages' and can be distinguished by their calls.

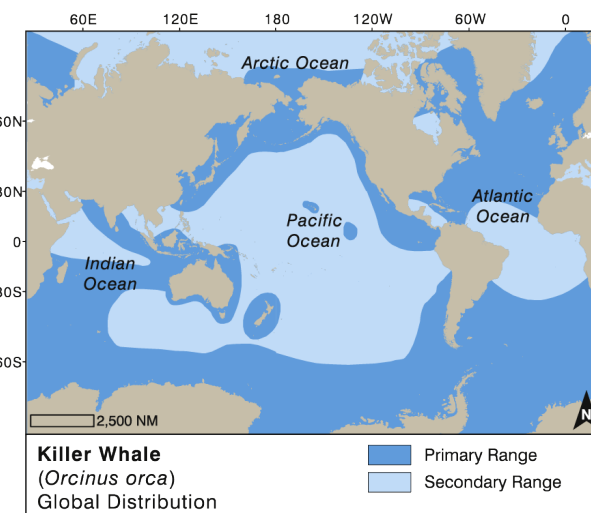
 Killer whale groups are stable over time with strong family bonds.

 Different killer whale populations specialize in different hunting strategies: some eat only fish, others strand themselves to catch sea lions, while still others work in groups to attack large whales, much like lions hunting buffalo.

Technically killer whales are dolphins. Males are larger than females and have taller dorsal fins. (see individual on the right). Photo courtesy Chris Johnson



Killer whales range throughout the world's oceans from Norway (left) to Eritrea (right). There are at least 8 different recognised forms with different diets, behaviours and subtle differences in size and colour patterns. Photos courtesy Chris Johnson



Killer whale distribution. Adapted by Nina Lisowski from Würsig, B., Thewissen, J.G.M. and Kovacs, K.M. Editors (2018) "Encyclopedia of Marine Mammals", 3rd ed. Academic Press, Elsevier: San Diego. CA. Copyright Elsevier: <http://www.elsevier.com>





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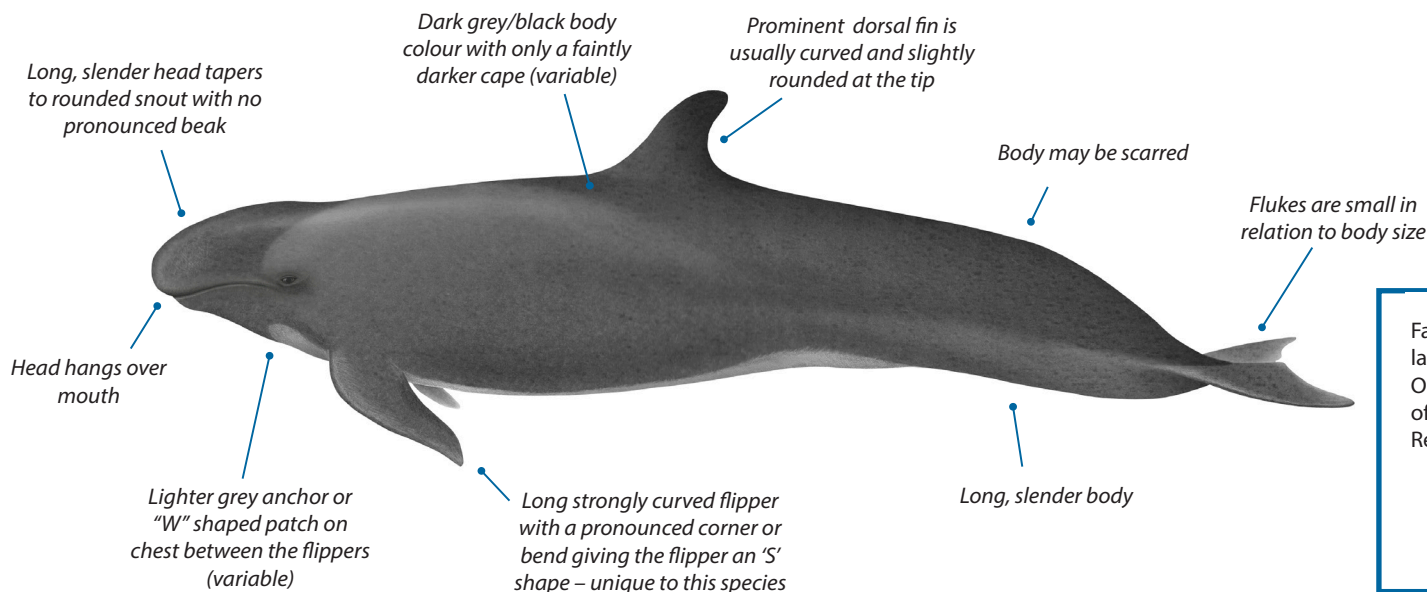
# False Killer whale (*pseudorca crassidens*)

Distribution: coastal and primarily offshore waters in tropical and temperate regions (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/false-killer-whale>)

Adult length: Up to 6m (male)/5m (female)

Adult weight: up to 2,000kg (m)

Newborn: 1.6-1.9m /Unknown



Threats: entanglement, contaminants

Habitat: offshore

Diet: squid, fish

IUCN Conservation status: Data deficient

False killer whales can eat large prey species like this Ono/Wahoo. photo courtesy of Daniel Webster, Cascadia Research



## Fun Facts

False killer whales are so named because the shape of their skulls, not their external appearance, is similar to that of killer whales.

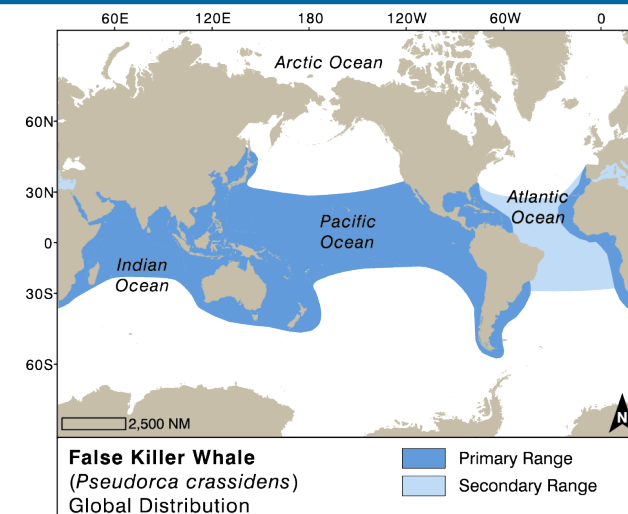
Like killer whales and sperm whales, false killer whales form stable family groups, and females who no longer produce calves themselves probably help to look after the young of other females

False killer whales participate in prey-sharing; a behaviour thought to reinforce social bonds

This photo illustrates the bullet-shaped head and typically 'S' shaped flippers that help observers to distinguish false killer whales from pilot whales. Photo courtesy of Paula Olson/SEFSC/NOAA.



False killer whales often behave like big dolphins, bow-riding with vessels and sometimes leaping clear of the water. They have some of the closest and longest lasting family bonds of any marine mammal species. Photos courtesy of Robin Baird



False Killer whale distribution. Adapted by Nina Lisowski from Würsig, B., Thewissen, J.G.M. and Kovacs, K.M. Editors (2018) "Encyclopedia of Marine Mammals", 3rd ed. Academic Press, Elsevier: San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>

False killer whales are found in tropical and temperate waters between latitudes of 50° and 50° N. They are generally uncommon and poorly studied in most regions. They appear to occur more frequently in deeper open ocean waters, but can occasionally move into nearshore areas.

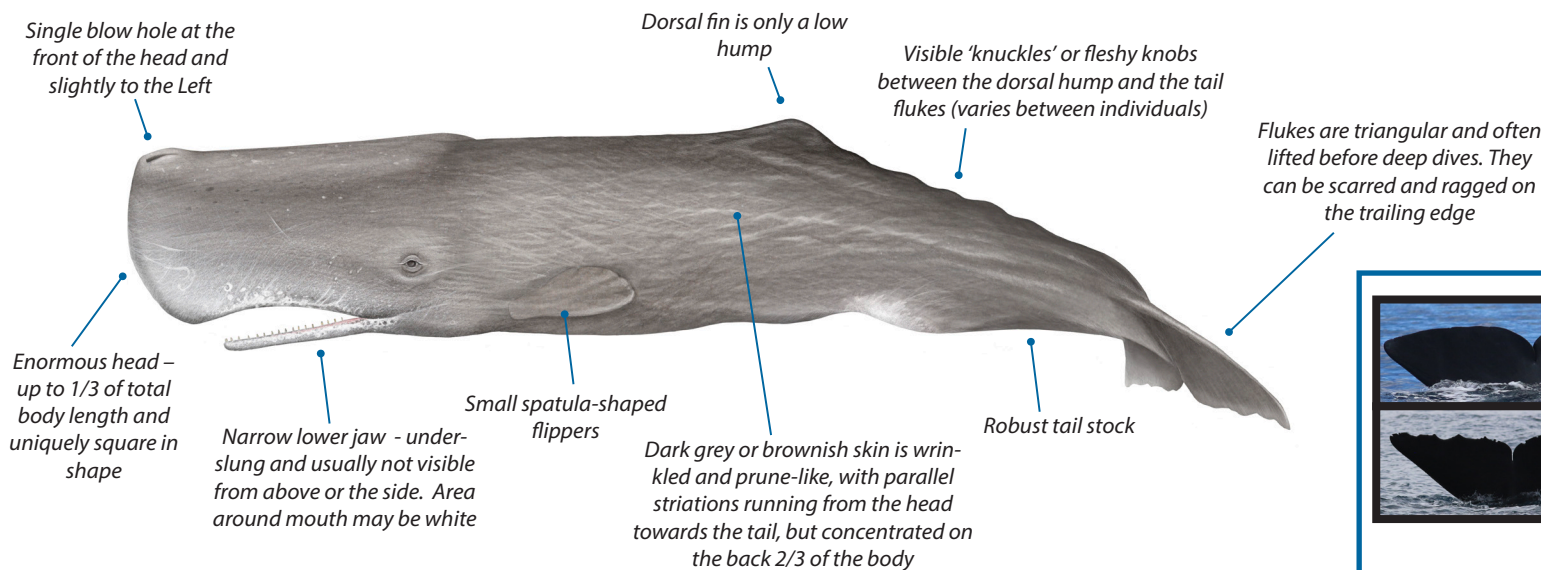
# Sperm whale (*Physeter macrocephalus*)

Distribution: Coastal areas of the North Pacific (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/sperm-whale>)

Adult length: Up to 18m (male)/11-12m (female)

Adult weight: up to 57,000kg (m)

Newborn: 3.5-4.5m /1,000kg



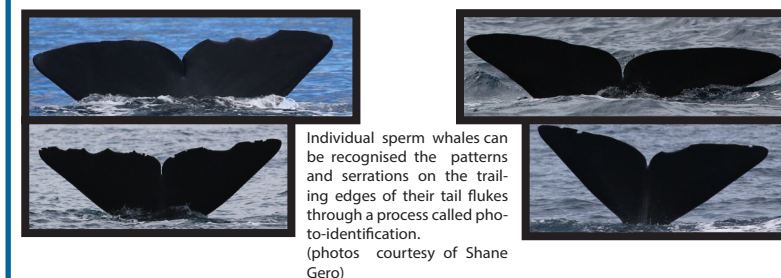
Threats: ship strikes, plastic ingestion, climate change

Habitat: offshore


Diet: squid


IUCN Conservation status: **Vulnerable**

Mediterranean sub-population **Endangered**




## Fun Facts

 Sperm whales typically dive to roughly 800 meters and for 50 minutes in search of food.

 Sperm whales' heads are filled with a waxy/oily substance called "spermacetti" (hence the common name).

 The story of Moby Dick was based on hunting of sperm whales in the 1800's.

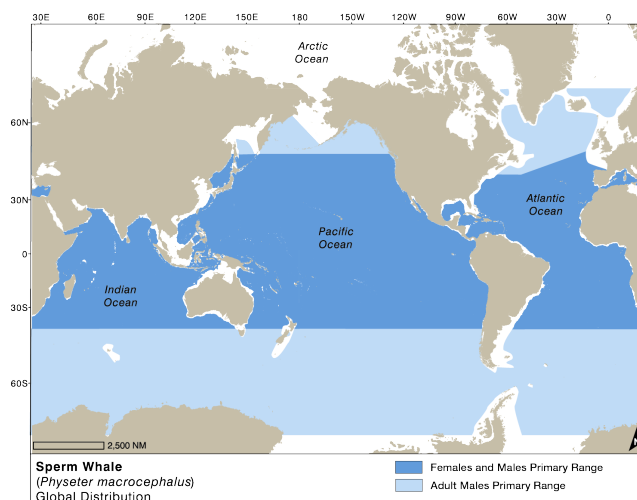
 When under attack, some communities of sperm whales move into a marguerite formation with heads to the centre and tails

Sperm whales have a single, slit-like opening to their blowhole, positioned far forward and slightly to the left side of their heads.

Photo courtesy of Chris Johnson



Sperm whale whale surfacing and dive pattern – notice the blow projecting forward and to the left



Sperm whale distribution. Adapted by Nina Lisowski from Würsig, B., Thewissen, J.G.M., and Kovacs, K.M. Editors (2018) "Encyclopedia of Marine Mammals", 3rd ed. Academic Press, Elsevier: San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>

Sperm whales occur almost everywhere in deep open waters, or around islands and coastal areas with deep canyons or very narrow continental shelves. Only males tend to be observed closer to the poles beyond approximately 40° S or N. Social structure is based around stable matrilineal family groups. Widely roving males appear to briefly visit the females and young and then move on.



# Blue whale (*Balaenoptera musculus*)

Distribution: Worldwide (see map below and full list of countries in the detailed species account online at: <https://www.iwc.int/en/species/blue-whale>)

## True Blue Whale

Adult length: 23-30m

Adult weight: up to 180,000kg

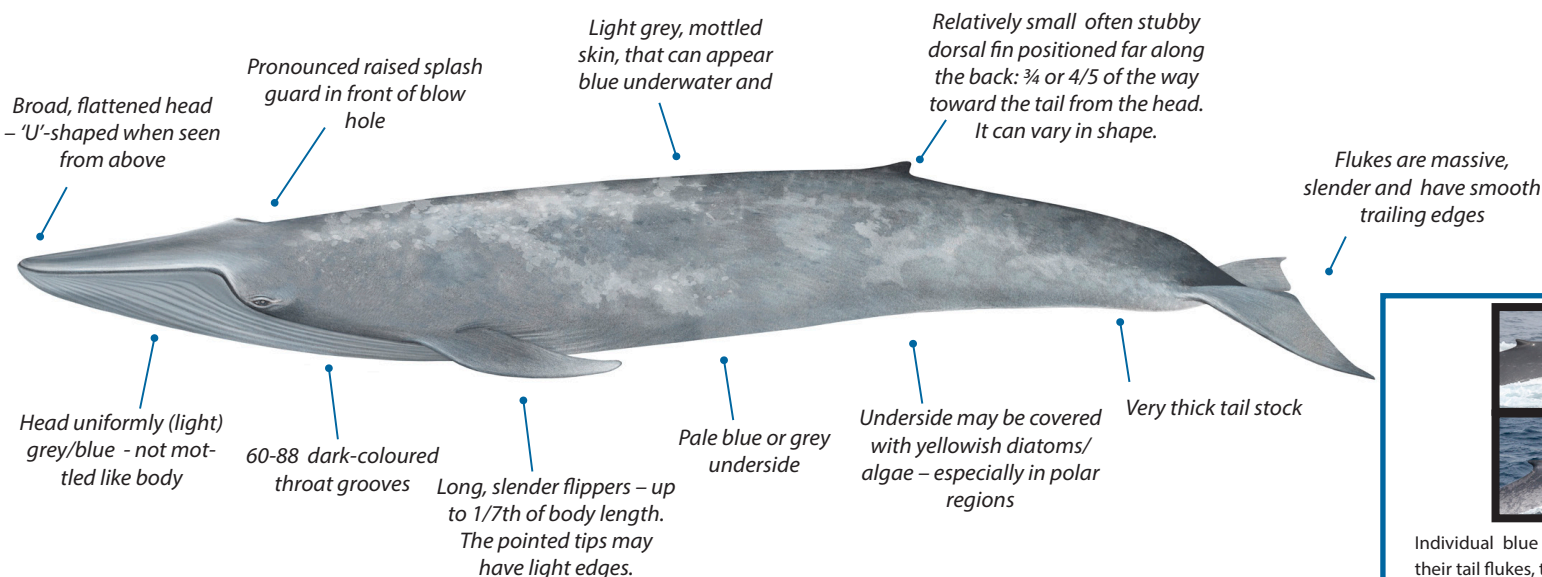
Newborn: 6-7m / 2000 – 3000kg

## Pygmy Blue Whale

Adult length: maximum 25m

Adult weight: up to 180,000kg

Newborn: 4.5-6m / 900-1000kg



Threats: Habitat loss, ship strikes, climate change

Habitat: Continental shelf, offshore

Diet: Krill, small schooling fish

## IUCN Conservation status:

Blue Whale: **Endangered**

Antarctic Blue Whale: **Critically Endangered**

Pygmy Blue Whale: **Data deficient**



Individual blue whales can be recognised by the pattern of mottling on their flanks as well as their tail flukes, through a process called photo-identification. (photos courtesy Paula Olson)

## Fun Facts



- Blue whales are the largest animal to have ever lived on the planet (bigger than dinosaurs!).
- A blue whale calf can gain 90 kg per day from drinking the mother's rich milk.
- An adult blue whale's heart is the size of a small car, and a child could crawl through its arteries.
- Blue whales are the only whale in the genus *Balaenoptera* that lifts its tail flukes regularly when diving.

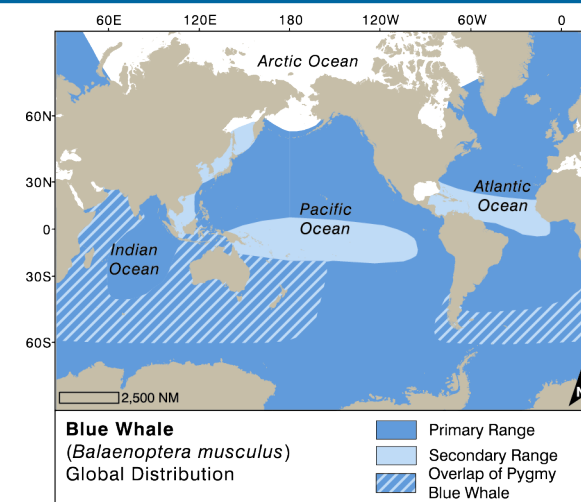
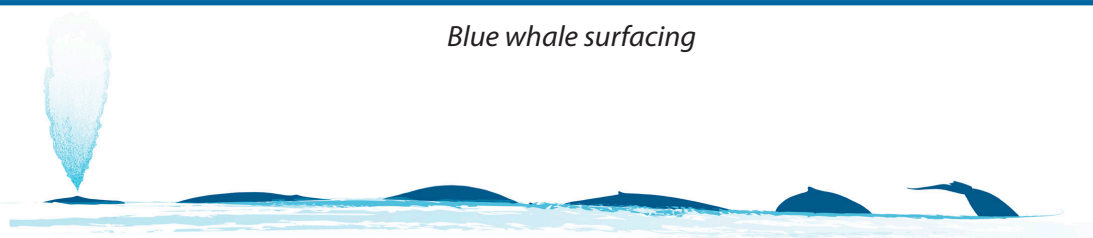


Blue whales in almost every ocean basin feed predominantly on small shrimp-like crustaceans called krill: Photo credit: [https://commons.wikimedia.org/wiki/File:Antarctic\\_krill\\_\(Euphausia\\_superba\).jpg](https://commons.wikimedia.org/wiki/File:Antarctic_krill_(Euphausia_superba).jpg)



A blue whale's blow can be 10-12 m high, making it visible from a long distance. This is a pygmy blue whale off the coast of Australia: Photo courtesy of Chris Johnson

## Blue whale surfacing



Blue whale global distribution. Adapted by Nina Lisowski from Jefferson, T.A., Webb, M.A. and Pitman, R.L. (2015). "Marine Mammals of the World: A Comprehensive Guide to Their Identification," 2nd ed. Elsevier, San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>

There are currently five recognised sub-species of blue whale that occur in different parts of the world. *B. m. musculus*, Northern blue whale, *B. m. intermedia*, Antarctic blue whale, *B. m. indica*, Northern Indian Ocean blue whale – these three are considered "True" blue whales. There are also *B. m. brevicauda*, Pygmy blue whale, and *B. m. un-named subsp.*, Chilean blue whale.

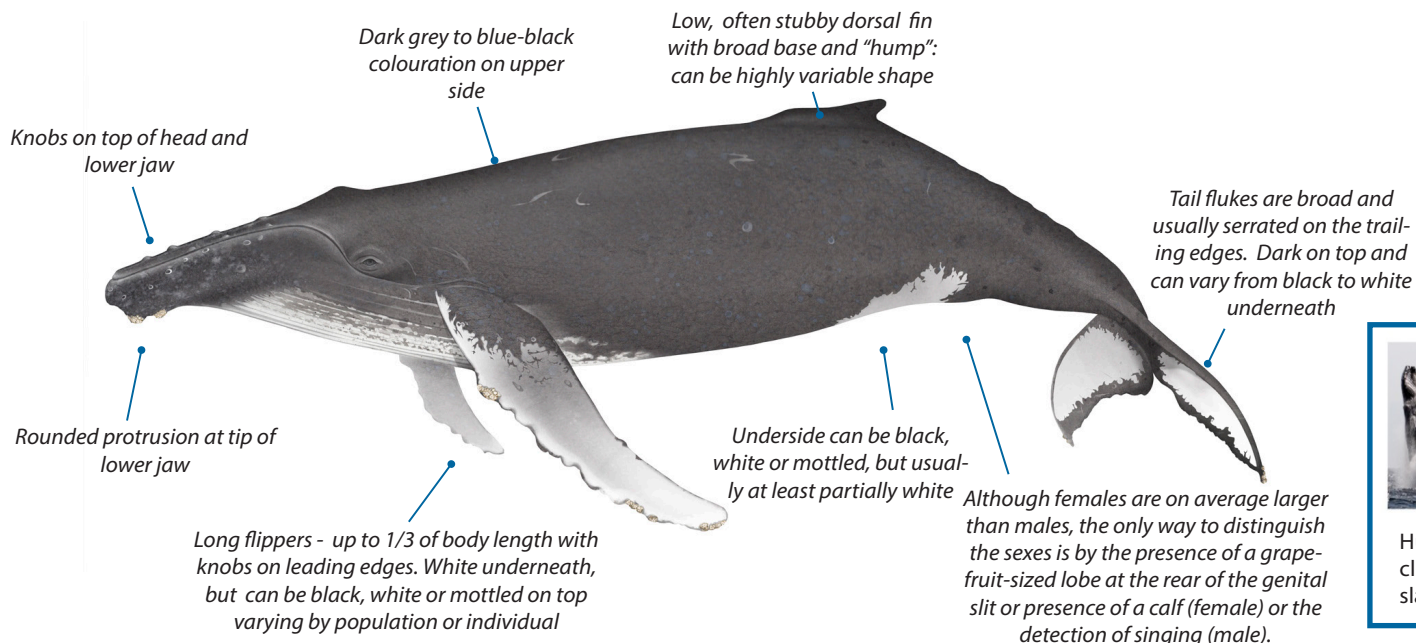


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# Humpback whale (*Megaptera novaeangliae*)

Distribution: Worldwide (see map below and full list of countries in the detailed species account online at: <https://www.handbook.iwc.int/en/species/humpback-whale>)

Adult length: 11.5-15m  
Adult weight: 25-30 tonnes  
Newborn: 4-4.5 m, 1-2 tonnes



Threats: Entanglement, habitat loss, ship strikes, climate change

Habitat: Nearshore, continental shelf

Diet: Small schooling fish, krill

IUCN Conservation status: **Least Concern**

Arabian Sea populations: **endangered**


Oceania populations: **endangered**



Humpback whales are famous for their "surface active" behaviour, which can include "breaching" (leaping clear of the water), pectoral fin (flipper) slapping, and tail slapping. The splash of a breach can be seen from a distance of several kilometres.

## Fun Facts

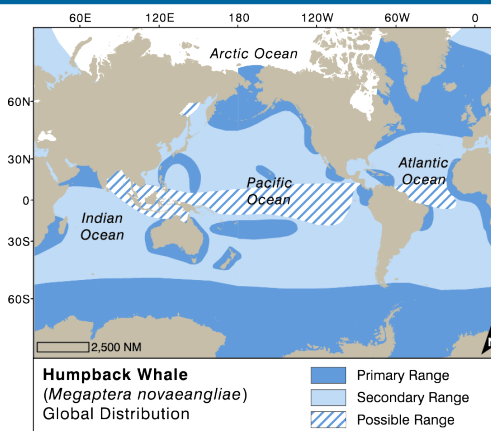
 Male humpback whales produce complex songs, which are heard almost exclusively on the breeding grounds.

 Humpback whale males engage in aggressive competitive behaviour, vying for access to females on the breeding grounds



Photos courtesy of the Environment Society of Oman

Individual humpback whales can be recognised by the serrations and black and white patterns on the underside of their tail flukes, through a process called photo-identification. Some whales in well-studied populations have been re-sighted over periods of up to over 40 years.



Bryde's whale global distribution. Adapted by Nina Lisowski from Jefferson, T.A., Webber, M.A. and Pitman, R.L. (2015). "Marine Mammals of the World: A Comprehensive Guide to Their Identification," 2nd ed. Elsevier, San Diego, CA. Copyright Elsevier: <http://www.elsevier.com>

Humpback whales perform the longest migrations of any mammal, with some individuals moving over 8,000km between the cold, nutrient rich waters where they feed in the summer, and the tropical waters where they mate and give birth in the winter. Because Northern and Southern Hemisphere seasons are 6 months out of phase, Northern and Southern Hemisphere populations are unlikely to ever meet on their tropical breeding grounds. The Endangered Arabian Sea humpback whales are the only population to feed and breed in the same area.

## Humpback whale surfacing

