

Wild
about

WHALES



WHALE WATCHING
IN NEW SOUTH WALES



IFAW
www.ifaw.org



Department of **Environment & Climate Change** NSW



This second edition is a joint publication between the **International Fund for Animal Welfare (IFAW)** and the **Department of Environment and Climate Change NSW (DECC)**.

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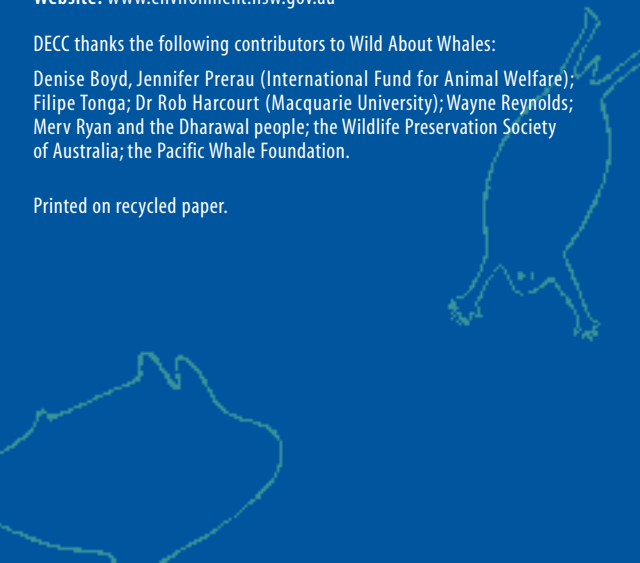
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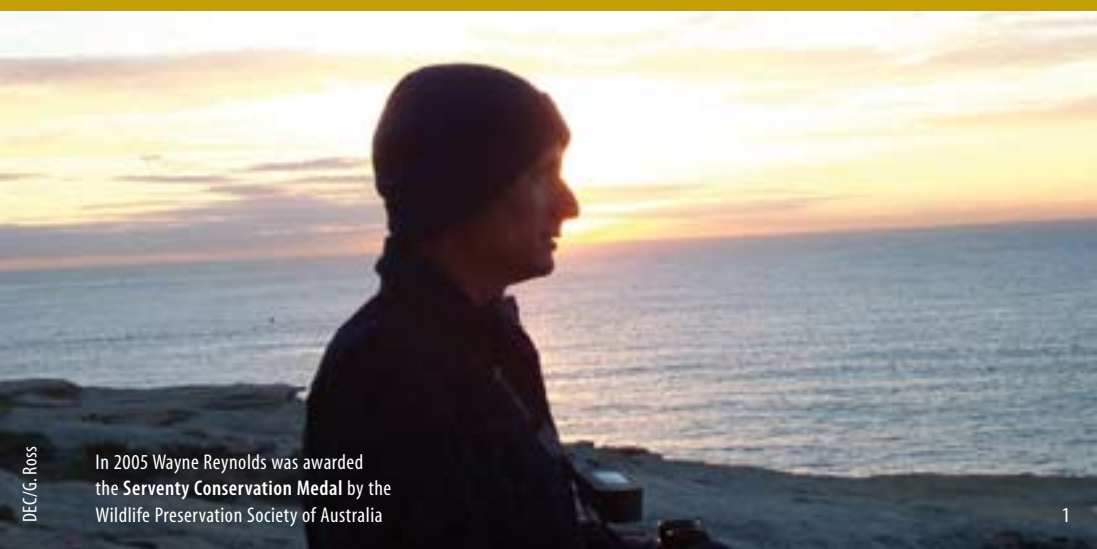
Enjoy your whale watching experience

Having spent 13 seasons involved in whale rescue and research and 8 years watching and recording humpback whales at Cape Solander, I have noticed a remarkable increase in the popularity and community awareness of these spectacular creatures.

Whale watching is a great winter pastime shared by thousands of locals and visitors in NSW. Whether you spend an hour or the whole day, there is nothing more relaxing than to sit by the ocean with a picnic. If you are a little more adventurous, take a trip on a whale watch cruise. Either way make sure you have a camera and some patience to be rewarded with memories that will last a lifetime.

When you support whale watching or volunteer your time to assist whale researchers, you are contributing to the global effort of whale conservation and are also witnessing one of nature's great migrations.

Wayne Reynolds, Cape Solander Whale Migration Study



Looking out

Southern Right and Humpback Whale migratory patterns make the NSW coastline Australia's best place to watch whales.

Between early June to August find a comfortable spot on a headland.

The best vantage points around Sydney Harbour are North Head, South Head and Dobroyd Head. Cape Byron is very popular in northern NSW.

There are good views from the lighthouses at Smoky Cape and Seal Rocks. In the south, try Jervis Bay, Green Cape or take a trip out to Montague Island.

The Humpback Whale and Southern Right Whale are the most regular visitors. Southern Right Whales are much rarer than Humpbacks and are usually seeking out shallow protected bays and inlets to mate and give birth.

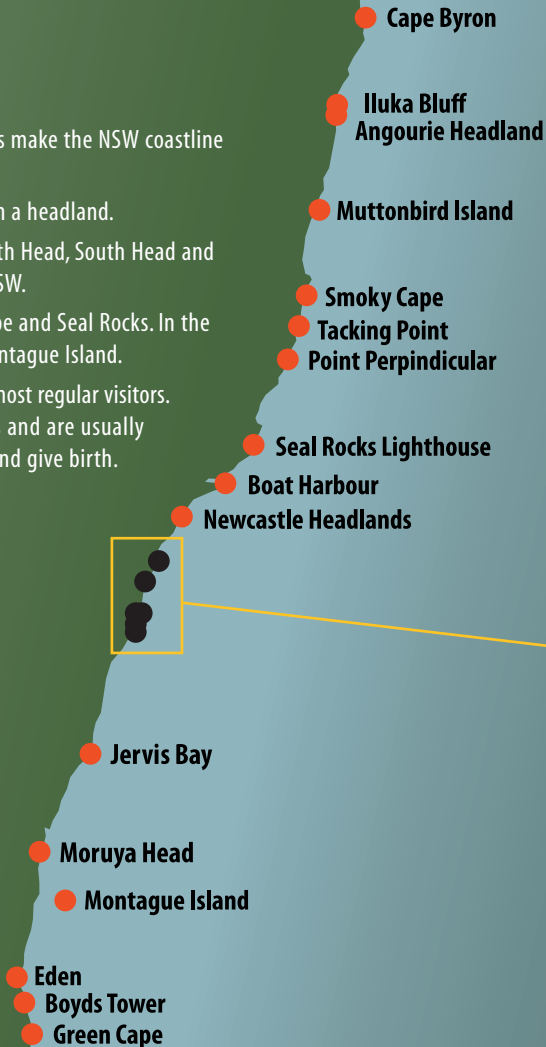
Be sure to take:

- Warm clothes and a blanket/chairs to sit on
- A hat and sunscreen
- Thermos with a hot drink or soup
- Drinking water and food
- Binoculars and sunglasses
- Camera (with telephoto lens if you have one)
- A species identification booklet
- Patience

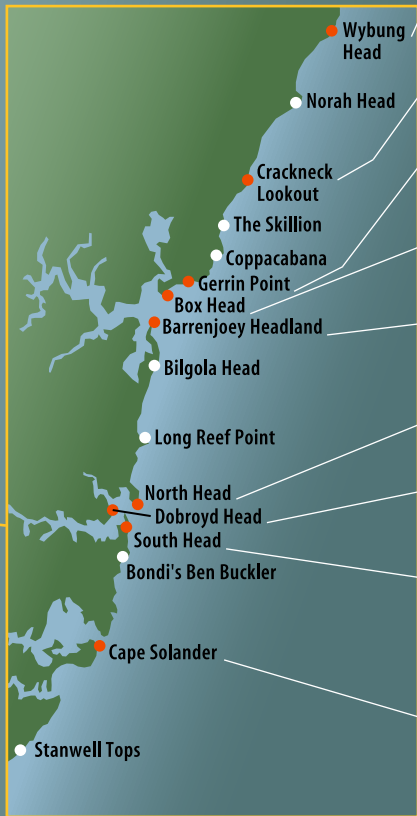
Take extra care around cliffs and rock platforms.

At Cape Solander you can meet specialists and learn about whales.

Whale watching adventures are also provided by commercial tour companies throughout NSW.



Where to go



WYBUNG HEAD, MUNMORAH STATE CONSERVATION AREA
End of Wybung Head Road, access park via entrance off Pacific Highway or southern entrance off Elizabeth Bay, Munmorah

CRACKNECK LOOKOUT, WYRRABALONG NATIONAL PARK
End of Hill Top St, Bateau Bay East



GERRIN POINT, BOUDDI NATIONAL PARK 
Park at Putty Beach picnic area and walk north along beach and up to lookout (approx 700 metres)

BOX HEAD, BOUDDI NATIONAL PARK 
End of Hawke Head Drive, Killcare. Walk in approx 1.5 km (medium grade)

BARRENJOEY HEADLAND, KU-RING-GAI CHASE NATIONAL PARK   
End of Barrenjoey Road, Palm Beach. Walk to lighthouse 30 mins (medium grade). Parking: Governor Phillip Park

NORTH HEAD, SYDNEY HARBOUR NATIONAL PARK
North Head Scenic Drive, Manly


DOBROYD HEAD, SYDNEY HARBOUR NATIONAL PARK  
Dobroyd Scenic Drive, Balgowlah Heights


SOUTH HEAD, SYDNEY HARBOUR NATIONAL PARK  
End of Old South Head Rd, Vaucluse.
Parking available at Watsons Bay.
Walk in approx 15 mins (easy grade)

CAPE SOLANDER, BOTANY BAY NATIONAL PARK 
End of Captain Cook Drive, Kurnell

 picnic tables

 toilets

 walk to lookout

 whale watching spots in national parks (parking fees may apply)

 spots outside national parks

Many national parks have great vantage points and coastal walking tracks. Some provide camping opportunities for the overnight experience. See www.nationalparks.nsw.gov.au

Why do whales migrate?

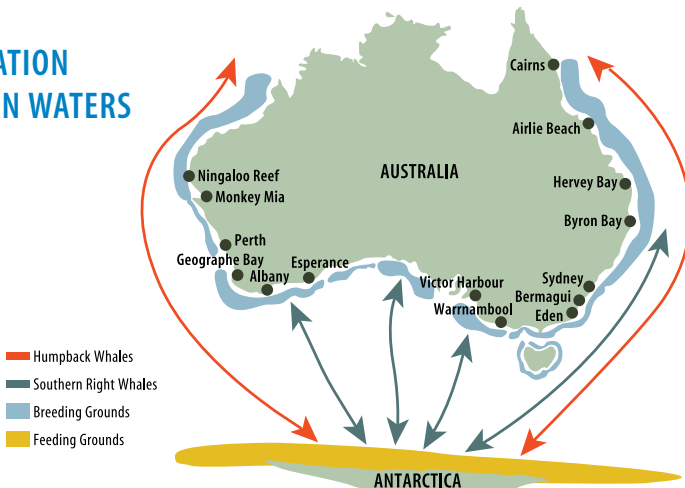
During summer, whales in the Southern Hemisphere migrate to Antarctica to feed. They return in late autumn, travelling to their winter breeding and calving grounds in the warmer tropical waters of the Pacific.

During migration, whales use an enormous amount of energy. Humpbacks migrate around 5000km on average, one of the longest migratory journeys of any mammal on Earth. Southern Right Whales make the long trek from Cape Byron to Antarctica, but have been seen as far north as Hervey Bay.

Travelling these sorts of distances has its hazards, particularly for calves and pregnant females. On the trip south, mothers and newborn calves need to come in close to the coast to give them regular chances to rest and suckle. It's important not to disturb the young whales at this vulnerable time.

A newborn Humpback calf can weigh up to two tonnes and they double their weight in the first week. The calves suckle several times a day, and drinking many litres of milk that's very high in fat and calories helps young calves gain up to 90kg per day.

WHALE MIGRATION IN AUSTRALIAN WATERS





Orca—W. Reynolds



Minke Whale—IFAW/Gordon



Migaloo—W. Reynolds

Whales you might see (or hear)

MIGRATING WHALES

There are 43 species of whales that travel through Australian waters. Humpbacks and Southern Right Whales are the most commonly seen whales along Australia's coastline, but here are some other marine mammals you may see:

- Minke Whale
- Pygmy Right Whale
- Bottle-nosed Dolphin
- Orca ("Killer Whale")
- Brydes Whale
- Common Dolphin

MIGALOO

The rare white male Humpback, dubbed "Migaloo", was first seen off the east coast of Australia in 1991, and has been sighted almost every year since. In NSW, regulations allow for short-term special protection zones to be declared around sick or special animals, such as Migaloo or new-born calves.

WHALES SING Male Humpbacks sing complex, lengthy and distinctive songs to entice females to mate. They use "syllables" and "rhyming phrases" to make up many different songs, ranging from canary-like chirps to deep rumbling sounds and carrying for hundreds of kilometres underwater. The songs also change overtime and between groups of whales.



W. Reynolds

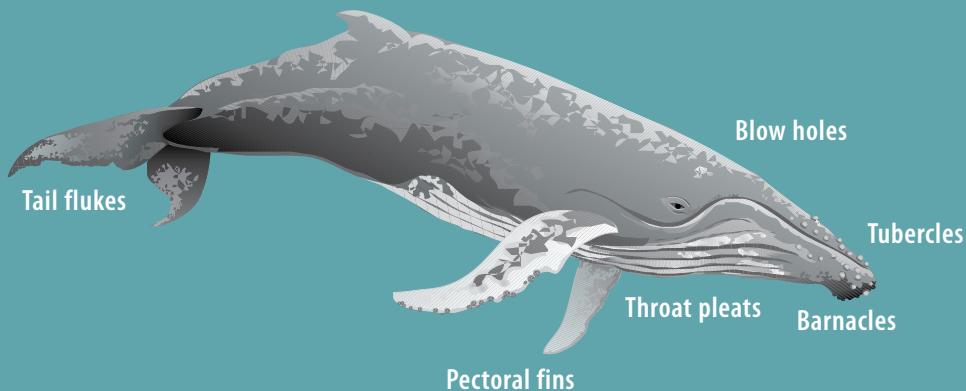
Humpback Whale

Renowned for their spectacular behaviour, Humpbacks will leap out of the water, roll in the air with their huge pectoral fins outstretched like wings, and crash noisily back into the water. This is called breaching.

They have a small dorsal fin located nearly two-thirds of the way down their back, and their backs steeply arch as they dive. This is how the Humpback got its name and is what helps whale watchers distinguish them from other species. They also have several other distinguishing features like large pectoral fins (which may be up to a third of the body length), and unique markings of black and white on the underside of the tail flukes.

These markings are like fingerprints, no two are the same. This fingerprint, or fluke identification (ID), aids researchers in identifying individuals as they migrate along the coast.

WHY DO WHALES BREACH? There are theories as to why whales breach. They may be communicating to other whales across vast distances, trying to attract other whales (including a mate), to warn off vessels or other males, or perhaps to cool off, remove parasites such as barnacles, or just for fun!



QUICK FACTS Humpback Whale (*Megaptera novaeangliae*)

Length: Adults: 14m to 18m; Calves: 4m to 5m at birth

Weight: Adults: up to 50 tonnes;
Calves: 2 tonnes at birth

Gestation: 11 to 11.5 months

Weaning age: up to 11 months

Calving interval: 2 to 3 years

Physical maturity: Age: 12 to 15 years; Length: 13m to 14m

Sexual maturity: Age: 4 to 10 years;

Length: 11.6m Males/12.1m Females

Mating season: June to October

Calving season: June to October

Cruising speed: 7km/hr

Blow pattern: Small and bushy, up to 4m

Protected: Since 1965



IDENTIFYING HUMPBACK WHALES



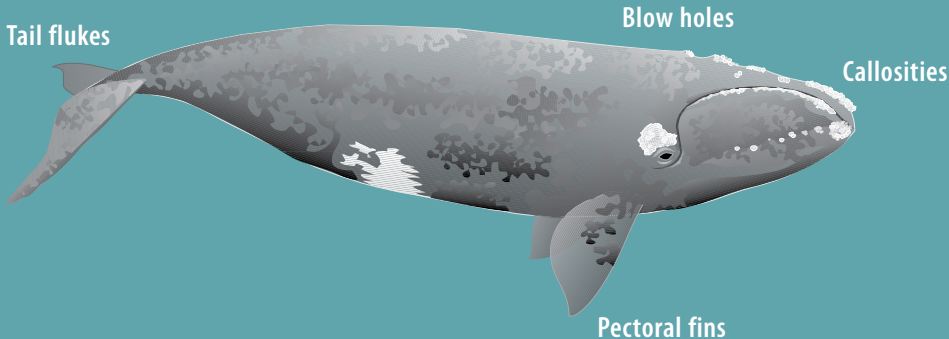
Southern Right Whale

Land-based whaling in Australia initially concentrated on Southern Right Whales as the “right” whale to catch. Commercial whaling began in 1820, taking around 75% of the Southern Right Whale population between 1835 and 1845 when the industry collapsed. It took another ninety years before they were officially protected.

These days, Southern Right Whales delight whale watchers with their peculiar looks and crowd attracting antics, like breaching and headstands. They have an enormous head that is up to one quarter of total body length with wide pectoral fins and no dorsal fin. Their two separate blow holes produce a distinguishing V-shaped blow.

The large growth on the front of a Southern Right Whale’s head or “rostrum” is called a “bonnet”. It’s made of hard material, similar to human finger-nails. The smaller rough patches of skin found on its head, chin and around the eyes and blow hole are called ‘callosities’. The number, shape and position of their callosities provide each whale with its own unique marking and is how we can tell them apart.

WHALES BLOW air, water vapour and mucus as they surface to take a breath. Whales are mammals like humans and need to breathe air. While diving, blow holes are plugged to create a watertight seal. On surfacing, air is expelled from their lungs at great speed, atomising small amounts of water from around their blow-hole.



QUICK FACTS *Southern Right Whale (Eubalaena australis)*

Length: Adults: 14m to 18m; Calves: 5m to 6m at birth

Weight: Adults: up to 80 tonnes;

Calves: 1 to 1.5 tonnes at birth

Gestation: 11 to 12 months

Weaning age: 11 to 12 months

Calving interval: Generally 3 years

Physical maturity: Age: unknown; Length: 16m

(males slightly less than females)

Sexual maturity: Age: 9 to 10 years;

Length: 12m to 13m

Mating season: July to August

Calving season: June to August

Cruising speed: 3km/hr

Blow pattern: V-shaped bushy blow, up to 5m

Protected: Since 1935



Blow



Diving



Fluke up dive



Pectoral wave

IDENTIFYING SOUTHERN RIGHT WHALES

From whale hunting to whale watching



BEACH SCENE—Joseph Lycett, Newcastle, 1817.



BOATS—Dubourg, 1813.

Whale hunting has a long history on the east coast of Australia. Aboriginal people lured them onto the beaches using fires, and commonly made feasts of stranded whales. Whales also feature in Aboriginal rock art and modern tradition.

Early settlers recognised the importance of whales to the economy and quickly established shore-based whaling stations on the northern side of Sydney Harbour and on the far south coast of NSW. Local Aboriginal people played a key role in whaling from stations around Eden, including Boyds Tower and Davidson Whaling Station, which are now managed by DECC as historic sites.

As settlement expanded there was a greater reliance on whale oil for industrial processes such as tanning and ropemaking and for making candles and soap that were used locally and exported to England. As whale hunting technology improved and whale populations diminished, shore-based whaling was replaced by off-shore whaling.

The exploitation of whales ceased in NSW in 1962. The last whaling station to close was at Cape Byron, now one of the state's most important whale watching sites. Since this time, populations have begun to recover.

Whales, dolphins and porpoises in NSW waters are now protected under the Commonwealth *Environment and Biodiversity Conservation Act 1999* and the NSW *National Parks and Wildlife Amendment (Marine Mammals) Regulation 2006*.

WHALES SWIM FAST Whales and dolphins have streamlined bodies to reduce drag from the water. They use their pectoral fins to glide and their muscular tails give them incredible power.

Whale evolution



IFAW/J. Peralta

Whales developed from land mammals that colonised warm brackish waters about 55 million years ago. They belong to an animal group called *Cetacea*, which also includes dolphins and porpoises.

There are two different types, the **toothed whales** (*Odontoceti*) and **baleen whales** (*Mysticeti*).

Toothed whales have teeth. Some, such as Baird's Beaked Whale have tusks while the Narwhal has a long spiraled horn, like the mythical unicorn. The *Odontoceti* include the smallest of the *Cetacea*, the porpoises, and one of the largest, the Sperm Whale (*Physeter macrocephalus*). The diet of toothed whales includes squid, octopus, crustaceans and fish.

Baleen (or Great) whales are named for their feeding apparatus. Baleen consists of a series of sloping plates made from keratin, the same material that makes up our fingernails. These hang from the roof of the mouth and are used to filter plankton, krill and schooling fish. The lower jaws are very flexible and the mouth is expandable to accommodate the gulping method of feeding. Food is caught in the bristles of the baleen, while water is forced out of the mouth through the gaps.

Baleen whales include Right Whales (Southern Rights, Pygmy Rights), Gray Whales and Rorquals. The Rorquals, which have dorsal fins like the Humpback, include the largest animal on Earth, the Blue Whale, which has been recorded at 34m in length. The other Rorquals in coastal Australian waters are the Fin, Sei, Brydes and Minke Whale. These whales have all been subject to considerable human exploitation.

WHALES DINE IN STYLE Humpbacks have developed a unique method of gathering prey, by releasing circular bubble “curtains” at depth and then surfacing mouth-open in the centre of the ring. Cooperative “bubble-netting” also occurs with multiple whales all releasing bubbles and surfacing together. 11

Whale watching guidelines



W. Reynolds

KEEPING OUR DISTANCE

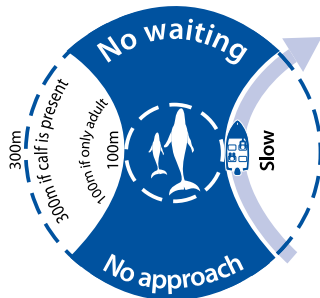
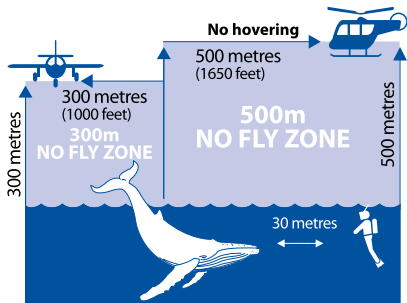
In order to protect whales from stress or harm, we need to keep our distance. State regulations can be found at www.environment.nsw.gov.au. DECC is responsible for safeguarding marine animals in NSW. Please report any unusual whale sightings to us. For further information please contact your nearest DECC office.

GENERAL RULES

- Abandon all contact with whales if there is any sign that they are disturbed or alarmed.
- Do not separate or scatter a group of whales.
- Do not attempt to feed whales or throw rubbish into the water.
- Avoid loud disturbing noises near whales.
- Observe general boating and aircraft regulations and restrictions (see diagram below).

BOATS

- Do not approach whales closer than 100 metres, or closer than 300 metres if a calf is present.
- Skippers should slow when approaching 300m (ie. to "no wake" speed).
- Do not approach whales directly from behind, cut off their path, or prevent them from leaving.
- Do not approach within 300 metres if three or more boats are already present.



National guidelines for *Cetacean* observation can be found at www.deh.gov.au

How you can help



FIVE WAYS YOU CAN HELP THE WHALES

1. **Be aware when on the water.** Adhere to the rules on keeping your distance from migrating whales, and reduce boat speed.
2. **Share your experience** of our magnificent marine creatures.
3. **Volunteer** with the **Cape Solander Whale Migration Study (CSWMS)** (02) 9668 9111 or **Orrca** (02) 9415 3333 and support conservation organisations like **Wildlife Preservation Society Australia (WPSA)** (02) 9556 1537 and **International Fund for Animal Welfare (IFAW)** 1800 00 4329.
4. **Support whale watching.** In NSW, we are in the box seat for one of the world's great natural wonders: the annual whale migration. It can be a humbling and awe-inspiring experience to see these huge marine mammals in the wild. So stand on a cliff, the beach, or anywhere you can see the ocean, and let these gentle giants amaze you with their antics.
5. **Help reduce rubbish** in the waterways and ocean. Plastic can kill or injure marine wildlife.



W. Reynolds

WHALES DIVE DEEP Sperm Whales have been tracked diving to 3300m, and often dive for 30 minutes or more. They feed at great depths on squid, including giant squid. The water pressure at these depths is immense, and whales' lungs collapse on these deep dives. Unlike people, they have a flexible rib cage that allows this to happen. The longest dives by marine mammals are around 2 hours. Baleen Whales, like Southern Right Whales and Humpbacks don't dive nearly so deep nor for as long (around 15 minutes) as they are surface feeders.

Further information

DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE NSW (DECC)

www.environment.nsw.gov.au

INTERNATIONAL FUND FOR ANIMAL WELFARE (IFAW)

www.ifaw.org

MARINE MAMMAL RESEARCH GROUP—MACQUARIE UNIVERSITY

www.gse.mq.edu.au/research/mmrq/index_ie.htm

AUSTRALIAN GOVERNMENT—DEPARTMENT OF ENVIRONMENT AND HERITAGE

www.deh.gov.au/coasts/species/cetaceans/index.html

WILDLIFE PROTECTION SOCIETY AUSTRALIA (WSPA)

www.wpsa.org.au

Leatherwood, S. and R.R. Reeves. 1983. *The Sierra Club Handbook of Whales and Dolphins*. Sierra Club Books, San Francisco.

Tucker, Mark. 1989. *Whales and Whale Watching in Australia*. Australian National Parks and Wildlife Service.

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