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PORT PHILLIP BAY BURRUNAN DOLPHINS A GUIDE TO A HEALTHY BAY



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OUR HEALTHY BAY

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The Port Phillip Catchment consists of rivers, estuaries, wetlands, and marine habitats covering a total area of 9,694km². Victoria's largest marine embayment, Port Phillip Bay is connected to the wider catchment through five major rivers (Yarra, Maribyrnong, Werribee, Patterson, Little) and to the ocean at Port Phillip Heads.

The natural drainage basins within the Catchment support a large diversity of complex ecosystems with high conservation value, including wetlands, lakes, rivers and creeks, estuaries, sandy beaches, rocky shores, mangroves, seagrass beds and rocky reefs. Spanning 1,934km², an average depth of only 13m, and 333kms of coastline, Port Phillip Bay is home to an estimated 10,000 species, and is one of only two known populations of the threatened Burrunan dolphin.

The Port Phillip Catchment sustains 4.5 million residents and over 90 million visitors each year. The natural resources within the Catchment are vital for supporting numerous communities, commercial industries and tourism, recreational activities, education and contain important Aboriginal and European cultural values.

Maintaining the health of the Catchment and its values are important for the vitality of the region, and all those it supports. Protected areas throughout the Catchment include National Parks, Marine National Parks and Marine Sanctuaries, and are important for the preservation and protection of the Catchment's native and endemic freshwater and marine flora and fauna.

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PORT PHILLIP BAY KULIN CREATION STORY



Many years ago, the area we know now as Port Phillip Bay was a large, grassy plain. The Boonwurrung people were the custodians of this land and welcomed people from other parts of the Kulin nation. They obeyed the laws of Bundjil their creator and spiritual leader, who travelled as an eagle, and Waan, who travelled as a crow. However, one day, there came a time of chaos and crisis, and conflict arose between the Boonwurrung people and other Kulin nations. They neglected to care for the land, instead they fought and the sea grew angry and began to rise. Soon, the vast grassy plain was entirely covered in water and the sea threatened to flood their whole country.



Terrified, the people appealed to Bundjil to stop the sea from rising. Bundjil was angry and sternly reprimanded them, saying if they wanted to save their land, they had to change their ways. The people reflected on what they had been doing, and agreed.

Bundjil approached the sea, raised his spear and stopped the flooding water. He then made the Boonwurrung promise they would respect the laws. But the water on the grassy plain never subsided. Instead it created a large Bay that the Boonwurrung called Nairm. Today it is known as Port Phillip Bay.

N'arweet Carolyn Briggs
Elder & Chair, Boon Wurrung Foundation



BURRUNAN IS THE ABORIGINAL NAME GIVEN TO DOLPHINS MEANING “NAME OF A LARGE SEA FISH OF THE PORPOISE KIND” USED IN THE BOONWURRUNG, WOIWURRUNG & TAUNGURUNG LANGUAGES.

ONE OF THE TWO ONLY KNOWN VICTORIAN RESIDENT POPULATIONS OF BURRUNAN IS IN PORT PHILLIP BAY WHERE THE BOONWURRUNG PEOPLE HAVE DOCUMENTED THEIR EXISTENCE FOR OVER 1000 YEARS.

THE BURRUNAN DOLPHIN



The Burrunan dolphin (*Tursiops australis*) was only formally identified and named as a new dolphin species in 2011, following multiple lines of genetic and morphological evidence (Charlton-Robb et al. 2011). The species is characterised by small, isolated and genetically distinct populations in Victoria, Tasmania and South Australia. The Burrunan are not found anywhere else on Earth!

With only two known resident populations in Victoria (Port Phillip Bay and Gippsland Lakes), the Burrunan dolphin is already listed as 'Endangered'.

The Burrunan dolphin is about 2.5m in length and has a distinct tri-colouration pattern, from dark grey on the upper side of the body, a paler grey midline and cream underside. The cream underside can extend over the eye, whilst the grey mid-line forms a shoulder blaze (a brush-stroke pattern) below the falcate (curved) dorsal fin. The Burrunan has broad tail flukes, a prominent rounded head and a short stubby rostrum (nose).

HOW WE IDENTIFY DOLPHINS

Marine Mammal Foundation researchers use the dolphin's dorsal fin to identify each individual dolphin. They are born with 'clean' fins and gain nicks and notches over time via social behaviour or human-induced causes, such as boat-strikes and nets. These markings act like a 'FINgerprint' which allow us to give each individual dolphin a unique code (for example PPB201), and for simplicity, a nickname.

Our researchers spend hundreds of hours on the water collecting photographs and assessing behaviours, interactions, movement patterns and calving rates. By collecting these images we can identify areas of significance and population size.

Port Phillip Bay has a resident population of approximately 120 individuals. Both males and females remain within Port Phillip Bay throughout their adult life. While many Burrunan dolphins favour the southern region of Port Phillip Bay, they are known to inhabit the entire Bay, with sightings occurring as far north as the Yarra River! Through fin identification we've found that certain individuals favour particular regions of the Bay, particularly some of the smaller male groups which have been consistently sighted using the same areas over the years.

Larger nursery groups with multiple mothers, calves and juveniles tend to favour southern Port Phillip. Females with independent young of similar ages are often sighted together within shallow and inshore areas which are vital for resting, nursing and caring for their young.



RISK & THREATS TO THE DOLPHINS



Unfortunately the biggest threat to the dolphins and their environment is us!

Inappropriate vessel approaches can disrupt core biological activities, such as feeding and resting.

Mothers and calves are more at risk, as calves spend more time at the surface and can be more inquisitive, thus are more prone to vessel strikes.

Dolphins are wild animals and should be given the choice to interact with us on their terms! Reduce speed, do not directly approach dolphins and look for signs of avoidance, such as changes in direction, behaviour and/or tail slapping.

Fishing waste (line, hooks and sinkers) can cause entanglements. Dispose of your fishing waste thoughtfully.

Habitat loss or degradation is another important aspect. Whilst we can choose not to swim, the dolphins can't. They rely on a pristine environment to survive.

Each year, 12.5 million metric tonnes of plastic enter our world's oceans! Let's rethink our overuse and over reliance on single use plastics.

BIN NOT BAY

Litter and waste is a significant threat to marine mammals in Port Phillip Bay. Each year thousands of animals become entangled and ingest plastic waste which can result in death.

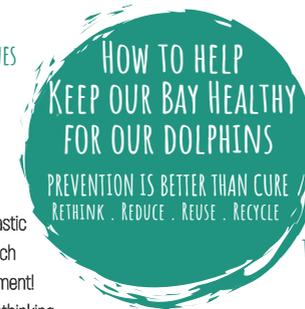
There is so much more that can be done to minimise these alarming figures. Simple actions can make a difference!



We buy over **118,000 TONNES** of **PLASTIC DRINK BOTTLES** a year! **RE-USE** your bottle, and help the environment!



We use **10 MILLION** new plastic bags **EVERYDAY** many of which end up in our marine environment! Reduce entanglements by rethinking your use of plastics.



ONE MILLION disposable coffee cups end up in landfill every **MINUTE!** Most cups are **NOT** recyclable. Reduce waste by using an **ENVIRO-CUP!**



Help reduce the **12.5 MILLION TONNES** of waste going to land fill in Victoria. Dispose of your litter correctly in-line with your local Council guidelines.





PORT PHILLIP BAY BURRUNAN DOLPHINS



LUCKY

Lucky (PPB201) has scarring and a large notch missing from her dorsal fin from a boat strike injury which she obtained as a juvenile. This is how she got her name, as she was lucky to have not been more severely injured!

Like many of the female Burrunan dolphins in Port Phillip Bay, Lucky favours southern Port Phillip Bay, often sighted near Mornington and Sorrento.

Lucky was first identified in 2006 and has been sighted regularly in the last decade, often associating with females Wanda (PPB311) and Curvy (PPB216). Lucky was first sighted with a calf back in 2007, in 2016 she was observed regularly within a large nursery group, but did not appear to have a calf. We've noticed many expectant females tend to associate with other mothers and calves before they give birth, this may be a preparation and parenting strategy. Fingers crossed, we're hoping to see her with a new calf again soon!

PORT PHILLIP BAY BURRUNAN DOLPHINS



RICKY

Ricky (GL10410) was first sighted back in 2006 near Rickett's Point. Much like Lucky, she tends to favour southern Port Phillip Bay, but has also been known to venture north, inhabiting inshore waters off Black Rock and Sandringham.

Ricky had a calf in early 2014 and the mother-calf pair were sighted regularly throughout 2015 and 2016. Earlier in 2018, Ricky was sighted within a large nursery pod. Underwater footage showed a large belly, suggesting she may be pregnant and we will be keeping a close eye on her progress!

Ricky has a large social network, associating regularly with a number of different individuals, but she is most often sighted with females Slim (PPB10116) and Harper (PPB10111).

Close bonds between females are often associated with shared maternal needs and protection from predators. All three females have had calves of similar ages and were frequently sighted together during these important early years for their offspring.



PORT PHILLIP BAY BURRUNAN DOLPHINS



MOZAM

Mozam (PPB113) is one of Port Phillip Bay's most well-known males. Sighted back in 2006, Mozam has one very close male companion (PPB10117). The pair have been sighted together constantly for more than a decade! Mozam and PPB10117 have only ever been sighted in southern Port Phillip and while they have been observed within the larger nursery groups, they seem to associate more frequently in smaller groups, sometimes it's just the two of them!

Male alliances like the one between Mozam and PPB10117 are a reproductive strategy. They work together as a team to find mating opportunities to increase their chances of producing offspring. The fact that these two are constantly sighted in the same region also suggests they may be somewhat territorial, protecting their resources from other males entering the area.

There are a number of other males within Port Phillip Bay who also share strong, long-term bonds with specific individuals, but they tend to inhabit different areas of the Bay and are rarely seen altogether.

PORT PHILLIP BAY BURRUNAN DOLPHINS



AL

Al (PPB10308) was first sighted in 2015. He got his name from being regularly sighted near Altona, however we've since realised we should really be calling him 'Al-Everywhere' as he covers a lot of ground! Within the space of a few days, Al has been sighted in his favoured Altona region and then has turned up in a much larger group near Mornington.

Al's closest associates are male companions Lu (PPB117) and Lego (PPB10411), but he seems to be well connected with a number of different individuals, indicating he has a broad social network, which may be the result of all the travelling he does. The social alliances between Al, Lu and Lego are strong, with the trio having never been sighted without each other.

Al has also been seen swimming alongside common dolphins (*Delphinus delphis*) and Australian fur seals (*Arctocephalus pusillus doriferus*)! This is known as a Mixed Species Association, and is generally associated with feeding opportunities.



OTHER MARINE MAMMALS IN PORT PHILLIP BAY



HUMPBACK WHALES

Humpback whales migrate through Victoria from feeding grounds in Antarctica to calving grounds in Queensland. Averaging 15m, they have long slender pectoral fins and a small stubby dorsal fin.



SOUTHERN RIGHT WHALES

Often seen close to shore in winter, these whales have a large bulbous head, downward arched mouth line and large paddle-like pectoral fins. They have large, white rough and raised markings around the head region, known as collosities, which are unique on each animal and help identify individual whales.



COMMON DOLPHIN

Common dolphins are found along Victoria's coastline, with small pods regularly seen off Mornington. Smaller than the Burrunan, common dolphins have long rostrums and a tri-colouration pattern with a distinct cream patch on their sides.

AUSTRALIAN FUR SEALS



Australian fur seals are endemic to south-eastern Australian waters, including Port Phillip Bay. They are the largest of the fur seals, with males weighing up to 360 kg and reaching 2.2 m in length. Like all fur seals, Australian fur seals must return to land after foraging to rest, socialise and breed.

While it is a joy to see these playful and charismatic animals in their natural habitat, it is important to respect their need for space. A minimum approach distance of 5m is permitted when a seal is hauled-out on a man made structure and 30m if the seal is on land. This applies to people, powered and unpowered water craft. Dogs are not permitted within 50m of a seal on land.

Unfortunately, the playful and curious nature of fur seals leaves them open to a range of threats – particularly entanglements. Items such as fishing line, balloon strings, and plastic strapping can get caught around seals and cause potentially fatal injuries. Reducing our reliance on plastics can have a significant impact on the threat of entanglements for our Australian fur seals, as well as our other marine mammals.



HOW CAN YOU HELP?



SPOTTED A BURRUNAN DOLPHIN?

Become a part of the MMF Citizen Science movement. By logging sightings, we can see where and how the dolphins are using the system, even when we can't physically be there. Submit your sightings via <https://marinemammal.org.au/trakmm/>



FOLLOW THE REGULATIONS

Do not approach dolphins within 100m if you're in a vessel (powered or unpowered) and 300m on a jetski. These regulations are enforced by Authorised Officers from DELWP and Parks Victoria. **It is OK if the dolphins approach you but please maintain a safe distance and speed.**

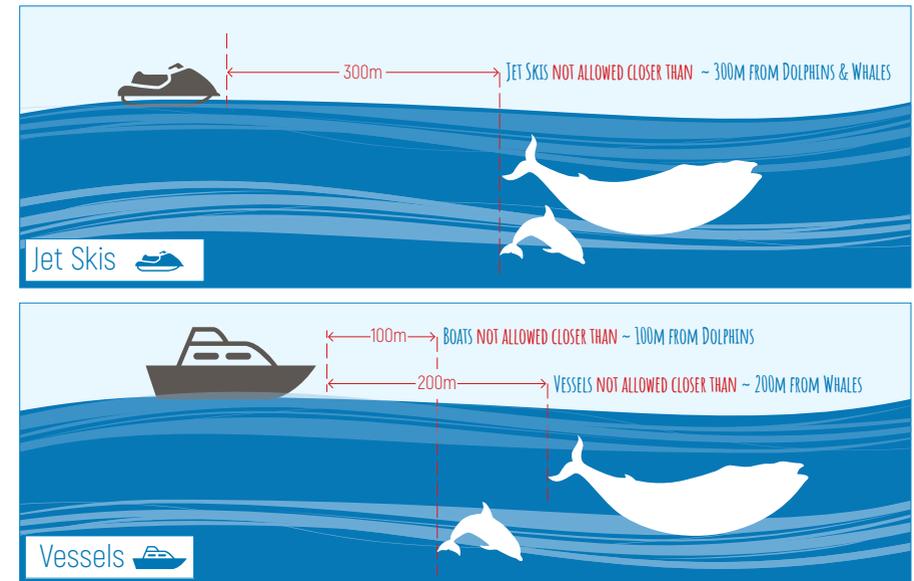
Call the DELWP Whale and Dolphin Emergency Hotline 1300 136 017 for entangled or stranded dolphins or whales.



MAKE A DONATION

The Marine Mammal Foundation rely upon the generosity of the community, environmental and sustainability conscious partners who want to support the protection and conservation of marine mammals. For more information, visit our website <https://marinemammal.org.au/donate/>

VESSEL APPROACH REGULATIONS



Vessels include powered and unpowered vessels such as kayaks and SUPs.

It is illegal to touch or feed whales, dolphins or seals and swim/surf near dolphins.

Dolphins are protected under the Wildlife Act 1975 and Wildlife (Marine Mammal) Regulations 2009

For more information on water safety around marine mammals please visit <https://www.wildlife.vic.gov.au/our-wildlife/whales,-dolphins-and-seals/water-safety-around-marine-mammals>

