FinBook

An identification catalogue for dolphins observed in the Swan Canning Riverpark

TENTH EDITION – 2024

RIVER GUARDIANS

DOLPHIN WATCH

Murdoch University | Harry Butler Institute

AUSTRALIA ECU EDITH COWAN UNIVERSITY

GOVERNMENT OF WESTERN AUSTRALIA

Department of **Biodiversity, Conservation and Attractions**

SWAN CANNING RIVERPARK

Foreword

As Patron of *Dolphin Watch*, it is always a great pleasure to write the foreword to the latest edition of this special book. Producing each new edition is made possible because of the dedicated work of so many volunteers in the Dolphin Watch project, along with the ever-committed scientists and the essential administrative support team.

The book continues to be a unique guide to learn about the animals that are held dear by Western Australians and visitors to our State alike. The content makes it possible to identify individual dolphins and to build up a more comprehensive picture of their behaviours and needs. Dolphins that bring joy to all who use and treasure our waterways and most importantly are valuable components of a healthy ecosystem.

The 'secret lives' of dolphins are now being revealed, an essential prerequisite to ensuring their future in our ever-changing waterways. It is heartening that the number dolphins in the Swan Canning Riverpark is estimated to be similar now to that when we started our surveys. However, it is not at the peak numbers seen at times in the interim. This is essential knowledge and provides information necessary to advocate to policy makers and managers for necessary conservation measures.

I am convinced that *Dolphin Watch*, complemented by the *FinBook*, is establishing a legacy for future generations of West Australians and enhances the efforts of all who care about the natural world across the globe. Each time you reach out to consult this book please accept a heartfelt 'thank you' from me and from many others. Long may *Dolphin Watch* thrive with those taking part continuing to use the *FinBook*!

Professor Lyn Beazley AO FAA FTSE

Front cover: Resident dolphins socialising. Photo: Sue Harper
Other photos in this Finbook by Delphine Chabanne and Sue Harper.

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Dolphin Watch

Dolphin Watch is a collaborative citizen science project dedicated to research and education. Launched in 2009 by the Swan River Trust (now the Department of Biodiversity, Conservation and Attractions, or DBCA) in partnership with Murdoch and Curtin universities, the project aims to enhance our understanding of the resident Indo-Pacific bottlenose dolphin community within the Riverpark.

In the past few years, the collaboration has included DBCA's Parks and Wildlife Service, along with Edith Cowan and Murdoch universities. In 2018, Dolphin Watch expanded to also monitor the resident Indo-Pacific bottlenose dolphins in the Peel-Harvey Estuary in Mandurah, as well as the Australian snubfin dolphins in Roebuck Bay, Broome.

Researchers from Edith Cowan and Murdoch universities work alongside the Parks and Wildlife Service's River Guardians team to train volunteers in monitoring techniques. These citizen scientists play an essential role by tracking dolphin movements and behaviours, contributing valuable data to the project. By becoming a member of the River Guardians program and attending training, volunteers become more informed about conservation issues and can take part in activities aimed at protecting waterways, and coastlines, and the wildlife that depends on them.

With more than 1,500 trained **Dolphin Watchers** and 858 volunteers observing dolphins in Perth, researchers are gaining valuable insights into the ecology of these dolphins across the three monitored areas.

Volunteer contributions, including photographs and videos, help build a detailed picture of the community of dolphins in the monitored areas. Our smartphone app enables community members to record information such as location and behaviour of the dolphins they observed. The app is available to download for free from the App Store (iPhone) or Google Play (Android). Check out the 'Make a Report' webpage on the River Guardians website for more information and assistance with lodging reports through our app or the online monitoring form.

Dolphin Watch shares information and expertise to help industry, government and the community develop effective management strategies and policies aimed at protecting dolphins and their habitats.

Perth dolphin research

Coastal and Estuarine Dolphin Project

Research for the Coastal and Estuarine Dolphin Project (CEDP) is driven by the belief that the best future for Perth's dolphins depends on maintaining healthy and resilient ecosystems, as well as fostering communities that actively engage in caring for their local dolphin populations and the environments they inhabit. CEDP focuses on the health, ecology, and conservation of dolphins in the Perth region.

Current CEDP Research

Since 2010, CEDP researchers have been monitoring the Riverpark dolphin community because of its small size and exposure to anthropogenic (man-made) activities. From 2011 to 2015, researchers conducted boat-based fieldwork to assess dolphin abundance and distribution within a study area extending from Rockingham to Scarborough along the coast and inland to the cities of Perth and Canning. Given the very small resident dolphin community in the Riverpark, understanding its status and connections to other communities was vital. Other CEDP research investigated the effect of anthropogenic noise on dolphins.

Researchers collaborate with DBCA staff to train Dolphin Watch volunteers and analyse volunteer data, which has provided valuable insights into the Riverpark dolphins.

The overall ongoing objectives of CEDP are to:

- conduct rigorous and innovative research into the ecology of dolphins in the Perth region
- provide scientific information and advice to industry and government to support the conservation of dolphins and their habitat
- share information and expertise with the public to improve community-based conservation and monitoring for dolphins.

Dolphins in the Riverpark

Dolphins are a unique part of the Riverpark ecosystem. What do we know about the ecology of the dolphins inhabiting the Swan and Canning rivers?

A resident community

The Riverpark is home to a resident community of 24 dolphins, including five dependent calves (as of October 2024). These dolphins account for nearly all Dolphin Watch sightings in the Riverpark, although dolphins from nearby coastal areas occasionally visit (see Visitors section in the catalogue).

The dolphins are classified as 'resident' because they use the Swan Canning Riverpark year-round. Based on our knowledge of bottlenose dolphins elsewhere, these animals are also likely to be lifelong residents of the Riverpark.

The resident dolphins in the Riverpark are considered a community because they range over similar areas (the Riverpark) and frequently interact and associate with one another. These ranging and association patterns distinguish them from other dolphins that reside in Cockburn Sound or Owen Anchorage.

Nonetheless, the resident dolphins in the Riverpark are genetically connected to adjacent communities. This may explain the presence of some of the dolphins that were subadults or adults when first encountered in the Riverpark, yet not recognised. Similarly, resident dolphins are known to interact with individual dolphins from the adjacent communities, potentially for reproduction, resulting in the birth of dolphins that have genetic material from two distinct locations. Such behaviour is beneficial for maintaining high genetic diversity, allowing dolphins to better adapt to changing environmental conditions.

The Swan Canning Riverpark resident dolphins have suffered from two outbreaks of Cetacean Morbillivirus, in 2009 and 2019. In those years, we lost six and five resident dolphins, respectively (CeMV, see FACTS section).

How to use **Fin**Book

This is the tenth edition of *FinBook*, our guide to the Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) inhabiting the Swan Canning Riverpark. *FinBook* is a catalogue of dolphin fin prints. The identification tables display the right and left sides of the dorsal fin for each dolphin observed regularly in the Riverpark. Information such as sex, age, and year of first observation, along with additional details (e.g., previous calves, injuries) is also provided.

We use the markings on the dorsal fins of dolphins to identify individual animals. These markings result from interactions with other dolphins and sometimes from shark attacks or entanglements with fishing gear. At birth, dolphins have dorsal fins that lack markings – we refer to them as 'clean fins' – until their first interactions (whether natural or due to human activities) occur.

FinBook sections

FinBook is divided into three sections according to the dolphins' age class and sex. The females' section also includes any calves that were still dependent on their mother in October 2024.

Adult females

There are nine adult females, with five of them having a dependent calf, the youngest ones being born in April 2023.

Adult males

There are four males, including the oldest being known from surveys in the Riverpark conducted in the early 2000s.

Subadults and Juveniles

There are two subadults and four juveniles, although they are not necessarily seen together.

Visitors

There have been records of a few female dolphins residing in the adjacent waters and visiting the Riverpark with the resident adult males on several occasions in the recent years.

Adult females

in order of calves age (youngest to older calf)

Name Claw

Sex Female

Age Adult

First recorded 2009

Note Claw is missing the very tip of her rostrum. Although Claw's foraging is not affected, we do not know how this injury happened.

Left side

Right side

Calf's name Smiley
(named by Dolphin Watch volunteer Phyllis Elliott)

Born late-April 2023

Note Calf of Claw.

Left side

Right side

Adult females

in order of calves age (youngest to older calf)

Name **Dunedoo**

Sex Female

Age Adult

First recorded 2009

Note Dunedoo lost her first newborn calf in September 2016 and her third calf born in February 2022.

Left side

Right side

Calf's name **Hope** (named by staff at Fremantle Ports)

Born mid-April 2023

Note Calf of Dunedoo.

Note Hope has been observed with fishing gear entanglement around the rostrum, then dorsal fin and pectorals since January 2024.

In February, Hope also had an encounter with a shark, leaving a couple of scars and a notch on the peduncle.

Left side

Right side

Adult females

in order of calves age (youngest to older calf)

Name **Akuna**

Sex Female

Age Adult

First recorded 2009

Note Mother of juvenile dolphin Nala who died in November 2019 during an outbreak of the Cetacean Morbillivirus, juvenile dolphin Super who disappeared early 2022 after being observed in poor health and with injuries, and new calf born in March 2021 who was euthanised due to severe injuries from entanglement with fishing gear.

Left side

Right side

Calf's name **Kaya** (meaning 'hello' in the Noongar language, named by Dolphin Watch volunteer Sue Harper)

Born June 2022

Note Calf of Akuna.

Left side

Right side

Adult females

in order of calves age (youngest to older calf)

Name Daniele

Sex Female

Age Adult

First recorded 2009

Note Daniele lost her first calf in January 2013. Echo was her second calf but died in May 2019 during an outbreak of the Cetacean Morbillivirus.

Left side

Right side

Calf's name Blue
(named by Hannah Cahill, a Yr 5 student from Caversham Primary School)

Born February 2022

Note Calf of Daniele.

Left side

Right side

Adult females

in order of calves age (youngest to older calf)

Name **Hugs**
Sex Female
Age Adult
First recorded 2011
Note Hugs knows the Riverpark. The dolphin first visited with its mother Cuddles in 2013. Hugs became independent from Cuddles in 2014. Hugs is generally observed in the Fremantle Ports and lower reaches of the estuary.

Left side

Right side

Calf's name **Bubbles**
(named by Fremantle Ports staff members)
Sex Male
Born July 2021
Note Calf of Hugs. One of Bubbles' tail flukes is curved due to an entanglement with a short rope that has been looped around it since its early age.

Left side

Right side

Adult females

without known dependent calves (as of October 2024)

Name **Moon**

Sex Female

Age Adult

First recorded 2001

Note Mother of juvenile dolphin Night and Djinda. Moon lost a newborn in January 2018 as well as a three-month old calf in 2019 from fishing line entanglement.

In April 2024, Moon had a large lump on her dorsal side behind the blowhole of unknown origin. This lump disappeared a few months later.

Left side

Right side

Name **Djinda** (meaning 'star' in Noongar language, named by Ronda Harman)

Sex Female

Age Adult

Note Djinda gave birth to her first calf in April 2023. Unfortunately, her calf, named Walken, deceased in June 2023 from a severe lungworm infestation that led to the development of pneumonia.

Left side

Right side

Adult females

without known dependent calves (as of October 2024)

Name **Panuni**

Sex Female

Age Adult

First recorded 2011

Note Mother of juvenile dolphin Cruze. In early 2019, Panuni lost a calf within the first month after birth. In October 2022, Panuni lost her six-month-old calf, named Dambart (meaning 'three' in Noongar language, named by Dolphin Watch volunteer, Melanie Moore).

Left side

Right side

Name **Eden**

Sex Female

Age Adult

First recorded 2009

Note Mother of four known dolphins, although none of them have survived or been seen for several years. This includes her last calf, Apple, born in February 2022.

Left side

Right side

Adult males

Name **Bottomslice**
Sex Male
Age Adult
First recorded 2001
Note Bottomslice is usually seen with Blackwall and has been visiting Cockburn Sound regularly.

Left side

Right side

Name **Blackwall**
Sex Male
Age Adult
First recorded 2001
Note Chunk missing out of peduncle (probably old shark attack wound). Blackwall is usually seen with Bottomslice and has been visiting Cockburn Sound regularly.

Left side

Right side

Adult males

Name **Extreme**

Sex Male

Age Adult

First recorded 2009

Note Extreme is often seen with Kwillena lookalike and has been a regular visitor to adjacent waters.

Left side

Right side

Name **Kwillena lookalike**

Sex Male

Age Adult

First recorded 2011

Note Kwillena lookalike was attacked by a shark in Winter 2014 leaving some scars on his body. He is often seen with Extreme and has been a regular visitor to adjacent waters.

Left side

Right side

Subadults/Juveniles

Name **Cruze**
(named by Jennifer Cogan)

Sex Female

Age Subadult

Note Born early 2015, Cruze was first seen without her mother Panuni and further up in the estuary when the latter gave birth to a newborn who unfortunately died in January 2018. Cruze is generally observed in the Fremantle Ports and lower reaches of the estuary.

Left side

Right side

Name **Click**
(named by Ruby Pyle)

Sex Unknown

Age Subadult

Note Born in March 2016 from mum Tupac. Unfortunately, Tupac and her new calf born in March 2019 died in November 2019 during an outbreak of the Cetacean Morbillivirus. Click was attacked by a shark in Summer 2021, leaving a scar on its right-side body.

Left side

Right side

Subadults/Juveniles

Name **Zephyr**
(named by Sue Friell)

Sex Male

Age Juvenile

Note Born in December 2018 from mum Eden. Zephyr is often seen with Marnz.

Left side

Right side

Name **Marnz**
(named after Marnie Giroud, a passionate advocate for wildlife and conservation and who worked hard for the *Dolphin Watch* project to be what it is today)

Sex Male

Age Juvenile

Note Born in November 2017 from mum Dunedoo. Marnz is often seen with Zephyr.

Left side

Right side

Subadults/Juveniles

Calf's name Bobby
(named after Robert (Bob) Broadway)

Sex Unknown

Age Juvenile

Note Born in April 2019 from mum Claw.

Left side

Right side

Name Nganga
(meaning 'sun' in Noongar language, named by Maddy Erines)

Sex Unknown

Age Juvenile

Born July 2020

Note Born in July 2020 from mum Moon.

Left side

Right side

Non-resident females visiting in 2023-2024

Name **Bullet**

Sex Female

Age Adult

First recorded 2011

Note Bullet is known as a resident dolphin in the adjacent waters (Owen Anchorage) and visited the Riverpark in 2024 with the Bottomslice and Blackwall.

Left side

Right side

Name **Charcoal**

Sex Female

Age Adult

First recorded 1993

Note Charcoal is known as a Cockburn Sound resident dolphin and visited the Riverpark in 2024 with the Bottomslice and Blackwall.

Left side

Right side

Non-resident females visiting in 2023-2024

Name **Kinda**

Sex Female

Age Adult

First recorded 1993

Note Kinda is known as a Cockburn Sound resident dolphin and visited the Riverpark in 2024 with the Bottomslice and Blackwall.

Left side

Right side

Name **Mottle**

Sex Female

Age Adult

First recorded 1993

Note Mottle is known as a Cockburn Sound resident dolphin and visited the Riverpark in 2024 with the Bottomslice and Blackwall.

Left side

Right side

Non-resident females visiting in 2023-2024

Name **Tippy**

Sex Female

Age Adult

First recorded 1993

Note Tippy is known as a Cockburn Sound resident dolphin and visited the Riverpark in 2024.

Left side

Right side

Dolphin behaviour

The main dolphin behaviours are defined into four primary 'states' - travelling, resting, socializing, and foraging. Within each behavioural state, dolphins may display instantaneous behaviour, also referred to as 'events', which can include vocalisations, sudden movements, or the ingestion of prey. Each of the behavioural states along with some commonly observed events are described in the following pages.

Travelling

Dolphins exhibit persistent movement in a consistent direction, indicating a directed effort to progress toward a particular direction. Dolphins can travel alone or in the company of other individuals.

While travelling, dolphins move in straight lines for periods before stopping to mill around an area if they locate a fish, allowing them to forage for a little while.

Resting

Dolphins that are engaged predominantly in a resting state and are not actively foraging/feeding, travelling, or socialising.

Resting dolphins form tightly spaced groups (i.e. less than 2m between dolphins) and move slowly, usually without a clear direction. They take multiple breaths (four to eight or more) at each surfacing, diving within a few seconds of each other.

Resting dolphins may remain submerged for several minutes and can surface pointed in a different direction. They often exhibit a behaviour known as '**snagging**', where they float motionless at the surface for a few seconds, or even minutes, with their fluke and often most of the dorsal fin beneath the water, while the front part of their body is exposed to the air. When they do this, they look a little like sausages, which is where the term comes from (at least in Australia!).

Sometimes, you may observe dolphins scanning their heads from side to side while snagging. This behaviour likely indicates they are using their echolocation to assess their surroundings. They may exhibit this behaviour while foraging.

Socialising

Like humans, dolphins are very social animals that continuously interact with one another. Dolphins display a remarkable variety of social behaviour.

A socialising group often consists of a tight group of dolphins with a lot of body-to-body contact. Dolphins may rub their bellies together or against each other, they may stroke each other with their pectoral fin, or nudge each other with their rostrum. During these interactions, their bellies often turn pink as the tissue becomes perfused with blood flowing close to the skin.

Sometimes, you may also observe **leaps, porpoising, and/or fast swimming** when dolphins are chasing each other. These behaviours can occur while dolphins are foraging, so it's a good idea to watch for a while before jumping to conclusions about what dolphins are doing. Calves can often be seen socialising with each other while their mother's forage.

However, not all social interactions are friendly. Some interactions, particularly among males, can be antagonistic. The rake marks seen on many dolphins are caused by other dolphins' teeth during these unfriendly interactions.

Foraging and feeding

Dolphins actively searching for prey such as finfish, squid and octopus are said to be foraging. Foraging is the most common activity observed in the Riverpark. When dolphins are catching, processing, and eating prey, this is referred to as feeding.

Generally, dolphins consume their prey underwater. However, since they cannot chew, they may sometimes throw larger prey around on the surface or drag it along the bottom to break it into smaller pieces. In deep water, foraging dolphins are typically spread apart (at least 10m apart) and often mill about, changing directions with every set of surfacing. You might observe them surfacing for a few breaths, diving again for a few minutes, and then surfacing again for a few breaths. This behaviour is known as '**mill forage**'.

Occasionally, when dolphins are eager to get back underwater, you may them surface for one quick breath, either by **leaping** or porpoising out of the water, or **rapidly surfacing** without fully clearing their ventral side from the surface.

Foraging behaviours in shallow water often includes:

- **fast swimming** and '**rooster tailing**', where streams of water come off the dorsal fin. This fast swim can turn into a hydroplane, with most of the dolphin's body visible above the water.
- **bottom-grubbing**, where dolphins poke around in the mud, sand, seagrass, or seaweed with their rostrum. After engaging in bottom-grubbing, it is common to see the dolphin's rostrum and head, and sometimes even the dorsal fin, covered in mud.

Other foraging behaviours include:

- **belly-up fish chase**, which involves dolphins swimming on their backs while chasing fish. Their eyesight and echolocation work best in a slightly downwards direction, making it easier to track fish this way.
- **herding fish against a structure** (e.g. a wall or breakwater).

Dolphins often travel along the edges of the rivers while searching for fish and display a combination of foraging and travelling behaviour. For example, they often travel through marinas and moorings or along the edge of Point Walter. Sometimes, they stop to engage in mill forage for a short while before continuing on their way.

Commonly observed behavioural events

Fast swim

Dolphins swimming at faster than normal cruising speeds. Dolphins may swim fast when chasing fish (foraging) or chasing each other (socialising). You may see a spray of water come off the dolphin

Leap

The entire body of a dolphin is out of the water. Leaps may occur when dolphins are foraging (i.e. a quick breath so they can get back underwater rapidly) or when they are socialising.

Rooster tail

A fast swim along the surface in which a sheet of water trails off the dorsal fin. Typically observed in the shallows when dolphins are foraging.

Dolphins chasing fish

To record dolphins chasing fish, you must observe the fish being pursued. Dolphins regularly chase fish along the edge of the rivers and other structures and often the fish can be seen jumping out of the water. When snacking, a dolphin swims belly-up near the surface chasing after small fish.

Dolphin with fish

Dolphins observed with fish (including cephalopods like squid and octopus) in their rostrum. Sometimes dolphins toss fish up in the air or repeatedly on the surface to immobilise or break their prey into smaller pieces. If you are able to confirm which species the dolphins are chasing, please note this.

Snagging

Dolphins hanging motionless at the surface with their flukes beneath the water and the front half of their body at the surface. They look like sausages when doing this, hence the term 'snagging'. Dolphins may turn their head from side to side to scan the water. Snagging most often occurs during resting bouts but may occur during pauses in other activities.

Commonly observed behavioural events

Body-to-body contact

Obvious social interaction between dolphins usually involves body-to-body contact. You will often see splashes, fast swims or leaps by dolphins interacting with each other and their bellies flushed pink with excitement. Socialising often occurs in tightly-spaced groups.

Baby position

Calves travelling just behind and to one side of their mother. When a calf surfaces in baby position (BP), its head surfaces near the mother's midsection. Travelling in BP provides a small hydrodynamic benefit for the calf and also easy access to the mammary slits located in the mother's tail region for feeding. Young calves spend a lot of time in BP. As they grow older, they gradually spend less and less time in BP and venture further away from their mother until eventually they are fully weaned. The best way to confirm BP is to see if the calf is substantially smaller than the mother and whether the calf maintains BP for several surfacings.

Male alliance

Male dolphins may form strong associations with one or two others. The pair or trio bond is called an alliance and can be seen side by side synchronously as they travel and socialise together.

This strong bond is thought to aid the males with hunting and mating success. Due to its benefits, some bonds are so strong, they last until one of the males passes away.

Among the Swan Canning Riverpark resident dolphins, the four adult males form two pairs of alliance: Bottomslice with Blackwall and Extreme with Kwillena lookalike. Among the youngest resident dolphins, it is possible that Marnz and Zephyr are developing this strong bond while still in their late juvenile stage.

All four adult males have recently been observed in adjacent waters and would occasionally herd a non-resident female within the estuary, away from other males.

Bottomslice herding Kinda, a visiting female.

Dunedoo's Calf's story

My name is Hope, and I am one of the youngest and most resilient dolphins swimming in the Swan Canning Riverpark.

Born in April 2023, I've just turned 1.5 years old (at the time my story was published). Researchers noticed something pink on my belly, but they're too cautious to say I am a male without a second observation.

I have one sibling, Marnz, who is about seven years old. He sometimes comes and plays with me and his buddy Zephyr, despite our age difference, and it's so much fun! My mother, Dunedoo, faced great heartache when she lost her first newborn calf in 2016, as well as her third calf born in 2022, both within the first three months after birth. I like to think of myself as the angel baby! Unfortunately for my mum, my journey, though still short, has not been easy since I was eight months old.

I am a true fighter. I have a skin growth above my rostrum caused by fishing lines embedded beneath my skin. I must have caught this in December 2023, and it cut my skin. Then a shark attacked me, but I survived, and now I consider myself a warrior against predators, with two small scars to prove it.

My struggles don't end here. Several months later, while still dealing with the fishing lines near my rostrum, I also got more fishing line caught behind my dorsal fin, which cut through my skin and blubber. Researchers have confirmed that I also have lines around my pectoral fins, but I can't see them myself, and I can't tell whether they're painful or how deep the cuts are. Their fear is that the lines may have cut down to the bones, which means I'm at an extremely high risk of bacteria entering my system and becoming septic. I don't want my mum to lose me…

Recently, researchers along with staff from the Department of Biodiversity, Conservation and Attractions have seen me. They've been trying to catch me to examine my injuries and remove the fishing lines. But I'm still highly active and have been socialising with other dolphins, including one born just a few days away from me (my birthday buddy, Smiley!). I think they might be frustrated because they haven't been able to help me yet.

While my story is one of struggle, it also highlights the importance of protecting our environment. Like many young dolphins, I face challenges that could be avoided with responsible fishing practices. Help us care for dolphins like me by being Dolphin Wise and RiverWise.

Facts – Cetacean Morbillivirus

What is Cetacean Morbillivirus (CeMV)?

Cetacean Morbillivirus or CeMV is a naturally occurring viral disease that affects a wide range of cetacean species (both toothed and baleen species i.e. dolphins, porpoises, and some whale species). It is the most significant natural cause of cetacean sickness/death globally, with multiple outbreaks documented worldwide – most commonly in the Mediterranean Sea and the Atlantic Ocean.

CeMV is caused by a group of virus strains that originate from a single virus species. These strains are related to viruses that occur in other species like dogs, seals, cattle, pigs, giraffes, camels, deer, goats, sheep, and humans (measles virus). CeMV is most closely related to the viruses in goats, sheep, cattle, and pigs. CeMV only affects cetaceans, not other species. Humans are not at risk.

How many Swan Canning Riverpark dolphins have died from CeMV in this unusual mortality event in 2019, and how does it compare to 2009?

As of December 2019, four Swan Canning Riverpark residents; Zari, Echo, Nala, and Tupac (and her new calf because of losing its mother); died due to CeMV, between February and May 2019, and November and December 2019.

In 2009, six Swan Canning Riverpark resident dolphins died over a five-month period. Two of the animals tested positive for CeMV. Although it is suspected that CeMV played a part in the deaths of all six, testing was inconclusive for the other four animals due to various confounding issues. It appears that this virus resurfaced in dolphins in Perth waters 10 years on from the first documented occurrence.

How does CeMV spread, i.e. how is it transmitted from one animal to the next?

Research carried out overseas and in eastern Australia indicates that the virus is present naturally at a baseline level within some of the offshore pelagic species, such as pilot whales and possibly melon-headed whales. These animals are highly social and frequently travel in large groups, meaning the virus can continue to survive in whale groups. It is likely that when such species make periodic incursions closer in-shore (e.g. foraging, stranding if sick), they may come in close contact with in-shore/resident estuarine dolphins and other cetaceans, who are very social and inquisitive.

As the virus is highly transmissible, it can then spread from animal to animal via infected particles they breathe out in their blow, with another animal then breathing them in (much like the way humans can catch respiratory viruses like colds). Although this respiratory route is the most important mode of transmission, there is also evidence the virus can spread from mother to foetus/calf. The virus cannot survive in the environment outside of a cetacean host.

What can we do to help dolphins, whales and other marine fauna?

Be Dolphin Wise, Be RiverWise.

Be Dolphin Wise

It's easy to help care for dolphins in the Riverpark by following these simple rules:

Enjoy dolphins from a distance – in Western Australia, the law states that:

- A person in the water must maintain a separation distance of at least 50m from a dolphin.
- A person driving or in charge of a vessel (including kayaks and sailboards) must not allow the vessel to get closer than 100m to a dolphin.
- Drones must maintain a 60m separation distance.

Offences for disturbing a cetacean can carry a maximum fine of $500,000.

The separation distances ensure that dolphins can live as wild animals, free from harassment and disturbance from people, ensuring they continue to enjoy our coastal waters for future generations to observe from a safe distance.

If a dolphin approaches you in the water (including on a paddle board or other floating device), you must move away from the dolphin as soon as reasonably possible to the required separation distance.

Go slow for those below – dolphins often form resting groups in the middle reaches of the Riverpark, so keep an eye out for dolphins, and slow down if you spot any.

Let dolphins feed themselves – it is illegal to feed dolphins and leaves them vulnerable to entanglement, boat strikes and disease.

Support a clean marine environment – take your rubbish home – when fishing on the rivers please fish responsibly. Dolphins, particularly calves, can become entangled in fishing line. Make sure you dispose of unwanted fishing line in a rubbish bin, use a biodegradable fishing line and help sustain fish stocks by taking only what you need.

Wildcare
HELPLINE
9474 9055

If you see dolphins in distress, call the Wildcare Helpline on **(08) 9474 9055**. The helpline provides round-the-clock assistance for anyone who finds sick or injured native wildlife.

Be River Wise

If we want to continue to see dolphins in the Riverpark we must protect its ecological health so that these food resources remain available and abundant.

The Swan and Canning rivers are an important habitat for bottlenose dolphins. The Riverpark serves as a nursery to raise their calves and as a meeting place to socialise and feed. Good quality habitat in the river system will continue to support the growth, survival and reproduction of these dolphins.

There are abundant fish resources in the Riverpark with a large number of fish species and a multitude of invertebrates, including crabs, prawns and molluscs.

If we want to continue to see dolphins in the Riverpark we must protect its ecological health so that these food resources remain available and abundant.

Nutrients such as phosphorus and nitrogen can threaten Riverpark health by promoting algal blooms, deoxygenation and fish kills. We need to halve the amount of nutrients entering the Swan Canning river system to protect water quality and ecological health.

Everyone has a role to play in reducing nutrients and protecting dolphin habitat. You can do this by:

- only applying fertiliser when it's needed in spring or early autumn – follow application rate instructions,
- don't over-apply fertilisers and never overwater growing local native plants – they need less water and fertiliser, and attract native birds, lizards, and insects
- composting your leaves and grass clippings so they don't wash into drains and add nutrients to our rivers and wetlands,
- keeping garden weeds away from drains – they may end up in rivers and wetlands and displace foreshore vegetation, and
- keeping harmful chemicals away from drains.

Check out **riverguardians.com** for more helpful tips and information.

Glossary

Calf – a dolphin still dependent on its mother, usually up to three years old, but some might become independent at a younger or older age (~ five years old).

Juvenile – a young, immature dolphin, usually about four to 10 years old.

Subadult – a dolphin that is not quite adult-size but larger than a juvenile, also not mature yet.

Adult – a mature, fully grown dolphin.

Dorsal fin – the fin on a dolphin's back (its dorsal surface), provides stability while swimming.

Leading edge (of dorsal fin) – the front edge of the fin (versus trailing edge).

Pectoral fin – fins on dolphin's side, provide directional control and can also be used for touching when socialising.

Peduncle – an anatomical term for the tail stock of a dolphin, the large muscle system that propels the dolphin through water.

Tail fluke – used for propulsion.

Blowhole – hole at the top of a dolphin's head through which the animal breathes air.

Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

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