FinBook

An identification catalogue for dolphins observed in the Swan Canning Riverpark

SEVENTH EDITION – 2018

RIVER GUARDIANS
DOLPHIN WATCH
Murdoch UNIVERSITY
AUSTRALIA ECU EDITH COWAN UNIVERSITY
GOVERNMENT OF WESTERN AUSTRALIA
Department of **Biodiversity, Conservation and Attractions**
SWAN CANNING RIVERPARK

Foreword

It is a great pleasure, as Patron of *Dolphin Watch*, to write the foreword to the seventh edition of this splendid book, which is based on the very best science and the dedicated work of so many individuals and teams. Using the book as a guide, we now know so much more about the animals that are held dear by Western Australians and visitors to our State alike. The book makes it possible to identify individual dolphins and to build up a more comprehensive picture of their behaviours and needs. Their 'secret lives' are now being revealed, an essential prerequisite to ensuring their future in our ever-changing waterways.

We have retained two sections that were added last year: 'Missing residents' and 'Visitors'. These additions are already proving valuable by helping researchers track down dolphins that are of particular interest to the scientists and infrequent visitors to the rivers.

This year is also one of anticipation as next year we will be celebrating 10 years of *Dolphin Watch*. I am sure that, at the outset, none of us could have imagined that the project would have grown to more than 1300 trained volunteers, with 977 currently registered, who produced more than 26,510 reports and provided 2328 hours of volunteer effort in 2017–18 alone. We have also progressed from just pencil and paper to our smartphone app, where users can easily upload reports with photos and videos. A record 2985 reports were submitted through the app last financial year. This figure represents a ten-fold increase since the last *FinBook* was produced in 2016. It is a great addition to the project, as is *Junior Dolphin Watch* which is now providing an exciting and educational schools-based program. To date 1209 students from 25 schools have engaged with *Junior Dolphin Watch*, with some schools including the program in ongoing study.

It is great that our success continues to inspire school students in Mandurah who have worked with Murdoch University academics to produce a fin guide and establish a dolphin watching program for the Peel-Harvey estuaries. Moreover, the students have also emulated the work of the *River Guardians* volunteers by adopting fishing line bins and educating the community of the hazards of fishing refuse to wildlife, including dolphins.

Sadly we have had direct evidence of such hazards recently. It would be remiss of me not to express my sadness, shared by you all and more generally I am sure, that this year we lost two dolphins close to our hearts, Highnitch and her calf, Splash. Both succumbed to injuries from fishing line entanglement. We can never relax our campaigns to engage the community and emphasise the importance of disposing of fishing lines responsibly.

There is no doubt that the knowledge gained by reference to our book about the Swan Canning Riverpark and the resultant culture shift are crucial to ensuring the survival and wellbeing of dolphins in the south-west of our State. The data generated will underpin good policy decision-making and sound management practices. We should all be proud of this terrific book and I congratulate all concerned in producing the latest edition, which I am sure will continue to be used extensively and to good effect.

Professor Lyn Beazley AO FTSE

Front cover: Dolphins leaping in the Swan Canning Riverpark. Above: Click's smile. *Photos: Delphine Chabanne*

Other photos by Sue Harper, Simon Allen, Matt Kleczkowski, Miranda Jackson and Delphine Chabanne.

Table of contents

How to use FinBook 5

Dolphin Watch 6

Perth dolphin research 7

Dolphins in the Riverpark 8

FinBook sections 9

FinBook catalogue 10

- Adult females 10
- Adult males 16
- Juveniles 20
- Missing residents 24
- Visitors 25

Dolphin behaviour guide 27

Echo's story 35

A sad ending for Highnitch and Splash 36

Be Dolphin Wise 37

Be RiverWise 38

Glossary 39

How to use FinBook

This is the seventh edition of *FinBook*, our guide to the Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) inhabiting the Swan Canning Riverpark.

We hope experienced Dolphin Watchers enjoy the opportunity for an update on our Riverpark dolphins and that newcomers to *Dolphin Watch* can begin their own journey of discovery with these fascinating and unique creatures.

FinBook is a catalogue of dolphin fin-prints. The identification tables show the right and left sides of the dorsal fin for each of the dolphins observed regularly in the Riverpark.

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

Each dolphin has a profile that provides:

- the dolphin's name
- images of the left and right side of the dolphin's dorsal fin
- the dolphin's age-class (adult/juvenile/calf)
- the dolphin's known or suspected sex
- for adult females, name of previous calves
- for juveniles, name of mother
- the dolphin's injuries or past events.

Dolphin Watch

Dolphin Watch is a collaborative, citizen science research and education project. The project was developed in 2009 by the Swan River Trust (now the Department of Biodiversity, Conservation and Attractions, or DBCA) together with Murdoch and Curtin universities. The aim was to help learn more about the resident Indo-Pacific bottlenose dolphin community that calls the Riverpark home.

Today, the collaboration is among DBCA, Murdoch University and Edith Cowan University. In 2018, *Dolphin Watch* expanded and is now monitoring 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 with DBCA's *River Guardians* team to train volunteers in techniques for monitoring the movement and behaviour of dolphins in the Riverpark. Volunteers play an essential role in monitoring dolphins as citizen scientists. By becoming a member of the *River Guardians* program and attending training, people become more informed about conservation issues and can participate in activities to help the waterways and coastline, and the wildlife that inhabits them.

With nearly 1000 registered Dolphin Watchers observing dolphins, researchers are gaining a greater understanding of what dolphins do in the Riverpark.

Volunteer information, photographs and video helps build a picture of the community of dolphins in the monitored areas. The *Dolphin Watch* 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).

Dolphin Watch shares information and expertise so that industry, government and the community can develop effective management activities and policy to help protect dolphins and their habitats.

Dolphin Watch continues to expand research capabilities and encourage volunteers to participate through online monitoring, smartphone apps and other initiatives.

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 lies with ecosystems that are healthy and resilient and with communities that are actively engaged in caring for their local dolphin populations and the environments they inhabit.

CEDP (**amru.org.au** and **cmer.ecu.edu.au**) addresses the health, ecology and conservation of dolphins in the Perth region. Curtin University and Murdoch University founded CEDP as a response to the deaths of six dolphins in the Swan River in 2009. More recently, Curtin CEDP researchers have moved from Curtin University to Edith Cowan University, with the collaboration continuing between these two universities. CEDP works in partnership with State and local government, industry and the community of Western Australia.

Current CEDP Research

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

Researchers work with DBCA staff to train *Dolphin Watch* volunteers and analyse volunteer data, which has revealed 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. 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 about 21 dolphins, excluding calves (September 2018). These dolphins account for nearly all the *Dolphin Watch* sightings in the Riverpark, although dolphins from nearby coastal areas are occasional visitors (see 'Visitors' section in the catalogue).

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

The resident dolphins in the Riverpark are said to comprise a community of dolphins because they range over similar areas (the Riverpark and adjacent coastal waters) 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.

FinBook sections

FinBook is divided into three sections according to the dolphins' age and sex. Females are subdivided according to the presence of a dependent calf and their general location in the Riverpark. Males are subdivided according to the level of their associations.

Adult females

Group 1: Females with dependent calves and seen in the entire Riverpark

Group 2: Females without dependent calves and seen in the entire Riverpark

Group 3: Females without dependent calves and mostly seen only in the Fremantle Inner Harbour and adjacent lower reaches of the estuary

Adult males

Group 4: Males often or always seen together – first group

Group 5: Males often or always seen together – second group

Group 6: Males with weaker associations

Juveniles

Group 7: Older juveniles

Group 8: Younger juveniles

Missing residents

Visitors

Adult females

Group 1: Females with dependent calves and seen in the entire Riverpark

Name **Akuna**
Sex Female
Age Adult
First recorded 2009
Note Mother of juvenile dolphin Nala.

Left side

Right side

Calf's name **Unnamed**
Born Early 2018
Note Calf of Akuna.

Left side

Right side

Adult females

Group 1: Females with dependent calves and seen in the entire Riverpark

Name **Daniele**
Sex Female
Age Adult
First recorded 2009
Note Daniele lost her first calf in January 2013. Echo is her current dependent calf.

Left side

Right side

Calf's name **Echo** (named by Penrhos College Year One students in 2016)
Born Mid-2015
Note Calf of Daniele, and soon to become a juvenile. Echo was badly entangled in fishing line in November 2015.

Left side

Right side

Adult females

Group 1: Females with dependent calves and seen in the entire Riverpark

Name **Tupac**
Sex Female
Age Adult
First recorded 2001
Note Tupac lost a newborn calf in January 2015 and her independent calf Gizmo in November 2015. Click is her current dependent calf.

Left side

Right side

Calf's name **Click**
(named by Ruby Pyle)
Born March 2016
Note Calf of Tupac.

Left side

Right side

Adult females

Group 1: Females with dependent calves and seen in the entire Riverpark

Name **Dunedoo**
Sex Female
Age Adult
First recorded 2009
Note Dunedoo lost her first newborn calf in September 2016.

Left side

Right side

Calf's name **Marnz** (named after Marnie Giroud, a passionate advocate for wildlife and conservation who worked hard to help make the *Dolphin Watch* project what it is today)
Born November 2017
Note Calf of Dunedoo.

Left side

Right side

Adult females

Group 2: Females without dependent calves and seen in the entire Riverpark

Name **Claw**
Sex Female
Age Adult
First recorded 2009
Note Claw is missing the very tip of her rostrum. The cause of this injury, which does not affect Claw's foraging, is unknown.

Left side

Right side

Name **Moon**
Sex Female
Age Adult
First recorded 2001
Note Mother of juvenile dolphins Night and Djinda. Moon lost a newborn calf in January 2018.

Left side

Right side

Adult females

Group 3: Females without dependent calves and mostly seen only in the Fremantle Inner Harbour and adjacent lower reaches of the estuary

Name **Eden**
Sex Female
Age Adult
First recorded 2009
Note Mother of juvenile dolphins Garden and Heaven. Eden lost her most recent calf born in March 2016.

Left side

Right side

Name **Panuni**
Sex Female
Age Adult
First recorded 2011
Note Mother of juvenile dolphin Cruze.

Left side

Right side

Adult males

Group 4: Males often or always seen together – first group

Name **Bottomslice**
Sex Male
Age Adult
First recorded 2001

Left side

Right side

Name **Hii**
Sex Male
Age Adult
First recorded 2001

Left side

Right side

Adult males

Group 5: Males often or always seen together – second group

Name **Extreme**
Sex Male
Age Adult
First recorded 2009

Left side

Right side

Name **Print**
Sex Male
Age Adult
First recorded 2009

Left side

Right side

Adult males

Group 6: Males with weaker associations

Name **Pebbles**
Sex Male
Age Adult
First recorded 2009
Note Pebbles can sometimes be seen hanging out with Bottomslice and Hii.

Left side

Right side

Name **Kwillena lookalike**
Sex Male
Age Adult
First recorded 2011
Note Kwillena lookalike was first seen with shark bite marks in the winter of 2014. He can sometimes be seen hanging out with Extreme and Print.

Left side

Right side

Adult males

Group 6: Males with weaker associations

Name **Blackwall**
Sex Male
Age Adult
First recorded 2001
Note Hunk missing out of his peduncle (probably an old shark attack wound).

Left side

Right side

Juveniles

Group 7: Older juveniles

Name **Zari**
Sex Male
Age Juvenile
First recorded 2011
Note Tworakes' previous calf. Tworakes has not been seen since late 2013 after being bitten by a shark.

Left side

Right side

Name **Night**
Sex Male
Age Juvenile
First recorded 2011
Note Moon's previous calf.

Left side

Right side

Juveniles

Group 7: Older juveniles

Name **Garden**
Sex Male
Age Juvenile
First recorded 2011
Note Eden's previous calf.

Left side

Right side

Juveniles

Group 8: Younger juveniles

Name Nala (named in memory of long-time *Dolphin Watch* team member Rachel Hutton's dog)

Sex Unknown

Age Juvenile

Note Born in mid-2014, Nala was described as independent from her mum Akuna by mid-2017.

Left side

Right side

Name Djinda (named by Rhonda Harman, who won a competition to name a dolphin in May 2017. Djinda is the Noongar word for star; her mother's name is Moon)

Sex Female

Age Juvenile

Note Born in May or June 2014, Djinda was described as independent from her mum Moon when Moon gave birth to a newborn who unfortunately died in January 2018.

Left side

Right side

Juveniles

Group 8: Younger juveniles

Name **Cruze** (named by Jennifer Cogan, a *Dolphin Watch* volunteer who won a naming competition in April 2016)

Sex Unknown

Age Juvenile

Note Born in early 2015, Cruze was first seen without mother Panuni and further up in the estuary in June 2018.

Left side

Right side

Missing residents

Name **Arrow**

Sex Male

Age Adult

First recorded 2009

Note Researchers last saw Arrow in March 2017. He is one of the older Riverpark resident males and used to spend a lot of time with Bottomslice and Hii.

Left side

Right side

Name **Soul**

Sex Unknown

Age Juvenile

Note Born in winter 2011, Soul is Pirulli's previous calf. Pirulli and her last dependent calf died in May 2016. Soul was last seen by researchers in August 2017.

Left side

Right side

Visitors

Name **Cuddles**
Sex Female
Age Adult
First recorded 2011
Note Cuddles is known as a resident dolphin in the adjacent waters (south of Fremantle) but visited the Riverpark on several occasions.

Left side

Right side

Calf's name **Snuggie**
Born Mid-2014
Age Adult
Note Calf of Cuddles. Snuggie is still following its mum everywhere she goes.

Left side

Right side

Visitors

Name **Hugs**

Sex Unknown

Age Juvenile

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 but they are still often seen together.

Left side

Right side

Dolphin behaviour guide

Dolphin behaviour 'states' can be defined as foraging, resting, socialising or travelling. Within a behavioural state, dolphins might display some instantaneous behaviour, also called 'events', such as vocalisations, sudden movements or ingestion of prey. Each of the behavioural states and some commonly observed events are described below.

Travelling

Dolphins show persistent movement in a consistent direction. This implies a directed effort to make progress in a particular direction. Dolphins may also ride a boat's bow or stern wake to go almost twice as fast using the same energy cost. Dolphins can travel alone or in the company of other individuals.

Dolphins often travel straight for periods and then, if they locate a fish, stop and mill around an area to forage for a little while.

Foraging and feeding

Dolphins that are actively searching for prey like finfish, squid and octopus are said to be foraging. Foraging is the most common activity for dolphins in the Riverpark. When dolphins are catching, processing and eating prey, they are said to be feeding.

Generally, dolphins consume prey underwater. However, as dolphins cannot chew, they sometimes throw larger prey around the surface or drag it along the bottom to break it up into smaller pieces. In deep water, foraging dolphins are usually spread apart from each other (at least 10m apart), often milling and changing directions with every surfacing. You may see them surface for a few breaths, dive again for a few minutes, then surface again for a few breaths. We refer to this behaviour as '**mill forage**'.

Sometimes, when dolphins are in a hurry to get back underwater, you will see them surface for one quick breath, either by **leaping** or **porpoising** out of the water, or **rapidly surfacing** without their ventral side clearing 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 where most of the dolphin's body is 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, you can usually 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 around on their backs while chasing fish. Their eyesight and echolocation work best in a slightly downwards direction, so it can be easier to keep track of fish that way.
- **herding fish against a structure** (eg a wall or breakwater).

Dolphins often travel along the edges of the rivers while searching for fish and display a forage/travel combination of behaviours. For example, they often travel through marinas and moorings or along the edge of Point Walter. Sometimes, they stop and engage in mill foraging for a little while, before moving on.

Resting

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

In contrast to foraging dolphins, resting dolphins form groups that are tightly-spaced (i.e. less than 2m between dolphins), moving slowly, usually without a clear direction, and taking multiple breaths (four to eight or more) at each surfacing, then diving within a few seconds of each other.

Resting dolphins may be submerged for several minutes and may surface pointed in another direction.

Resting dolphins often '**snag**' at the surface for a few seconds, or even minutes. '**Snagging**' can be identified by a dolphin floating at the surface motionless with their fluke and often the majority of the dorsal fin beneath the water while the front part of their body is exposed to the air. They look a little like sausages when they do this, hence the term.

Sometimes you will see dolphins move their head from side to side while snagging. This most likely means they are using their echolocation to scan the area. They may do this while foraging too.

Socialising

Like humans, dolphins are very social animals that continuously interact with each other. Dolphins display a remarkable variety of social behaviours.

A socialising group is often a tight group of dolphins with a lot of body-to-body contact between individuals. Dolphins may rub their bellies together or against each other, they may stroke each other with their pectoral fins or nudge each other with their rostrums. Their bellies often turn pink when they are socialising because the tissue becomes perfused (blood flowing close to the skin) with blood.

Sometimes, you may see leaps, porpoising, and/or fast swims when dolphins are chasing each other. These behaviours can also 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. You can also see calves socialising with each other while their mothers are foraging.

Not all social interactions between individuals are friendly. Some interactions, particularly among males, are antagonistic. The rake marks you see on many dolphins are caused by other dolphins' teeth as a result of unfriendly interactions.

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.

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 water's 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.

Echo's story

My name is Echo.

In 2016, when I turned one year old, I was named by the Year One students from Penrhos College. They won a naming competition that was organised between all the *Junior Dolphin Watch* schools. Pretty cool, hey?!

Researchers say that while I look great and healthy today, my first year in the Riverpark was pretty tough.

A *Dolphin Watch* volunteer, Sarah Guiton, took photos of my mum Daniele and I in July 2015. I was still tiny with very clear vertical foetal lines. Researchers identified me straight away and hoped that I would survive the cold water over winter as my blubber was a bit thin when I was born. But my mum looked after me very well. I guess she did not want to have the same experience she had two years earlier, when she lost her calf soon after birth in January 2013.

When the researchers met me for the first time in November 2015, I was badly entangled in fishing line. They came back on their boat a week later to find me, but I was already freed. How? This is my little secret and I won't share it with anyone, not even the research crew.

Of course, the fishing line left some marks. I now have a dorsal fin that is similar to my mum's with a cut at the front and a few more nicks at the back. What it means is that I can't hide anymore. You'll know who I am.

Mum and I often hung out with Highnitch (my grandma) and her calf, also my auntie, who was younger than me. Strange, isn't it? Unfortunately, they both passed away in August 2018 with fishing lines entangled around their dorsal fin and flukes.

Below: Echo entangled in fishing line in 2015

A sad end for Highnitch and Splash

August was a sad month for the Perth resident dolphin community as we lost one of our favourite females, Highnitch, and her calf Splash. Both fell victim to fishing line entanglement.

After struggling to cope with the entanglement around her dorsal fin for more than two months, Highnitch was found washed up dead on the Swan River foreshore on 21 August 2018.

The entanglement was more severe than expected, with fishing line also wrapped around her tail. A plastic bag was tangled in the fishing line. Highnitch's skin was also showing signs of an infection that may have hindered the healing of her wounds.

DBCA wildlife officers continued to monitor the activities of her calf, Splash. Unfortunately, Splash was found dead less than one week later. While researchers knew Splash would struggle to survive without the protection and nourishment provided by her mum, she was also severely entangled with fishing line wrapped around her tail.

The bodies of both dolphins were taken straight to Murdoch University for autopsy and associated testing.

This incident highlights the hazards for our wildlife from fishing line and people are reminded to dispose of fishing line and tackle appropriately. Dozens of fishing line bins are located across popular jetties, fishing platforms, traffic bridges and foreshores so people can dispose of lines. More information is available at **riverguardians.com/projects/reel-it-in**.

Be Dolphin Wise

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

Enjoy dolphins from a distance – never approach a wild dolphin and ensure you stay at least 30m away if you're in the water or 100m if you're in a boat.

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.

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.

Be RiverWise

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 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 the rivers
- keeping garden weeds away from drains – they may end up in rivers and displace foreshore vegetation
- 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.

Sub-adult – 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**

SWAN CANNING RIVERPARK

RIVER GUARDIANS

DOLPHIN WATCH

DOLPHIN WATCH Junior

Murdoch UNIVERSITY

AUSTRALIA ECU EDITH COWAN UNIVERSITY

AMRU AQUATIC MEGAFAUNA RESEARCH UNIT

Supported by

FREMANTLE PORTS

Contact us

River Guardians
Phone: 9278 1932
Web: riverguardians.com
Email: community@dbca.wa.gov.au
Facebook: facebook.com/riverguardians1

Aquatic Megafauna Research Unit
Web: amru.org.au

20180275 1018 500

Information current as at October 2018.
This publication is available in alternative formats on request.