FinBook

An identification catalogue for dolphins observed in the Swan Canning Riverpark

3rd Edition - June 2013
In memory of Zari Ryan - now free to play forever.

Zari, 12, lost her battle with leukaemia in 2009 before she could fulfil her Make a Wish request to swim with dolphins. Zari’s love of dolphins was recognised when her name was given to a dolphin calf in the Swan Canning Riverpark in 2012.
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Foreword

As Chief Scientist of Western Australia it has been my pleasure and privilege to follow the splendid Dolphin Watch project. The dolphins in our beautiful estuaries are part of the State’s environmental, social and cultural heritage.

And how Dolphin Watch has grown! We are in our fourth successful year with some 600 volunteer watchers and amazingly more than 7000 reports already logged. FinBook is proving invaluable as, when possible, volunteers identify dolphins in their reports.

The data generated will help us protect our dolphin population into the future. The information even helped Department of Environment and Conservation and WA Water Police staff to rescue Gizmo the entangled dolphin calf last year, watched by his devoted mother Tupac.

I commend everyone involved with Dolphin Watch, a trailblazing program. All the Dolphin Watch team should feel proud of your significant contribution to protecting our precious environment.

I look forward to seeing the program go from strength to strength.

Professor Lyn Beazley AO FTSE

Chief Scientist of Western Australia
Welcome to FinBook

This is the third edition of FinBook, our catalogue of the bottlenose dolphins (*Tursiops aduncus*) present in the Swan Canning Riverpark. This edition includes 28 dolphins sighted in the Riverpark during the past year.

New to FinBook this year is a Dolphin Behaviour Guide.

All the dolphins in FinBook are distinct individuals with their own unique personalities. One of the most distinctive is Gizmo, a calf who was freed from a fishing line entanglement by the WA Water Police in June 2012.

The community of dolphins we have in the Riverpark is very small. Gizmo’s rescue reminds us of the impact we have on their lives, both good and bad. We hope Gizmo’s story encourages us all to keep the rivers healthy and safe.

Dr Hugh Finn
Murdoch University

Dr Chandra Salgado
Curtin University

Delphine Chabanne
Murdoch University

Marnie Giroud
Swan River Trust
How to use FinBook

Dolphins can be identified by the markings and ‘nicks’ on their dorsal fins. Many of these markings are permanent, which means individual dolphins can be monitored over time. Some dolphins are hard to identify because their fins lack markings - they are known as ‘clean fins’.

FinBook is a catalogue of dolphin ‘fin-prints’. The identification tables in FinBook show the right and left sides of each dolphin’s dorsal fin. Some dolphins also have other distinctive features such as shark bite scars.

This is Arrow. Note the nicks along the dorsal fin (indicated by the arrow). The white marks on the fin and body are caused by the teeth of other dolphins. While the ‘rake marks’ will fade over time, the nicks on the fin will remain.
Each dolphin has a profile which shows images of the left and right side of the **dorsal fin** and provides information such as **age-class** (calf, juvenile, adult) and **sex** (where this is known).

Nine of the dolphins in FinBook 2013 were first identified during previous research studies in Perth metropolitan waters between 1993 to 2003. The biographical information for each dolphin includes **the year in which he or she was first observed**.

Some profiles provide information on **notable marks**, which are unique scars or other markings.

**Backpack** is a male from Cockburn Sound. He was first sighted in 1993. His **male alliance** partner is Fingers. They are occasionally sighted in the Riverpark.

Backpack in 1995 (above) and in 2009 (right)
FinBook sections

FinBook is divided into three sections based on how frequently dolphins associate with each other. Like humans, dolphins have particular individuals (or associates) they tend to interact with.

Mothers and their dependent calves are almost always seen together, so if you see one of the mothers, her calf will not be too far away. However, some calves are very independent, and two or more calves may play and interact with each other while their mothers are searching for fish.

**Strong associates: dolphins regularly seen with each other**

- Group 1: four adult suspected males; sometimes accompanied by Tworakes and Zari (a mother-calf pair)
- Group 2: three adult suspected males
- Group 3: two adult females (without dependent calves)
- Group 4: two adult males; seen infrequently in the Riverpark

**Moderate associates: dolphins occasionally seen with other dolphins**

- Group 5: mother-calf pairs. Includes five adult females and their dependent calves. These mother-calf pairs may occur alone or with other mother-calf pairs. The unsexed individuals in Group 6 also associate with them.
- Group 6: unsexed dolphins

**Solitary individual: a dolphin that is generally seen alone**

- Group 7
### Strong associates

**Group 1 - Four adult suspected males sometimes accompanied by Tworakes and Zari (a mother-calf pair)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex</th>
<th>Age</th>
<th>First recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hii</td>
<td>Suspected male</td>
<td>Adult</td>
<td>2001</td>
</tr>
</tbody>
</table>

**Left side**

- **Name**: Hii
- **Sex**: Suspected male
- **Age**: Adult
- **First recorded**: 2001

**Right side**

- **Name**: Arrow
- **Sex**: Suspected male
- **Age**: Adult
- **First recorded**: 2009
### Strong associates

<table>
<thead>
<tr>
<th>Name</th>
<th>Left side</th>
<th>Right side</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>Bottomslice</td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>Suspected male</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Adult</td>
<td></td>
</tr>
<tr>
<td><strong>First recorded</strong></td>
<td>2001</td>
<td></td>
</tr>
</tbody>
</table>

Blackwall has a hunk missing out of his peduncle, probably an old shark attack wound.
**Strong associates**

<table>
<thead>
<tr>
<th>Left side</th>
<th>Right side</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>Tworakes</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>Female</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Adult</td>
</tr>
<tr>
<td><strong>First recorded</strong></td>
<td>2001</td>
</tr>
<tr>
<td><strong>Mother of</strong></td>
<td>Zari</td>
</tr>
</tbody>
</table>

**Name**  
Zari  
**Sex**  
Unknown  
**Age**  
Calf - four to five years old  
**Calf of**  
Tworakes  

Zari is old enough to live independently and may be seen alone.
Strong associates

Group 2 - Three adult suspected males

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex</th>
<th>Suspected</th>
<th>Age</th>
<th>First recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extreme</td>
<td>male</td>
<td>Adult</td>
<td>2009</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Sex</th>
<th>Suspected</th>
<th>Age</th>
<th>First recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print</td>
<td>male</td>
<td>Adult</td>
<td>2009</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Pebbles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Suspected male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Adult</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First recorded</td>
<td>2009</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Left side**

**Right side**
Group 3 - Two adult females without dependent calves

<table>
<thead>
<tr>
<th>Name</th>
<th>Highnitch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female</td>
</tr>
<tr>
<td>Age</td>
<td>Adult</td>
</tr>
<tr>
<td>First recorded</td>
<td>2001</td>
</tr>
</tbody>
</table>

Highnitch lost her calf Highhope in January 2013. The cause of death could not be determined.

<table>
<thead>
<tr>
<th>Name</th>
<th>Daniele</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female</td>
</tr>
<tr>
<td>Age</td>
<td>Adult</td>
</tr>
<tr>
<td>First recorded</td>
<td>2009</td>
</tr>
</tbody>
</table>

Daniele lost her first calf in January 2013 after only a few days. Calf mortality is high for inexperienced mothers.
### Strong associates

**Group 4 - Two adult males. Backpack and Fingers are Cockburn Sound residents but are sometimes seen in the Riverpark.**

<table>
<thead>
<tr>
<th>Left side</th>
<th>Right side</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>Backpack</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>Male</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Adult</td>
</tr>
<tr>
<td><strong>First recorded</strong></td>
<td>1993</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Left side</th>
<th>Right side</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td>Fingers</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>Male</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Adult</td>
</tr>
<tr>
<td><strong>First recorded</strong></td>
<td>1993</td>
</tr>
</tbody>
</table>

Fingers has been entangled since February 2013. The fishing line is on his fluke (tailfin). Fingers has recently begun begging for fish.
Moderate associates

Group 5 - Mother and calf pairs

<table>
<thead>
<tr>
<th>Name</th>
<th>Tupac</th>
<th>Sex</th>
<th>Female</th>
<th>Age</th>
<th>Adult</th>
<th>First recorded</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother of</td>
<td>Gizmo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tupac suffered from an entanglement to his dorsal fin in April 2012. He was freed two months later but the fishing line severely damaged his fin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Gizmo</th>
<th>Sex</th>
<th>Male</th>
<th>Age</th>
<th>Calf - four years old</th>
<th>Calf of</th>
<th>Tupac</th>
</tr>
</thead>
</table>

Gizmo suffered from an entanglement to his dorsal fin in April 2012. He was freed two months later but the fishing line severely damaged his fin.
### Moderate associates

#### Identification

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<th>Right side</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td><strong>Name</strong></td>
</tr>
<tr>
<td>Moon</td>
<td>Night</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td><strong>Sex</strong></td>
</tr>
<tr>
<td>Female</td>
<td>Unknown</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>Adult</td>
<td>Calf - four years old</td>
</tr>
<tr>
<td><strong>First recorded</strong></td>
<td><strong>Calf of</strong></td>
</tr>
<tr>
<td>2001</td>
<td>Moon</td>
</tr>
<tr>
<td><strong>Mother of</strong></td>
<td><strong>Night</strong></td>
</tr>
<tr>
<td>Night</td>
<td></td>
</tr>
</tbody>
</table>

Calf of Moon
Moderate associates

**Left side**

**Name**
Pirulli

**Sex**
Female

**Age**
Adult

**First recorded**
2009

**Mother of**
Soul

**Right side**

**Name**
Soul

**Sex**
Unknown

**Age**
Calf – two years old

**Calf of**
Pirulli
<table>
<thead>
<tr>
<th>Name</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female</td>
</tr>
<tr>
<td>Age</td>
<td>Adult</td>
</tr>
<tr>
<td>First recorded</td>
<td>2011</td>
</tr>
<tr>
<td>Mother of</td>
<td>Product</td>
</tr>
</tbody>
</table>

**Left side**

**Name**

**Product**

**Sex**

**Male**

**Age**

**Calf – two years old**

**Calf of**

**Resource**
Moderate associates

Left side

Name: Eden
Sex: Female
Age: Adult
First recorded: 2009
Mother of: Garden

Right side

Name: Garden
Sex: Male
Age: Juvenile
Calf of: Eden

Garden is now independent and Eden has a new unnamed calf.
## Group 6 - Unsexed dolphins

<table>
<thead>
<tr>
<th>Name</th>
<th>Claw</th>
<th>Sex</th>
<th>Unknown</th>
<th>Age</th>
<th>Adult</th>
<th>First recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claw</td>
<td></td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
<td>2009</td>
</tr>
<tr>
<td>Akuna</td>
<td></td>
<td>Unknown</td>
<td></td>
<td></td>
<td></td>
<td>2009</td>
</tr>
</tbody>
</table>
Moderate associates

Left side

Name
Dunedoo
Sex
Unknown
Age
Adult
First recorded
2009

Right side

Name
Panuni
Sex
Unknown
Age
Adult
First recorded
2011
In September 2012, Neck suffered from a shark attack that left him with marks and half his dorsal fin was lost.
Foraging and feeding

Dolphins that are actively searching for prey (e.g. finfish, squid, 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 their prey up into smaller pieces. If you see dolphins chasing or eating fish, be sure to record this information. Information about what fish species dolphins are eating is very helpful.

Foraging behaviours

Foraging dolphins are usually spread at least 10 metres apart (and may be much farther apart). Occasionally, however, dolphins may be closer together. In deeper water, foraging dolphins often mill around in an area for several minutes. So, you might see them surface for a few breaths, then dive again for a few minutes, then surface again for a few breaths, etc. We refer to this 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 out of the water or by humping their body at the surface. We refer to this as a ‘rapid surface’. Dolphins often travel along the edges of the rivers while searching for fish (sort of a forage/travel combination). For example, they often travel through marinas and moorings or along the edge of Point Walter. Sometimes, they stop and engage in ‘mill forage’ for a little while, before moving on.
Foraging behaviours in shallow water are a little different. Indications of foraging in shallow water include:

- **fast swimming** (sometimes with streams of water coming off the dorsal fins, which is called ‘rooster-tailing’); and
- **bottom-grubbing** (i.e. dolphins poking around in the mud, sand, seagrass, or seaweed with their beaks).

Other foraging behaviours include:

- **belly-up fish chase** (i.e. 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); and
- **herding fish against a structure** (e.g. a wall or breakwater).
Resting

Dolphins that are engaged predominantly in a resting state (i.e. are not actively foraging/feeding, travelling or socialising) are said to be ‘resting’.

Resting is not often observed in the estuary. This may be because of the shallow waters in the two rivers (dolphins seem to prefer waters more than 8 metres deep to rest in) and dolphins being frequently disturbed by vessel traffic and other human activities. Resting groups are commonly observed in the deeper parts of Owen Anchorage (southwest of Fremantle) and Cockburn Sound.

In contrast to foraging dolphins, resting dolphins are often clumped closely together. The classic resting pattern involves groups (usually four or more) that are tightly-spaced (i.e. less than 2 metres between dolphins), moving slowly (usually in a meandering pattern but sometimes in straight line), and taking multiple breaths (4-8 or more) at each surfacing, then diving within a few seconds of each other.

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

Resting dolphins often ‘snag’ at the surface for a few seconds. ‘Snagging’ is when dolphins hang motionless at the surface with their tail beneath the water and the front part of their body exposed to the air. They look a little like sausages when they do this, hence the term.

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

Like humans, dolphins are very social animals. Dolphins that are engaged in social interaction with other dolphins are said to be ‘socialising’.

The most obvious sign of socialising dolphins is body-to-body contact between dolphins. The bellies of dolphins often turn pink when they are socialising – this is because the tissue becomes perfused with blood.

Sometimes, you may see leaps and/or fast swims while dolphins are socialising. 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.

Sometimes, dolphins (e.g. calves) in a group might be socialising while other dolphins (e.g. their mothers) are foraging.

Dolphins are very creative in terms of how they interact physically. So, for example, dolphins may:

• rub their bellies together;
• rub their belly against the side of another dolphin;
• stroke each other with their tail flukes or pectoral fins;
• ‘goose’ (nudge another dolphin’s underside with its beak); and
• swim with pectoral fins over-lapping.

Not all social interactions are friendly. Some interactions, particularly among males, are antagonistic. The ‘rake marks’ you see on many dolphins are often the result of unfriendly interactions. The rake marks come from dolphins raking their teeth across the skin of other dolphins.
Guide to dolphin behaviour

Behaviours

Swimming fast
Dolphins swimming at faster than normal cruising speeds. Dolphins may swim fast when foraging (e.g. while chasing fish) or socialising (e.g. while chasing each other). In shallow water, you may see a spray of water come off the dolphins.

Milling and diving in one place
Dolphins surfacing independently of each other in one general area. This behaviour pattern implies that dolphins are searching for fish. When dolphins are resting or socialising, they tend to dive and surface at (or nearly) the same time. Milling means dolphins are hanging around an area for several minutes during which they may dive and surface several times and often change direction. They are usually (but not always) spread at least 10 metres from other dolphins.

Chasing fish
Dolphins chasing fish. To record the behaviour for a Dolphin Watch sighting, you must observe the fish being pursued. Please note the fish species if you are able to confirm which species the dolphins are chasing.
Dolphin with fish in mouth
Dolphins with fish (including squid and octopus) in their beak. Sometimes dolphins throw the fish around the surface as well. Please note the fish species if you are able to confirm which species the dolphins are chasing.

Snagging
Dolphins hanging motionless at the surface with their tails beneath the water and the front half of their body at the surface. They look a little like sausages when they are 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.

Travelling straight, consistently in one direction
Dolphins that move in one direction. This occurs most often when dolphins are travelling and implies a directed effort to make progress in a particular direction. 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.
Body contact between dolphins
Direct body-to-body contact between dolphins. This generally occurs when dolphins are socialising.

Social interaction (body contact, splashes etc)
Obvious social interaction between dolphins and usually involves body-to-body contact. You will often see splashes, bellies flushed pink (with excitement), fast swims or leaps (by dolphins interacting with each other). Socialising often occurs in tightly-spaced groups of three or more dolphins, but may occur between two dolphins (e.g. between a mother and calf).

Leaping out of the water
The entire body of a dolphin is out of the water. May occur when dolphins are foraging (i.e. a quick breath so they can get back underwater quickly) or when they are socialising.
Milling and diving alone more than 20 metres from other dolphins
Dolphins that are widely-spaced from each other and are diving and surfacing in an area. This behaviour pattern occurs exclusively during foraging/feeding – it implies that dolphins are searching for fish that are present in the area. Dolphins are spread out to minimise competition for fish (i.e. to get out of each other’s way).

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 mid-section. Travelling in BP allows calves access to the mammary slits (located in the tail region) and also provides a small hydrodynamic benefit. Young calves spend a lot of time in BP; as they grow older, they spend less and less time there. If calves are stressed, they usually return to BP (if they were away from their mother). Infants (i.e. newborns) swim by the side of the mother’s head. Be sure to confirm that the dolphin in BP is actually a calf and not just a dolphin travelling close by. The best way to confirm BP is to see if the calf is smaller than the mother and if the calf maintains BP for several breaths.
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 ([http://mucru.org/](http://mucru.org/)) 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 within the Swan River in 2009. CEDP works in partnership with state and local government, industry and the community of Western Australia.

Current CEDP Research

Since 2011, CEDP researchers have been assessing 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. The resident dolphin population in the Riverpark is very small, so it is vital that we understand its status and connections to other populations. Other CEDP research is investigating the effect of man-made noise on dolphins.

CEDP researchers work with the Swan River Trust and Dolphin Watch volunteers to analyse the Dolphin Watch sighting information. These analyses have already revealed valuable insights into the Riverpark dolphins.

The overall 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; and
- 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 Canning and Swan rivers?

A resident community

The Riverpark is home to a resident community of about 20 dolphins. These dolphins account for nearly all of the sightings of dolphins in the Riverpark, although dolphins from nearby coastal areas are occasional visitors.

The dolphins are classified as ‘resident’ because they use the estuary year-round. Based on our knowledge of bottlenose dolphins elsewhere, these are also likely to be life-long residents of the estuary. Seven of the residents were first identified in 2001, when the first research on the Riverpark dolphins was undertaken. Two of the occasional visitors – the males Fingers and Backpack – were first sighted in Cockburn Sound in 1993.

The dolphins resident 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 may be resident in Cockburn Sound or Owen Anchorage.
A life between the ocean and the estuary

The dolphins in the resident community spend part of their lives in the coastal areas outside the Riverpark, sometimes venturing as far as Cockburn Sound to the south and Gage Roads to the north. They move between the Riverpark and the coastal waters on a daily or near-daily basis. Thus, their lives are like a see-saw between the ocean and the estuary.

Though dolphins are most frequently sighted in the lower and middle reaches of the Canning and Swan rivers, they sometimes travel into the upper reaches of both rivers. Where the dolphins go and when they go will reflect patterns in the abundance and distribution of their prey.

Important prey for dolphins in the Riverpark include mullet, herring, whiting and cephalopods (e.g. squid, cuttlefish and octopus). They are also likely to feed at least occasionally on black bream and other fish species. Dolphins can’t chew, so if they catch prey that is too big to swallow whole, they must break it into smaller pieces. They do this by throwing the prey around at the surface or by rubbing it along the sediment at the bottom.

Foraging (searching for fish) is the main activity of dolphins in the Riverpark. Most dolphins need to consume upwards of 10 kg of fish a day – that’s a lot of fish, so it’s easy to see why dolphins are always on the look-out for a feed.

Dolphins will forage anywhere in the two rivers and in any kind of habitat. So you may see them chasing mullet in the shallows along the shore, preying on herring in the deeper water, or trying to corral octopus amongst the pens in a marina.
Dolphin Watch

The Swan River Trust, Murdoch and Curtin universities created a social science research and education project called *Dolphin Watch* which involves the community as citizen scientists in researching bottlenose dolphins in the Swan Canning Riverpark.

Researchers from Curtin and Murdoch work with the Trust’s *River Guardians* program to train Dolphin Watch volunteers in techniques for monitoring the movement and behaviour of dolphins in the Riverpark.

Community involvement is a great boost to the research and allows large amounts of information to be gathered on how dolphins use the Riverpark that could not be gathered through conventional scientific research programs.

The public plays an essential role in monitoring this iconic species as citizen scientists. By becoming a member of the *River Guardians* program the public becomes more informed on river conservation issues and can participate in activities to help the rivers and the animals living within them. With 600 trained Dolphin Watchers observing dolphins, the information is helping to provide more observations to be analysed by research scientists.

Since Dolphin Watch began, volunteers have contributed photographs and observations of the locations and behaviours of dolphins in the Riverpark. Originally this was confined to the upper reaches of the Swan and Canning rivers, however the entire Riverpark is now being monitored. Volunteer information and photographs help build a picture of the community of dolphins in the system.

The Dolphin Watch project will continue to develop and change over time to expand research capabilities and to encourage volunteers to participate through training sessions, online monitoring and other initiatives.
Caring for dolphins in the Riverpark

It’s easy to help care for dolphins in the Swan Canning Riverpark by following these simple rules.

Enjoy dolphins from a distance – never approach a wild dolphin and make sure you keep at least 30 metres away if you are in the water or 100 metres if you are in a boat.

Slow down for dolphins - dolphins often form resting groups in the middle reaches of the estuary, so keep an eye out for dolphins, and slow down if you spot any.

Never feed dolphins – it is illegal and leaves them vulnerable to entanglement, boat strikes and disease.

And finally, take rubbish home with you or dispose of it in a rubbish bin. When fishing on the rivers please fish responsibly. Dolphins, particularly calves, can get tangled in fishing line. Make sure you dispose of unwanted fishing line, use a biodegradable line and take only what you need to maintain fish stocks.

If you see dolphins in distress, please call the Department of Environment and Conservation’s (DEC) WILDCARE Helpline on (08) 9474 9055. WILDCARE Helpline provides 24-hour state-wide referral to a dedicated group of volunteer wildlife carers and professionals for anyone who finds sick, injured or orphaned native wildlife.
Reducing nutrients to care for dolphins in the Riverpark

The Swan and Canning rivers are an important habitat for bottlenose dolphins. They bring their calves to the Riverpark and come 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 river system with more than 130 fish species and a multitude of invertebrates, including crabs, prawns and molluscs.

Keeping our dolphins in the river system means looking after the ecological health of the system so that these food resources in their river habitat remain available and abundant.

Nutrients and organic loading threaten ecological health and habitat value by promoting algal blooms, deoxygenation and fish kills.

We know from the Swan Canning Water Quality Improvement Plan that we need to halve the amount of nutrients in the system in order to protect water quality and ecological health.

Everyone living in the catchment 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 over water.
- 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 overtake foreshore vegetation.

Check out www.riverguardians.com for more helpful tips and information.
Glossary

Calf – a dolphin still dependent upon its mother, usually ≤ 5 years old

Dorsal fin – the fin on a dolphin’s back (its ‘dorsal’ surface)

Juvenile – a young dolphin, usually about 4–10 years old

Leading edge (of dorsal fin) – the front edge of the fin (vs. ‘trailing edge’)

Peduncle – an anatomical term for the tail stock of a dolphin

Sub-adult – a dolphin that is not quite adult-size but larger than a juvenile
Photograph (this page) of Gizmo and Tupac, front cover photograph of Fingers, page 2 photograph of Zari and Tworakes and page 38 photograph courtesy of Delphine Chabanne. Photograph of Soul on page 33 courtesy of Simon Allen. Thanks to Delphine, Simon, Kate Sprogis and Holly Raudino for dolphin identification and behaviour photographs.
Project partners

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