

# Research in the Adelaide Dolphin Sanctuary

National Parks and Wildlife Service (NPWS) has a scientific monitoring program for dolphins in the Adelaide Dolphin Sanctuary (ADS), which ultimately provides us with a better understanding of dolphin ecology and behaviour.

Rangers undertake regular boat-based scientific surveys of the ADS dolphin population, collecting demographic, behavioural and photo identification data. The data collected is then filtered and sorted by citizen scientists and volunteers from the ADS Action Group. So far, more than 200 animals have been identified by citizen scientists.

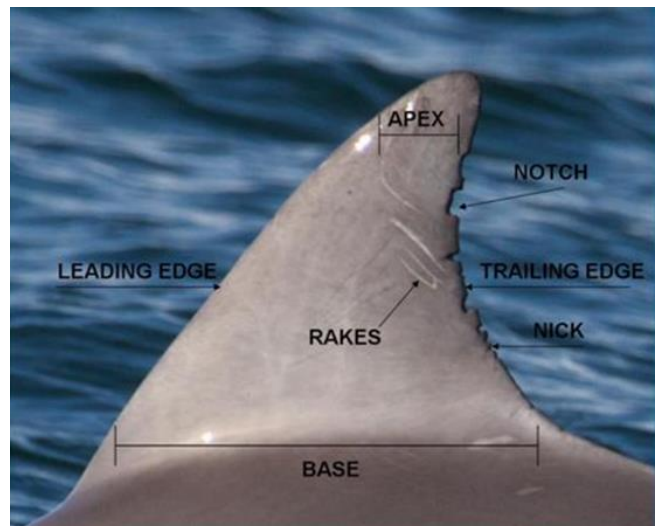
Rangers also regularly work with Volunteer Rangers, volunteer groups and commercial tour operators to monitor individual dolphins, with a particular focus on calves and sick/injured animals. Rangers also assist with water quality monitoring by collecting water samples when requested by the EPA.

## How are dolphins monitored?

The Adelaide Dolphin Sanctuary Monitoring Program was implemented in 2016. The objectives of this monitoring program are:

1. To obtain baseline data on the movements, abundance, distribution, demography and behaviours of dolphins within the Adelaide Dolphin Sanctuary.
2. To develop and maintain a long term database of individually identified dolphins within the Adelaide Dolphin Sanctuary.

To achieve these objectives, National Parks and Wildlife Service (NPWS) Rangers conduct boat surveys along specific transects within the Adelaide Dolphin Sanctuary. When a group of dolphins is encountered on a survey, Rangers record information on their location, behaviour, group size and composition. Images are then taken of each dolphin's dorsal fin for photo-identification purposes. The data collected is then filtered and sorted by citizen scientists and volunteers from the ADS Action Group.



Dolphins can be individually identified by the unique and natural marks on their dorsal fins, including nicks and notches. Secondary markings, such as scratches, pigmentation, and other body markings, can also be used to help aid their identification. These identification photos are used to develop a dolphin identification catalogue, which can later be used to address a variety of research questions.



## What has the dolphin monitoring program discovered?

From 2016 – 2021, the program has included 42 boat surveys, with 495 dolphin groups being identified in the ADS.

More than 22,000 photos were also taken by our Rangers, with citizen scientists identifying 218 individual dolphins. Group size ranged from one individual to 17 individuals, with the average group size being three.

### Other observations recorded included:

- Feeding and travelling being the most frequently sighted behaviours
- Dolphins use the ADS area differently across the seasons, with more sightings off Outer Harbor during summer-autumn compared to more sightings in the Inner Port during winter.

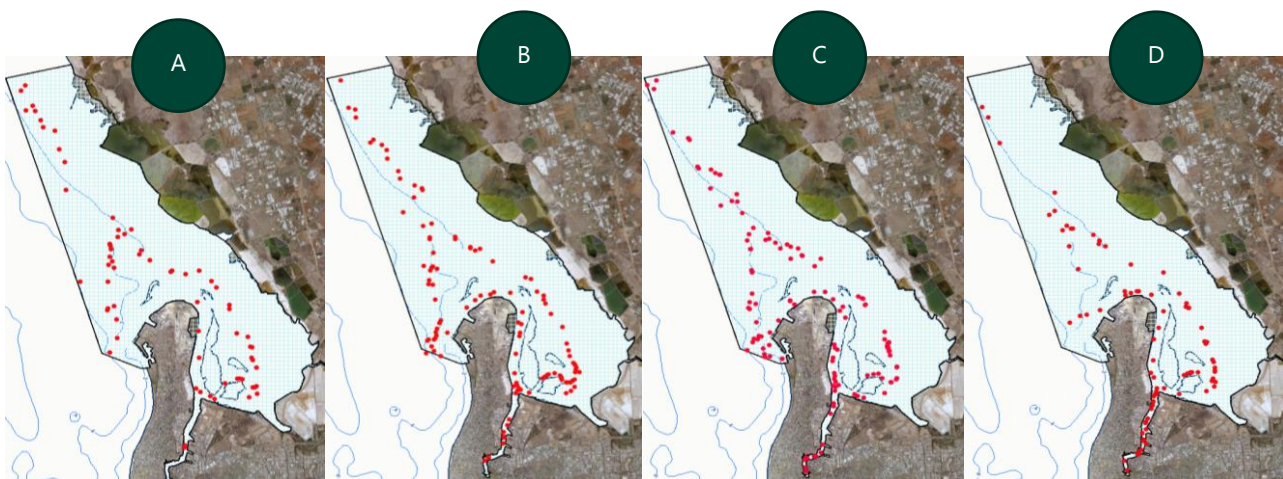


Fig. 1: Distribution of dolphin sightings (red dots) within the Adelaide Dolphin Sanctuary, across (A) spring, (B) summer, (C) autumn, (D) winter

## What other marine animals are monitored?

Both long-nosed fur seals and Australian sea lions haul out (rest) on the Outer Harbor breakwater. Rangers undertake a count each time they pass this area, to keep track of pinniped numbers across seasons and monitor any changes over time.

The Adelaide Dolphin Sanctuary also provides important habitat for both migratory and non-migratory shorebirds, and overlaps with areas of the Adelaide International Bird Sanctuary -Winaityinaityi Pangkara.

Shorebird population surveys are conducted within the ADS, including at Bird Island, Torrens Island, St Kilda and Port Gawler. BirdLife Australia also undertakes a monitoring program for endangered Fairy Terns nesting on Bird Island.

## What research is being carried out?

NPWS Rangers are currently working with South Australian universities, researchers and the SA Museum to increase our knowledge of ADS dolphin health, reproductive and survival rates, life histories, and to determine the impacts of human activities, (e.g. recreational boating/kayaking) and pollution (e.g. plastics).

**Community members can report marine mammal incidents to a NPWS duty officer on 0427 556 676.**

**For more information visit**

**[www.parks.sa.gov.au/parks/adelaide-dolphin-sanctuary](http://www.parks.sa.gov.au/parks/adelaide-dolphin-sanctuary)**

