

# STRANDINGS OF OCEANIA DATABASE PROTOCOLS

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## INTRODUCTION

Stranded whales and dolphins are a valuable source of information on species identity and diversity, particularly for many of the remote and inaccessible regions of the South Pacific. To improve understanding of whale and dolphin populations in the Pacific, and possibly improve understanding of their threats, a concerted effort is needed to document strandings and incidental sightings.

The APOD (A Pattern of Dolphins) database was started by the South Pacific Whale Research Consortium as a pilot to test the possibility of standardised data collection process and improve the documentation of whale and dolphin strandings in SPREP member countries and territories.

The original platform was not meant to be a long-term solution and became outdated and unsupported. The data hosted by WildMe was transferred to a new platform, Flukebook. Flukebook is a browser-based user interface.

A project named 'Strandings of Oceania' has been set up within Flukebook. Defined SPREP staff and members of the South Pacific Whale Research Consortium (SPWRC) can associate encounters to the project. They can also approve encounters and confirm species ID.

Data can be submitted by anyone, but an account is required to view, explore, and download data. An account can be obtained through SPREP via Karen Baird (kbaird@doc.govt.nz).

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## CAVEAT

Flukebook was designed for photo-identification catalogues using artificial intelligence to perform matches between individuals based on images. This is the only project with a focus on stranded individuals. The platform isn't ideal for this kind of data, but it serves as a basic data record.

## ABOUT

### PROJECT DETAILS

Host: WildMe - Flukebook

Location: <https://www.flukebook.org/projects/project.jsp?id=5008aa82-c0e4-427e-a0d0-cb809a63e1a8> (you must be logged in to view this)

Project ID prefix: APOD

Research project name: Strandings of Oceania

Purpose: for the collection of data on stranded or beachcast cetaceans in Pacific Island Countries and Territories (PICTs).

View all data (must be logged in): [click here.](#)

### ROLES

Submitter: The person who collected the data locally. If you are entering on someone else's behalf, put their name and email address in. They do not need an account to submit data.

Photographer: The name of the person who took the photographs.

Non-user: Someone submitting data without an account.

User: Someone with an account who can download and analyse the data in the project.

Managing researcher: People who wish to view, use, and download the data from the project. This might be members of the South Pacific Whale Research Consortium, or government or independent people in PICTs who wish to view and use the data. There should be at least one representative of each country or territory who has an account to view the data. Researchers from the SPWRC are responsible for approving encounters and adding them to the project.

Organisation Admin: Hannah Hendriks and Karen Baird of SPREP are admins and they can create new accounts.

### CONTACTS

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#### SPREP

- Karen Baird, Threatened and Migratory Species Advisor: [kbaird@sprep.org](mailto:kbaird@sprep.org)
- Hannah Hendriks, Migratory Marine Species Conservation Officer: [hannahh.ext@sprep.org](mailto:hannahh.ext@sprep.org) or [hhendriks@doc.govt.nz](mailto:hhendriks@doc.govt.nz).

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#### SOUTH PACIFIC WHALE RESEARCH CONSORTIUM

- Scott Baker (Marine Mammal Institute, Oregon State University, US): [scott.baker@oregonstate.edu](mailto:scott.baker@oregonstate.edu)

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- Juney Ward (SPREP, Samoa): [juneyw@sprep.org](mailto:juneyw@sprep.org)

## INSTRUCTIONS

### VIEWING, SEARCHING AND DOWNLOADING DATA

To search, analyse and use data you must be set up with an account. To do this, please contact Karen Baird ([karenb@sprep.org](mailto:karenb@sprep.org)). We recommend having a representative of your organisation who has an account.

Search encounters: <https://www.flukebook.org/encounters/encounterSearch.jsp> - Note that you will be searching all data on the site, which is shared by researchers all over the world.

Viewing all encounters in the project is best via [this link](#). To replicate this, just do an encounter search with a filter on the 'Strandings of Oceania' project (under 'Metadata filters' and 'Project name').

Once you have the results, you can view all the associated images, view the results on a map, get some basic analysis, or export the data – all using the tabs at the top of the table.

### SUBMITTING DATA

To assist with data collection in the field, a printable form is available, see appendix 1. The form details what information should be collected, including measurements and photos.

Anyone can submit data to Flukebook, an account isn't necessary. **If you have an account, being logged in while entering data is preferable.** This will automatically make you the managing researcher and you can edit and approve the encounter.

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### HOW TO BEGIN

Click on the 'Submit' menu → 'Report an encounter'.

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### IMAGES

Start by dragging any images or files (or images of files) into the grey box of the 'Footage' section.

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### DATE

Include the date in one of these formats depending on what level of information you have, or use the calendar:

- 2014-01-05 12:30

- 2014-03-23
- 2013-12
- 2010

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## LOCATION

'Where were you?': Describe the location

'Was this one of our location IDs?': All PICTs have been added to this field under 'Pacific Ocean'.

'Country': this will be the same as the location ID.

Include latitude, longitude, depth if known/applicable. You can find the location on the map and double click to pin the location and include the associated lat, long coordinates.

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## ABOUT YOU AND THE PHOTOGRAPHER

Include contact information about you (or whoever you are submitting this data on behalf of), and details of the photographer if applicable.

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## ADDITIONAL INFORMATION

**If you have an account and are logged in you will have the option to associate the encounter with a project. Choose the 'Strandings of Oceania' project.**

'Additional comments': Add a description of the event and any further information that isn't captured by other fields e.g.:

- Number of animals involved
- Response details
- Animal measurements (total length, height of dorsal fin etc - see data form in appendix 1).

Choose what species in the 'Species' dropdown.

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## DO YOU HAVE ADVANCED INFORMATION?

Click this to expand for further options (required).

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## ABOUT THE ANIMAL

Choose 'sex' if known.

If this is a beachcast incident or stranded animal that has died, make sure 'status' is changed to dead.

'Alternate ID': make a record of any other IDs such as from the old APOD database, local databases etc.

'Sighting ID' is not required.

'Behaviour': unless any behaviour from when the animal was alive is available, just describe the type of incident e.g. stranded, beachcast.

'Noticeable scarring': the purpose of this field is to record if there is any scarring that might identify the individual. You can also include generic remarks about scarring on the animals.

'Life stage': unknown, adult, calf, juvenile.

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## MEASUREMENTS

These are not standard cetacean stranding data records but if you happen to have them, you can include them.

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## TAGS

Use fields if applicable.

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## NOTIFICATIONS

Include email addresses of people who should be notified of this encounter, including Karen Baird (karenb@sprep.org) so the encounter can be added to the project.

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## SUBMITTING

Tick the reCAPTCHA box and click 'Send encounter report'.

## ABOUT FLUKEBOOK

Flukebook is a free, online resource, established to strengthen the global conservation of whales and dolphins. A catalyst for collaboration, Flukebook enables researchers to manage, share, analyze and archive data via pioneering, user friendly software. Flukebook unites researchers, conservationists and citizen scientists, enables connections with individual animals, and provides robust data to inform conservation of marine mammals and their habitats.

Information for researchers using the platform is available on the WildMe website at <https://docs.wildme.org/docs/researchers/overview>

## FLUKEBOOK DATA STRUCTURE

*Note that we aren't using Flukebook for its intended purpose so this information isn't all directly relevant for this project.*

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## ENCOUNTERS

An **Encounter** is an individual sighting of a member of a target population of a single species. An encounter report is submitted to the framework via a web interface and may represent (if enough data is present for identification) a "mark" (first sighting) or "recapture" (subsequent re-sighting) of an individual from a study population. Each encounter contains data that represent one individual at one point in time. For example, an Encounter may represent the photographing of a single dolphin at a specific point in time and/or the collection of a tissue sample for genetic identification later. An encounter can be added to a previously identified marked individual in the database, representing a re-sighting of that animal, or it can be allocated as a new marked individual and given a name or tag number (e.g. "A-001"), representing a new animal previously undocumented in the wildbook.

*For Strandings of Oceania: These are what will be used for stranded animals.*

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## MARKED INDIVIDUALS

A **Marked Individual** is a uniquely identified member of a population and includes one or more reported encounters. It is up to each library and its research staff to determine the minimum amount of data and procedures required for a unique identification (e.g., a distinct ear tag, a visual photo-identification, digital extraction of spot patterning, a distinct DNA pattern, etc.). As the study acquires more and more encounters for each individual in the wildbook, it will be able to build up robust metrics for population analysis, allowing its research team to better understand population trends.

*For Strandings of Oceania: Each dead animal will technically be marked as a new individual as a function of the project but there is no data to compare the individuals to.*

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## OCCURENCES

An **Occurrence** represents a observation of multiple individuals together and includes one or more encounters over a short duration of time. The purpose of an occurrence is to provide an hierarchical category to represent groups of individuals and potentially the relationships among them at a point in time and space. For example, an occurrence might represent a pod of baleen whales, which are typically fluid in membership, even over brief periods of observation (e.g., less than an hour), or more stable groups, such as sperm whales, which might remain relatively stable over a longer period of continuous observation (e.g., several hours).

*For Strandings of Oceania: Technically this could be used for mass strandings however we will not be focusing on it at this time.*

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## BIOLOGICAL SAMPLES

A **Biological Sample** (a.k.a. "Tissue Sample" but not strictly a tissue) represents the retrieval of a small amount of biological material from an animal. For example, this may be a direct biopsy, a fecal sample, a blood sample, or a mucus sample. Because a biological sample is collected at a location and point in time, it is added to an Encounter, representing an additional part of an animal sighting record. Wildbook currently allows you to add data for these types of subsequent analyses upon a Biological Sample:

- One or more haplotype analyses and determinations
- One or more genotype analyses (microsatellite markers)
- One or more genetic sex determinations
- One or more biological/chemical measurement. For example, you could record a stable isotope determination of "-2.4 ppm for  $^{13}\text{C}$ " or record a pollutant measurement detected in the sample.

*For Strandings of Oceania: Tissue or other samples taken from stranded animals should be recorded as a biological sample. These can only be added by Research Managers and Admins.*

## PACIFIC ISLANDS REGION – STRANDINGS OF OCEANIA PROJECT

### WHALE, DOLPHIN & DUGONG – STRANDING / ACCIDENT / DEATH REPORT

Take a photo of this completed form and send, along with other photos, to Karen Baird at SPREP, [karenb@sprep.org](mailto:karenb@sprep.org) or submit data and photos on [flukebook.org](http://flukebook.org). See the SPREP website for more info. **\*required field**

<b>Record Identification #:</b>	<b>Examination date:</b>
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<b>*Your name/s and affiliation:</b>	<b>*Contact email:</b>	<b>*Date animal initially found/reported:</b>	<b>Time animal found/reported:</b>

LOCATION INFORMATION		
<b>*Description</b> (village/district/island):		
<b>*Country:</b>	<b>Latitude:</b>	<b>Longitude:</b>

EVENT INFORMATION				
<b>Pre-stranding/beaching behaviour:</b>				
<b>*Event type:</b>	Beachcast (dead)	Live stranding	Floating at sea	Other:
<b>*Number of animals:</b>	Individual	Mother/calf pair	Mass stranding	
<b>Condition of animal/s</b> (circle option and provide numbers if more than one animal):				
Alive	Freshly dead	Moderate decomposition	Advanced decomposition	Mummified/skeleton
<b>*Response</b> (circle all that apply):				
Refloat (successful)	Refloat (unsuccessful)	Refloat (partially successful – indicate numbers)	No. survived: No. died:	Other:
Post mortem	Burial	Left to decay naturally	Disposal at sea	Other:

ANIMAL INFORMATION				
<b>*Species</b> (if unsure, describe):				
<b>Sex:</b>	Male	Female	Unknown	
<b>Age class:</b>	Adult	Juvenile	Calf	Unknown
<b>*Total length (cm):</b>	<i>Additional measurements are available over the page.</i>			
<b>*Photos:</b>	Yes	No	<b>Photographer name and email:</b>	
<b>Photos are very important, focus on:</b>				
<ul style="list-style-type: none"> <li>• The complete scene</li> <li>• Lateral (side on) body of the animal</li> <li>• Dorsal fin, flipper, fluke</li> <li>• Head region including the mouth/teeth</li> <li>• Genital (ventral/under side)</li> <li>• Scars and marks on the body – wounds, lesions, parasites etc</li> </ul>				
<b>Samples taken?</b>	Yes	No	<b>Describe:</b>	

<b>Additional information</b> (circumstances, injuries, scars, indications of cause of death, post mortem results etc):

Additional information (more space if required):

	Measurements - optional (take measurements in a straight line, not around the curve of the body – see guidance below)	Length (cm)	Notes
1.	*Total length (from tip of UPPER jaw to deepest part of fluke notch)		
2.	Tip of upper jaw to tip of dorsal fin		
3.	Tip of upper jaw to anus		
4.	Tip of upper jaw to genital slit		
5.	Tip of upper jaw to front (forward insertion) of flipper		
6.	Tip of upper jaw to blowhole		
7.	Length of flipper (external)		
8.	Greatest width of flipper		
9.	Greatest width of tail flukes (if undamaged)		
10.	Length of rostrum (beak)		
11.	Length of gape (tip of lower jaw to corner of mouth)		
12.	*Height of dorsal fin		
13.	Axillary girth (immediately behind flippers, around body)		
14.	Length of genital slit		

