STRANDINGS OF OCEANIA DATABASE

GUIDANCE FOR DATA USERS AND CITIZEN SCIENTISTS
OCTOBER 2023 - SPREP

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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The original platform was not meant to be a long-term solution and became outdated and unsupported.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), or from Hannah Hendriks (hhendriks@doc.govt.nz). An extract of the data is available on the Pacific Environment Data Portal for those who want to view and explore the data without a Flukebook account.

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.

More information: https://docs.wildme.org/product-docs/en/wildbook/getting-started-with-wildbook/ (note this information is for Wildbooks generally and may not exactly match the Flukebook experience).

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/citizen scientist/public: 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

SPREP/NZ DEPARTMENT OF CONSERVATION

- Karen Baird, Threatened and Migratory Species Advisor: kbaird@sprep.org
- Hannah Hendriks, Migratory Marine Species Conservation Officer/Technical Advisor: hannahh.ext@sprep.org or hhendriks@doc.govt.nz.

SOUTH PACIFIC WHALE RESEARCH CONSORTIUM

- Scott Baker (Marine Mammal Institute, Oregon State University, US): scott.baker@oregonstate.edu
- Phil Clapham (US National Marine Mammal Lab, Seattle, US): phillip.clapham@gmail.com
- Rochelle Constantine (University of Auckland, NZ): r.constantine@auckland.ac.nz
- Claire Garrigue (Operation Cetaces, New Caledonia): claire.garrigue@ird.fr
- Nan Hauser (Cook Islands Whale Research): nan@whaleresearch.org
- Michael Poole (French Polynesia): michaelpoole@mail.pf
- Mike Noad (University of Queensland, Brisbane, Aus): mnoad@uq.edu.au
- Dave Paton (Blue Planet Marine, Aus): dave@blueplanetmarine.com
- Debbie Dietrich-Steel (Oregon State University, US): debbie.steel@oregonstate.edu
- Simon Childerhouse (Cawthron Institute, NZ): Simon.Childerhouse@cawthron.org.nz
- Olive Andrews (Conservation International): whaleology@gmail.com
- Ellen Garland (University of St Andrews, Scotland): ecg5@st-andrews.ac.uk
- Juney Ward (SPREP, Samoa): 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 Hannah Hendriks (hhendriks@doc.govt.nz) or Karen Baird (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, please log in before entering data, it will make things much easier.** This will automatically make you the managing researcher and you can edit and approve the encounter.

HOW TO BEGIN

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

IMAGES

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

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

LOCATION

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

'Where were you?': Describe the location

'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.

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. The email address you provide will be sent a link to your submitted encounter.

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 (this includes 'unknown dolphin' or 'unknown whale').

DO YOU HAVE ADVANCED INFORMATION?

Click this to expand for further options (required).

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.

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

'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.

MEASUREMENTS

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

TAGS

Use fields if applicable.

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.

SUBMITTING

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

VIEWING YOUR SUBMISSION

Submitters should receive an email when they make a submission which contains a link to their new encounter. Users without an account should be able to view their submission via this link.

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, analyse 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 people using the platform is available on the WildMe website at: https://docs.wildme.org/product-docs/en/wildbook/getting-started-with-wildbook/ (note this information is for Wildbooks generally and may not exactly match the Flukebook experience).

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.

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.

MARKED INDIVIDUALS

A **Marked Individual** is an 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.

SIGHTING

A Sighting represents a observation of multiple individuals together and includes one or more encounters over a short duration of time. The purpose of a sighting is to provide a hierarchical category to represent groups of individuals and potentially the relationships among them at a point in time and space. For example, a sighting 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.

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 13C" 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.