

New Zealand Sea Lion Tagging Workshop report

Attendees: Enrique Pardo, Katie Clemens-Seely, Helena Dodge, Jim Fyfe (DOC), Greg Lydon, David Middleton (Deepwater Group) Jim Roberts (NIWA), Simon Childerhouse (Cawthron Institute), Sarah Michael (University of Sydney and Massey University) and Jordana Whyte (NZSLT).

Apologies: Laura Boren, Rosalind Cole, Kevin Carter (DOC), Tiffany Bock, Ben Sharp.

Date: 20 May 2019, Conservation House, Wellington

Tag discussions

The Dalton superflexi tag availability is not enough for covering the next tagging season in 2019/20. DOC has some leftover from last season and potentially previous season, but they will probably not be enough.

Last year, we received stock available for superflexi tag from Dalton, they didn't have one single colour available for tagging all animals, so a mix of colours had to be purchased.

An immediate decision for tagging the subantarctic populations this year needs to be reached. Otago/Southland and Stewart Island have enough tags for the next couple of seasons.

Comments on requirements for a good tag are provided as below:

- Readability. They should be readable from at least 10 m, and clearly with binoculars.
 - Noted that letters should be easily differentiated (font and letter/# choice is important).
- Retention. Coffin or rectangular shape is preferred over round tags, as the readability and retention seem to be better for coffin tags.
 - Noted that round tags from 1998/99 are still readable.
 - Flexible tags seem to be preferred (noted to take caution with how thin the tags are)
- The tag should be large enough to accommodate the printing of 5 alphanumeric digits.
- The 'pin' size should be long enough for the flipper of an adult sea lion
- Tags should be printable on both sides
- Colour availability, avoiding certain colours.
- Male post able to move independently of the main male part

Agreement: For the 2019/20 tagging season, the Dalton Jumbo tag will be used.

Action: With regards to ordering the Dalton Jumbo tags, investigate which providers are available to supply these.

Action: This tag has been used in the past and DOC/NIWA will try to identify retention rates in comparison to superflexi tags.

During the meeting, Jim (NIWA) provided a summary of retention:

- Good tag years are 2004-2006, 2009-2011, 2014
- Bad tag years are 2001-2003, 2007-2008, 2012-2013

It was noted that retention is not only related to the type of tag used, but also the team experience, time available for tagging, etc.

Flipper tagging is used in many other pinniped programmes internationally. It was noted that DOC has looked at examples like the monk seal research program and NZSL Trust has contacted others, noting they are also facing the same problem.

Action: It was agreed DOC will contact other international programmes and pinniped/tag experts (i.e. DOC staff, Louise C, Martin C, etc.) to gather additional information about suitable tags for sea lions/pinnipeds. [Simon C has emailed some of his contacts, such as NOAA - email attached]

Action: Several samples of each tag (including font if possible) will be requested to share with TAG group members to discard non suitable options and gather additional information about the others.

The group had additional discussion about the cost/benefits of tagging in locations where the re-sighting effort is low, such as Campbell Is and Dundas Is. Information about the use of these data for modelling the population was provided.

Agreement: The question about flipper tagging effort will be shared in the sea lion Advisory Group.

Action: Jordana (NZSL Trust) will check progress with Otago Polytech regarding printing sea lion tags and potentially options to create a tag similar to superflexi tag.

Microchip discussions

A similar conversation regarding cost/benefit of PIT tagging was held in the meeting.

Agreement: Microchipping in 'mainland' locations (Otago and Stoutland), Stewart Island and Enderby should continue, as there is periodic/frequent re-sighting effort. Additional discussion is required for Campbell Is and Dundas Is.

Trovan microchips have issues with detection (the reader needs to be really close to the animal), there are other options in the market and the group agreed that a new microchip should be identified.

Agreement: To move to a larger chip size for a larger range of detectability.

Action: To explore microchip options available (also check with other international programmes). The microchip should be detectable from the distance.

It was noted that Trovan microchips don't meet international standards

Action: To explore options for customising readers to be able to read two different chips and look into if Trovan has a universal reader available.

- To note: Allflex chips have 15 digits, which might be an issue for recording and getting more mistakes.

Action: To send a microchip to David Middleton

Meeting: New Zealand Sea Lion Tagging Workshop Agenda

Date: 20 May 2019

Time: 1:00am-3:00pm

Place: WLG 3.10, Conservation House, 18-32 Manners Street, Wellington.

Chair: Enrique Pardo

Attendees: Enrique Pardo, Katie Clemens-Seely, Helena Dodge, Jim Fyfe (DOC), Greg Lydon, Ben Sharp (MPI), David Middleton (Trident Systems) Jim Roberts (NIWA), Simon Childerhouse (Cawthron Institute), Sarah Michael (University of Sydney and Massey University) and Jordana Whyte (NZSLT).

Apologies: Laura Boren, Rosalind Cole, Kevin Carter (DOC), Tiffany Bock.

Time:	Event:
1:00pm	<u>Welcome, Introductions, Apologies</u>
1:05pm	<u>Purpose:</u> <ul style="list-style-type: none">• Taking actions to decide on which tags will replace the Dalton Superflexi tags (as they will no longer be produced).• Make a decision on what microchips will be used at which locations.
1:15pm	<u>Tag Discussions</u> Areas to consider: <ul style="list-style-type: none">• Priorities-Retention, readability, Primary data needs (unique identifier, location of birth/year born, and etc.)• Review options and establish key factors for decision making.• What will color denote and what color sequence should be used?• What numbering/alphanumerical system to use?• How to improve resighting/readability? e.g. Drill pattern on mini or coffin tags, check digit on button tags, external RFID tags, and Camera/drone/RC camera trial.
3:00 pm	<u>Microchip Discussions</u> <ul style="list-style-type: none">• Remain with Trovan or switch to a different chip (NZISO compliant chip)?• Do we want to microchip at all locations?• Options for universal reader, or an antenna for a portable Trovan reader.
3:45pm	<u>Wrap up</u>
4:00pm	<u>Close of meeting</u>