	Flinders University College of Science and Engineering **Standard Operating Procedure** **For Working with Little Penguins** **18/06/19**	
		**Animal Facility**

SOP Number	RA Number	AWC Approval Date
SOP-BIOL-4-Penguins	RA_	18/06/2019

Contact Person	SOP Prepared By	Review Date
Leslie Morrison	Diane Colombelli-Négrel	June 2021

Contents

The SOP **Working with Little Penguins** contains the following sections:

Legislation

- *Australian Code for the Care and Use of Animals for Scientific Purposes 8th Ed.*
- *Animal Welfare Act 1985*
- *Animal Welfare Regulations 2012*
- *Gene Technology Act 2000* (the Act)
- *Gene Technology Regulations 2001*
- *Work Health and Safety Regulations 2012*
- *Fisheries Management Act 2007* (Section 115)
- *South Australian National Parks and Wildlife Act 1972*

University Policy

- Work Health and Safety Policy 2013
- Responsible Conduct of Research Policy 2016
- NHMRC Guidelines

Local Policy

Use of the College of Science and Engineering Animal Facilities by all staff and students of the College of Science and Engineering, Flinders University, is subject to awareness of, and adherence to the following:

Research Involving Animals:

- The University holds a permit for the use of animals for teaching and research purposes. To satisfy the requirements of the permit, anyone wishing to undertake teaching and research using animals must submit a proposal to the Animal Welfare Sub-Committee (AWS-C). No work with animals may commence until written approval has been received from the Animal Welfare Committee. Standardised application forms for Laboratory, Teaching and Wildlife work with animals can be found on the Flinders University website listed below. It is your responsibility to regularly check this site for updates to guidelines, forms etc.

  http://www.flinders.edu.au/research/researcher-support/ebi/animal-ethics/animal-ethics_home.cfm

- **All All staff and students involved in animal research must complete Animal Ethics Online Training (AEOT) and must also regularly attend Animal Researcher Information Sessions (ARIS).**

Standard Operating Procedures

Refer to Risk assessments, Standard Operating Procedures and Safe Operating Procedures for chemicals, processes and plant equipment where appropriate. All projects must have an accompanying Risk Assessment signed by the College of Science and Engineering OH&S Manager.

The following are a list of the main SOP's governing working with animals in the College of Science and Engineering. An extensive database of specific technique SOP's is also available from the Animal Facility Manager and on the AWC home page.

- **Standard Operating Procedure and Safe Work Procedure for the Use of the Animal Facilities, Aquaculture and Marine Aquarium Facilities**
- **Standard Operating Procedure for Working With Fish**
- **Standard Operating Procedure for Working With Reptiles**
- **Standard Operating Procedure for Working With Birds**

Permits

- Any research to be undertaken in the field may require a permit from Department for Environment and Heritage (DEH) National Parks and Wildlife: http://www.environment.sa.gov.au/licences-and-permits/Animals_in_captivity_permits

- The Animal Facility Manager holds a Marine Specimen Collection permit that may be used by nominated delegates, or you may obtain your own at: http://www.pir.sa.gov.au/fishing/permits_and_exemptions

- Collection and live transport/holding of noxious species/declared pests will require a specific permit from The Department of Water, Land and Biodiversity Conservation (DWLBC) and The Department of Primary Industries and Resources of South Australia (PIRSA).

- While your research may not involve animals covered by the Code, and won't necessarily require an application for the use of animals, it is necessary to provide details of organisms used to the AWC so as to register their use with the institution. For marine collections, which includes the 'by catch' of non-target species, an application must be submitted to the committee which outlines 'by catch' details and the fate of species.

General

- Wash hands with disinfectant before and after handling birds.
- Refer to Standard Operating Procedure for animal handling, and Safe Work Procedure for administering medication and animal handling.
- An Unexpected Adverse Event is an event that is not expected and was not foreshadowed in the application approved by the AWC.

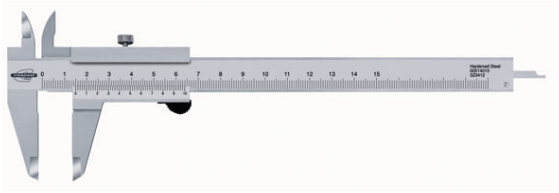
Catching from Burrow and Handling

1. Record/check the burrow ID and location via GPS, and using the appropriate data sheet.
2. Prepare calipers, scales (either hanging or field balance), and a clean calico bag (*see pictures on next page*).

3. Check the burrow for occupancy using a scope camera.
4. Wear leather gloves when removing adults from burrows.
5. If eggs or chicks are present, remove eggs and chicks first to avoid them being crushed by the adults during the removal.
6. Insert one hand (protected with a leather glove) into the burrow until you can reach the adult/egg/chick.
7. To remove eggs, close hand gently around the egg and position the egg so it is sitting in the palm of the hand with the fingers slightly closed on top to protect the egg. Remove all eggs before removing the adults.
8. To remove adults/chicks, close the hand gently around the back of the penguin neck, just above the flippers. The thumb and the grooming fingers should hold the back of the penguin neck while the rest of the hand should rest against the flippers to ensure they remain against the penguin's body *(see photo below)*. Take care not to apply to much pressure, as this will restrict their breathing.
9. If the penguin is facing the other way and the neck cannot be reached, put the hand under its belly to grab both feet in one hand – the feet are held between the thumb and index finger and the ring and little finger while the rest of the fingers are under the penguin's belly. Pull gently until the back of the neck can be reached with the other hand and grab the penguin as described above.
10. Do not pull the penguins by the flippers, and never pull the penguin from the burrow if its flippers are not properly maintained against its body.

11. Once the adult/chick/egg is secure in hand, gently pull outside of the burrow.
12. Eggs should be placed in a small plastic container on side of the burrow until the adult has been removed and all eggs can be replaced in the burrow.
13. Once the adult/chick is outside the burrow, immediately place the penguin in a calico bag in a cool area out of direct sunlight.
14. Process the first penguin before removing any other individuals to reduce the amount of time one individual spend outside of the burrow.

15. While the penguin is still in the bag, use the scales (either hanging or field balance) to obtain its mass.
16. To measure the penguin, one researcher should be holding it with both hands while the second researcher takes the measurements. If only one researcher is present, place the penguin between the handler's legs such that the flippers are held secure. In this way, the handler's hands are free to restrain and position the head and neck to facilitate blood removal, microchipping, or to measure the penguin.
17. Remove the penguin from the bag to measure its bill and body. Ensure to maintain its flippers against its body by holding the penguin with both hands around its body *(see photo above)*.
18. When measuring the flippers, release one flipper at a time while still holding the penguin with both hands around its body. Do not pull on the flipper.
19. Once the first penguin has been processed, remove the second individual as described above before returning the first individual to the burrow
20. Process all individuals at proximity of the burrow to avoid delay in processing.
21. Release penguin by placing its head first into the burrow, both hands maintaining the flippers against its body. Gently loosen the hands and the penguins will walk toward the back of the burrow by itself.
22. Careful considerations should be given to environmental temperature and conditions for capture and release, and catching/handling should not be planned for temperatures above 35°C.



Calipers

Scales

Microchipping

- Check that the penguin does not already have an aluminum band or a microchip. TIRIS transponders are read using an AllflexTM reader.
- Prepare a 12 gauge needle, the transponder *(see photo below)* and implanter so they are accessible with one hand. Remove the cap of the needle and place cap, needle, and transponder, on a sterile surface. All needles and transponders are contained in a sterile package and can only be used once.

- Prepare an alcohol swipe.
- Use alcohol swipe to swab sterilize the area.
- Insert transponder by inserting the tip of the needle subcutaneously in a caudal (downward) direction at the base of the neck.
- Use tissue glue and digital pressure to seal the implantation site.
- Monitor the bird for subsequent bleeding.

Taking Blood Samples

1. Prepare a 25 gauge needle and 1mm diameter heparinised capillary tube so they are accessible with one hand. Remove the cap of the needle, and place both cap and needle on a sterile surface.
2. Prepare FTA paper and blood smears.
3. Prepare an alcohol swipe.
4. If the feet are cold to the touch, gently hold them in the palm of the hand for few minutes to warn them up.
5. Hold the foot of the penguin between your thumb, grooming, and index fingers (*see image below*).
6. Use alcohol swipe to swab sterilize the area.
7. Use thumb to gently compress the vein to make it distend.
8. Insert a 25G needle in the vein running between the second and third toes, and collect blood by inserting a heparinised microcapillary tube on the other side of the needle (*see image below*).

9. Store the blood on FTA card and put one drop on blood smear.
10. Put the cap back on the needle and place the needle in a sharps container.
11. Allow blood to clot by applying gentle pressure with alcohol swipe to stop bleeding effectively.
12. Put pressure on the vein for at least 30 seconds once enough blood has been obtained to prevent superfluous bleeding.
13. Monitor the bird for subsequent bleeding.

SOP Review

This SOP currently applies to the animals housed in the College of Science and Engineering Animal Facility and field sites. This SOP will be reviewed 3 yearly, but also updated more frequently as policies, techniques and animal care requirements change.

Any questions regarding the above guidelines and any technical advice/ assistance required can be directed to Animal Facility Manager.

Position	Name	Contact Details
Animal Facility Manager	Leslie Morrison	X 12196 Office in Animal Facility Leslie.morrison@flinders.edu.au
Animal Welfare Officer	Lewis Vaughan	0450 424 143 awo@flinders.edu.au

Useful References:

- http://www.nhmrc.gov.au
- http://www.adelaide.edu.au/ANZCCART/
- http://www.environment.sa.gov.au
- http://www.flinders.edu.au/research/researcher-support/ebi/animal-ethics/animal-ethics_home.cfm