



MASTS-PECRE Final Report: Dr. Susan Gallon

Host Institution:

Institute of Biodiversity, Health and Comparative Medicine,
University of Glasgow, Glasgow G12 8QQ

Hosting Faculty:

Dr. Dominic McCafferty
Senior Lecturer
Institute of Biodiversity, Health and Comparative Medicine
University of Glasgow

Background:

This fellowship aimed to examine the energetics of huddling during moulting in Southern elephant seals. The MASTS exchange provided the opportunity for Dr. Gallon to bring her expertise in behavioural ecology of pinnipeds and knowledge of Southern elephant seals foraging ecology to the Institute of Biodiversity, Animal Health and Comparative Medicine (IBAHCM) at the University of Glasgow. In turn, Dr. Gallon received training in the techniques of thermography and biophysical modeling from Dominic McCafferty at Glasgow. This exchange enhanced international collaboration between the University of Glasgow and French partners.

Interaction with the MASTS community:

For four months, Dr. Gallon was an active member of the MASTS community at the Institute of Biodiversity, Animal Health and Comparative Medicine (IBAHCM) at the University of Glasgow. She interacted at all levels, providing advice and support to PhD students and interacting with faculty and other fellow members. Dr. Gallon gave a lecture to undergraduate and master students for the Marine Mammal and Turtle Biology course held at Millport in July 2013. She also intends to give a webinar in November 2013 to present the findings of the work to the wider MASTS community.

Outputs completed and expected:

1. Techniques for Thermography

On a personnel and professional level, the PECRE fellowship was a success for Dr. Gallon as she was trained in the techniques of thermography and biophysical modeling. She learned to use new analysis tools and software (*i.e.* FLIR Thermacam Researcher).

2. Re-design of fieldwork data collection

Results and methodologies obtained and used during the MASTS exchange were presented and discussed during meetings in Paris with all collaborators, Dr. Gallon (MASTS-PECRE fellow), Dr. McCafferty (IBAHCM, Glasgow), Dr. Gilbert (Ecole Veterinaire, Paris) and Dr. Ancel (DEPE-CNRS,

Strasbourg). Data for this on-going project (2011-2015), that investigates the energetic of the moult in Southern elephant seals, will be collected during two more field seasons on the Kerguelen Archipelago (2013-2014 and 2014-2015). Tools and methodologies developed during the PECRE Fellowship were crucial to optimise and improve data collection for the coming years and insure publication of our results in peer reviewed international journals.

3. Thermal Biology Workshop, 21st June at SCENE, Loch Lomond

Dr. Gallon participated and presented her work during a workshop that brought together a number of scientists working on projects involving the measurement of body temperature in birds and mammals. Challenges and future directions for Thermography techniques were discussed during the meeting.

4. Conferences

Scientific Committee of Antarctic Research Conference, Barcelona, Spain, 15-19th July 2013.

MASTS Annual Science Meeting, Heriot-Watt University, Edinburgh, Scotland, 27-29th August 2013.

Bio-Logging Conference, Strasbourg, France, 22-26th September 2014.

5. Proposals

NERC Standard Research Grant

Leverhulme Research Grant

NC3Rs Project Grant

Future plans to building on the PECRE:

My collaborations and interactions with the MASTS community will continue in the future. I am co-organising a Thermography workshop at the next Bio-logging Conference that will be held in Strasbourg in September 2014 with Dr. McCafferty. During the tenure of this fellowship, I have also discussed and drafted research proposals to be developed in collaboration with Dr. Pomeroy (SMRU, St Andrews), Dr. Thompson (SMRU, St Andrews) and Dr. Boehme (SMRU, St Andrews).

Award Size and Expenditure:

Total award: £6247

Salary: £5447

Travel & Consumables: £141

Available: £659