

FILAMO Mobility Grant REPORT FORM

1. DETAILS OF BURSARY HOLDER

Title: Mr

Surname: Lloyd

First names: Kyle John

Department: Zoology and Entomology

Institution: University of Pretoria

Country of residence: South Africa

Amount Awarded: 37 300 NOK (R 61 700)

Prepayment amount: 22 380 NOK (R 34 987.56 after tax)

Actual amount spent: 47067.53 NOK (R 78 445.88)

Amount still to be paid: 14 920 NOK (R 24 682.71)

2. INSTITUTION VISITED

Department: Ecology

Institution: Montana State University

Country visited: United States of America

Individual/s visited: Professor Jay Rotella and research group

Title of collaborative programme:

Home Programme: Marion Island Marine Mammal Programme (www.marionseals.com)

Host Programme: Weddell Seal Population Dynamics in Erebus Bay, Antarctica

(www.weddellsealscience.com).....

3. ACHIEVEMENT OF AIMS

- I attended lectures of the post-graduate module titled: Applied Population Ecology (WILD 501) presented by Prof. Jay Rotella. This provided much needed theory and practical skills for population modelling.
- I then applied the knowledge acquired from the lectures to construct my own two-sex population model for southern elephant seals. Prof. Jay Rotella provided assistance with this which he found beneficial to his own understanding.
- We discussed envisioned aims from the two-sex population model which will be subsequently tested and written up for my PhD thesis. Publications that result from the chapter will include Prof. Jay Rotella as a collaborator.
- I also began an analysis that investigates density-dependent and independent causes of observed breeding success, age of recruitment and survival patterns in adult (breeding) male southern elephant seals (objective 3 of my original aim).
- Prof. Jay Rotella provided assistance with data formatting, R code and aims development.
- This too will be written up for my PhD thesis and any resulting publication will include Prof. Jay Rotella as a collaborator.
- A post-doctorate of Prof. Jay Rotella's research group, Dr Terrill Patterson, provided assistance with the comments of my first chapter which was returned by the *Journal of Animal Ecology* with major revisions. Dr Terrill Patterson also offered his resources (super computer) to perform needed analyses.
- I accompanied Prof. Jay Rotella to Yellowstone National Park which was an enriching experience as an ecologist and provided an opportunity to develop our relationship further.
- Dr Terrill Patterson expressed interest in collaborating on research in the future which is an invitation that we will seriously consider.
- I presented my work to Prof. Jay Rotella and his research group which provided stimulating discussion given that my methodology and study animal were novel to them.

Here, comparisons between their study system and ours was beneficial to developing each student's aims and hypotheses for their research project.

- I also presented on Marion Island and South Africa's role as a steward of the island to both the research group and pupils of Bozeman High School.
- I participated in departmental events by attending Wildlife Society meetings and post-graduate presentations. This provided a platform to establish networks with researchers, students and practitioners.
- Prof. Jay Rotella expressed that he is open to discussing future collaborations and the possibility of a joint post-doctoral position.

4. EVALUATION

Successes Achieved: I think that my visit was successful in achieving all of the envisioned aims. My understanding of population theory, and skills in population modelling have been greatly advanced as a direct result of the visit which could not have been accomplished in South Africa alone. I established relationships with researchers of Montana State University that will result in lasting collaborations in the foreseeable future. Quality research was performed during the visit that will answer questions at the forefront of the field and result in publications. The experience was also enriching for me as an individual by living with people of a different country and culture. This experience will have a lasting effect on my values and philosophies as a scientist, conservationist and citizen of South Africa.

Contribution to Collaboration Programme: Presenting on my research group's programme and study system gave the host research group a better understanding of what we have discovered, what we are currently investigating and what potential questions we can ask together in future collaborations. We also exchanged research tools and techniques that will strengthen our capacity to perform cutting edge analyses and make the most of our long term datasets. This was the first step in moving from an informal relationship between groups that discussed ideas to a formal collaboration on joint research. The resulting publications from the collaboration will solidify our relationship and encourage the exchange of ideas, expertise and (hopefully) students for years to come.

5. DECLARATION

I certify that the information in this report is correct and complete.



SIGNATURE OF BURSARY HOLDER:

DATE: 20/06/2019

6. COMMENTS BY SUPERVISOR

Kyle Lloyd made excellent progress on his PhD through collaboration with colleagues at Montana State University. This progress would not have been possible had he not been offered this opportunity. He made the utmost effort to use his time at Prof. Jay Rotella's laboratory to the maximum benefit of his PhD, his skills development and his ultimate career advancement. I am very proud of his achievements, his efforts and initiative shown. The study abroad period was a resounding success.

NAME: Prof. P.J.N. de Bruyn

DATE: 20/06/2019

SIGNATURE: 