

Darwin Fellowship- Interim Report- *Laura Fasola*

(Please check guidance for submission deadlines, max 3 pages.)

Darwin Main Project Ref No	13016
Darwin Project Title	"The endangered otter and the invasive mink in Patagonia"
Name of Darwin Fellow	Laura Fasola
UK Organisation	Wildlife Conservation Research Unit, University of Oxford
Your Organisation(s)	Profauna Organization
Your role within your Organisation	Ph D student
Start/end date of Fellowship	July 2007-June 2008
Location	Oxford, UK
Darwin fellowship funding (£)	18,000
Type of work (eg research, training, other, please specify)	research, training, scientific publication along with thesis writing
Main contact in UK Organisation	David Whyte Macdonald
Author(s), date	Laura Fasola, 22-11-2007

1. Background

- Briefly describe your involvement in the Darwin project before the start of your fellowship.

Since the project started in 2004, I've been involved in a number of ways. Initially my involvement was as a full time field biologist with responsibilities including sampling-fieldwork design and leading one of the three fieldwork teams. When the fieldwork was completed, my work within the project was mainly in laboratory. During this phase, I started diet analyses from samples collected during fieldwork, built a GIS to summarise and enable visualization of all the information gathered in the field. This work was later used to contribute to: (a) the various reports submitted to the Darwin Initiative; (b) the action plan for the conservation of the endangered otter; (c) the control plan for the invasive American mink; (d) the 'Complete Report of Project Achievements' to be presented to local institutions involved in the conservation of Patagonian vertebrates (wildlife agencies at provincial level and National Parks Administration), and (e) scientific publications (some submitted whilst others are currently in preparation for submission this month). A large proportion of this work is the basis of my doctoral thesis, to be submitted before the end of 2008 at University of Buenos Aires University (Argentina).

- Describe aim and objectives of the Fellowship, and programme of work

The aim of the Fellowship was to support the achievements of the Darwin project regarding the fulfilment of the articles of the CBC, mainly 5 (cooperation) and 17 (exchange of information) and also articles 12 (research and training) and 18 (technical and scientific collaboration).

The specific objectives of the fellowship were to (i) develop the fellows scientific analytical and writing skills through assistance from other researchers, (ii) enable contact with experts in invasive species and carnivore conservation, (iii) attend a major conference and workshop, (iv) receive supporting guidance on doctoral thesis preparation and (v) gain the opportunity to work closely with Professor David Macdonald, the project's UK expert, and other scientists in the Wildlife Conservation Research Unit (WildCRU), many of whom are experts on similar species and conservation issues.

- Briefly describe the roles of the UK and Fellow's institutions

The WildCRU is the host organisation for the fellowship. The unit, through the University of Oxford, provides access to all the bibliographic material required to fulfil the outlined objectives.

Researchers within the unit provide guidance enabling the fellow to acquire a range of different skills such as learning data analysis tools and techniques and developing scientific writing skills. Relevant experts within the unit are also sharing expertise in study cases that have similarities with my interests in terms of the species involved, the sort of conservation problems and the kind of policies that need to be applied. Furthermore, these experts are training me in new techniques to be included in an upcoming conservation programme in Tierra del Fuego, Argentina.

Profauna is supporting Laura throughout the fellowship, being involved in the progress taking place in the UK. The strong relationship and good communication between Laura and Profauna secures that all Laura is learning in the UK is immediately beneficial to the institution. Profauna organized a workshop in Tierra del Fuego last November (2007) where Laura had the opportunity to present both the current achievements of the project and talk about the opportunities the fellowship is providing in the UK. Profauna also gave Laura the opportunity to attend an international meeting on the conservation of otter species in South Korea (IUCN otter specialist group colloquium-October 2007). There Laura had the opportunity to talk to, and network with, other world experts on otter conservation, as well as increase her knowledge of new techniques designed to improve future otter studies. This information is invaluable for the new phase of the study of otters in Tierra del Fuego.

2. Progress

- Provide a brief account of your work since the start of your fellowship, showing progress against the programme of work.

To date, within the WildCRU I have made significant progress in many aspects of my work. I have continued analysis of the data collected during the Darwin project and also improved and completed two scientific papers, begun in Argentina, so that they are ready for submission to scientific journals. This involved the direct assistance and advice of D. W. Macdonald and the experts working in his research group (WildCRU), as well as the use of the University of Oxford's extensive library.

Working at WildCRU has enabled me to meet, and listen to presentations from, a vast number of experts working within the conservation arena. After my arrival at WildCRU I started attending several talks by prominent scientists from the unit and around the UK that regularly visits the WildCRU. The talks generally give both a detailed overview of many WildCRU projects as well as dealing with conservation issues around the world. These talks lend me information related to the different approaches WildCRU, and others, use in solving different conservation problems. Early in July, I attended a tutorial organised by WildCRU, to improve skills in working with GIS tools (Geographic Information Systems). In September I attended the International Felid Biology and Conservation Conference, organised by WildCRU, where I listened to presentations by some of the world's most prestigious researchers working in carnivore ecology. The presentations were very informative about both applied conservation issues and policy implementation. I have also attended the IUCN Xth International Otter Colloquium, in South Korea, where I presented three of the papers from the Darwin Patagonian otter project. This gave me the opportunity to meet more experts within my field and enabled me to discuss many of the results and ideas arising from the Darwin project. Finally, I also attended a workshop in Tierra del Fuego (Argentina) where I presented our achievements in the frame of the previous Darwin project to the local wildlife agency and local researchers, as well as park wardens and researchers from National parks. Additionally, I gained invaluable feedback from the attendees which will be important in future research being developed in the area. I also had the opportunity to listen to prominent scientists from Argentina and Chile. The workshop also allowed the two organisations and me, as a group, to strengthen our links with local stakeholders.

Alongside taking advantage of the opportunity to meet other researchers, I started to write my thesis manuscript in June. After the careful review of my supervisors, the thesis will be ready to be submitted at University of Buenos Aires before the end of 2008. The assistance and advice of the researchers of the WildCRU are invaluable for enriching this manuscript, in terms of experiences, bibliographical guidance and reference material.

I am learning new techniques TDRs (Time Depth data recorders) that can be used to study the diving behaviours of semi aquatic animals. Information provided by these devices can be linked directly to energetic requirements of species and are useful for later application in understanding the success of certain invasive species, as well as for assessing the survival difficulties that similar endangered species may face. The training involves all the steps from fieldwork for data collection, to the data analysis phase. This will have a key role during my return to Argentina and undoubtedly this will contribute to fulfil some of the articles of the CBC: cooperation (5); research and training (12), exchange of information (17) and technical and scientific cooperation (18).

- Provide an account of any problems encountered and how you have or are planning to overcome them.

There have been no particular problems. Of course it took me a while to get used to being here, but everything has worked out really well.

- Are there any issues you would like to raise

No, everything has gone smoothly and I am enormously grateful to the Darwin Initiative for this wonderful opportunity.

3. Achievements and Outcomes

- What have been the main achievements and outcomes to date, and how do they relate to the overall aim and objectives of the Fellowship.
 - i. Networking with experts both in conservation in general as well as with particular expertise related to the conservation issues and situations tackled during the Argentinean Darwin project and my own thesis (article 17, related to objectives ii, iii and v).
 - ii. Library research applied to the completion of scientific manuscripts and my thesis process (objective i), as well as towards the foundation of more projects on invasive species in the Southern Cone of South America (article 17). This was skilfully guided and assisted by people from the WildCRU (articles 5 and 12, objective ii, v).
 - iii. Improvement of writing and analysis skills, which the main outcomes of at least three scientific manuscripts and the completion of my doctoral thesis. (Articles 5, 17, 18; objective i, iv).
 - iv. Learning and training of advanced technologies (DTRs) applied to the study of diving behaviour of semi aquatic species: Training for novel fieldwork techniques (which will involve the attendance of a specific course); learning of data analysis with the use of specific software (which would lead to manuscript writing), (articles 5, 12, 18).

4. Next Steps

- Briefly describe forthcoming activities, events, milestones
 - i. Submission of the improved manuscripts to scientific journals.
 - ii. Improvement of GIS skills, which is particularly important in the context of my growing interest in analysing otter ecology and dispersion
 - iii. Library researches (continuation).
 - iv. Thesis writing completion. A final version will be ready for supervisors review by the end of the fellowship. The thesis will be submitted at University of Buenos Aires before the end of 2008.
 - v. Continuation of the training in data analysis collected from the TDR technique, potentially leading to further scientific publication.
 - vi. Design and polish a project to be developed in Tierra del Fuego, using TDR technique applied to semi aquatic mammals. This will be a prolongation of the cooperation between the WildCRU and research groups in my country (PROFAUNA and a new group located in Tierra del Fuego).