

# ***Darwin Initiative for the Survival of Species***

## ***Annual Report***

### **1. Darwin Project Information**

Project Ref. Number	<i>162/09/015 (NB this is original project code, we don't appear to have one for the follow-up project)</i>
Project Title	<i>The Role of Tourism in Sustainable use of Big Cats</i>
Country(ies)	<i>Zimbabwe &amp; southern Africa</i>
UK Contractor	<i>Prof. D.W. Macdonald, WildCRU, Oxford University</i>
Partner Organisation(s)	<i>Parks and Wildlife Authority, Zimbabwe</i>
Darwin Grant Value	<i>£74 695.80</i>
Start/End dates	<i>October 2003 to October 2005</i>
Reporting period (1 Apr 200x to 31 Mar 200y) and report number (1,2,3..)	<i>October 2003 to April 2004</i>
Project website	<i><a href="http://www.wildcru.org">www.wildcru.org</a> (a dedicated Darwin Big Cat project website is under construction)</i>
Author(s), date	<i>Dr A.J.Loveridge, June 2004</i>

### **2. Project Background**

- This Darwin project investigates the sustainability of sport hunting of big cats and works towards implementation of sustainable management for this species. The project is hosted by Wildlife Conservation Research Unit at Oxford University and is partnered locally by the Zimbabwe National Parks and Wildlife Authority. The fieldwork component of the project is largely based in western Zimbabwe in Hwange National Park and Matetsi Safari Area. We have strong links with regional and local conservationists involved in similar work.

### **3. Project Purpose and Outputs**

- The project aims, with Darwin Initiative follow-up funding, to build on successes experienced by the original Darwin project. We aim to continue to monitor the Hwange National Park lion population in the light of reductions in hunting quotas achieved by the original project. We are initiating a tourism survey to elucidate the value of lions to photographic tourism. We are analysing and creating a database of historical hunting data from Matetsi Safari area. Our conservation education initiative continues to communicate the conservation message to the local community. Specific progress and milestones have been organisation and implementation of a workshop in Hwange attended by local stakeholders and National Parks staff in October 2003 and the organisation and implementation of a fourth regional lion conservation workshop at Mabula Lodge, Gauteng, South Africa- attended by a group of conservation biologists working on lions in the region. The fieldwork component of the project has gone ahead as planned and the project staff currently monitor 17 lion prides (with 12 VHF and 14 GPS collars), over an area of approximately 6000km<sup>2</sup>. The fieldwork is collecting valuable movement and behavioural data using GPS technology (making it a unique large carnivore project). In addition we are monitoring the effect of a

further reduction in lion hunting quota (a moratorium on lion hunting was implemented on private land surrounding the park- effectively reducing the quota by around 75% of the 2002 level). The tourism survey to investigate the value of lions to photographic tourism is almost complete (500 questionnaires have been obtained from tourists visiting Hwange), pilot analysis is being carried out. Production of the hunting data base has been actioned and all data for big cats (lions and leopards) has been collated and put on a computer data base. This is currently being analysed. A booklet on counting wildlife and assessing sustainable quotas was compiled in collaboration with CIRAD (French Agricultural aid project) and distributed to local stakeholders and National Parks staff. Training of two parks support staff Mr N. Hlongwane and Mr P. Dladla has continued. Mr Hlongwane has been sent on a 4 weeks computer course in Bulawayo to enhance his skills. Mr Z. Davidson has been accepted as a D. Phil student at Oxford and will base his D. Phil on results obtained by the fieldwork component of the study. Mr D. Parker (an recently graduated MSc student is gaining 1 years work experience on the project). The conservation education initiative continues to build on past success and has concentrated on working with school children in the area, passing on theatre skills in addition to performances of the conservation plays. Ms Wendy Blakely has taken the role of conservation liaison officer and is helping to train the drama group and enhance their theatre and management skills.

- The outputs and proposed operational plan have not been significantly modified over the last year, however the proposed penetration study to assess the conservation education initiative has only gone ahead in pilot form, as the project has experienced difficulty with vehicles and fuel and we chose to prioritise crucial fieldwork. We anticipate making up this time later in the project as we are ahead of schedule on a number of other components of the project (see below).

#### **4. Progress**

- This project is a follow-up on the original 'Big cats and sustainable use' project. The original project achieved a 50% reduction in hunting quotas during 2003, based on research results, developed a strong relationship with the National Parks Authority, held 3 regional workshops attended by experts from the region and thereby developed strong links between conservationists in southern Africa. We trained 7 National Parks staff and assisted local stakeholders in assessing and setting wildlife hunting quotas. Our conservation education initiative (Ingonyama theatre group) disseminated conservation values to local school children and villagers through the medium of dance and drama. Since the award of follow-up funding the project has continued to build on this strong foundation. In addition to continuing with the above activities the project has begun analysis of historical hunting data, initiated a survey of the value of lions to tourism and has put in place early planning for the hosting of a major conference in Oxford in early 2006, on Felids.
- The Hwange workshop (Oct 2003) and Regional Lion conservation workshop (Feb 2004) were both implemented successfully as per the project timetable. Ecological fieldwork has been continuous since the end of the original project and continues to meet the high standards set by the original project, GPS collars have been deployed and monitored by field staff. The wildlife census document was produced and distributed in December 2003 (as per schedule). The tourism survey has been designed and implemented and has produced the requisite 500 questionnaires ahead of schedule, initial analysis is currently being undertaken. The data-base of historical hunting of big cats in the adjacent hunting area (30 years of data 1974-2003) has been completed ahead of schedule and analysis is underway. Work is in progress on the proceedings of the 4<sup>th</sup> lion conservation workshop (anticipated completion and distribution September 2004) and on scientific papers. Training and conservation liaison activities are ongoing. A pilot penetration study was undertaken to investigate the impact of conservation

education in the local area, but the full study has yet to be implemented (see above). Initial planning has been undertaken to organise and implement a major international conference on Felids in Oxford.

- Project achievements:-
  - 1) Further reduction in hunting quota for the 2004 hunting season (75% reduction over two years) based on the results of our ecological study. The Parks and Wildlife Authority continue to rely on us to monitor the impact of reduced quotas, evidence of the strong relationship we have developed with the Authority. Fieldwork has achieved the goals of deploying and monitoring GPS collars on lions in the study area.
  - 2) Both the tourism survey and hunting data-base are complete ahead of schedule. Analysis is now taking place.
  - 3) Dissemination of project goals and conservation objectives has occurred through a regional workshop and local stakeholder workshop and through 1 TV (Sky news) and 2 UK radio (BBC) interviews (see below).
  - 4) Training continues. Two national parks staff continue to receive training. Mr Z. Davidson has gained a pilots licence (to fly the project ultra-light) and attended and course to obtain a dangerous drugs and wildlife capture license (for capture of study animals). Ms J. Hunt has also gained a drugs and capture license. Mr D. Parker is gaining work experience on the project.
  - 5) Wildlife census technique booklet produced and distributed.
  - 6) Continued deployment of the Conservation Education theatre group in the local area to educate and interact with local people on conservation issues. The theatre group is getting additional training from Ms Blakely and professional dramatic artist.
  - 7) Mr N. Hlongwane and Mr P. Dladla (Parks support staff, employed and trained by the project over the last three years) both had the opportunity to apply for permanent positions within the National Parks and Wildlife Authority as research technicians. The fact that they are able to do so is testimony to training in research techniques and computer skills gained while working on this project.
- Due to Zimbabwe's political and economic crisis the logistics of undertaking fieldwork are significantly more difficult (e.g. we now have to import all our fuel from South Africa and transport food and consumables from Bulawayo the nearest city, rather than sourcing them locally as before). Notwithstanding these logistical hardships the project has managed to maintain its original impetus and continues to achieve the milestones set out and to build on past successes.
- The design of the study has not been altered over the last year, however early achievement of certain major components (tourism survey and hunting data-base) of the project provide scope for enhancing these outputs through further work, once initial analysis has been undertaken.
- Project work-plan for next six months:-
  - 1) Continued ecological fieldwork and monitoring of the lion population. Project will continue to act in an advisory capacity on issues of hunting quotas and liaise with the National Parks authority and local hunters and stakeholders.
  - 2) Continue analysis of hunting data base and tourism survey. Preparation of publications resulting from this work.
  - 3) Completion of Lion workshop proceedings by September 2004. Distribution of this publication. Planning and organisation for 5<sup>th</sup> lion workshop to take place early 2005.
  - 4) Z. Davidson to take up D.Phil. studentship with Oxford and continue fieldwork on project. Ongoing training of National Parks staff continues.

5) Conservation education and liaison continues to be undertaken. Further training of the theatre group undertaken by W. Blakely.

#### **5. Actions taken in response to previous reviews (if applicable)**

- The follow-up phase of this project has not yet been assessed, however previous reporting has elicited extremely favourable reviews. We will continue to build upon and enhance previous successes.

#### **6. Partnerships**

- Collaboration between the Oxford based research project and the National Parks and Wildlife Authority, Zimbabwe continues to build on a previously strong relationship, built during the initial part of this project. The Wildlife Authority does not have the resources to monitor the implemented reduction in lion hunting quota and have specifically requested that the project do so. The project continues to partner the Wildlife Authority and provide ecological data to support management decision-making. The project continues to help train parks staff and improve capacity to undertake ecological research. Project trained personnel have applied (and are likely to get) permanent posts within the Authority and be able to utilise training and resources gained from exposure to research and training provided by the project.
- The Big cat project has collaborated with the Painted Hunting Dog Project (another Darwin Initiative Project in the local area), Ms W. Blakely is attached to the PHDP and assists with training our conservation education theatre group. We collaborate on various logistical issues- such as procurement of fuel and supplies. We assist the PHDP to locate their study animals using our aircraft. We have also collaborated with the local CIRAD project on the production of the Wildlife census booklet and are planning some baseline analysis of lion behaviour using data they have collected on the distribution of prey species in the National Park.

#### **7. Impact and Sustainability**

- The impact of the project is most obvious in the reduction of lion hunting quota by the Wildlife Authority in 2003 and 2004, based on ecological work that the project has done and presented. In addition to this the chief ecologist in the Wildlife Authority has recently called upon the project to provide additional evidence to support a further reduction in quota. This could be applied in the 2005 hunting season. This is evidence that the work of this Darwin project is well respected and well promoted within wildlife and conservation circles in Zimbabwe. The legacy of the project, when Darwin funding ends, will be sustainable management of lions in Hwange National Park. In addition, because Mr Davidson is taking up a DPhil studentship, our long-term plans are to continue the ecological fieldwork on lions in Hwange and if possible (should further funding be available) expand the project to encompass other ecosystem processes.

#### **8. Post-Project Follow up Activities (max 300 words)**

- This project is currently benefiting from follow-up funding. Further reporting on follow –up activities and exit strategies derived from this phase of the project will be undertaken in the final year (2005).

#### **9. Outputs, Outcomes and Dissemination**

- The project has largely produced the outputs agreed in the project implementation schedule. A number of outputs (tourism survey, hunting database) are more advanced than anticipated which may allow some expansion of these components of the project after initial analysis. The investigation of the impact of conservation education has only gone ahead in pilot form, but due to

logistical difficulties and prioritisation of ecological fieldwork, we have not implemented the full survey to date. We anticipate that it will occur later in the project. This slippage will not impact the main objectives of the work.

- We have presented the results of our work to local stakeholders, researchers and Parks staff on two occasions in late 2003 (see below). In addition ad. hoc. presentations are made, by project staff, when opportunity arises (e.g. in safari camps for guests).
- Please expand and complete Table 1. **Quantify** project outputs over the last year using the coding and format from the Darwin Initiative Standard Output Measures (see website for details) and give a brief description. Please list and report on appropriate Code Nos. only. The level of detail required is specified in the Guidance notes on Output Definitions, which accompanies the List of Standard Output Measures

**Table 1. Project Outputs (According to Standard Output Measures)**

Code No.	Quantity	Description
19D	1	BBC radio (Ulster) interview Dr A. Loveridge (December 2003)
19B	1	BBC radio Natural History Unit interview Dr A. Loveridge (January 2004)
18C	1	SKY news interview Dr A. Loveridge (May 2004)
14A	1	Regional workshop held Mabula Lodge, South Africa (February 2004)
14A	1	Local stakeholder workshop (Hwange, Zimbabwe October 2003)
14B	1	Attendance at local research workshop and seminars, presentation of lion research results by Z. Davidson (Hwange, November 2003)
4C	1	Work experience and training, 1 post-graduate student (D. Parker)
3	1	Computer training course attended N. Hlongwane
5	2	Training and work experience 2 National Parks research staff (N. Hlongwane, P. Dladla)
3	1	Training course attended (J. Hunt) to gain dangerous drugs license
4C	1	Training undertaken and pilots license gained by Z. Davidson to fly project aircraft.
7	1	Wildlife census manual

- In Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Details will be recorded on the Darwin Monitoring Website Publications Database. Mark (\*) all publications and other material that you have included with this report.

**Table 2: Publications**

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £
Manual	Counting Wildlife. Loveridge. A., Fritz, H., Smith, K. and Valieux, M.	Ring bound, photocopy	WildCRU, Oxford	Nil

## 10. Project Expenditure

- Please expand and complete Table 3.

**Table 3: Project expenditure during the reporting period (Defra Financial Year 01 April to 31 March)**

Item	Budget (please indicate which document you refer to if other than your project schedule)	Expenditure	Balance
Rent, rates, heating, overheads etc			
Office costs (e.g. postage, telephone, stationery)			
Travel and subsistence			
Printing			
Conferences, seminars, etc			
Capital items/equipment (repair/ replacement of)			
Others (running costs)			
Salaries (specify)			
(A. Loveridge)			
TOTAL			

- Due to the fact that follow-up funding for this project was only received in February 2004 and the monthly nature of most project expenditure (running costs, salaries) we are unable to produce a table of annual expenditure. Discrepancies between the annual project budget and project expenditure to date exist because we have not yet spent the entire 12 month budget for the project. Full reporting on the years expenditure will be given in October 2004.

## 11. Monitoring, Evaluation and Lessons

- The purpose of this Darwin project is to encourage sustainable use and conservation of wildlife resources (in particular big cats), in the Hwange and the southern African region. Verification that this goal is being achieved is evidenced by our continued impact on the management of lions in Hwange National Park based on ecological data collected by the study. An extensive database on lion movements and demographic parameters has been collected and archived. In addition we have data bases set up to investigate the value of lions and other wildlife to photographic tourism and a data base to investigate the long term impacts of sport hunting on big cats in an adjacent safari area. We have continued to co-operate with regional scientists and have held another regional workshop (publication forthcoming). We continue to work in partnership with the National Parks and Wildlife Authority. Our conservation education theatre group continues to deliver the conservation message to local schools, raising not only the profile of conservation issues, but also the profile of the Darwin project locally.
- Despite the difficult economic and political conditions prevalent in Zimbabwe it is still possible to achieve conservation outcomes as evidenced by continuation of the initial success experienced by this project. Although logistical difficulties (e.g. lack of fuel, access to motor spares etc) make fieldwork more challenging we have largely been able to overcome these problems and continue to collect high quality data. The National Parks and Wildlife Authority, as an organisation, has undergone a period of restructuring. The Authority appears ever more willing to welcome the assistance of outside expertise. This project is in a unique position to capitalise on the confidence the Authority has displayed in the data we have collected and our management recommendations. We look forward to continuation of this partnership and the resulting implementation of important conservation outcomes.

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2003/2004

Project summary	Measurable Indicators	Progress and Achievements April 2003-Mar 2004	Actions required/planned for next period
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> <li>• The conservation of biological diversity,</li> <li>• The sustainable use of its components, and</li> <li>• The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>			
<p><b>Purpose</b> To encourage sustainable use and conservation of wildlife resources (in particular big cats), in the Hwange and the southern African region</p>	<p><i>New knowledge gained of a big cat population recovering from high levels of hunting</i></p> <p><i>Measures of the value of wildlife to tourism and sustainable use.</i></p> <p><i>Measures of the impact and penetration of conservation education initiatives</i></p> <p><i>Co-operation of conservation scientists in the region. Exchange of ideas.</i></p>	<p><i>The project continues to successfully monitor the ecology and behaviour of lions in Hwange National Park and impacts of hunting, including the impacts of reduced hunting quotas (achieved by the original project). We have compiled the hunting database and are undertaking analysis. The tourism survey is well advanced and a data base has been created. The regional workshop went ahead as planned and was attended by regional scientists.</i></p>	<p><i>Continued population monitoring, analysis of hunting data base and tourism survey and preparation of publications resulting from this work. Planning put in place for 5<sup>th</sup> regional workshop. Study of impact of conservation education to take place in 2005.</i></p>
<p><b>Outputs</b></p>			
<p><i>Yearly regional workshops held.</i></p>	<p><i>Workshops attended by regional scientists.</i></p>	<p><i>Regional workshop held and attended by 20 wildlife biologists from the UK, USA and southern Africa, Feb 2004.</i></p>	<p><i>5<sup>th</sup> Regional lion conservation workshop planned for early- mid 2005. Proceedings of previous workshop currently in preparation. Distribution anticipated September</i></p>

			2004.
<i>Data obtained on lion population recovery after quota reduction.</i>	<i>Prides of lions collared and monitored effectively. Data compared to current data from period of high trophy hunting pressure.</i>	<i>17 prides of lions monitored over a 6000km<sup>2</sup> area. GPS technology used successfully and yielding high quality ecological data.</i>	<i>Continued monitoring, replacement of worn radio-collars. Collaring of additional animals as necessary.</i>
<i>Data on value of wildlife (in particular lions) to tourism revenue collected.</i>	<i>300+ tourists interviewed.</i>	<i>To date 500 interviews completed</i>	<i>Initial analysis underway</i>
<i>Data on effect of conservation education obtained.</i>	<i>Conservation liaison officer (CLO) and project staff survey local community to assess conservation education impact.</i>	<i>Only a pilot study undertaken so far. This component of the project will be completed at a later date- probably in 2005. W. Blakely working with Theatre group.</i>	<i>Difficult logistics has meant prioritisation of fieldwork and other activities crucial to the main outcomes of this work.</i>
<i>Final workshop presents results</i>	<i>Final workshop attended by project staff, DNPWLM staff and stakeholders</i>	<i>Workshop held October 2003 attended by Parks and stakeholders and results of original Darwin project presented.</i>	<i>3 further workshops planned for September 2004 (to be held at parks HQ, Harare, Bulawayo and Hwange). Planned attendance and presentation of results at southern African Wildlife management symposium 20-22 September 2004</i>
<i>Conservation education outreach continues</i>	<i>CLO and theatre group interact with the local community through conservation education initiative.</i>	<i>Continued conservation education activity.</i>	<i>Conservation education activity to continue throughout.</i>
<i>Database on hunting trophy quality compiled, manual on wildlife census and quota setting produced.</i>	<i>Project and DNPWLM staff enter data into designed database</i>	<i>Booklet on wildlife census and quota setting produced and distributed. Hunting data base for</i>	<i>Initial analysis of hunting data underway.</i>

		<i>big cats compiled and analysis underway</i>	
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*Note: Please do NOT expand rows to include activities since their completion and outcomes should be reported under the column on progress and achievements at output and purpose levels.*