

Dr Alison Leslie



I had the privilege of growing up in a wonderful outdoor environment and that set the stage for my love of wildlife. I did my undergraduate degree at Stellenbosch University majoring in Zoology and Botany. I then spent three wonderful and exciting years back-packing all over the world before settling into an MSc programme at Drexel University in the USA.

My master's thesis was on the nesting ecology of the leatherback sea turtle in Tortuguero National Park, Costa Rica and that is where I first fell in love with reptiles! I followed this with a PhD at the same University in the USA, studying the ecology of the Nile crocodile in the then Greater St Lucia Wetland Park (now the Isimangaliso Wetland Park) in Kwazulu-Natal, South Africa.

My post-doctoral stint was at Stellenbosch University where I looked at endocrine disrupting contaminants in various water bodies in the Western Cape. I then joined the Faculty of Forestry, Department of Nature Conservation, as a part-time lecturer and since 2004 I have been a senior lecturer in the Department of Conservation Ecology & Entomology.

My research interests are broad with regards to the species studied, however a common link among my various projects, is the compilation of management plans for governments, farmers, wildlife organisations, etc.

Recent publications

Wallace, K.M. and **A.J. Leslie**. 2008. The Diet of the Nile Crocodile (*Crocodylus niloticus*) in the Okavango Delta, Botswana. **Journal of Herpetology Vol 42, No 2, pp 361-368.**

C.J Lovely & **A.J Leslie**. 2008. Normal intestinal flora of wild Nile crocodiles (*Crocodylus niloticus*) in the Okavango Delta, Botswana. **Journal of the South African Veterinary Association 79(2):67-70.**

[Bishop, J.M.](#), AJ Leslie, S Bourquin, L Badenhorst, C O'Ryan. 2009. Overexploitation and the declining effective population size of a top predator. *Biological Conservation*, Vol 142, Issue 10: 2335-2341.

Sven L. Bourquin and **Alison J. Leslie**. 2011. Estimating demographics of the Nile crocodile (*Crocodylus niloticus* Laurenti) in the panhandle region of the Okavango Delta, Botswana. *African Journal of Ecology*, Online August 2011.

A J Leslie, C J Lovely and J M Pittman. 2011. A preliminary disease survey in the wild Nile crocodile (*Crocodylus niloticus*) population in the Okavango Delta, Botswana. *Jl S.Afr.vet.Ass.* (2011) 82(3): 155–159.

Kevin M. Wallace, **Alison J. Leslie** and Tim Coulson 2011. Living with predators: a focus on the issues of human–crocodile conflict within the lower Zambezi valley. *Journal of Wildlife Research*, Online December 2011.

Conservation Ecology & Entomology Department

Teaching Responsibilities

2nd year: Conservation Censusing – Aquatic Environments

4th year: Wildlife Management, Climate Change and Sustainable Harvesting in marine environments

Research Projects / Programmes

1. GREATER ST. LUCIA WETLAND PARK CROCODILE PROJECT (1994-1997)

As a PhD candidate I was responsible for the initial project design and fund-raising, establishment, field and laboratory research, administration and financial aspects. I also supervised and coordinated 123 volunteer research assistants, from 13 different countries, during the course of the project through the Earthwatch Institute volunteer programme (www.earthwatch.org). Three scientific publications and numerous television productions and popular articles originated from this work.

2. AN ASSESSMENT OF THE EXTENT OF ESTROGENIC ACTIVITY IN WESTERN CAPE AND OTHER SELECTED WATER RESOURCES (1998-2000).

As a post-doctoral candidate I was the co-principal investigator and project co-ordinator of this project, funded by the Water Research Commission (WRC) of South Africa. Apart from three years of intensive field work, this project involved liaising with farmers, local communities and state officials. A report was submitted to the WRC.

3. OKAVANGO DELTA CROCODILE PROGRAMME, BOTSWANA (2002-2006).

This research programme was carried out in the largest RAMSAR site in Africa. I was responsible for the project design and implementation, all fund-raising, recruitment of staff and graduate students, building of our own research camp, regular reporting to the various takeholders and all management aspects, including financial. Together with my students, we compiled a Crocodile Management Plan which was submitted to the Government of Botswana, Department of Wildlife & National Parks (DWNP) in early 2008. Eight master's theses and one PhD thesis were produced and one post-doctoral candidate was supervised. Several research papers have been published and other manuscripts have been submitted. Over 250 Earthwatch volunteers were trained and utilised during this project. Additionally, numerous television documentaries, popular scientific articles and newspaper articles were produced. In France in 2006, this project was recognized by the Crocodile Specialist Group (CSG) of the IUCN as the longest running and most intensive research project ever undertaken on the Nile crocodile in Africa

4. HABITAT USE AND FEEDING PREFERENCE OF REINTRODUCED WHITE RHINOCEROS, CERATOTHERIUM SIMUM SIMUM, INTO NORTHERN KRUGER NATIONAL PARK, SOUTH AFRICA (2006 - 2008)

This project was established in collaboration with Wilderness Safaris and the Wilderness Trust and was undertaken by MSc student Gayle Pedersen.

The study was completed and a thesis submitted. Three scientific publications are currently in prep.



5. NESTING ECOLOGY OF LEATHERBACK (DERMOCHELYS CORIACEA) AND LOGGERHEAD (CARETTA CARETTA) SEA TURTLES ON THE MAPUTULAND COAST OF SOUTH AFRICA (2007 to present)

This research project, undertaken in a World Heritage Site, was established in collaboration with Ezemvelo KZN Wildlife, the Isimangaliso Wetland Park Authority, Wilderness Safaris and the Wilderness Trust. The outcomes of this project will contribute to a management plan for the endangered leatherback and threatened loggerhead turtles inhabiting South Africa's coastline. The fieldwork has been completed and a thesis is currently being completed by MSc student Chris Boyes.

6. CONSERVATION ECOLOGY OF THE NILE CROCODILE AND COMMUNITY ENVIRONMENTAL EDUCATION IN THE MIDDLE ZAMBEZI VALLEY, ZAMBIA (2007-2011)

This was a multi-disciplinary, collaborative research programme involving the wildlife departments of two trans-boundary countries, various universities (Stellenbosch and Imperial College, London), NGO's (AWF, Earthwatch, Conservation Lower Zambezi, The Zambezi Society), tourist lodges and several local communities (>10) with Tribal Chiefs, fishermen and farmers.

The primary aim of this project is to contribute to the implementation of a concise conservation strategy and management plan, allowing the crocodile population to be managed successfully in a sustainable way, that is beneficial to all. PhD student Kevin Wallace will graduate at the end of 2011. Four scientific publications have been produced.

7. SEASONAL RANGE, HABITAT USE AND FEEDING PREFERENCE OF REINTRODUCED WHITE RHINOCEROS, CERATOTHERIUM SIMUM SIMUM, IN MOREMI GAME RESERVE, BOTSWANA (2008-PRESENT)

This collaborative project, between the Department of Wildlife and National Parks (DWNP) in Botswana and Okavango Wilderness Safaris (OWS) commenced in 2001. My MSc student on this project, Pelotsweu Galebotswe, is a full-time employee of the DWNP. This is an essential conservation project as rhinoceros have been re-introduced to Botswana and the Moremi area on two previous occasions, but on both occasions extirpation followed due to illegal hunting/poaching. Now that a suitable anti-poaching strategy is in place, we hope to determine habitat use and feeding preference in order to assist future planned re-introductions elsewhere.

8 THE ECOLOGY AND POTENTIAL FACTORS LIMITING THE SUCCESS OF SABLE ANTELOPE IN SOUTH-EASTERN ZIMBABWE: IMPLICATIONS FOR CONSERVATION (2009 – 2011).

This project is in collaboration with Malilangwe Private Reserve in Zimbabwe and is entirely funded by the Malilangwe Trust. MSc student, Simon Capon, will graduate in March 2012.

9. TWO SIDES TO A FENCE: MANAGING THE IMPACTS OF FENCING OF MAJETE WILDLIFE RESERVE, MALAWI, ON ELEPHANTS AND LOCAL COMMUNITIES (2011 – PRESENT).

This thesis is structured around how fencing (the creation of a closed system protected area) creates critical issues in both the ecological system of the reserve, and the social systems surrounding the reserve. A key management issue in each system will be addressed in this thesis, to demonstrate the importance of actively managing for the impacts of fencing in conservation. Co-supervision of MSc student Jessica Wienand.

10. EXPLORING THE INCREASE OF THE COMMON WARTHOG (PHACOCHOERUS AFRICANUS) IN PARTS OF THE NORTHERN CAPE AND FREESTATE PROVINCES, SOUTH AFRICA (2011 TO PRESENT)

The recent appearance of the common warthog (*Phacochoerus africanus*) on farms in the Northern Cape and Free State region has caused concern among farmers and land-owners. The species occurs naturally in the north-eastern parts of South Africa, but introductions on game farms in parts of the Northern Cape and Free State have allowed the species to successfully inhabit and populate the area. Livestock and crop farms have been subjected to a massive increase in warthog numbers over the past few years. Warthogs damage fences allowing jackals and other predators access to the livestock. Additionally they damage fields, crops and infrastructure. As an introduced species, the warthog inhabits an area outside of its natural range, which could have an impact on the natural environment and ecosystem function. Farmers are concerned about the impact the population explosion could have on their enterprises, and are currently shooting the warthogs on sight. However, the species has the potential to be a popular game hunting species and become part of the game meat industry. This study aims to investigate the ecology of warthogs in parts of the Northern Cape and Free State, and the ecological and economical impacts of the invasion. It also aims to investigate the quality and usability of meat for the commercial market. Data will be gathered in the form of observational studies, interviews with farmers and land owners and the culling of warthogs. The objective of the study is to provide farmers with information on the species and its biology in order to formulate potential management strategies. MSc project carried out by Monlee Swanepoel.

11. CROCODILIAN AND FRESHWATER TURTLE RESEARCH AND CONSERVATION PROJECT CORBETT TIGER RESERVE, UTTARAKHAND STATE, INDIA (2011 TO PRESENT).

This project is proposed as the initial stage of a planned, long-term research, conservation and awareness initiative on crocodilians and freshwater turtles in the State of Uttarakhand, India. It is the first phase of a follow up on the 2008 surveys in Corbett Tiger Reserve. This 2008 survey was of key importance as it revealed a breeding population of approximately 100 gharials of various size classes. This confirmed that the study area is one of the three breeding populations of wild gharial in the world, contributing approximately 20% to the global population of wild adult breeding gharial.

While the initial survey conducted was only to count gharials, during Phase 1 we will undertake:

- Long-term surveys of gharial and other species in conjunction with the Forest Department (FD)
- Nesting surveys, with an overlap with nesting surveys of other species with similar nesting times and habitats, such as mugger
- Post hatching surveys and monitoring to establish mortality and survival rates
- Conduct training and awareness programs for FD staff on various issues of gharial ecology, habitat requirements, life cycle, etc.

This research is being carried out by undergraduate student Subir Chowfin.

12. BENCHMARKING BUFFALO PRODUCTION SYSTEMS IN SOUTH AFRICA (2011 TO PRESENT).

The breeding, keeping and hunting of disease free buffalo has become a lucrative business in South Africa. Yet, very little scientific data exists to describe the production systems utilised. It is envisaged that this study will help fill this dearth in our knowledge. We are working together with the Buffalo Owners Association of South Africa to ensure that the data collected is of value to the industry. This research is being conducted by MSc student Walter Hildebrandt.