## Robert Thomson, MSc

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A conservation professional with 26 years of experience in wildlife monitoring, training and data management, with a strong background in information technology. I have a particular interest in the practical applications of modern technology to conservation and research.

## Recent Experience

## Felines Communication and Conservation (Consultancy)

June 2019 – Present

Co-Founder, Co-Director, and Technical Specialist. I have assisted with work for a number of organisations, but my primary clients are currently the Namibian Chamber of Environment (NCE), Development Workshop Namibia (DWN) and Resource Africa (RA).

- Design, development and ongoing support for the Conservation Namibia, DWN, DW Zambia, RA, NamNet, and Conservancy Safaris Namibia websites.
- General IT support for DWN.
- Co-authorship of a camera-trapping manual for Endangered Wildlife Trust.
- Produced numerous maps using QGIS, as required by various projects.
- Developed a prototype SMART/Cybertracker app for Research Africa.
- Development and maintenance of various Filemaker (v17) databases for in-house data storage.
- Developed R scripts for ongoing periodic reports for key clients.
- Analysed spoor and sightings data gathered across Botswana using the R statistical package. Developed a standardised analysis protocol for spoor surveys in conjunction with Christiaan Winterbach and Florian Weise.

# Okavango Lion Monitoring Project, headed by Christiaan Winterbach January 2015 – October 2018

Maun, Botswana

- Developed, deployed and maintained Cybertracker databases (software uses MS Access platform) for the following projects:
  - African Conservation Experience's Okavango Monitoring Project.
  - Derek Keeping's Kalahari Track Survey (2018).
  - Botswana's Management Oriented Monitoring Systems (MOMS), being rolled out for environmental monitoring in the tourism sector.
  - Various in-house spoor and sightings databases.
- Developed Filemaker Pro (v12 and v16) databases for a proposed new Problem Animal Control (PAC) recording system for use by Botswana's Department of Wildlife and National Parks (DWNP).
- Co-led a two-thousand kilometre spoor survey in Western Ngamiland funded by the University of Wisconsin (Stephen's Point) in 2016. Conducted other spoor surveys during 2015-2018 in northern and central Botswana.

- Worked with African Conservation Experience (ACE) to refine their Okavango wildlife monitoring volunteer project, and provided ongoing scientific support for their teams.
- Reviewed and critiqued camera trap data processing software for a special edition of African Journal of Ecology, focusing on the use of camera traps in Africa.
- Assisted with developing a website for Conserve Botswana magazine.

During this time, I co-authored the following scientific publications:

Thomson, R., Potgieter, G.C., Bahaa-el-din, L. (2018). Closing the gap between camera trap software development and the user community. *African Journal of Ecology, 56(4), 721–739.* 

Winterbach, C.W., Thomson R. etc. (in prep.). Estimating Carnivore Density from Track Surveys: Revised Analyses for Improved Confidence.

Doden, E.S., Winterbach, C.W., Hygnstrom, S.E., Thomson, R., Potgieter, G.C., Budleski,S.J., Stangler, H.G., Winterbach, H.E.K. (in prep.). **Using prey biomass estimates to assess habitat suitability for large African carnivores in Northwestern Botswana**.

## Wildlife Conservation Research Unit (WildCRU)

February 2014 – September 2014 University of Oxford, United Kingdom

## Postgraduate Diploma in International Wildlife Conservation Practice – 77% overall (Distinction)

- An intensive course aimed at improving existing skills in ecology and behaviour, population biology, human-wildlife conflict resolution and community involvement, project management, monitoring techniques, GIS and statistical analysis. For full details, see: https://www.wildcru.org/courses/diploma/curriculum/
- One-day workshops were also provided, covering: an introduction to the ZSL's Spatial Monitoring and Reporting Tool (SMART), how to conduct animal autopsies in the field, the use of drones for conservation (including practical flight-plan design and manual flying), and field first aid.
- I completed the following two projects using data previously collected by WildCRU members. WildCRU hopes to submit both as journal articles in the future.

Thomson, R., Zimmermann, A., (unpub.) **Investigating the differing perceptions of human-jaguar** *Panthera onca* **conflict at 17 sites in Central and South America.** 

Thomson, R., Bahaa-el-din, L. (in prep.). **Modelling species occupancy for small carnivores in Afrotropical forests.** 

### **Employment History**

The Cheetah Conservation Fund (CCF) Otjiwarongo, Namibia

March 2008 - February 2014

## Head of Rhino Reserve Monitoring IT and Electronic Systems Manager

- Head of monitoring for the health and safety of rhinos loaned to CCF by the Custodian Programme of the Namibian Ministry of Environment, Forestry and Tourism (MEFT). This included radio tracking and mapping, design and implementation of camera trapping surveys – along with the ongoing checking of the camera trap network, monitoring and repair of infrastructure such as roads and fences, assisting with reserve security and ongoing liaison with the MEFT. I developed a management plan for the reserve, and also conducted a leopard census.
- Database development with Filemaker Pro (v11 and 12) migrating existing data onto the system and writing databases for future data entry. Developed systems to collect data from the field using Cybertracker. I also used my IT skills to automate data entry from GPS collars and camera traps, thus reducing the time required to complete these tasks.
- Responsibility for programming ARGOS and Iridium radio/satellite collars and liaising with suppliers.
   Also responsible for monitoring/mapping data from the collars, communicating the results to project stakeholders, including sponsors and local farmers, and assisting in cases of livestock mortality caused by released predators.
- Development and implementation of educational programmes for volunteers, tourists and Namibian students, on the history of the rhino species, the current threats, and the positive impact that community based conservation in Namibia has had on local wildlife populations and human incomes.
- For three years I taught a course that I developed on radio tracking and the use of a GPS. The course consisted of a lecture and several practical sessions, and was given to more than 150 international conservation students. A number of the course attendees asked me to consider presenting the course in their home countries and I subsequently taught this course to students at WildCRU (Oxford University) in the United Kingdom.

The Ethiopian Wolf Conservation Programme (EWCP) Oxford, United Kingdom, and Bale Mountains, Ethiopia

July 2009 – December 2014 [part time]

#### Webmaster

 Upgraded the EWCP website (www.ethiopianwolf.org) and provided ongoing maintenance and updates for the site as required by field project staff. Also assisted staff with social media interactions with members of the public and potential donors.

### Friends of Conservation (Abercrombie & Kent) London, United Kingdom

December 2008 – January 2014 [part time]

## Webmaster Graphic Designer

- Re-coded the FOC website (www.foc-uk.com) replacing overly complicated HTML with a streamlined XHTML/CSS standard and provided ongoing maintenance of the site as required by project staff.
- Ticket and flyer graphic design for fund-raising events, such as lectures by Jonathan Scott, Paul Goldstein, and Dr. Laurie Marker.

The British Red Cross London, United Kingdom May 2007 - March 2008 [part time]

### **Emergency Responder**

• Provided emergency on-call first aid support throughout the London region, and scheduled first aid coverage for events such as football matches, formal dinners, marches and the London Marathon.

## Ford Motor Company / TechTeam Global

January 2000 - July 2005

Essex, United Kingdom

### **Team Leader and UNIX Support Analyst**

- I provided daily support of more than 800 Sun, HP and SGI workstations and 15 Sun and HP servers, located across six sites in the UK and mainland Europe. This included user administration in a NIS environment, hardware and software upgrades, jumpstart configuration, shell scripting of administrative and user tools, network troubleshooting, print queue configuration/maintenance and system backups using Veritas NetBackup.
- In 2003, I took on the supplementary role of Team Leader for the five-person UNIX Help Desk. My additional roles included training of junior analysts, management briefings, co-ordination of site-wide upgrades and technical interviews of prospective staff.
- I created the department's intranet site and implemented a new web-based knowledge database that resulted in significant time savings for the entire team.
- I was heavily involved throughout the planning and equipment installation stages of a new building in Dagenham, East London. This included the organisation of user trials for new equipment and coordination with suppliers and manufacturers for problem management and resolution. I also worked closely with facilities management and network teams to get the new workstations and servers commissioned. The project was completed on time.

MCM Expo

May 2001 - October 2007 [part time]

London, United Kingdom

#### **Senior Volunteer Co-ordinator**

Team management of typically 70-120 volunteers for each of two annual weekend events for 20-30,000 attendees at the Excel Exhibition Centre in London. This included recruitment, scheduling, co-ordination with other department heads and venue security staff, plus extensive troubleshooting in a large-scale rapidly changing environment.

Fugro-LCT (Marine Survey Division)
London and Milton Keynes, United Kingdom

June 1997 - December 1999

**UNIX and Windows System Administrator** 

Shakespeare's Globe Theatre London, United Kingdom

1996 - 2020 [part time]

Steward, First Aider, Photographer

University of Kent at Canterbury
The Unit for Space Sciences and Astrophysics

September 1995 - December 1996

#### **Research Assistant**

- I was involved in several research projects relating to hypervelocity meteor impacts on orbiting spacecraft. These consisted both of the examination of spacecraft parts returned to Earth (e.g. solar cells from the Hubble Space Telescope), and laboratory based simulations.
- I operated and maintained a 5 km/sec light gas gun and a supporting Linux server.
- During this time I co-authored the following research papers and conference presentations:

Burchell, M.J. and Thomson, R. 1996. Intact Hypervelocity Particle Capture in Aerogel in the Laboratory. 1996. Volume 370 pp. 1155-1158 Proceedings of the conference of the American Physical Society topical group on shock compression of condensed matter

Shrine, N.R.G., McDonnell, J.A.M., Burchell, M.J., Gardner, D.J., Jolly, H.S., Ratcliff, P.R, and Thomson, R. 1996. **Euromir '95: First Results from the Dustwatch-P detectors of the European Space Exposure Facility.** *Paper B0.8-0012, 31st Scientific Assembly of COSPAR, Birmingham, United Kingdom, 14-21 July 1996* 

Shrine, N.R.G., McDonnell, J.A.M., Burchell, M.J, Gardner, D.J., Jolly, H.S., Ratcliff, P.R., and Thomson R. 1997. **Euromir '95: First Results from the Dustwatch-P detectors of the European Space Exposure Facility.** *Adv. Space Res. Vol. 20, No. 8, pp. 1481-1484* 

Taylor, E.A., Herbert, M.K., Gardner, D.J., Kay, L., Thomson, R. and Burchell, M.J. 1997. **Hypervelocity Impact on Spacecraft Carbon Fibre Reinforced Plastic/Aluminium Honeycomb.** *Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering - Volume 211, number 5* 

Burchell, M.J., Thomson, R., Yano, H. 1999. Capture of Hypervelocity Particles in Aerogel: in Ground Laboratory and Low Earth Orbit. Planetary and Space Science 47, 189-204

## **Qualifications and Training**

#### Qualifications

2014: Postgraduate Diploma in International Conservation Studies at the University of Oxford, U.K.

1995: MSc in Physics at the University of Kent at Canterbury, U.K.

1994: BSc (Hons) in Physics with Astrophysics at the University of Kent at Canterbury, U.K.

#### **Specialist Training**

Full, clean UK Driving Licence
JAR-FCL Private Pilot's Licence (expired in 2012)

2014: Expedition First Aid (Level 4), with Remote Emergancy Care, Surrey, UK

2011: Advanced Medicine for Remote Foreign Travel, with Wilderness Medical Training, Oxford, UK

2007: Standard First Aid, Manual Handling 1, and Providing Emotional Support, with the British Red Cross

2006: Sun Solaris 9 System Administration - parts 1 & 2

#### Referees

Glen Holland **Christiaan Winterbach** Dr. Laila Bahaa-el-din Partner and Product Manager, Formerly; Director, Senior Researcher. Werribee Open Range Zoo, Okavango Lion Monitoring Project, Intellitraps Ltd. Victoria, Australia Botswana Editor, Africal Journal of Ecology (AJE). glen-nat5@bigpond.com christiaan.winterbach@gmail.com lailab.sp@gmail.com