

JONATHAN JAMES SMALLIE

Curriculum Vitae

Date of birth: 20 October 1975

Qualifications: BSC – Agriculture (Hons)
University of Natal - Pietermaritzburg

Occupation: Field Biologist – Endangered Wildlife Trust –
Industries Partnership (a working group of
Endangered Wildlife Trust)

Duties: Conduct investigations, impact assessments, studies,
research on wildlife interactions with power line
infrastructure and wildlife hazards at airports.

The following projects have been completed since 2000.

1) Wildlife interactions with power lines

Bird Impact Assessment Studies for Electrical infrastructure:

Transmission lines:

- Mercury – Perseus 400kV
- Eros – Neptune – Grassridge 400kV
- Kudu-Juno 400kV
- Garona Aries 400kV
- Perseus Hydra 765kV
- Tabor – Witkop 275kV
- Tabor Spencer 400kV
- Moropule Orapa 220kV (Botswana)
- Coega Electrification
- Gamma Grassridge 765kV
- Gourikwa Proteus 400kV

Distribution lines:

- Kanoneiland 22kV
- Hydra-Gamma 765kV
- Komani-Manzana 132kV
- Rockdale-Middelburg 132kV
- Irenedale 132 kV
- Zandfontein 132kV

- Venulu-Makonde 132 kV
- Spencer-Makonde 132 kV
- Dalkeith-Jackal Creek 132kV
- Glen Austin 88kV
- Bulgerivier 132kV
- Ottawa-Tongaat 132kV
- Disselfontein 132kV
- Voorspoed Mine 132kV
- Wonderfontein 132kV
- Kabokweni Hlau Hlau 132kV
- Hazyview Kiepersol 132kV
- Mayfern Delta 132kV
- VAAL Vresap 88kV
- Arthursview Modderkuil 88kV
- Orapa, AK6, Lethakane substations and 66kV lines (Botswana)
- Dagbreek Hermon 66kV
- Uitkoms Majuba 88kV
- Pilanesberg Spitskop 132kV
- Qumbu PG Bison 132kV
- Louis Trichardt Venetia 132kV
- Rockdale Middelburg Ferrochrome 132kV
- New Continental Cement 132kV
- Hillside 88kV
- Marathon Delta 132kV
- Malelane Boulder 132kV
- Nondela Strengthening 132kV
- Spitskop Northern Plats 132kV
- West Acres Mataffin 132kV
- Westgate Tarlton Kromdraai 132kV
-

Generation projects:

- Eskom Concentrated Solar Power Plant
- West Coast Wind Energy Facility
- Hopefield Wind Energy Facility

Substations:

- Nooitgedacht distribution
- Pilanesberg distribution
- Gamma Transmission

Risk Assessments on existing power lines:

- Hydra-Droerivier 1,2 & 3 – 400kV
- Hydra-Poseidon 1,2 – 400kV
- Butterworth – Ncora 66kV
- Nieu-Bethesda 22kV
- Maclear 22kV (Joelshoek Valley Project)
- Wodehouse 22kV (Dordrecht district)
- Burgersdorp - Aliwal North - Jamestown 22kV
- Cradock 22kV
- Colesberg area 22kV
- Loxton self build 11kV
- Kanoneiland 22kV
- Stutterheim Municipality 22kV
- Majuba-Venus 400kV
- Chivelston-Mersey 400kV
- Marathon-Prairie 275kV
- Delphi-Neptune 400kV
- Ingagane – Bloukrans 275kV
- Ingagane – Danskraal 275kV
- Danskraal – Bloukrans 275kV

Bird mortality investigations & other studies:

- Bird Impact Assessment for Lizzard Point Golf Estate - Vaaldam
- Bird Impact Assessment for Lever Creek Estates housing development
- Investigation into rotating Bird Flapper saga – Aberdeen 22kV
- Investigation of in excess of 80 separate incidents of bird mortalities on power line networks from August 1999 to present
- Investigation of bird mortalities at 3 separate substations
- Special investigation into faulting on Ariadne-Eros 132kV
- Special investigation into Bald Ibis faulting on Tutuka Pegasus 275kV
- Special investigation into bird related faulting on 22kV Geluk Hendrina line
- Special investigation into bird related faulting on Camden Chivelston 400kV line

Avifaunal "walk thoughts" (EMP's):

- Beta Delphi 400kV
- Mercury Perseus 765kV
- Perseus 765kV Substation
- Beta Turn 765kV in lines

- Spencer Tabor 400kV line
- Kabokweni Hlau Hlau 132kV
- Mayfern Delta 132kV
-

Strategic Environmental Assessments for Master Electrification Plans

- Northern Johannesburg area
- Southern KZN and Northern Eastern Cape
- Northern Pretoria
- Western Cape Peninsula

Research projects:

- Southern Region Proactive GIS Blue Crane collision project

Conferences attended:

- September 2000: 5th World Conference on Birds of Prey in Seville, Spain.
- 2003: Presented a talk on "Birds & Power lines" at the 2003 AGM of the Amalgamated Municipal Electrical Unions – in Stutterheim - Eastern Cape
- June 2005: IASTED Conference at Benalmadena, Spain – presented a paper entitled "Impact of bird streamers on quality of supply on transmission lines: a case study"
- March 27 – 30 2006: International Conference on Overhead Lines, Design, Construction, Inspection & Maintenance, Fort Collins Colorado USA. Presented a paper entitled "Assessing the powerline network in the Kwa-Zulu Natal Province of South Africa from a vulture interaction perspective".

Courses & training:

- Successfully completed a 5 day course in High Voltage Regulations (modules 1 to 10) conducted by Eskom – Southern Region
- Successfully completed training on, and obtained authorization for, live line installation of Bird Flappers

Papers:

- Smallie, J. & Van Rooyen, C. 2003. Risk assessment of bird interaction on the Hydra-Droërvier 1 and 2 400kV. Unpublished report to Eskom Transmission Group. Endangered Wildlife Trust. Johannesburg. South Africa
- Van Rooyen, C. Jenkins, A. De Goede, J. & Smallie J. 2003. Environmentally acceptable ways to minimise the incidence of power outages associated with large raptor nests on Eskom pylons in the Karoo: Lessons learnt to date. Project number 9RE-00005 / R1127 Technology Services International. Johannesburg. South Africa
- Smallie, J. & Van Rooyen, C. 2005. Impact of bird streamers on quality of supply on transmission lines: a case study. Proceedings of the Fifth IASTED International Conference on Power and Energy Systems, Benalmadena, Spain.

2) Wildlife hazards at airports

Risk assessments:

Assessments of the bird strike hazard posed to aircraft have been conducted at the following airports:

- Kigali International Airport - Rwanda
- Port Elizabeth Airport – specialist study as part of the EIA for the proposed Madiba Bay Leisure Park
- Manzini International Airport (Swaziland)
- Polokwane International Airport
- Mafekeng International Airport
- Lanseria Airport

Courses and training:

- One day course in Airside Induction & Safety successfully attended

Conferences attended:

- May 2005: International Bird Strike Committee 27th meeting – Athens, Greece. Presented a paper entitled Bird Strike Data analysis at SA airports 1999 to 2004.

Papers:

- Smallie, J. & Froneman, A. 2005. Bird Strike data analysis at South African Airports 1999 to 2004. Proceedings of the 27th Conference of the International Bird Strike Committee, Athens Greece.