

## CURRICULUM VITAE – ANDREW ROBERT JENKINS

**Date & Place of Birth:** 11 June 1966; Glasgow, Scotland.

**Nationality:** South African & British.

**Address:** AVISENSE Consulting cc, 10 Harrier Circle, Imhoff's Gift, Kommetjie 7975, RSA; Tel. RSA (021) 786 4358 (w), 082 959 9238, Fax. RSA (021) 786 3279; Email: *Andrew@avisense.co.za*

### Education

**1989-1998:** MSc upgraded to PhD, Percy FitzPatrick Institute, University of Cape Town. Thesis title: *Behavioural ecology of Peregrine and Lanner Falcons in South Africa.*

**1988:** BSc Hons in Zoology, University of Natal, Pietermaritzburg (with distinction). Project title: *Bill morphology, feeding ecology and niche partitioning in six sympatric species of granivorous birds.*

**1984-1987:** BSc, University of Natal, Pietermaritzburg, majoring in Zoology and African & Experimental Zoology.

**1983:** Matriculated at St. Stithian's College, Randburg.

### Employment & experience

**April 2009-Present:** Set up own business as a full-time avifaunal consultant - AVISENSE Consulting cc, with a strong emphasis on impact assessments for energy developments. Currently involved in EIA assessments and pre-construction monitoring for >30 proposed wind energy developments and >15 proposed solar energy developments in the Western, Eastern and Northern Cape Provinces, South Africa.

**May 2011:** Primary author of the EWT/BirdLife SA best practice guidelines for avian monitoring at wind energy development sites, and of the revision of this document in 2012.

**January 2003-March 2009:** Retained by various agencies to do EIA work as an avian specialist for development projects in the Greater Cape Town area, and more broadly in the Western Cape, latterly including numerous proposed power line and renewable energy developments.

**March 2007-Present:** Retained as an Honorary Research Associate, and latterly as a Research Associate at the FitzPatrick Institute, UCT, and as an Honorary Research Associate at the Animal Demography Unit, UCT. During this time continued to conduct my own work on falcon biology – Peregrine Falcon demography in the Greater Cape Town area, Taita Falcon survey, monitoring and conservation biology in the Mpumalanga/Limpopo escarpment region - and co-supervised a Masters mini-thesis on power line collision risk in Blue Cranes, a PhD on power line collision risk in Ludwig's Bustard, an MSc (recently upgraded to PhD) on the foraging ecology of Verreaux's Eagle (in collaboration with the Animal Demography Unit), and an MSc on the conservation status of the Martial Eagle in southern Africa in relation to the distribution of the national power grid.

**September 2007-March 2009:** Employed as a research scientist by the Wildlife & Energy Interaction Group of the Endangered Wildlife Trust, tasked with (i) consolidating and strengthening existing research, and initiating new research initiatives, in the field of wildlife/power line interactions, and particularly in the mitigation of bird mortalities associated with electrical infrastructure, and (ii) doing in-depth EIA assessments for major proposed developments in energy infrastructure. Designed the WEIG research programme for 2008-2011, focusing on the mitigation of bird:power line collisions.

**March 2002-February 2007:** Employed as research scientist at FitzPatrick Institute, UCT from March 2002, managing the *Western Cape Raptor Research Programme*, and overseeing various raptor-

based projects, including a collaboration with electricity supplier Eskom to reduce the incidence of line faults associated with large eagle nests on electricity transmission pylons in the Karoo, and a collaboration with the Critical Ecosystem Partnership Fund to investigate the value of the Black Harrier as a surrogate species in the conservation of lowland Fynbos and Renosterveld. Also conducted work on the suitability of Barn Owls as bio-control agents for rodents in a wheat-farming area, and the role of African Fish Eagles and other raptors as indicators of agrochemical contamination in an area of intensive viticulture, and organized and led a survey of the Taita Falcon population of the Mpumalanga escarpment. During this period, co-supervised one MSc thesis, three MSc Conservation Biology mini-theses, and two BSc Hons projects.

- January 1989-Present:** Conducted long-term field study of Peregrine Falcons on the Cape Peninsula, including monitoring of breeding performance and demography of a colour-marked population. Still ongoing.
- 2005-2006:** Employed by Maloti-Drakensberg Ecological Consultants in a collaboration with David Allan of the Durban Museum of Natural History to survey the populations of Bearded and Cape Vultures in the Lesotho Highlands, as part of a strategic conservation initiative stemming from the Maloti-Drakensberg Transfrontier Project.
- January 2003-2004:** Retained to design and oversee monitoring of impacts on avifauna of the Eskom Demonstration Wind Farm facility at Klipheuwel, W Cape.
- April 2001-2004:** Produced initial scoping report and conducted subsequent monitoring of the potential impact of the proposed Darling National Demonstration Wind Farm facility on the local avifauna.
- November 1998–December 2000:** Employed as a postgraduate research fellow at the FitzPatrick Institute, UCT, working on various projects concerning the biology of predation. Also co-supervised the two Masters mini-theses in Conservation Biology, and oversaw the experiential training year of a Cape Technikon Nature Conservation student.
- November 1998:** Subcontracted by the Environmental Evaluation Unit, UCT, to conduct the avian component of a site evaluation for the proposed extension of the Namakwa Sands heavy mineral sands mine area near Lutzville on the Cape west coast.
- September 1996, August 1997, August 2000:** Part of ornithological team subcontracted by Afridev Consultants to survey the birds of the Katse Basin, Lesotho: phase 1A of the Lesotho Highlands Water Scheme.
- August 1995:** Part of ornithological team subcontracted by Afridev Consultants to survey the birds of the Mophale Basin, Lesotho: phase 1B of the Lesotho Highlands Water Scheme.
- July 1992 & December/January 1993:** Contributor to "Environmental survey to determine priority areas for conservation, community use and development in the West Coast urban structure plan". Assessed avian diversity in proposed priority areas in a study coordinated by the National Botanical Institute.
- June 1991:** Assisted with bird component of "Baseline biological study of phase 1a of the Lesotho Highlands water scheme", coordinated by Loxton Venn environmental consultants.
- December 1989:** Assisted with environmental impact assessment of the West Coast Heavy Mineral Sands Project at *Brand se Baai*, subcontracted by UCT's Environmental Evaluation Unit.

#### **Selected publications and reports**

Scientific papers

Jenkins, A.R. 2000. Factors affecting breeding success of Peregrine and Lanner Falcons in South Africa. *Ostrich* 71: 385-392.

- Jenkins, A.R. 2000. Hunting mode and success of African Peregrines *Falco peregrinus minor*: does nesting habitat quality affect foraging efficiency? *Ibis* 142: 235-246.
- Jenkins, A.R. & Benn, G.A. 1998. Home range size and habitat requirements of Peregrine Falcons on the Cape Peninsula, South Africa. *Journal of Raptor Research* 32: 90-97.
- Jenkins, A.R. & Hockey, P.A.R. 2001. Prey availability influences habitat tolerance: an explanation for the rarity of peregrine falcons in the tropics. *Ecography* 24: 359-367.
- Jenkins, A.R. & van Zyl, J.A. 2005. Conservation status and community structure of cliff-nesting raptors and ravens on the Cape Peninsula, South Africa. *Ostrich* 76: 175-184.
- Jenkins, A.R., Allan, D.G. & Smallie, J.J. 2009. Does electrification of the Lesotho Highlands pose a threat to that country's unique raptor fauna? Dubious evidence from surveys of three existing power lines. *Gabar* 20: 1-11.
- Jenkins, A.R., Allan, D.G., Botha, A., Harvey, A., Kemp, A.C., Monadjem, A., Rodrigues, L., Rushworth, D., Stephenson, A. & van Zyl, A.J. 2008. Preliminary survey of Taita Falcon *Falco fasciinucha* in the Drakensberg escarpment region of Mpumalanga and Limpopo Provinces, South Africa. *Bulletin of the African Bird Club* 15: 53-58.
- Jenkins, A.R., Smallie, J.J. & Diamond, M. 2010. Avian collisions with power lines: a global review of causes and mitigation with a South African perspective. *Bird Conservation International* 20:263-278.
- Jenkins, A.R., Shaw, J.M., Smallie, J.J., Gibbons, B., Visagie, R. & Ryan, P. 2011. Estimating the impacts of power line collisions on Ludwig's Bustards *Neotis ludwigii*. *Bird Conservation International* 21: 303-310.
- Jenkins, A.R., de Goede, J.H., Sebele, L. & Diamond, M. 2013. Brokering a settlement between eagles and industry: sustainable management of large raptors nesting on power infrastructure. *Bird Conservation International* 23: 232-246.
- Altwegg, R., **Jenkins, A.** & Abadi, F. 2014. Nestboxes and immigration drive the growth of an urban Peregrine Falcon *Falco peregrinus* population. *Ibis* 156: 107-115.
- Curtis, O., Simmons, R.E. & **Jenkins, A.R.** 2004. Black Harrier *Circus maurus* of the Fynbos biome, South Africa: a threatened specialist or an adaptable survivor? *Bird Conservation International* 14: 233-245.
- Curtis, O.E. & **Jenkins, A.R.** 2005. Shell thickness and size of Peregrine Falcon, *Falco peregrinus minor*, eggs from two areas in South Africa. *Ostrich* 73: 64-66.
- Curtis, O., Malan, G. & **Jenkins, A.R.** 2007. Multiple-brooding in birds of prey: South African Black Sparrowhawks *Accipiter melanoleucus* extend the boundaries. *Ibis* 147: 11-16.
- Machange, R.W., **Jenkins, A.R.** & Navarro, R.A. 2005. Eagles as indicators of ecosystem health: Is the distribution of Martial Eagle nests in the Karoo, South Africa, influenced by variations in land-use and rangeland quality? *Journal of Arid Environments* 63: 223-243.
- Saether, B-E., Coulson, T., Grøtan, V., Engen, S., Altwegg, R., Armitage, K.B., Barbraud, C., Becker, P.H., Blumstein, D.T., Dobson, F.S., Festa-Bianchet, M., Gaillard, J-M., Jenkins, A., Jones, C., Nicoll, M.A.C., Norris, K., Oli, M.K., Ozgul, A. & Weimerskirch, H. 2013. How life history influences population dynamics in fluctuating environments. *The American Naturalist* 182: 743-759.
- Shaw, J., **Jenkins, A.R.** & Ryan, P.G. 2010a. Modelling power line collision risk in the Blue Crane *Anthropoides paradiseus* in South Africa. *Ibis* 152: 590-599.
- Shaw, J., **Jenkins, A.R.**, Ryan, P.G. & Smallie, J. 2010b. A preliminary survey of avian mortality on power lines in the Overberg, South Africa. *Ostrich* 81: 109-113.

#### Semi-popular articles and books

- Jenkins, A. 2005. Southern Africa's Birds of Prey. Africa Geographic, Cape Town.
- Jenkins, A. 2007. On the trail of the Taita. *Africa – birds & birding* 12(3): 35-37.
- Jenkins, A. 2008. Wing bling: keeping track of raptors. *Africa – birds & birding* 12(6): 45-49.
- Jenkins, A. 2010. Fast tracking: A Peregrine Diary. *Africa – birds & birding* 15(1): 46-55.
- Jenkins, A. 2010. Cliff-hangers: A Peregrine Diary. *Africa – birds & birding* 15(2): 34-43.
- Jenkins, A. & van Zyl, A. 2002. Home on the range: raptor riches of the Cape Peninsula. *Africa – birds & birding* 7(5): 38-46.
- Jenkins, A. & Davies, R. 2005. Dying for a drink: running the raptor gauntlet at Kalahari waterholes. *Africa – birds & birding* 10(4): 34-45.
- Jenkins, A. & Smallie, J. 2009. Terminal velocity: end of the line for Ludwig's Bustard? *Africa – birds & birding* 14(2): 34-39.
- FitzPatrick Institute. 2005. Landing rights: crane conservation conundrums on SA farmland. *Africa – birds & birding* 10 (4): 62-64.
- Curtis, O. & **Jenkins, A.** 2001. It's never too late to learn: the effects of pesticides on southern African environments. *African Wildlife* 55: 13-15.
- Curtis, O., **Jenkins, A.** & Simmons, R. 2001. The Black Harrier: work in progress. *Africa – birds & birding* 6(5): 30-36.
- de Goede, K. & **Jenkins, A.** 2001. Electric eagles of the Karoo. *Africa – birds & birding* 6(4): 62-67.
- Welz, A. & **Jenkins, A.** 2005. How green is the valley: monitoring Fish Eagles along the Breede River. *Africa – birds & birding* 10(1): 30-37.

#### Reports

- Jenkins, A.R. 1998. Site evaluation for Namakwa Sands heavy mineral sands mine: Birds.
- Jenkins, A.R. 2002. Inputs to the Environmental Management Plan for construction and maintenance work on Chapman's Peak Drive: Cliff-dwelling birds. Report to *Ecosense* Environmental Consultants.
- Jenkins, A.R. 2003. Monitoring the impact of the Eskom Wind Energy Demonstration Facility on local avifauna: project outline and data collection protocols. Report to Eskom.
- Jenkins, A.R. 2003. Populations and movements of priority bird species in the vicinity of the proposed Darling Demonstration Wind Farm facility. Report to UCT's Environmental Evaluation Unit.
- Jenkins, A.R. 2004. Environmental impacts on birds of *Infogold's* proposed development within the 'Heritage Park' framework plan. Report to Doug Jeffery Consultants.
- Jenkins, A.R. 2006. Environmental impacts on birds of Eskom's proposed 66 kV overhead powerline between Riviersonderend and Vryheid. Report to SHE Cape Environmental consultants.
- Jenkins, A.R. 2007. Assessing the bird strike potential of the existing Spoornet 50 kV OHTE installation and a proposed new 50 kV feeder line between Sishen and Saldanha. Report to SHE Cape Environmental consultants.
- Jenkins, A.R. 2008. Eskom generation wind energy facility – Western Cape: Avifaunal impact assessment. Report to Savannah Environmental (Pty) Ltd.
- Jenkins, A.R. 2009. Hopefield wind energy facility: avifaunal impact assessment. Report to Savannah Environmental (Pty) Ltd.
- Jenkins, A.R. 2010. Dorper wind energy facility: Avian impact assessment. Report to Savannah Environmental (Pty) Ltd.

- Jenkins, A.R. 2010. Exxaro Namakwa Sands wind energy facility: Avian impact assessment. Report to Savannah Environmental (Pty) Ltd.
- Jenkins, A.R. 2010. Gouda wind energy facility: Avian impact assessment. Report to Savannah Environmental (Pty) Ltd.
- Jenkins, A.R. 2010. De Aar PV solar energy facility: Avian impact assessment. Report to DJ Environmental (Pty) Ltd.
- Jenkins, A.R. 2010. Prieska PV solar energy facility: Avian impact assessment. Report to DJ Environmental (Pty) Ltd.
- Jenkins, A.R. 2010. Richtersveld wind energy facility: Avian impact assessment. Report to ERM Southern Africa (Pty) Ltd.
- Jenkins, A.R. 2010. Roggeveld wind energy facility: Avian impact assessment. Report to ERM Southern Africa (Pty) Ltd.
- Jenkins, A.R. 2011. Olyven Kolk PV solar power plant: Bird impact assessment. Report to ERM Southern Africa.
- Jenkins, A.R. 2011. Happy Valley wind energy facility: Bird impact assessment. Report to Savannah Environmental (Pty) Ltd.
- Jenkins, A.R. 2011. Kappa-Omega 765 kV power line: Avian inputs to the environmental management plan. Report to NCC Environmental Services.
- Jenkins, A.R. 2012. Mainstream Aberdeen wind energy facility: Bird impact assessment - Scoping. Report to Savannah Environmental (Pty) Ltd.
- Jenkins, A.R. 2012. Copperton photovoltaic energy facilities 2, 3 & 4: Bird impact assessments. Reports to Aurecon South Africa (Pty) Ltd.
- Jenkins, A.R. 2012. Letseng Wind Farm: bird impact assessment. Report to Classical Environmental Management Services.
- Jenkins, A.R. 2012. Sea water desalination plant in the Saldanha Bay area, Western Cape, South Africa: Environmental impact assessment – terrestrial birds. Report to the CSIR Environmental Management Services.
- Jenkins, A.R. & du Plessis, J. 2013. Proposed hydropower station and associated infrastructure at Boegoeberg Dam on the Orange River, Northern Cape: Avian impact assessment. Report to Aurecon South Africa (Pty) Ltd.
- Jenkins, A.R. & du Plessis, J. 2013. Proposed PV2-10 photovoltaic energy plants on the farm Hoekplaas near Copperton, Northern Cape: Avian impact assessment. Report to Aurecon South Africa (Pty) Ltd.
- Jenkins, A.R. & du Plessis, J. 2013. Proposed PV2-7 photovoltaic energy plants on the farm Klipgats near Copperton, Northern Cape: Avian impact assessment. Report to Aurecon South Africa (Pty) Ltd.
- Jenkins, A.R. & du Plessis, J. 2013. Proposed PV2-5 photovoltaic energy plants on the farm Badenhorst Dam near De Aar, Northern Cape: Avian impact assessment. Report to Aurecon South Africa (Pty) Ltd.
- Jenkins, A.R. & du Plessis, J. 2013. Proposed PV2-4 photovoltaic energy plants on the farm Du Plessis Dam near De Aar, Northern Cape: Avian impact assessment. Report to Aurecon South Africa (Pty) Ltd.
- Jenkins, A.R., van Rooyen, C.S., Smallie, J.J., Anderson, M.D. & Smit, H.A. 2012. Best practice guidelines for avian monitoring and impact mitigation at proposed wind energy development sites in southern Africa, 1st Revision. Endangered Wildlife Trust/BirdLife South Africa, Johannesburg.

- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2012. Clover Valley and Groenekloof Wind Energy Facilities: avian impact assessment. Report to Withers Environmental.
- Jenkins, A.R. & Allan, D.G. 2012. Lesotho Wind Power Project: avian impact assessment – scoping study. Report to ERM Southern Africa.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2012. Amakahla Emoyeni Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Windlab Developments South Africa (Pty) Ltd.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2012. West Coast One Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Moyeng Energy (Pty) Ltd.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2012. Rhebokfontein Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Moyeng Energy (Pty) Ltd.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2012. Klipheuwel Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to BioTherm Energy.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2013. Msenge Emoyeni Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Windlab Developments South Africa (Pty) Ltd.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2013. Perdekraal Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Mainstream.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2013. Riverbank Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Just Energy.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2013. Riverbank Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Just Energy.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2013. Copperton Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Plan8.
- Jenkins, A.R., du Plessis, J., Colyn, R., Cooke, P-J, & Benn, G. 2013. Riverbank Wind Energy Facility: avian impact risk assessment and mitigation scheme. Report to Just Energy.
- Allan, D.G., Barnes, K.N., **Jenkins, A.R.** & Whittington, P. 1996. Baseline biological survey, fauna and flora, Lesotho Highlands water Project Phase 1B Mohale Dam – birds. ADU Research Report 18. Unpubl. Report. Avian Demography Unit, University of Cape Town, Cape Town.
- Brown, C., **Jenkins, A.R.** & Turpie J. 1993. Environmental survey to determine priority areas for conservation, community use and development in the west coast urban structure plan: Bird species lists.

## References

The following people should be contacted for testimonials:

- Assoc. Prof. Peter Ryan, Acting Director, Percy FitzPatrick Institute of African Ornithology, University of Cape Town, Rondebosch 7701, South Africa, tel. +27 21 650 3290, email: [pryan31@gmail.com](mailto:pryan31@gmail.com).
- David Allan, Director, Durban Natural Science Museum, P.O. Box 4085, Durban 4000, South Africa, tel. +27 31 300 6211, email: [david.allan@durban.gov.za](mailto:david.allan@durban.gov.za).
- Mark Anderson, CEO, BirdLife South Africa, P.O. Box 515, Randburg 2125, Gauteng, South Africa, tel. +27 11 789 1122, email: [ceo@birdlife.org.za](mailto:ceo@birdlife.org.za).