

UNIVERSITY OF PRETORIA

FORMAT OF CURRICULUM VITAE

The University prefers the following CV format. Specific items can be added to or omitted to reflect faculty specific and/or individual circumstances, but the given numbering should, as far as possible, be followed to facilitate the evaluation process.

Provision of information about race and gender is optional, but will assist the University to report in terms of current employment equity legislation.

EVALUATION DATE: *(Office use only)*

1. BIOGRAPHICAL SKETCH

1.1 GENERAL INFORMATION

Surname	Van Aarde									
First names	Rudolph Johannes			ID Number	5109215124086					
Citizenship	South African			Title	Prof	Female	<input type="checkbox"/>	Male	<input checked="" type="checkbox"/>	
Place of birth	Nylstroom, South Africa			Date of birth	21 September 1951					
Population group	African	<input type="checkbox"/>	Coloured	<input type="checkbox"/>	Indian	<input type="checkbox"/>	White	<input checked="" type="checkbox"/>	Other (Please specify)	<input type="checkbox"/>
Department	Zoology & Entomology			Position	Professor of Zoology Chair of Conservation Ecology					
Direct Telephone	+27 12 420 2753			Direct Tele fax	+27 12 420 4523					
E-mail	rjvaarde@zoology.up.ac.za									
Date of appointment	January 1975			Permanent full-time	<input checked="" type="checkbox"/>	Temporary full-time	<input type="checkbox"/>			

1.2 ACADEMIC QUALIFICATIONS OBTAINED

Degree/ Diploma	Field of study	Higher education institution	Year	Distinctions
BSc	Zoology	University of Pretoria	1973	
BSc (Hons)	Zoology	University of Pretoria	1974	
MSc	Zoology	University of Pretoria	1978	
PhD	Zoology	University of Pretoria	1984	

1.3 WORK EXPERIENCE TO DATE

Name of employer	Capacity and/or type of work	Period
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University of Pretoria	Temporary junior lecturer, Department of Zoology, University of Pretoria.	1974
University of Pretoria	Antarctic research biologist, Mammal Research Institute, University of Pretoria.	1975 – 1978
University of Pretoria	Temporary lecturer, Department of Zoology, University of Pretoria.	1979
University of Pretoria	Temporary research officer, Mammal Research Institute, University of Pretoria.	1979 – 1983
University of Pretoria	Research officer, Mammal Research Institute, University of Pretoria.	1984 – 1985
University of Pretoria	Senior lecturer, Department of Zoology, University of Pretoria.	1986 – 1987
University of Pretoria	Associate Professor, Department of Zoology, University of Pretoria.	1988 – 1990
University of Pretoria	Professor, Department of Zoology, University of Pretoria.	1991 – 1994
University of Pretoria	Professor, Department of Zoology & Entomology, University of Pretoria.	1995 – 2017
University of Pretoria	Emeritus Professor, Department of Zoology & Entomology, University of Pretoria.	2017 – present
University of Pretoria	Director, Conservation Ecology Research Unit, University of Pretoria.	1999 - present

2. TEACHING ACTIVITIES

2.1 Courses presented

Course	Level (e.g. second year, Masters)	Self-developed (Yes or No)
Lecturing in community ecology (2003 - 2017).	Third year	Yes
Lecturing in population and community ecology (1987 - 2002).	Third year	Yes
Practical courses in population biology and community ecology (1987 - 2017).	Third year	Yes
<i>Ad hoc</i> lecturing to students in reproductive endocrinology (1987 - 1994).	Third year	Yes
Lecturing in reproductive adaptations in mammals (1996 - 1997).	Third year	Yes
Lecturing in behavioural ecology (1998).	Third year	Yes
Guest lecturer in restoration ecology (2009 - 2017).	Second year	Yes
Guest lecturer in course on African biomes (1998 – 2001).	Second year	Yes
Guest lecturer in conservation biology course (1998 - 2001).	Second year	Yes
Lecturing in course on African Vertebrates (2002).	Second year	Yes

Course	Level (e.g. second year, Masters)	Self-developed (Yes or No)
Lecturing in population biology, community ecology and conservation biology (1979 - 1993).	Honours students	Yes
Practical courses in population biology, community ecology, growth and age determination (1979 - 1993).	Honours students	Yes
Lecturing in community and restoration ecology (1992 - 2000).	Honours students	Yes
Lecturing in community ecology (2006 – 2016).	Honours	Yes
Lecturing in population & community ecology (2000 – 2005).	Honours students	Yes
Lecturing in Life History & Population biology (1993 - 1994).	Honours students	Yes
Lecturing in Reproductive Biology & Technology (1994 - 1996).	MSc	Yes
MVSc students: Lecturing in Population & Community ecology (1997 – 2005).	MSc	Yes
M. Inst. Agric. students: Lecturing in Community & Restoration ecology (1997 – 1999).	MSc	Yes
MSc Conservation Ecology & Planning Course development and course leader.	MSc	Yes
Lecturing in population & communities in space and time (2001 – 2007).	MSc	Yes
Lecturing in Conservation in Practice (2001 – 2007).	MSc	Yes
Supervisor of mini dissertations.	MSc	Yes
MSc African Mammalogy Lecturing in Mammal Population & communities in space and time (2001 – 2007).	MSc	Yes
Lecturing in Conservation in Practice (2001 – 2007).	MSc	Yes
BVSc Conservation Biology Lecturing in Conservation Biology (2011 – 2015)	BVSc third and fourth year (WOC 610)	Yes

3. TEACHING OUTPUTS

3.1 Educational publications and products

Provide full details including full titles, names of all the authors, publishers, dates, page numbers etc. Specify your exact contribution to the publications or products. Note that the publications here should be of a didactic nature e.g. articles in educational publications, papers presented at educational conferences, etc. A summary and description of educational products developed can be provided (e.g. study guides, learning materials, multimedia productions (CDs), educational videos, web materials, text books etc.) relevant to university education.

VAN AARDE, R.J. 1990. Mammal Research Institute: Postgraduate Training and Research. Typescript MRI 32p.
 VAN AARDE, R.J. 1990. Investigation into the implementation of research findings. Report to the Human Sciences Research Council. 24p.

VAN AARDE, R.J. 1990 - 1994. Departement Dierkunde : Studiegids 1990. Typescript 16p.

VAN AARDE, R.J. & RASA, O.A.E. 1990. Guide to writing theses. Typescript, Department of Zoology, University of Pretoria. 13p.

VAN AARDE, R.J. 1996 - 2006. Course study guides for third year students in ecology Typescripts 6p.

VAN AARDE, R.J. 2007 – 2017. Course study guides and PowerPoint presentations for third year students in zoology, entomology and ecology Typescripts 46p.

4. OTHER TEACHING CONTRIBUTIONS

4.1 Membership of national and international bodies

List all the teaching associations or societies to which you belong. Name your involvement, e.g. honorary member, founder member, full member, chairman, president, secretary

4.2 Visits to local and overseas universities as guest professor or lecturer in regard to teaching

Provide details

4.3 Participation in national and international teaching associations, bodies, committees

List all memberships of associations and bodies, as well as teaching committees (e.g. curriculum and assessment committees, teaching review committees, etc.) in which you participate. Name the type and extent of participation

5. RESEARCH ACTIVITIES

5.1 Former supervision or co-supervision (*completed*)

Name of student	Degree/Title of dissertation/ thesis and date	Supervisor	Co-supervisor(s)	Duration of studies (years)
BSc (Honours) students				
Morris, D.	BSc (Honours) - Sexual behaviour of the female porcupine <i>Hystrix africaeaustralis</i> .	R.J. van Aarde		1983
Grant, K.	BSc (Honours) - Parental care in the porcupine <i>Hystrix africaeaustralis</i> .	R.J. van Aarde		1984
Davis, C.	BSc (Honours) - Oestrus synchronisation in Cape porcupines.	R.J. van Aarde		1987
Fergusson, R.	BSc (Honours) - Inter-group aggression in Cape porcupines.	R.J. van Aarde		1987
van Wyk, V.	BSc (Honours) - GnRH stimulation and testosterone secretion in Cape porcupines.	R.J. van Aarde		1987
van der Swan, T.	BSc (Honours) - Progesterone metabolism in the rock hyrax, <i>Procavia capensis</i> .	R.J. van Aarde		1987
van Zyl, D.	BSc (Honours) - Androgen secretion by pregnant porcupines.	R.J. van Aarde		1988
White, L.	BSc (Honours) - Urinary steroids in porcupines.	R.J. van Aarde		1988
Cordell, C.	BSc (Honours) - Steroid metabolites in Cape porcupines.	R.J. van Aarde		1989
Malan, J.	BSc (Honours) – Effect of odours on trapability of rodents.	R.J. van Aarde		1990
Hoffman, A.	BSc (Honours) – Scent marking in Cape porcupines.	R.J. van Aarde		1991

Name of student	Degree/Title of dissertation/ thesis and date	Supervisor	Co-supervisor(s)	Duration of studies (years)
Foord, S.	BSc (Honours) – Vervet monkeys as agents of seed dispersal in rehabilitated dune forests.	R.J. van Aarde		1993
Kreiner, A.	BSc (Honours) – Competitive interactions in co-existing rodents.	R.J. van Aarde		1993
Ford, M.	BSc (Honours) – Steroidogenic potential of the foetal elephant ovary.	R.J. van Aarde		1993
Neluvhalani, J.	BSc (Honours) – Influence of seed treatment on survival of forest dwelling rodents.	R.J. van Aarde		1994
Greyling, M.	BSc (Honours) – Competitive exclusion in a millipede community.	R.J. van Aarde		1994
Mecenero, S.	BSc (Honours) – Population biology of mice at Marion Island.	R.J. van Aarde		1994
Koekemoer, A.	BSc (Honours) – Ecomorphological variables in developing avian communities.	R.J. van Aarde		1996
Knowles, T.	BSc (Honours) – Starvation and dispersal in multi-mammate mice.	R.J. van Aarde		1997
du Toit, M.	BSc (Honours) – Starvation and sexual selection in the multi-mammate mouse.	R.J. van Aarde		1998
Venturi, F.	BSc (Honours) – Environmental predictors of the distributional ranges of <i>Mastomys</i> species in southern Africa.	R.J. van Aarde		2001
Ntshotsho, P.	BSc (Honours) – The consequences of water deprivation for kidney function in <i>Mastomys</i> species.	R.J. van Aarde		2002
de Beer, Y.	BSc (Honours) – Elephants, drought and woody plants in Namibia's Etosha National Park.	R.J. van Aarde		2003
Wilson, J.	BSc (Honours) – Forest fragmentation and bird communities in Maputaland.	R.J. van Aarde		2003
Junker, J.	BSc (Honours) – Meta analysis of elephant census data.	R.J. van Aarde	R.A.R. Guldemon	2005
Lee, T.	BSc (Honours) – Spatial segregation in elephants.	R.J. van Aarde	T. Ott	2008
de Flamingh, A.	BSc (Honours) – Elephants space use in changing environments.	R.J. van Aarde	M. Trimble	2009
Muller, E.	BSc (Honours) – Implementation of conservation legislation and policy in Mozambique.	R.J. van Aarde		2010
Mohale, O.M.	BSc (Honours) – Response of millipedes to heterogeneity in primary productivity.	R.J. van Aarde	R.A.R. Guldemon	2011
Piears, K.	BVSc (Honours) - Directional movements in free-ranging elephants.	R.J. van Aarde		2011
Visser, N.	BSc (Honours) – Peninsula effect on millipedes.	R.J. van Aarde	P.I. Olivier	2012
Robson, A.	BSc (Honours) – Societal attitudes to dune forest restoration.	R.J. van Aarde	K. Young	2012
Strauss, C.	BSc (Honours) – Historical contingencies as determinants of millipede assemblages.	R.J. van Aarde	R.A.R. Guldemon	2013

Name of student	Degree/Title of dissertation/ thesis and date	Supervisor	Co-supervisor(s)	Duration of studies (years)
Harthoorn, S.	BSc (Honours) – Thermodynamics of elephants at night.	R.J. van Aarde		2013
Coleman, A.H.	BSc (Honours) – Googling elephants.	R.J. van Aarde		2014
Freeman, M.T.	BSc (Honours) – The response of coastal forest birds to matrix transformation.	R.J. van Aarde	P.I. Olivier	2015
Reljic, E.	BSc (Honours) – Partitioning the ecological processes that drive dune forest regeneration.	R.J. van Aarde	P.I. Olivier	2015
Voysey, M.	BSc (Honours) – Water as a determinant of elephant movement patterns.	R.J. van Aarde		2015
Erasmus, P.L.	BSc (Honours) – How does the matrix influence regenerating coastal forest bird assemblages?	R.J. van Aarde	P.I. Olivier	2016
Motsomane, P.T.	BSc (Honours) – Identifying a benchmark for coastal dune forest rehabilitation.	R.J. van Aarde	V. Rolo	2016
Prinsloo, C.	BSc (Honours) – Mammal community structure in South African protected areas.	R.J. van Aarde	P.I. Olivier	2016
MSc students				
van der Colf, W.	MSc – Thermoregulation and reproduction in the hedgehog (<i>Erinaceus frontalis</i>) A. Smith.	R.J. van Aarde		1987-1989
van Wyk, V.	MSc – Plasma progesterone-binding proteins in the Cape porcupines, <i>Hystrix africaeaustralis</i> .	R.J. van Aarde	B. Louw	1989-1991
Machiné, C.B.	MSc – The ecology of the sable antelope <i>Hippotragus niger niger</i> (Harris 1838) in the Masebé Nature Reserve, Lebowa.	R.J. van Aarde		1989-1991
de Villiers, M.	MSc – Trophodynamics of the Cape porcupine, <i>Hystrix africaeaustralis</i> Peters, 1852, at Nylsvley Nature Reserve.	R.J. van Aarde		1989 - 1992
Corbet, N.	MSc – Space use and group living in the Cape porcupine <i>Hystrix africaeaustralis</i> Peters, 1852.	R.J. van Aarde		1990-1991
Ferreira, S.M.	MSc – The effect(s) of habitat rehabilitation at Richard's Bay on small mammal community structure.	R.J. van Aarde		1991-1993
Matthewson, D.C.	MSc – Population biology of the house mouse (<i>Mus musculus linnaeus</i>) on Marion Island.	R.J. van Aarde		1991-1993
White, L.	MSc – The effect of male proximity on the ovarian activity of female Cape porcupines.	R.J. van Aarde		(part – time) 1990–1994
Kritzinger, J.J.	MSc – Bird community structure in rehabilitating coastal dune forests.	R.J. van Aarde		1993–1996
van Dyk, P.J.	MSc – The population biology of the Sweetthorn <i>Acacia karroo</i> in rehabilitating coastal dune forests in northern KwaZulu-Natal, South Africa.	R.J. van Aarde		(part–time) 1994 - 1996

Name of student	Degree/Title of dissertation/ thesis and date	Supervisor	Co-supervisor(s)	Duration of studies (years)
Greyling, M.	MSc – Characterisation of uterine progesterone and oestrogen receptors in the African elephant, <i>Loxodonta africana</i> .	R.J. van Aarde	H. Potgieter	1995-1996
Mecenero, S.	MSc – Steroidogenic potential of the ovary, placenta and blood of the rock hyrax (<i>Procavia capensis</i>).	R.J. van Aarde	H. Potgieter	1995-1998
Wassenaar, T.D.	MSc – The effects of cattle on the development of plant communities in rehabilitating coastal dune forests at Richards Bay, KwaZulu-Natal, South Africa.	R.J. van Aarde		(part-time) 1996-1998
Ford, M.	MSc – Steroidogenic activity of the placenta, corpus luteum and blood of the African elephant (<i>Loxodonta africana</i>).	R.J. van Aarde		1996-1998
Weiermans, J.	MSc – The effect of habitat edges on the rehabilitation of coastal dune community structure.	R.J. van Aarde		1997-2000
Wallace, E.D.	MSc – Some characteristics of the uterine progesterone receptor and the effects of norethindrone on conception in the rock hyrax (<i>Procavia capensis</i>).	R.J. van Aarde		1997-1999
Koekemoer, A.C.	MSc – The influence of supplementary food on the rodent communities of coastal sand dunes.	R.J. van Aarde		1997-2000
Lamb, C.E.	MSc – The influence of maternal protein intake on aspects of sex-specific foetal and neonatal development in <i>Mastomys natalensis</i> .	R.J. van Aarde		1998-2000
Guldmond, R.A.R.	M Inst Agric – Management plan for the Cinergy Conservation Area, Naboomspruit, Northern Province.	R.J. van Aarde		1999-2000
Niemand, L.	MSc – The contribution of the bird community of the regenerating coastal dunes at Richards Bay to regional diversity.	R.J. van Aarde		1999-2001
Theron, L.J.	MSc – Distribution and abundance of rodents, millipedes and trees in coastal dune forests in northern KwaZulu-Natal.	R.J. van Aarde		1998-2001
Ntumi C.P.	MSc – Space and habitat use by elephants (<i>Loxodonta africana</i>) in the Maputo Elephant Reserve, Mozambique.	R.J. van Aarde	N. Fairall	2000-2002
Visscher, D.	Course MSc thesis – The influence of culling, rainfall and density dependence on Buffalo in Kruger National Park.	R.J. van Aarde		2001-2002
Knowles, T.	Course MSc thesis – Landsat images as surrogates for vegetation regeneration on coastal sand dunes.	R.J. van Aarde		2001-2002
Marthews, T.R.	Course MSc thesis – Assessment of Rehabilitation Success in a Coastal Dune Forest in KwaZulu-Natal, South Africa, Using a Markov Chain Model.	R.J. van Aarde	T.D. Wassenaar	2002-2003

Name of student	Degree/Title of dissertation/ thesis and date	Supervisor	Co-supervisor(s)	Duration of studies (years)
Woolley, L.A.	Course MSc thesis – An assessment of the conservation status of coastal dune forest in the Maputaland centre of endemism using Landsat TM imagery.	R.J. van Aarde		2002-2003
Tyburski, M.	Course MSc thesis – Human resource use in the Futi Corridor.	R.J. van Aarde		2002-2003
Kumssa, D.B.	Course MSc thesis – Soil minerals and soil arthropods in coastal dune forests.	R.J. van Aarde	T.D. Wassenaar	2003-2004
Redi, B.	Course MSc thesis – Millipede community development in dune forests.	R.J. van Aarde	T.D. Wassenaar	2003-2004
Grainger, M.	Course MSc thesis – Landscape heterogeneity and spatial use by elephants.	R.J. van Aarde		2003-2004
Lambrecht, M.	Course MSc thesis – Soil and vegetation structure representation in savanna conservation areas.	R.J. van Aarde		2003
Sweeney, O.F.M.D.	Course MSc thesis – Colonisation of coastal dunes.	R.J. van Aarde	T.D. Wassenaar	2004
McElveen, M.E.	Course MSc thesis – Factors influencing the shoulder height technique used for aging African elephants in Addo NP.	R.J. van Aarde		2003-2004
Mosojane, S.	Course MSc thesis – Human/elephant interaction in the Okavango Panhandle, north western Botswana.	R.J. van Aarde		2003-2004
Lehman, E.	Course MSc thesis – Modelling accuracy and precision of elephant population estimates.	R.J. van Aarde	S.M. Ferreira	2004-2005
Ntshotsho, P.	Research MSc thesis – Carbon sequestration on the subtropical dunes of South Africa: a comparison between native regenerating ecosystems and exotic plantations.	R.J. van Aarde	T.D. Wassenaar	2003-2006
de Beer, Y.	Research MSc thesis – Determinants and consequences of elephant spatial use in Southern Africa's arid savannas.	R.J. van Aarde		2004-2007
Taylor, M.	Research MSc thesis – An evaluation of bird presence and breeding activity in regenerating coastal dune forests, Maputaland, South Africa.	R.J. van Aarde	T.D. Wassenaar	2004-2007
Ott, T.	Research MSc – Landscape heterogeneity as a determinant of range utilization by African elephants (<i>Loxodonta Africana</i>) in mesic savannas.	R.J. van Aarde	T. Jackson	2005-2007
Ribeiro, E.	Course MSc thesis – The use of natural resources by people in southern Mozambique.	R.J. van Aarde		2003-2008
Trimble, M.	Course MSc thesis – Drivers of megaherbivore demographic fluctuations: Inference from elephants.	R.J. van Aarde	S.M. Ferreira	2007
Junker, J.	Research MSc – An analysis of numerical trends in African elephant populations.	R.J. van Aarde	S.M. Ferreira	2006-2008

Name of student	Degree/Title of dissertation/ thesis and date	Supervisor	Co-supervisor(s)	Duration of studies (years)
Owens, L.	Course MSc thesis – Forest fragmentation and millipede communities.	R.J. van Aarde		2007-2008
Olivier, P.	Research MSc – An evaluation of southern Africa's elephant sub-populations as a metapopulation.	R.J. van Aarde		2007-2009
Tangawamira, Z.	Course MSc thesis – Landscape transitions in conservation clusters.	R.J. van Aarde		2007-2010
Tait, G.	Course MSc thesis – Spatial analysis of the relationship between elephant movements and resource selection: a case study on elephants introduced into the iSimangaliso Wetland Park, South Africa.	R.J. van Aarde	W. Ferguson	2010-2012
Lee, T.	Research MSc – Determinants of protected area boundary crossings by savannah elephants, <i>Loxodonta Africana</i> .	R.J. van Aarde		2010-2013
de Flamingh, A.	Research MSc – Defining metapopulation structures among southern African elephant populations.	R.J. van Aarde		2010-2013
Mole, M.	MSc – Ecological consequences of shade-seeking in elephants.	R.J. van Aarde	D. Mitchell & A. Fuller	2012-2014
D'Araujo, R.S.	MSc – Thermoregulation in elephants.	R.J. van Aarde	D. Mitchell & A. Fuller	2012-2014
Purdon, A.	MSc – Spatial use of elephants in the Kruger National Park.	R.J. van Aarde		2013-2015
Robson, A.S.	MSc – Drivers of demographic change in the Kruger National Park.	R.J. van Aarde		2013-2015
Mohale, M.O.	MSc – Gap dynamics in coastal forests.	R.J. van Aarde		2012-2015
Freeman, M.T.	MSc – Evaluating the influence of human-modified habitat types on bird community structure and diversity.	R.J. van Aarde		2016-2018
Reljic, J.	MSc – Beta diversity in new-growth forests.	R.J. van Aarde		2016-2018
PhD students				
Wilkinson, I.S.	PhD – Factors affecting reproductive success of southern elephant seals, <i>Mirounga leonina</i> , at Marion Island.	R.J. van Aarde		1987-1992
Milstein, P. le S.	PhD – A study of the Egyptian goose <i>Alopochen aegytiacus</i> .	R.J. van Aarde		(part-time) 1987-1993
Ferreira, S.M.	PhD – Determinants of small mammal community structure on rehabilitating dune forests in northern KwaZulu-Natal, South Africa.	R.J. van Aarde		(part-time) 1993-1997
Whyte, I.J.	PhD – Conservation Management of the Kruger National Park Elephant Population.	R.J. van Aarde		(part-time) 1993-2001

Name of student	Degree/Title of dissertation/ thesis and date	Supervisor	Co-supervisor(s)	Duration of studies (years)
Wassenaar, T.D.	PhD – Convergence in coastal dune forests.	R.J. van Aarde		(part-time) 1999-2004
Morley, R.C.	PhD – The demography of a fragmented population of the savannah elephant (<i>Loxodonta africana</i> Blumenbach) in Maputaland.	R.J. van Aarde		1999-2005
Guldemon, R.A.R.	PhD – The influence of savannah elephants on vegetation: a case study in the Tembe Elephant Park, South Africa.	R.J. van Aarde		2001-2006
Young, K.	PhD – Functional correlates for elephant spatial use in southern African savannas and some implications for management.	R.J. van Aarde		2005-2010
Ntumi, C.P.	PhD – A landscape approach to mitigating human-elephant conflict.	R.J. van Aarde		(part-time) 2007-2012
Grainger, M.J.	PhD – An evaluation of coastal dune forest restoration in northern Kwazulu-Natal, South Africa.	R.J. van Aarde		2006-2011
Ott, T.	PhD – The response of biological communities to spatial and temporal changes in a regenerating coastal dune forest along the north-east coast of South Africa.	R.J. van Aarde		2008-2013
Roever, C.	PhD – Spatial determinants of habitat use, mortality and connectivity for elephant populations across southern Africa.	R.J. van Aarde		2010-2013
Trimble, M.	PhD – Comparative assessment of conservation efficiency.	R.J. van Aarde		2010-2013
Olivier, P.I.	PhD – Patterns of species diversity in coastal forests: case studies on tree and bird assemblages in KwaZulu-Natal, South Africa.	R.J. van Aarde		2011-2014
de Flamingh, A.	PhD - The genetic structure of the African elephants	R.J. van Aarde	A.L. Roca	2016-2020

Name of student	Title of project	Supervisor	Co-supervisor(s)	Duration of studies (years)
Post-doctoral fellows				
Beard, A.	Elephant reproduction.	R.J. van Aarde		1993-1994
McCallum, C.	Coastal dune ecology.	R.J. van Aarde		1996-1997
Sinclair, R.	Forest regeneration.	R.J. van Aarde		2000

Name of student	Title of project	Supervisor	Co-supervisor(s)	Duration of studies (years)
Davies, A.	Dung beetle community regeneration.	R.J. van Aarde	C.H. Scholtz	2000-2001
Jackson, T.	Sexual selection in rodents.	R.J. van Aarde		2001-2002
Ferreira, S.M.	Modelling metapopulation dynamics for African elephants.	R.J. van Aarde		2003-2004
Kinahan, A.A.	Elephant landscape selection.	R.J. van Aarde		2004-2005
Shrader, A.	Ecological gradients and elephant dynamics.	R.J. van Aarde		2004-2005
Young, K.	Spatial structuring of elephants.	R.J. van Aarde		2012-2014
Rolo, V.	Functional response of dune rehabilitation.	R.J. van Aarde		2014-2017
Olivier, P.I.	Determining the biophysical structure of coastal forest fragments in South Africa.	R.J. van Aarde		2015-2017
Huang, R.	Metapopulation dynamics across savanna Africa	R.J. van Aarde	S.L. Pimm	2019-2021
de Flamingh	Genomic profiles of African elephant populations	R.J. van Aarde	A.L. Roca	2020-2021

5.2 Current post-graduate students

Name of student	Degree enrolled for and date of first registration	Project title	Supervisor	Co-supervisor(s)	Year of registration
Diaz, S. (International student)	PhD – 2016	Individual-based modelling of elephant space use	R.J. van Aarde	M.S. Gaines	3
Bucciarelli, J.	MSc – 2020	t.b.c.	R.J. van Aarde	S.L. Pimm	0

5.3 Obtaining research funds (*Optional*)

Origin of research funds (e.g. contract research, THRIP, international funding organisations, other(s))	Title of research project or programme	Duration	Money allocated (R) (<i>Optional - exact amounts not required</i>)
Elephant Conservation Management (2000 – on-going)			
IFAW	Conservation ecology of elephants: megaparks for metapopulation initiative	2002 – on-going	
US Fish & Wildlife Services	Population ecology of Etosha elephants	2002 – 2004	840,000
US Fish & Wildlife Services	Restoration of Maputaland elephants	2000 – 2003	900,000
Mozal Development Trust	Restoration of Maputaland elephants	2000 – 2011	2,780,000
Peace Parks Foundation	Elephant conservation across six countries	2001 – 2005	1,100,000
Wildlifewins	Restoration of Maputaland elephants	2002	80,000
Conservation Zambia Ltd	Elephant conservation in Zambia	2006 – 2008	300,000
Conservation International	Elephant and human conflict in Botswana	2003 – 2004	450,000

Origin of research funds (e.g. contract research, THRIP, international funding organisations, other(s))	Title of research project or programme	Duration	Money allocated (R) (Optional - exact amounts not required)
WWF SARPO	Human elephant conflict	2007 – 2009	450,000
WWF Mozambique	Elephant ecology in Mozambique	2007 – 2010	300,000
South African National Parks	Population biology of elephants, Kruger National Park	2009 – 2015	In-kind
Department of Nature Conservation in Mozambique	Population biology of Mozambican elephants	2005 – on-going	In-kind
Zambian Wildlife Authority	Population biology of Zambian elephants	2005 – on-going	In-kind
Etosha Ecological Institute, Namibia	Population biology of Namibian elephants	2002 – 2006	In-kind
Elephants without Borders, Botswana	Temporal and spatial dynamics of elephants	2010 – on-going	In-kind
Paul Allen Family Foundation	Thermal biology of elephants	2012 - on-going	280,000
Forest Restoration Programme (1992 – on-going)			
Richards Bay Minerals	Dune forest communities	1992 – on-going	
THRIP	Dune forest restoration	2009 – 2014	1,860 000
THRIP	Coastal dune restoration	1994 – 1999	900,000
NRF	Restoration ecology	2002 – 2011	1,250,000
Other Ecological Projects (1997 – 2010)			
Department of Environment	Mouse population studies at Marion	1997 – 2002	600,000
National Geographic Big Cat Initiative	Lion-human interactions in the Tete Province, Mozambique	2010	140,000

1. RESEARCH OUTPUTS

6.1 Publications in peer-reviewed or refereed journals

Provide full details of each publication, including full titles, names of all the authors, journals, dates, page numbers etc.

Peer-reviewed publications (1978 – present)

2019

205 ZHAO, K., ISHIDA, Y., GREEN, C.E., DAVIDSON, A.G., SITAM, F.A.T, DONNELLY, C.L., DE FLAMINGH, A., PERRIN-STOWE, T.I.N., BOURGEOIS, S., BRANDT, A.L., MUNDIS, S.J., **VAN AARDE, R.J.**, GREENBERG, J.A., MALHI, R.S., GEORGORDIS, N.J., McEWING, R. & ROCA, A.L. (2019) *Loxodonta* Localizer: A software tool for inferring the provenance of African elephants and their ivory using mitochondrial DNA. *Journal of Heredity* 110: 761-768 DOI:10.1093/jhered/esz058

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- 203 MOLE, A.M., RODRIGUES D'ARAUJO, S., **VAN AARDE, R.J.**, MITCHELL, D. & FULLER, A. (2018) Savanna elephants maintain homeothermy under African heat. *Journal of Comparative Physiology B* 188: 889-897.
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- 198 McCLELLAND, G.T.W., ALTWEGG, R., **VAN AARDE, R.J.**, FERREIRA, S., BURGER, A.E. & CHOWN, S.L. (2018) Climate change leads to increasing population density and impacts of a key island invader. *Ecological Applications* 28: 212-224.
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Provide full details of provisional or full patents

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- 64 **VAN AARDE, R.J.**, KILIAN, W. & PIMM, S. (2003) The dynamics of savanna elephants in Etosha National Park in Northern Namibia. CERU Annual progress report 2002 to US Fish & Wild-life Service.

- 63 WASSENAAR, T.D. & **VAN AARDE, R.J.** (2003) Richards Bay Ecological Research Program: report on the monitoring of ecological development of dune forest rehabilitation sites. CERU Technical Report 14, University of Pretoria.
- 62 **VAN AARDE, R.J.**, KILIAN, W., VERSFELD, W., JACKSON, T., FERREIRA, S., SHRADER, A., ERASMUS, D.G. & DE BEER, Y. (2003) The dynamics of savanna elephants in Etosha National Park in northern Namibia. CERU final report to US Fish & Wildlife Service.
- 61 **VAN AARDE, R.J.**, KINAHAN, A., FOURIE, J., KABUNGO, B., FAIRALL, N. & ERASMUS, D.G. (2003) The dynamics and integrity of savanna elephants in the Kafue National Park, Zambia. IFAW Progress Report: July - December 2003. CERU, University of Pretoria.
- 60 **VAN AARDE, R.J.**, MOSOJANE, S., SHRADER, A., FERREIRA, S. & ERASMUS, D.G. (2003) Human-elephant conflict along the Okavango Panhandle in northwest Botswana. Report to Conservation International - Southern African Wilderness Programme. CERU, University of Pretoria.
- 59 WASSENAAR, T.D. & **VAN AARDE, R.J.** (2003) Optimizing pre-mining topsoil procurement: an assessment of the extent, quality and spatial configuration of topsoil in the unmined part of the Zulti North lease area. CERU Technical Report 19, University of Pretoria.
- 58 **VAN AARDE, R.J.**, WASSENAAR, T.D. & NTSHOTSHO, P. (2003) Coastal dune rehabilitation by Richards Bay Minerals as a carbon sequestration initiative Richards Bay Ecological Research Program. CERU Technical Report 15, University of Pretoria.
- 57 WASSENAAR, T.D., **VAN AARDE, R.J.** & NIEMAND, L.J. (2003) Report on the monitoring of the rehabilitation process of Richards Bay Minerals. CERU Technical Report 17, University of Pretoria.
- 2002**
- 56 **VAN AARDE, R.J.**, ERASMUS, D.G., KUUN, P. & LOUW, C. (2002) Autecology of the house mouse *Mus musculus* (senso lato) on Marion Island. Final report to the Department of Environmental Affairs & Tourism. 40p.
- 55 **VAN AARDE, R.J.** (2002) Monitoring translocated elephants in the Limpopo National Park, Mozambique. CERU Technical Report 13, University of Pretoria.
- 54 **VAN AARDE, R.J.** (2002) The potential for game farming and the rehabilitation of wildlife resources in the National Re-serve of Gilé ("Reserva do Gilé", Zambézia, Mozambique). Final report. University of Pretoria.
- 53 **VAN AARDE, R.J.**, ELS, H., FAIRALL, N. & NTUMI, C. (2002) Restoration of the Tembe-Futi-Maputo coastal plains elephant population. Annual Report 2001/2002 to the US Fish & Wildlife Service.
- 52 **VAN AARDE, R.J.**, ERASMUS, D.G., KUUN, P. & LOUW, C. (2002) Autecology of the house mouse *Mus musculus* (senso lato) on Marion Island. Final report to the Department of Environmental Affairs & Tourism. 40p.
- 51 **VAN AARDE, R.J.** & FAIRALL, N. (2002) Conservation Ecology of Elephants in southern Mozambique. CERU Annual Report to Mozal Community Development Trust.
- 50 **VAN AARDE, R.J.** & FAIRALL, N. (2002) Monitoring translocated elephants in the Limpopo National Park, Mozambique. Peace Parks Foundation report for period September 2001-April 2002. CERU Technical Report 13, University of Pretoria.
- 49 **VAN AARDE, R.J.** & FAIRALL, N. (2002) Restoration of the Tembe-Futi-Maputo Coastal Plains elephant population. Annual report to US Fish & Wildlife Service 2001/2002. CERU Technical Report 12, UP.
- 48 **VAN AARDE, R.J.** & FAIRALL, N. (2002) The Dynamics and integrity of savanna elephants in the Kafue National Park, Zambia. IFAW Interim Report July 2002 – December 2002. CERU, University of Pretoria.
- 47 WASSENAAR, T.D. & **VAN AARDE, R.J.** (2002) Richards Bay Ecological Research Program: report on the monitoring of ecological development of dune forest rehabilitation sites. CERU Technical Report 9, University of Pretoria.
- 46 WASSENAAR, T.D. & **VAN AARDE, R.J.** (2002) Richards Bay Ecological Research Program: report on the monitoring of the rehabilitation process of Richards Bay Minerals. CERU Technical Report 11, University of Pretoria.
- 2001**
- 45 **VAN AARDE, R.J.** & FAIRALL, N. (2001) Extending Conservation Initiatives in southern Mozambique: A Proposal for the Development of the Futi Corridor as a Conservation Area. Report to the Mozal Community Development Trust. CERU Technical Report 7, University of Pretoria.
- 1995**

- 44 **VAN AARDE, R.J.** & SKINNER, J.D. (1995) Guide to writing theses. *Typescript*, Mammal Research Institute, University of Pretoria. 13p.
- 43 **VAN AARDE, R.J.** & SKINNER, J.D. (1995) The population biology of the house mouse (*Mus musculus*) on Marion Island. Final Report to SACAR. 23p.
- 42 **VAN AARDE, R.J.** (1995) Workshop on the rehabilitation of coastal dunes of KwaZulu-Natal. *Typescript*, Mammal Research Institute, University of Pretoria. 39p.
- 1994**
- 41 SKINNER, J.D., **VAN AARDE, R.J.** & FERREIRA, S.M. (1994) Report on a preliminary survey of a mouse plague in the Limpopo Valley, northern Transvaal. Report to MRI. 13p.
- 40 **VAN AARDE, R.J.** (1994) Species lists for mammals, birds and reptiles occurring in a region of the Orange Free State. Report to Willem van Riet landscape Architects. *Typescript* 21p.
- 39 **VAN AARDE, R.J.** & FERREIRA, S.M. (1994) Results of a preliminary survey of the vegetation and vertebrate fauna of a part of Meintjieskop suggested for development. Report to the Russelstreet Residence. *Typescript* 8p.
- 38 **VAN AARDE, R.J.** & FERREIRA, S.M. (1994) Results of a preliminary survey of the vegetation and vertebrate fauna of RE Lot 153 and RE Lot 224 on the northern slope Meintjieskop suggested for development. Report to the GH Oosthuizen. *Typescript* 8p.
- 37 **VAN AARDE, R.J.** & FERREIRA, S.M. (1994) Report on a desktop study of the reptiles, birds and mammals of the catchment areas of the Umzimvubu river demarcated for development of the Umzimvubu Transfer Scheme. Report to SRK. *Typescript* 27p.
- 36 **VAN AARDE, R.J.** & FERREIRA, S.M. (1994) Report on a desk top study of the insects, reptiles, birds and mammals of the areas demarcated for Phase 2 & 3 developments of the Lesotho Highland Water Project. Report to SRK. *Typescript* 57p.
- 35 VERSTRAETE, J.M. & **VAN AARDE, R.J.** (1994) The dental pathology of feral cats on Marion Island. *Veterinary Dentistry '94*. 30 Sept - 2 Oct 1994, Philadelphia.
- 1993**
- 34 **VAN AARDE, R.J.**, FERREIRA, S.M., KRITZINGER, J.J., MACMAHON, C., MILLER, M. & LEUMANN, L. (1993) *Report on a special study programme on community structure of rehabilitated coastal dune forests north of Richards Bay*. Report to Richards Bay Minerals. 48p.
- 33 **VAN AARDE, R.J.** & FERREIRA, S.M. (1993) Response submitted to CSIR on the St. Lucia Environmental Impact Report by R.J. van Aarde & S.M. Ferreira entitled '*A preliminary appraisal of community structure on rehabilitated coastal sand dunes north of Richards Bay*'. 9pp.
- 32 **VAN AARDE, R.J.**, FERREIRA, S.M. & KRITZINGER, J.J. (1993) Report on a survey of the fauna of Zulti South, Natal, Report to Steffen, Robbertson & Kirsten Consulting Engineers. 19p.
- 31 **VAN AARDE, R.J.** (1993) Report on a survey of the fauna of an industrial site situated in Alton, Richards Bay. 3p.
- 30 **VAN AARDE, R.J.** & MATTHEWSON, D.C. (1993) *Biology of the mice population on Marion Island Project*. Report to SACAR. 7p.
- 1990**
- 29 **VAN AARDE, R.J.** (1990) Mammal Research Institute: Postgraduate Training and Research. *Typescript* MRI. 32p.
- 28 **VAN AARDE, R.J.** (1990) Investigation into the implementation of research findings. Report to the Human Sciences Research Council. 24p.
- 27 **VAN AARDE, R.J.** (1990-1994). Departement Dierkunde: Studiegids 1990. *Typescript* 16p.
- 26 **VAN AARDE, R.J.** & RASA, O.A.E. (1990) Guide to writing theses. *Typescript*, Department of Zoology, University of Pretoria. 13p.
- 1989**
- 25 **VAN AARDE, R.J.** & RICHARDSON, P.R.K. (1989) The behavioural ecology of the Cape pangolin (*Manis temminckii*) MRI 7p. (Report to the Endangered Wildlife Trust).
- 1988**
- 24 **VAN AARDE, R.J.** & RICHARDSON, P.R.K. (1988) The behavioural ecology of the Cape pangolin *Manis temminckii*. *Typed manuscript* MRI. 6p. Report to the Endangered Wildlife Trust.
- 1986**
- 23 **VAN AARDE, R.J.** (1986) Report on sabbatical leave. *Typescript* MRI 8p.

- 1985**
22 SKINNER, J.D. & VAN AARDE, R.J. (1985) Report on the behavioural ecology of the aardwolf *Proteles cristatus* in the Rustenburg Nature Reserve, Transvaal. *Typescript* MRI 10 p. (Report to the Endangered Species Sub-committee of the Transvaal Branch of the Wildlife Society of Southern Africa).
- 1984**
21 VAN AARDE, R.J. (1984) Reproduction in the porcupine. Final Progress Report. *Typescript* MRI 4p.
- 1983**
20 VAN AARDE, R.J. (1983) Reproduction in the porcupine. Progress Report *Typescript* MRI 4p.
- 1982**
19 VAN AARDE, R.J. (1982) Reproduction in the porcupine *Hystrix africaeaustralis*. Progress Report. *Typescript*. MRI 4p.
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17 SKINNER, J.D. & VAN AARDE, R.J. (1983) Behavioural ecology of the brown hyaena *Hyaena brunnea* in the Southern Namib. *Typescript* MRI 4p.
- 1981**
16 VAN AARDE, R.J. July (1981) Reproduction in the porcupine *Hystrix africaeaustralis*. Progress Report. *Typescript*. MRI 9p.
15 VAN AARDE, R.J. December (1981) Reproduction in the porcupine *Hystrix africaeaustralis*, Peters 1852. Progress Report. *Typescript*. MRI 9p.
- 1980**
14 VAN AARDE, R.J. December (1980) Reproduction in the porcupine *Hystrix africaeaustralis*. Progress Report. *Typescript*. MRI 3p.
- 1979**
13 VAN AARDE, R.J. January (1979) Report on the feral cats of Dassen Island. *Typescript*. MRI 4p.
12 VAN AARDE, R.J. (1979) Report on *ad hoc* task group for the use of poisons and other methods for the control of feral cats *Felis catus*. *Typescript*. MRI. 13p.
- 1978**
11 VAN AARDE, R.J. June (1978) Progress Report: January 1978 - June 1978. *Typescript*. MRI 3p.
10 VAN AARDE, R.J. & HOWELL, P.G. (1978) Control of the feral house cat *Felis catus*, population at Marion Island. *Typescript*. MRI 14p.
9 VAN AARDE, R.J. (1978) The southern elephant seal *Mirounga leonina*: a report on the co-operative mammal research programme between TAAF (France) and SASCAR (South Africa), September 1977 - January 1978. *Typescript*. 72p.
8 VAN AARDE, R.J. (1978) Progress Report: January 1978 - December 1978. *Typescript*. MRI 5p.
7 VAN AARDE, R.J. (1978) The status of the feral cat population at Marion Island. *Typescript*. MRI 7p.
- 1977**
6 VAN AARDE, R.J. (1977) The introduction of the flu virus *feline panleukopaenia* on Marion Island. 17 - 22 March 1977. *Typescript*. MRI 5 p.
5 VAN AARDE, R.J. (1977) The research programme on the feral house cat population on Marion Island. *Typescript*. MRI 7p.
- 1976**
4 VAN AARDE, R.J. (1976) Report on cat research and extermination. *Typescript*. MRI. 10p.
3 VAN AARDE, R.J. (1976) Progress Report regarding the research programme of the feral house cat population on Marion Island. *Typescript* MRI. 10p.
- 1975**
2 VAN AARDE, R.J. (1975) Report regarding the research programme and extermination of the feral house cat population on Marion Island. *Typescript*. MRI 4p.
1 VAN AARDE, R.J. (1975) Report on cat research and extermination on Marion Island. *Typescript* MRI. 17p.

7. OTHER SCHOLARLY RESEARCH-BASED CONTRIBUTIONS

7.1 Participation in conferences, workshops and short courses - specify type of contribution

Provide full details of participation in national and international conferences etc.

7.1.1. National academic meetings and public presentations

2020

- 111 **VAN AARDE, R.J.** GULDEMOND, R.A.R., FERREIRA, S.M. For Kruger's elephants things may never be the same again. 18th Annual Savanna Science Networking Meeting, Skukuza, Kruger National Park: 1 – 5 March 2020.

2019

- 110 **VAN AARDE, R.J.** GULDEMOND, R.A.R., FERREIRA, S.M. For Kruger's elephants things may never be the same again. South African Wildlife Management Association Conference, Wilderness Hotel, Wilderness: 1 – 5 September 2019.

2018

- 109 **VAN AARDE, R.J.** Too many, too few, and never enough. Invited plenary at the South African Wildlife Management Association Conference, Klein Kariba, Bela Bela: 9 – 13 September 2018.

2017

- 108 FREEMAN, M. & **VAN AARDE, R.J.** Matrix transformation alters species-area relationships in fragmented coastal forests, ESSA & ZSSA Combined Congress, CSIR, Pretoria: 3 – 7 July 2017.
- 107 OLIVIER, P.I. & **VAN AARDE, R.J.** Extinction debt and species credit in coastal forests: does restoration lead to conservation? ESSA & ZSSA Combined Congress, CSIR, Pretoria: 3 – 7 July 2017.
- 106 MOLE, M., PURDON, A. & **VAN AARDE, R.J.** Do elephants migrate? ESSA & ZSSA Combined Congress, CSIR, Pretoria: 3 – 7 July 2017.
- 105 PURDON, A., ROBSON, A., TRIMBLE, M. & **VAN AARDE, R.J.** How many elephants should there be? ESSA & ZSSA Combined Congress, CSIR, Pretoria: 3 – 7 July 2017.
- 104 GULDEMOND, R.A.R., PURDON, A. & **VAN AARDE, R.J.** The impact of elephants on others, ESSA & ZSSA Combined Congress, CSIR, Pretoria: 3 – 7 July 2017.

2016

- 103 **VAN AARDE, R.J.** Elephants. Mammal Research Institute 50th Anniversary Celebration, CIRCA Gallery, Rosebank: 25 August 2016.
- 102 ROBSON, A.S., PURDON, A., TRIMBLE, M.J., **VAN AARDE, R.J.** *et al.* How many elephants should there be in the Kruger National Park? Annual Savanna Science Network Meeting, Skukuza, Kruger National Park: 13 – 18 March 2016.

2014

- 101 MOLE, M., D'ARAUJO, S., **VAN AARDE, R.J.**, MITCHELL, D. & FULLER, A. Behavioural adaptations of elephants to temperature. 5th International Symposium on the Physiology and Pharmacology of Temperature Regulation, Skukuza, Kruger National Park: 7 – 12 September 2014.
- 100 D'ARAUJO, S., MOLE, M., **VAN AARDE, R.J.**, FULLER, A. & MITCHELL, D. Elephants in the heat. 5th International Symposium on the Physiology and Pharmacology of Temperature Regulation, Skukuza, Kruger National Park: 7 – 12 September 2014.

2013

- 99 **VAN AARDE, R.J.** Functional connectivity within conservation networks: delineating corridors for African elephants. Southern African Wildlife Management Association Symposium, Skukuza, Kruger National Park: 15 – 19 September 2013.
- 98 GULDEMOND, R.A.R., & **VAN AARDE, R.J.** Fragmentation induces idiosyncrasies in forest millipede assemblages. Southern African Wildlife Management Association Symposium, Skukuza, Kruger National Park: 15 – 19 September 2013.
- 97 TRIMBLE, M. & **VAN AARDE, R.J.** The state of global research on biodiversity in human-modified landscapes and a case study on herpetofauna over a land-use gradient in coastal forest. Southern African Wildlife Management Association Symposium, Skukuza, Kruger National Park: 15 – 19 September 2013.
- 96 OLIVIER, P. & **VAN AARDE, R.J.** Can we predict extinctions before they happen? A case study in coastal forests. Southern African Wildlife Management Association Symposium, Skukuza, Kruger National Park: 15 – 19 September 2013.
- 95 DE FLAMINGH, A., SOLE, C. & **VAN AARDE, R.J.** Genetic support for spatial structuring in elephants: a case study in the Kavango-Zambezi Transfrontier Conservation Area. Southern African Wildlife Management Association Symposium, Skukuza, Kruger National Park: 15 – 19 September 2013.

- 94 PURDON, A. & **VAN AARDE, R.J.** Spatial responses to landscape heterogeneity: a case study for the elephants in the Kruger National Park. Southern African Wildlife Management Association Symposium, Skukuza, Kruger National Park: 15 – 19 September 2013.
- 93 ROBSON, A. & **VAN AARDE, R.J.** Demographic responses to the restoration of landscape heterogeneity: a case study for the elephants in the Kruger National Park. Southern African Wildlife Management Association Symposium, Skukuza, Kruger National Park: 15 – 19 September 2013.
- 92 VISSER, N., OLIVIER, P. & **VAN AARDE, R.J.** The response of bird, tree and millipede communities to a coastal dune forest habitat peninsula. Southern African Wildlife Management Association Symposium, Skukuza, Kruger National Park: 15 – 19 September 2013.
- 91 **VAN AARDE, R.J.** Peace Parks Foundation Annual Management Committee. Invited speaker. “Transfrontier Parks – elephants like the idea”. Mabula Lodge: 13 August 2013.
- 90 **VAN AARDE, R.J.** Peace Parks Foundation Annual Function. Invited keynote speaker. “Elephants and transfrontier conservation”. L’Omarins Estate, Franshoek: 5 December 2013.
- 89 **VAN AARDE, R.J.** & NORGAARD, C. National Geographic Committee for Research and Exploration – South Africa Field Inspection. Invited speaker on “Elephants, A Way Forward”, Sabi Sabi Bush Lodge, Conference Centre, Kruger National Park: 30 August to 1 September 2013.
- 2012**
- 88 **VAN AARDE, R.J.** Conservation without Borders: setting the table for the management of southern Africa’s elephants. Presentation on invitation at the IVth International Wildlife Management Congress, Durban: 9 – 12 July 2012.
- 87 **VAN AARDE, R.J.** Elephants Matter. Public lecture on invitation. Cape Union Mart, Pretoria: 20 June 2012.
- 86 **VAN AARDE, R.J.** Megaparks for Metapopulations: a spatial-temporal approach to elephant conservation across southern Africa. Megaparks for Metapopulations Colloquium, Pretoria: 14 & 15 June 2012.
- 85 **VAN AARDE, R.J.** For elephants Kruger will never be the same. Megaparks for Metapopulations Colloquium, Pretoria: 14 & 15 June 2012.
- 84 **VAN AARDE, R.J.** Restoring Coastal Dune Forests. On invitation. Special Biodiversity Meeting - Richards Bay Minerals, Richards Bay: 28 May 2012.
- 2011**
- 83 **VAN AARDE, R.J.** Restoring a coastal dune forest. Open day presentation for RBM’s Environmental Forum, Richards Bay: 2 November 2011.
- 82 **VAN AARDE, R.J.** Restoring a coastal dune forest, Shareholders of Richards Bay Minerals, Richards Bay: 10 May 2011.
- 81 **VAN AARDE, R.J.** Elephants Matter. Invited presentation to Honorary Rangers, SANParks Head Office, Pretoria: 16 March 2011.
- 80 **VAN AARDE, R.J.** Restoring coastal dune forests. Plenary presentation at the Fifth Natural Forests and Woodlands Symposium, Richards Bay, KwaZulu-Natal: 10 – 14 April 2011.
- 79 GULDEMOND, R.A.R. & **VAN AARDE, R.J.** Niche and neutral theory as explanatory platforms for the structuring of coastal dune forest communities in KwaZulu-Natal, South Africa. Fifth Natural Forests and Woodlands Symposium, Richards Bay, KwaZulu-Natal: 10 – 14 April 2011.
- 78 OTT, T. & **VAN AARDE, R.J.** Canopy structure as a determinant of coastal dune forest regeneration in response to rehabilitation: a case study in northern KZN. Fifth Natural Forests and Woodlands Symposium, Richards Bay, KwaZulu-Natal: 10 – 14 April 2011.
- 77 OLIVIER, P.I. & **VAN AARDE, R.J.** The role of canopy gaps in the regeneration of coastal dune forest in KwaZulu-Natal, South Africa. Fifth Natural Forests and Woodlands Symposium, Richards Bay, KwaZulu-Natal: 10 – 14 April 2011.
- 2010**
- 76 **VAN AARDE, R.J.**, TRIMBLE, M., YOUNG, K. & OTT, T. A Paradigm Shift in Managing African Elephant Populations. IFAW: 3 - 6 February 2010.
- 75 **VAN AARDE, R.J.** & CERU TEAM. Megaparks for Metapopulations a spatial-temporal approach to elephant conservation across southern Africa. Duke discussion class per Skype: 17 February 2010.
- 74 **VAN AARDE, R.J.** & CERU TEAM. Elephants in Nature - Megaparks for Metapopulations as a sensible venture. Magalies Club, Pretoria: 23 March 2010.

- 73 **VAN AARDE, R.J.** & CERU TEAM. Elephants in Nature: Megaparks for metapopulations as a conservation paradigm. Invited lecture to students and staff in veterinary science at the Onderstepoort Campus, University of Pretoria, Pretoria: 26 March 2010.
- 72 **VAN AARDE, R.J.** & CERU TEAM. Elephants do respond to a paradigm shift in management. Department of Zoology and Entomology, University of Pretoria, Pretoria: 30 April 2010.
- 71 **VAN AARDE, R.J.** & CERU TEAM. Elephants do respond to a paradigm shift in management. SANParks Management: 17 May 2010.
- 70 **VAN AARDE, R.J.** & CERU TEAM. Elephants without passports: a shifting conservation paradigm. Department of Political Sciences, University of Pretoria: 20 May 2010.
- 69 **VAN AARDE, R.J.** & CERU TEAM. Kruger will never be the same again - elephants and the paradigm shift in management. Rotary Club, Pretoria: 20 May 2010.
- 68 **VAN AARDE, R.J.** Celebrating Biodiversity through the Lens. Public presentation on invitation, CSIR, Pretoria: 25 May 2010.
- 67 **VAN AARDE, R.J.** Celebrating Biodiversity through the Lens. Presentation to the Department of Zoology and Entomology: 2 June 2010.
- 66 **VAN AARDE, R.J.** Celebrating diversity through the lens. Invited special lecture. Groenkloof Campus, University of Pretoria: 12 August 2010.
- 65 **VAN AARDE, R.J.** A paradigm shift in managing free-ranging African elephants. Southern African Wildlife Management Association 40th Anniversary Symposium, Buffelspoort, Marikana, North West Province: 19 – 22 September 2010.
- 64 **VAN AARDE, R.J.** Managing elephants in small parks. Presentation on special invitation to the Southern African Wildlife Management Association Seminar, Buffelspoort, Marikana, North West Province: 23 September 2010.
- 63 **VAN AARDE, R.J.** Managing free-ranging elephants. Lecture on invitation, Tshwane University of Technology: 11 August 2010.
- 62 **VAN AARDE, R.J.** Restoring nature; the rehabilitation of coastal dune forests. Lecture on invitation, Department of Botany, University of Pretoria: 16 February 2010.
- 61 **VAN AARDE, R.J.** Restoration of dune forest. RBM Management. Special lecture on invitation: 11 September 2010.
- 60 **VAN AARDE, R.J.** Diversity through the lens. Invited breakfast lecture to retired academics. Louisiana Diner, Willow Way Shopping Centre, Pretoria: 5 October 2010.
- 59 **VAN AARDE, R.J.** Elephants matter: Megaparks and Metapopulations for a Megaherbivore. Elephants in the spotlight at a speaking event held at the Barnyard Theatre, Caster Bridge, White River, Mpumalanga hosted by EcoTraining in conjunction with the International Fund for Animal Welfare (IFAW) and Africa Geographic. Keynote speaker at the exclusive dinner on 6 October 2010.
- 2009**
- 58 **VAN AARDE, R.J.** The megaparks for metapopulation research initiative: where are we and where are we going? Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State: 13 – 16 September 2009.
- 57 OLIVIER, P. & **VAN AARDE, R.J.** Demographic support for metapopulation structure amongst southern Africa's elephants. Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State: 13 – 16 September 2009.
- 56 NTUMI, C. & **VAN AARDE, R.J.** Dealing with human-elephant conflict; a landscape approach in Mozambique. Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State: 13 – 16 September 2009.
- 55 LEE, T. & **VAN AARDE, R.J.** Environmental determinants of spatial use by elephants: a case study in Zambia. Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State' 13 – 16 September 2009.
- 54 DE FLAMINGH, A., TRIMBLE, M. & **VAN AARDE R.J.** Elephants and people in the landscape: a case study in the Caprivi region. Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State: 13 – 16 September 2009.
- 53 GULDEMOND, R.A.R. & **VAN AARDE, R.J.** Forest patchiness as a driver of bird diversity in Maputaland. Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State, 13 – 16 September 2009.

- 52 TRIMBLE, M. & **VAN AARDE, R.J.** An alarming decline of several coastal dune forest bird assemblages. Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State: 13 – 16 September 2009.
- 51 OTT, T. & **VAN AARDE, R.J.** Do historical changes in landscape patterns dictate colonization? A case study on regenerating coastal dunes. Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State: 13 – 16 September 2009.
- 50 **VAN AARDE, R.J.** & CERU TEAM. A spatial-temporal plan to conserve elephants: A case study across southern Africa. ZAWA management, Lusaka: 11 – 15 October 2009
- 49 **VAN AARDE, R.J.** Elephants in nature: Megaparks for metapopulation as a sensible venture. Public presentation on invitation hosted by IFAW, Baxter Theatre, Cape Town: 22 May 2009.
- 48 **VAN AARDE, R.J.** Elephants in Nature. A photographic exhibition on invitation, Baxter Theatre, Cape Town: May and June 2009.
- 47 **VAN AARDE, R.J.** Science through the lens. Invited dinner talk Southern African Wildlife Management Association Symposium, Thaba 'Nchu, Free State: 14 September 2009.
- 2008**
- 46 **VAN AARDE, R.J.** Closing address: Eyes on Africa: Conservation sense and non-sense. Southern African Wildlife Management Association Symposium, Port Alfred, Eastern Cape: 16 – 19 September 2008.
- 45 GRAINGER, M., **VAN AARDE R.J.** & WASSENAAR, T. Space or time – patch characteristics versus succession in habitat restoration. Southern African Wildlife Management Association Symposium, Port Alfred, Eastern Cape: 16 – 19 September 2008.
- 44 GULDEMOND, R. & **VAN AARDE, R.J.** Forest fragmentation: Birds, another exception to the rule. Southern African Wildlife Management Association Symposium, Port Alfred, Eastern Cape: 16 – 19 September 2008.
- 43 LEE, T., **VAN AARDE, R.J.** & OTT, T. There is more to life than foraging and fornication for bull elephants. Southern African Wildlife Management Association Symposium, Port Alfred, Eastern Cape: 16 – 19 September 2008.
- 42 OLIVIER, P., **VAN AARDE, R.J.** & FERREIRA, S. The metapopulation concept in conservation management. Southern African Wildlife Management Association Symposium, Port Alfred, Eastern Cape: 16 – 19 September 2008.
- 41 OTT, T. & **VAN AARDE, R.J.** Temporal and spatial forest flux in Maputaland. Southern African Wildlife Management Association Symposium, Port Alfred, Eastern Cape: 16 – 19 September 2008.
- 40 OWENS, L. & **VAN AARDE, R.J.** Forest fragmentation: Millipedes, another exception to the rule. Southern African Wildlife Management Association Symposium, Port Alfred, Eastern Cape: 16 – 19 September 2008
- 39 TANGAWAMIRA, Z. & **VAN AARDE, R.J.** Land-use transformation: threats and opportunities for elephant conservation. Southern African Wildlife Management Association Symposium, Port Alfred, Eastern Cape: 16 – 19 September 2008.
- 2007**
- 38 **VAN AARDE, R.J.** Elephant Modelling Workshop hosted by SANParks, Skukuza: 24 – 26 January 2007.
- 37 **VAN AARDE, R.J.** Science and conservation management. Dinner talk at the symposium of the Southern African Wildlife Management Association, Drakensberg: 19 September 2007.
- 2006**
- 36 **VAN AARDE, R.J.** Invited 30 minute presentation to the Minister of Environmental Affairs & Tourism at the Science round table. DEAT, Kirstenbosch, Cape Town: 2006.
- 35 **VAN AARDE, R.J.** Invited public presentation on “Managing elephants: dealing with causes, not symptoms”. S2A3 meeting. University of Pretoria: 2 August 2006.
- 34 **VAN AARDE, R.J.** Invited public presentation on “Managing elephants: dealing with causes, not symptoms”. Johannesburg Honorary Rangers, Delta Environmental Centre. Johannesburg, South Africa: 20 February 2006.
- 33 **VAN AARDE, R.J.** Presentation on “Managing elephants: dealing with causes rather than symptoms”. Department of Zoology & Entomology, University of Pretoria: 24 February 2006.
- 32 **VAN AARDE, R.J.** Invited speaker on “Elephant conservation management: where to now?” SAWMA Symposium, Loskopdam: 17 – 19 September 2006.

2005

- 31 **VAN AARDE, R.J.** Invited speaker, entitled “Metadinamika as ‘n alternatiewe bewaringsmetafoor. Afrikaanse Fotografiese Organisasie”, Pretoria: 7 March 2005.
- 30 **VAN AARDE, R.J.** Cecile Niven invited lecture, entitled “Metapopulation dynamics as a conservation metaphor for elephants”, SASOL Science Festival, University of Grahamstown: 19 March 2005.
- 29 **VAN AARDE, R.J.** Invited speaker, entitled “In search of a conservation alternative for savanna elephants”. Special meeting of a group from the National Geographic Society, Sodwana, South Africa: 27 April 2005.
- 28 **VAN AARDE, R.J.** Invited talk on “The African Elephant as a Flagship for Transnational Conservation”. University of Pretoria: 27 May 2005.
- 27 **VAN AARDE, R.J.** Invited speaker on “Managing elephants: dealing with causes, not symptoms”. Special meeting at the African Elephant Forum, Wits: 19 July 2005.
- 26 **VAN AARDE, R.J.** Invited talk on “Metapopulation dynamics as a conservation metaphor for elephants”, Toyota Head office, Sandton, Johannesburg: 1 August 2005.
- 25 **VAN AARDE, R.J.** A conservation alternative for elephants - the megaparks & metapopulation metaphor. Invited presentation at the Annual General Meeting of the Royal Society of South Africa, Cape Town: 15 August 2005.
- 24 **VAN AARDE, R.J.** Public presentation on invitation on “Managing elephants – a metapopulation approach”. Invited public presentation housed by IFAW at the Waterfront, Cape Town: 24 September 2005.

2004

- 23 **VAN AARDE, R.J.** Invited speaker, entitled “Alternative conservation measures for African elephants” at the Elephant Indaba, Kruger National Park: October 2004.
- 22 **VAN AARDE, R.J.**, FERREIRA, S. SHRADER, A. & GULDEMOND, R. Invited speaker, entitled “Metapopulation dynamics as a conservation metaphor for elephants”. EMOA Symposium Pilanesberg, South Africa: 13 – 17 September 2004.
- 21 **VAN AARDE, R.J.**, FERREIRA, S. & SHRADER, A. Assessing demographic variables for elephants across a sub-continental gradient. SAWMA Symposium, Kathu, South Africa: 21 – 23 September 2004.

2003

- 20 WASSENAAR, T.D. & **VAN AARDE, R.J.** Evaluating restoration success. Post mining coastal dune forest regeneration in South Africa. Proceedings of the Mining and Sustainable Development Conference, Sandton, South Africa: 2003.

2001

- 19 **VAN AARDE, R.J.** Life history traits of developing vertebrate communities. Symposium on New Techniques & Methods in Wildlife Management. University of Pretoria, Pretoria: 3 & 4 October 2001.

2000

- 18 **VAN AARDE, R.J.** The saga of feral mice on Marion Island. *Wildlife Management Association Symposium*, Pretoria: 10 – 11 July 2000.
- 17 **VAN AARDE, R.J.** Restoring the Maputaland elephant population. *Wildlife Management Association Symposium*, Pretoria: 10 – 11 July 2000.
- 16 LAMB, C., **VAN AARDE, R.J.** & JACKSON, T. Variation in maternal condition in the multi-mammate mouse: Implications for offspring development and future reproductive success. *Wildlife Management Association Symposium*, Pretoria: 10 – 11 July 2000.
- 15 SINCLAIR, R., MESJASZ-PRZYBYLOWICZ, J., PRZYBYLOWICZ, W.J., WASSENAAR, T.D. & **VAN AARDE, R.J.** Effects of mining activities on element localization in arbuscular mycorrhizae. *Wildlife Management Association Symposium*, Pretoria: 10 – 11 July 2000.
- 14 THERON, L-J. & **VAN AARDE, R.J.** The relationship between abundance and incidence on rehabilitating and unmined coastal dune forests at Richards Bay, KwaZulu Natal. *Wildlife Management Association Symposium*, Pretoria: 10 – 11 July 2000.
- 13 WEIERMANS, J. & **VAN AARDE, R.J.** Roads as ecological edges in rehabilitating coastal dune assemblages at Richards Bay, KwaZulu Natal, South Africa. *Wildlife Management Association Symposium*, Pretoria: 10 – 11 July 2000.

1997

- 12 **VAN AARDE, R.J.** The consequences of culling for the dynamics of the Kruger National Park African elephant population. *Zoological Society of Southern Africa Symposium: The role of zoological sciences in the future prosperity of southern Africa*. University of Cape Town, Cape Town: 7 – 12 July 1997.
- 11 **VAN AARDE, R.J.** An ecological perspective of reproduction in the Cape porcupine. *Royal Society of South Africa. A Kalahari Desert Colloquium*, University of Pretoria, Pretoria: 1 – 2 September 1997.
- 10 **VAN AARDE, R.J.** The consequences of culling for the dynamics of an elephant population. *Kruger National Park Research Symposium. Skukuza*: 5 – 6 November 1997.
- 1995**
- 9 **VAN AARDE, R.J.** The development of biological communities as indicators of the success of the rehabilitation of coastal dune forests. *Workshop on the rehabilitation of coastal dunes of KwaZulu-Natal*, Richards Bay: 30 – 31 August 1995.
- 1993**
- 8 **VAN AARDE, R.J.** Habitat rehabilitation and the development of selected coastal dune forest communities. *Zoological Society of Southern Africa: Biodiversity: the way forward?* Transvaal Museum, Pretoria: 5 – 7 July 1993.
- 7 **VAN AARDE, R.J.** The development of millipede communities in rehabilitated dune forests. *Zoological Society of Southern Africa: Biodiversity: the way forward?* Transvaal Museum, Pretoria: 5 – 7 July 1993.
- 6 **VAN AARDE, R.J.** The relevance of restoration ecology in the maintenance of biological diversity. *Southern African Wildlife Management Association Symposium on Biodiversity in Practice*. University of Port Elizabeth: 29 June – 1 July 1993.
- 1991**
- 5 **VAN AARDE, R.J.** Properties of progesterone-binding proteins in the Cape porcupine. *Tenth Congress of the South African Biochemical Society*. University of Natal, Pietermaritzburg: 27 – 30 January 1991.
- 1986**
- 4 **VAN AARDE, R.J.** Endocrinology of the annual reproductive cycle of Cape porcupines. *Symposium of the Zoological Society of Southern Africa*. Johannesburg, South Africa: 15 – 18 July 1986.
- 1984**
- 3 **VAN AARDE, R.J.** Reproduction in the Cape porcupine *Hystrix africae australis*. *Silver Jubilee Symposium of the Zoological Society of Southern Africa*. Potchefstroom, South Africa: 2 – 6 July 1984.
- 1978**
- 2 **VAN AARDE, R.J.** Density and distribution of feral house cats at Marion Island. *Symposium on the biology of Marion Island*. Pretoria, South Africa: 28 – 30 August 1978.
- 1 **VAN AARDE, R.J.** Reproduction in the feral cats at Marion Island. *Symposium on the Biology of Marion Island*. Pretoria, South Africa: 28 – 30 August 1978.

7.1.2 International meetings & Invited public presentations to international audiences

- 2018**
- 90 **VAN AARDE, R.J.** Elephant Rumours. Invited by the Wildlife Trust of India as a plenary speaker at Gaj Mahotsav – Celebrating India's National Heritage Animal, Indra Ghandi National Centres for the Arts, New Delhi, India: 12 – 15 August 2018.
- 2016**
- 89 **VAN AARDE, R.J.** Beyond Poaching. Invited speaker and participant on the discussion panel at the Inaugural Giants Club Summit, Mount Kenya Safari Club, Nanyuki, Kenya: 29 – 30 April 2016.
- 2015**
- 88 GULDEMOND, R.A.R. & **VAN AARDE, R.J.** Designing functional linkages between conservation area for wildlife in Africa. Invitation to participate at the 7th Global Challenges University Alliance Workshop, Swedish University of Agricultural Sciences, Uppsala, Sweden: 26 – 29 April 2015.
- 87 **VAN AARDE, R.J.** Of Elephants in Africa. Plenary speaker at the Animal Behavior Management Alliance Conference, Nyborg, Denmark: 13 – 18 April 2015.
- 2012**
- 86 **VAN AARDE, R.J.** & GULDEMOND, R.A.R. Corridors and Linkages: a case study on southern Africa's elephant populations. Invitation to participate at the Eleventh meeting of the Conference of the Parties to the Convention on Biological Diversity (COP11), Hyderabad, Andhra Pradesh, India: 8 – 19 October 2012.

- 85 GULDEMOND, R.A.R. & **VAN AARDE, R.J.** Nurturing succession to restore degraded coastal dune forests in South Africa. 4th International EcoSummit, Columbus, Ohio, United States of America: 30 September – 5 October 2012.
- 2011**
- 84 **VAN AARDE, R.J.** A change in the life of Kruger’s elephants. Invited speaker at the Joint ZSSA & PARSA Conference, Stellenbosch, South Africa: 10 – 13 July 2011.
- 2010**
- 83 **VAN AARDE, R.J.** Compassionate Elephant Conservation Management. Compassionate Conservation Symposium, Lady Margaret Hall, Oxford, United Kingdom: 1 – 3 September 2010.
- 82 **VAN AARDE, R.J.** A conceptual shift in managing African elephants. 24th International Congress for Conservation Biology, Edmonton, Alberta, Canada: 3 – 7 July 2010.
- 81 **VAN AARDE, R.J.** Presentation to MOZAL Management, Research programme in southern Mozambique: 21 – 23 May 2010.
- 80 **VAN AARDE, R.J.** Managing Elephants: a paradigm shift, Public lecture on invitation and as part of a one month photographic exhibition on “Elephants in Nature”, Windhoek, Namibia: 6 April 2010.
- 79 **VAN AARDE, R.J.** & CERU TEAM. A spatial-temporal approach to elephant conservation across southern Africa. DNAC, Maputo, Mozambique: 5 March 2010.
- 78 **VAN AARDE, R.J.** A paradigm shift in managing African elephant populations. An invited paper to the International Elephant Research Symposium, Kwalata Game Reserve, Limpopo Province, South Africa: 27 – 30 January 2010.
- 2009**
- 77 **VAN AARDE, R.J.**, OTT, T., NTUMI, C. & TRIMBLE, M. Conflict between people and elephant – zonation as a potential solution. Plenary paper to the International Seminar on Human & Wildlife Conflict, Lichinga, Mozambique: 7 – 8 May 2009.
- 2008**
- 76 **VAN AARDE, R.J.** Megaparks for metapopulations: A spatial-temporal plan to conserve elephants. IFAW, Boston: 11 – 12 February 2008.
- 75 **VAN AARDE, R.J.** Megaparks for metapopulations: A spatial-temporal plan to conserve elephants. INECE 8th International Conference, Cape Town: 6 – 7 April 2008.
- 74 **VAN AARDE, R.J.** Conservation Ecology Research Unit - Restoring Natural Systems. Duke Alumni. Pretoria: 6 April 2008.
- 2007**
- 73 **VAN AARDE, R.J.**, FERREIRA, S.M., JACKSON T., GULDEMOND, R., YOUNG, K., OTT, T., DE BEER, Y. & JUNKER, J. Megaparks for metapopulations to ameliorate impact. SANParks, Skukuza: 24 – 25 January 2007.
- 72 **VAN AARDE, R.J.** Elephant conservation management: where to now? Department of Zoology & Entomology. University of Pretoria: 2 March 2007.
- 71 **VAN AARDE, R.J.** & FERREIRA, S.M. The megaparks for metapopulations initiative: our progress in Botswana. Maun, Botswana: 13 – 14 March 2007.
- 70 **VAN AARDE, R.J.** & FERREIRA, S.M. Megaparks for Metapopulations – a Management Option for Elephants in southern Africa. Nairobi, Kenya. International Symposium on Research Imperatives for Biodiversity Conservation: 18 – 20 April 2007.
- 69 **VAN AARDE, R.J.** Megaparks for Metapopulations – a Management Option for Elephants in southern Africa. Presentation on invitation under auspices of IFAW in London, Reading, Hamburg, Amsterdam, den Hague & Brussels: 6 – 13 May 2007.
- 68 **VAN AARDE, R.J.** The African Elephant as a Flagship for Transnational Conservation. Guest lecture to the Department of Political Sciences, University of Pretoria: 15 June 2007.
- 67 **VAN AARDE, R.J.**, FERREIRA, S.M., DE BEER Y. & JUNKER, J. Elephants in time and space: the Namibian experience in perspective. Etosha Centennial Symposium: 28 – 30 June 2007.
- 66 **VAN AARDE, R.J.**, FERREIRA, S.M., JUNKER, J., OTT, T., DE BEER, Y. & YOUNG, K. A landscape approach to the conservation management of southern Africa’s elephants. 21st Annual Meeting of Society for Conservation Biology, Port Elizabeth, South Africa: 1 – 5 July 2007.
- 65 **VAN AARDE, R.J.** The African Elephant: Conservation Management Issues. Northern Branch of the Royal Society of SA. University of Pretoria: 8 August 2007.

- 64 **VAN AARDE, R.J.** & FERREIRA, S.M. A landscape approach to the conservation management of elephants. International Union of Game Biologists Conference. Uppsala, Sweden: 14 – 17 August 2007.
- 63 **VAN AARDE, R.J.** A landscape approach to the conservation management of elephants. International Elephant Foundation. Orlando, USA: 3 - 5 November 2007.

2006

- 62 **VAN AARDE, R.J.** A conservation option for Africa's savanna elephants - the megaparks & metapopulation metaphor. Kings Campus, BAA illustrated talk, Scottish Royal Geographic Society, Aberdeen University, Aberdeen, Scotland: 6 February 2006.
- 61 **VAN AARDE, R.J.** A conservation option for Africa's savanna elephants - the megaparks & metapopulation metaphor. Scottish Royal Geographic Society, University of Dundee, Dundee, Scotland: 7 February 2006.
- 60 **VAN AARDE, R.J.** A conservation option for Africa's savanna elephants - the megaparks & metapopulation metaphor. Scottish Royal Geographic Society, Edinburgh University, Scotland: 9 February 2006.
- 59 **VAN AARDE, R.J.** A conservation option for Africa's savanna elephants - the megaparks & metapopulation metaphor. Scottish Royal Geographic Society, Glasgow University, Scotland: 9 February 2006.
- 58 **VAN AARDE, R.J.** The metapopulation as a conservation metaphor for southern Africa's elephants. Wildlife Conservation Research Unit, Oxford University, UK: 13 February 2006.
- 57 **VAN AARDE, R.J.** A conservation option for Africa's savanna elephants - the megaparks & metapopulation metaphor. Care for the Wild, London, UK: 14 February 2006.
- 56 **VAN AARDE, R.J.** A conservation option for Africa's savanna elephants - the megaparks & metapopulation metaphor. IFAW Head office, London, UK: 15 February 2006.
- 55 **VAN AARDE, R.J.** Managing elephants: the megaparks for metapopulations metaphor. University of Eduardo Mondlane. Maputo, Mozambique: 17 May 2006
- 54 **VAN AARDE, R.J.** Managing elephants: dealing with causes, not symptoms. Conservation International Meeting, Gaborone, Botswana: 23 – 24 May 2006.
- 53 **VAN AARDE, R.J.** Managing elephants: dealing with causes, not symptoms. Botswana Department of Wildlife & National Parks. Gaborone: 8 August 2006
- 52 **VAN AARDE, R.J.** Managing elephants: if not numbers what drives impact. Botswana Department of Wildlife & National Parks. Gaborone: 8 August 2006
- 51 **VAN AARDE, R.J., FERREIRA, S.M., JACKSON T. & GULDEMOND, R.** Elephant conservation management: dealing with causes and not symptoms. International Elephant Conservation and Research Symposium. Gilleleje, Denmark: 20 – 22 October 2006.
- 50 **VAN AARDE, R.J.** Elephant conservation: megaparks for metapopulations. Kruger National Park, IFAW. 3 November. IFAW delegation at Umbhaba Lodge in Hazyview: 3 – 5 November 2006.

2005

- 49 **VAN AARDE, R.J.** Metapopulation dynamics as a conservation metaphor for elephants. Invited Presentation to WWF in Maputo, Mozambique: 27 June 2005.
- 48 **VAN AARDE, R.J.** Invited participation and presentation of talk entitled "Metapopulation dynamics as a conservation metaphor for elephants". WWF Elephant management workshop, Pemba, Mozambique: 25 July 2005.
- 47 **VAN AARDE, R.J.** Elephant conservation: Megaparks for the metapopulation metaphor. NORAD, Lusaka, Zambia: 9 September 2005.
- 46 **VAN AARDE, R.J. & WASSENAAR T.D.** Invited participants in the International Council on Mining & Metals (ICMM). The Castle Kayalami Hotel, Midrand, South Africa: 15 November 2005.
- 45 **VAN AARDE, R.J. & FERREIRA S.M.** Invited speaker on elephant management during a meeting on "Research for management of African protected areas: Experience from research in Hwange National Park". Workshop co-organized by ZPWMA (Zimbabwe Parks and Wildlife Management Authority) and CIRAD (Centre de Coopération Internationale en Recherche Agronomique pour le Développement). Main Camp, Hwange National Park, Zimbabwe: 21 – 24 November 2005.

2004

- 44 **VAN AARDE, R.J.** Keynote speaker: Nurturing metadynamics as an alternative conservation measure for elephants across Southern Africa. Kalahari Conservation Society Annual meeting, Gabarone, Botswana: 2004.
- 43 **VAN AARDE, R.J.** Keynote speaker: Nurturing metadynamics as an alternative conservation measure for elephants across Southern Africa. ZAWA Annual meeting, Lusaka, Zambia: 4 November 2004.
- 2003**
- 42 **VAN AARDE, R.J.** Invited paper entitled "A conservation management alternative for the African elephant". Third International Wildlife Management Congress, Christchurch, New Zealand: 1 – 5 December 2003.
- 2002**
- 41 **VAN AARDE, R.J. & WASENAAR, T.D.** Keynote address: "Convergence and alternative states in sub-tropical dune forest assemblages" at the International Conference on Environmental Problems of Mediterranean Ecosystems held at the Near East University, Cyprus: 12 – 15 April 2002.
- 2001**
- 40 WASENAAR, T.D., FERREIRA, S.M. & **VAN AARDE, R.J.** Convergence of coastal dune forests. 15th Annual meeting of the Society for Conservation Biology: Ecological Lessons From Islands. University of Hawaii, Hilo, Hawaii, USA: 4 August 2001.
- 2000**
- 39 VAN JAARSVELD, A.S., **VAN AARDE, R.J.** & FAIRALL, N. Peace Parks and Biodiversity Conservation. *International Conference on Transboundary Initiatives*, Cambridge University, Cambridge, UK: 2 – 4 September 2000.
- 1998**
- 38 **VAN AARDE, R.J.** Developmental paths of selected biological communities in rehabilitating coastal dune forests in KwaZulu-Natal, South Africa. *VII International Congress of Ecology*, Firenze, Italy: 19 - 25 July 1998.
- 1996**
- 37 **VAN AARDE, R.J.** Control of reproductive output in female African elephants. *IUCN Specialist Meeting*, Skukuza, Kruger National Park, South Africa: 5 – 10 February 1996.
- 36 **VAN AARDE, R.J.** Evaluating restoration of dune forests on the coast of KwaZulu-Natal, South Africa. *Society for Ecological Restoration, International Conference*, University of New Jersey, New York: 17 – 22 June 1996.
- 35 **VAN AARDE, R.J.** Reproductive control in elephants. *4th International Conference on Fertility Control for Wildlife Management*. Great Keppel Island, Australia; 8 – 11 July 1996.
- 34 **VAN AARDE, R.J.** Rehabilitation of coastal sand dune communities. *Ecoworld '96*, Callagher Estate, South Africa: 18 – 19 September 1996.
- 1995**
- 33 **VAN AARDE, R.J.** Invited speaker: Seeking an alternative to culling to control population growth of the African elephant. *IVSA Summer Congress*, Pretoria: 25 June - 2 July 1995.
- 32 **VAN AARDE, R.J.** Invited speaker: The restoration of coastal dune forest communities in KwaZulu-Natal, South Africa. *7th European Ecological Congress*, Budapest: 20 – 25 August 1995.
- 31 **VAN AARDE, R.J.** Invited speaker: Correlates of small mammal succession in rehabilitating coastal dune forests in KwaZulu-Natal, South Africa. *7th European Ecological Congress*, Budapest: 20 – 25 August 1995.
- 30 **VAN AARDE, R.J.** Invited speaker: An autecological interpretation of reproductive variability in house mice on Marion island. *7th International Colloquium on the ecology and taxonomy of small African mammals*, Itala, South Africa. 24 – 30 September 1995.
- 29 **VAN AARDE, R.J.** Male proximity and ovarian activity in the Cape porcupine. *7th International Colloquium on the ecology and taxonomy of small African mammals*, Itala, South Africa. 24 – 30 September 1995.
- 1994**
- 28 **VAN AARDE, R.J.** Invited speaker: The rehabilitation of coastal dune animal communities in northern Natal South Africa. *International symposium on the science and management of coastal dunes*. Port Elizabeth and Stellenbosch: 6 – 11 January 1994.
- 27 **VAN AARDE, R.J.** Steroidogenic activity of the corpus luteum of the African elephant. *Zoological Society of Southern Africa: Contemporary Zoology in southern Africa*. Pietermaritzburg: 11 – 14 July 1994.

- 26 **VAN AARDE, R.J.** Placentation in the African elephant (*Loxodonta africana*). *Society for the study of Fertility: Winter Meeting*, London: 19 – 20 December 1994.
- 1993**
- 25 **VAN AARDE, R.J.** Invited speaker: Small mammal species replacement on rehabilitated coastal dune forests at Richards Bay, South Africa. *6th Sixth International Theriological Congress: Symposium on the response of mammalian communities to disturbance events*. University of New South Wales, Sidney, Australia: 4 – 10 July 1993.
- 24 **VAN AARDE, R.J.** Invited speaker: Reproductive success in southern elephant seals at Marion Island. *6th International Theriological Congress: Symposium on marine mammals and conservation in the Antarctic Marine system*. University of New South Wales, Sidney, Australia: 4 – 10 July 1993.
- 23 **VAN AARDE, R.J.** Trophodynamics of the Cape porcupine *Hystrix africaeaustralis*. *6th International Theriological Congress: Symposium on mammal-plant interactions*. University of New South Wales, Sidney, Australia: 4 – 10 July 1993.
- 22 **VAN AARDE, R.J.** Invited speaker: Restoration ecology and the maintenance of biodiversity. *Symposium on sustainable development in Africa*. University of Pretoria: 25 March 1993.
- 21 **VAN AARDE, R.J.** Invited speaker: Rehabilitation of coastal dune forest communities. *1993 National Dune Forum*. University of Port Elizabeth: 25 – 26 March 1993.
- 1992**
- 20 **VAN AARDE, R.J.** Progesterone binding globulins in the Cape porcupine. *12th International Congress on animal reproduction*. The Hague, Netherlands: 23 – 27 August 1992.
- 1991**
- 19 **VAN AARDE, R.J.** Invited speaker: Reproductive ecology of Cape porcupines. *6th International Colloquium on the ecology and taxonomy of small African mammals*. Mitzpe Ramon, Israel: 11 – 16 August 1991.
- 1989**
- 18 **VAN AARDE, R.J.** The consequences of group living in the Cape porcupine *Hystrix africaeaustralis*. *International symposium on savanna fauna and emigrations and movements of the Zoological Society of Southern Africa*. Etosha National Park, Namibia: 8 – 10 August 1989.
- 17 **VAN AARDE, R.J.** The effect of the social environment on the reproductive endocrinology of the female Cape porcupine. *Fifth International Theriological Congress*. Rome, Italy: 22 – 29 August 1989.
- 16 **VAN AARDE, R.J.** Invited speaker: Reproductive suppression as a factor in the regulation of the density of Cape porcupines *Hystrix africaeaustralis*. *Fifth International Theriological Congress*. Rome, Italy: 22 – 29 August 1989.
- 1988**
- 15 **VAN AARDE, R.J.** Invited speaker: The behavioural ecology of brown hyenas *Hyaena brunnea* in the central Namib desert. *Tenth International Symposium on Biotelemetry*. Arkansas, USA: 31 July – 5 August 1988.
- 14 **VAN AARDE, R.J.** Molecular weight heterogeneity of circulating luteinizing hormone in the cow. *Annual Conference of the Society for the Study of Fertility*. Edinburgh, Britain: 4 – 6 July 1988.
- 1987**
- 13 **VAN AARDE, R.J.** Reproduction in the Cape porcupine: an ecological perspective. *International Symposium on Adaptation for survival in mammals*. Pretoria, South Africa: 26 – 29 January 1987.
- 1985**
- 12 **VAN AARDE, R.J.** Invited speaker: Endocrine correlates of the annual reproductive cycle of the porcupine *Hystrix africaeaustralis*. *International Colloquium on Endocrine regulations as adaptive mechanisms to the environment*. Forêt de Chize, France: 1 – 5 July 1985.
- 11 **VAN AARDE, R.J.** Invited speaker: The interaction between brown hyaenas and other carnivores in the central Namib Desert. *Fourth International Theriological Congress*. Edmonton, Canada: 13 – 21 August 1985.
- 10 **VAN AARDE, R.J.** Estimating brown hyaena density using isotopes. *Fourth International Theriological Congress* Edmonton, Canada: 13 – 21 August 1985.
- 9 **VAN AARDE, R.J.** Age determination of Cape porcupines. *Third International Theriological Congress*. Edmonton, Canada: 13 – 21 August 1985.

1983

- 8 **VAN AARDE, R.J.** Utilization of space by brown hyaenas *Hyaena brunnea* in the Transvaal, South Africa. *Colloquium of the Hyaena Specialist Group, IUCN*, Harare, Zimbabwe: April 1983.
- 7 **VAN AARDE, R.J.** Invited speaker: Population biology of southern elephant seals on Iles Kerguelen. *International Workshop on seals*. Pretoria, South Africa: September 1983.
- 6 **VAN AARDE, R.J.** Feral cats on Marion Island. *Fourth Symposium on Antarctic Biology, Wilderness*, South Africa: September 1983.

1982

- 5 **VAN AARDE, R.J.** Aspects of reproduction in the porcupine *Hystrix africaeaustralis*. *Annual conference of the Society for the study of Fertility*. Sutton Bonnington, Britain: 13 – 16 July 1982.
- 4 **VAN AARDE, R.J.** Population biology and the control of feral cats on Marion Island. *Third International Theriological Congress*. Helsinki, Finland: 15 – 20 August 1982.

1981

- 3 **VAN AARDE, R.J.** Invited speaker: Colonization and control of feral cats at Marion Island. *International Symposium on Wildlife ecology: theory, research and application*. Pretoria, South Africa: 3 – 5 July 1981.

1978

- 2 **VAN AARDE, R.J.** Invited speaker: Reproduction and population ecology in the feral house cat on Marion Island. *First International Conference on domestic cat ecology and genetics*. Syracuse, Italy: 27 June – 2 July 1978.

1977

- 1 **VAN AARDE, R.J.** The influence of the domestic cat populations on the avifauna on Marion Island. *2nd International Symposium on African Wildlife, research and management*. Pretoria, South Africa 5 – 7 July 1977.

7.2 Teamwork and collaboration with others:

Other researchers (national and international)
Other research institutions (national and international)
Industry

Collaborative research with the following international co-workers:

Professor R.J. Berry, University of London, UK.
Professor Ben Blumenberg, Lesley College, Massachusetts, USA.
Professor Brian Heap, AFRC Institute of Animal Physiology, UK.
Professor Keith Hodges, University of Göttingen, Germany.
Dr Malcolm Coe, University of Oxford, UK.*
Professor Twink Allen, University of Cambridge, UK.
Professor Ulrich Welsch, University of Munchen, Germany.
Professor Avraham Haim, University of Haifa, Israel.
Professor Stuart Pimm, University of Columbia, USA.
Professor Stuart Pimm, University of Duke, USA.*
Professor Michael Gaines, University of Miami, USA.*
Professor Alfred Rocco, University of Illinois, USA.*

*Over the last five years as visiting scientists to the University of Pretoria.

Other research institutions (national and international)

South African National Parks
Ezemvelo KwaZulu-Natal Nature Conservation Services
Department of Nature Conservation in Mozambique (DNAC)
Botswana Department of Wildlife and National parks
Ministry of the Environment & Tourism in Namibia
Etosha Ecological Institute in Namibia
Zambian Wildlife Authority

Nicholas School of the Environment, Duke University in USA
Frankfurt Zoological Society
Namibian Elephant and Giraffe Trust
Copenhagen Zoo

Industry & NGOs

Elephants Without Borders
Richards Bay Minerals
Peace Parks Foundation
International Fund for Animal Welfare
Wilderness Safaris
MOZAL Community Development Trust
Billiton
Conservation Foundation, Zambia
African Wilderness Safaris
World Wide Fund for Nature

7.3 Membership in national and international bodies

List all the scientific associations or societies to which you belong. Name your involvement, e.g. honorary member, founder member, full member, chairman, president, secretary

Zoological Society of Southern Africa (Council Member 1987, 1990-1991, 1994, 1995, 1996, 1997).
Zoological Society of Southern Africa (Ordinary Member 1998 - present).
Southern African Wildlife Management Association (Council Member 1994 - present).
South African Wildlife Management Association (President 2000 - 2002; 2003 - 2004)
Society for the Study of Fertility (UK) (member till 1999)
Royal Society of Southern Africa (FRSSAf 2005 -)
IUCN Specialist Group on Hyaenas (Member 1985 - 1991)
Society for Restoration Ecology (member 1997 – present)
Society for Conservation Biology (member 2000 – present)
Scientific Committee for the Restoration of Mediterranean ecosystems (2002)
Royal Society of Southern Africa – Chairman: Northern Areas Branch (2007 - 2010)
Royal Society of Southern Africa – Council member (2007 - 2010)

Project evaluator for the following organizations

Big Cat Initiative
Conservation International
Foundation for Research Development
National Research Foundation
Peace Parks Foundation
South African Scientific Committee for Antarctic Research
United States - Israel Bi-national Science Foundation
Richards Bay Minerals
National Geographic Society
World Wide Fund for Nature
Conservation Foundation, Zambia

7.4 Visits to local and overseas universities or research institutes as guest professor or researcher

Details are required

Terres Australes Antarctiques Francaises (TAAF) Research station on Kerguelen, South Indian Ocean.
Collaborative research on the Southern Elephant Seal (1977 – 1981)

University of Nottingham, UK.
 Collaborative research on mammalian reproduction (1982 – 1985)

University of Tel Aviv, Israel.
 Behavioural ecology of striped hyaenas (1984 – 1985)

University of Haifa, Israel.
 Reproductive biology of desert rodents (1992)

Institute of Zoology, London, UK.
 Reproductive endocrinology (1982 – 1984)

AFRC Institute of Animal Physiology, Cambridge, UK.
 Post Doctoral fellow in reproductive endocrinology (1985 - 1986)

University of Göttingen, Germany.
 Elephant reproduction (1993)

University of Columbia, USA
 Restoration ecology (1997)

Duke University, USA
 Elephant metapopulation dynamics (regularly from 2003 – 2008)

University of Miami, USA
 Elephant metapopulation dynamics (2016)

8. ARTISTIC OUTPUTS (*if applicable*)

8.1 Provide full details of artistic outputs, including public reviews of work, coordinating reports by experts in the field, publisher, production company etc

None but those associated with my hobby and these include acceptances at national and international salons in Wildlife Photography, special awards at the 2001 and 2002 Agfa Awards, special merits and category winner at the 2004, 2005, 2006, 2007 & 2008 Fuji Awards, acceptance and recognition of work at International salons.

i. MANAGEMENT AND ADMINISTRATIVE DUTIES

9.1 List your involvement in departmental activities (e.g. administrative functions), faculty (e.g. faculty committees) or other university activities.

ADMINISTRATIVE EXPERIENCE AND RESPONSIBILITIES

Mammal Research Institute, University of Pretoria

1987 - 1998 Research associate

1987 - 1998 Acting Director in the absence of the Director.

1979 - 1985 Organizer/presenter of several public presentations and exhibitions relating to the research activities of the Institute.

1979 - 1998 Marketing the Institute through popularised scientific lectures on research activities to government departments, branches of the Wildlife Society of southern Africa, NGO's, a variety of industries involved in the exploitation of natural resources, conservation organisations, and by participating in radio programmes, television productions and reports in the media.

1980 - 1986 Convener and organizer of the Annual General Meetings of the Institute.

1979 - 1998 Assistance to the Director on the financial and research administration of the Institute.

- 1992 - 1994 Co-programme leader of the Antarctic Research Programme of the Institute.
- 1989 - 1998 Programme leader of research projects in the sub-Antarctic.
- 1991 - 1998 Programme leader of an ecological research programme on coastal dunes at Richards Bay.
- 1979 - 1998 Organiser of postgraduate educational and research expeditions to Botswana, Namibia, Marion Island and several localities in South Africa.
- 1980 - 1998 Liaison with several international research institutions and universities (Haifa, Tel-Aviv, Göttingen, Boston, Oxford, Cambridge, Tennessee) to promote collaborative postgraduate education.
- 1982 - 1998 Development and management of isotope laboratory and facilities, including the endocrinology laboratory.
- 1980 - 1991 Development and management of animal holding facilities of the Institute.

Department of Zoology, University of Pretoria

- 1987 - 1994 Acting Head in the absence of Head of Department.
- 1989 - 1994 Direct assistance to Head of Department in aspects related to the day-to-day running of the Department (management, personnel, marketing, external affairs, media, financial, development, planning).
- 1987 - 1994 Departmental representative at the Merensky Library.
- 1987 - 1994 Safety representative for the Department.
- 1982 - 1994 Management of use of radio-active material in the Department.
- 1991 - 1992 Convener of taskgroup for the development of a new study programmes in Zoology.
- 1993 - 1994 Co-curriculum of modules for undergraduate and honours students.
- 1993 - 1994 Member of departmental management committee.
- 1990 - 1994 Responsible for the compilation of the annual study guide for undergraduate students.
- 1993 - 1995 Responsible for the compilation of the study guide of BSc(Hons) students.
- 1988 - 1994 Course coordinator for all third year students in Zoology.
- 1992 - 1994 Course coordinator for honours students in Zoology.
- 1993 - 1994 Personnel coordinator and responsible for all job descriptions relating to teaching and technical activities in the Department.

Department of Zoology & Entomology, University of Pretoria

- 1994 – 1996 Assistant financial coordinator
- 2000 – 2007 Very occasional Acting Head of Department
- 1994 – 2017 Course coordinator for students in Ecology
- 2000 – 2007 Course coordinator for Masters students in Conservation Ecology & Planning
- 1999 – present Chair in Conservation Ecology
- 1999 – present Establishment and Maintenance of the Conservation Ecology Research Unit (CERU)

Faculty of Science, University of Pretoria

- 1991 - 1993 Convener of task group for the development of an undergraduate study programme in Ecology.
- 1991 - 1992 Member of task group of University Ethics Committee.
- 1991 - 1992 Member of University task group responsible for the centralisation of animal holding facilities.
- 1992 - 1993 Member of task group investigating standards of Faculty BSc(Honours) courses.
- 1992 - 1993 Responsible for setting schedules for all practical courses presented under the auspices of the Faculty.
- 1993 - 1994 Member of Faculty Staff Committee.
- 1993 - 1994 Member of Faculty Committee for External Affairs.
- 1993 - 1995 Media representative for the Faculty.
- 1993 - 1994 Member of Faculty Committee evaluating candidates for outstanding academic activity.

Faculty of Biological & Agricultural Sciences, University of Pretoria

- 1994 - 1995 Member of Faculty Research Committee

- 1995 - 2009 Member of the Experimental Farm Steering Committee
 1994 - 2017 Responsible for co-ordination of undergraduate study programme in Ecology

Conservation Ecology Research Unit

I established the Unit during 1999 as an integral part of the Department of Zoology & Entomology. For this I have secured logistical and financial support from the University of Pretoria, the Foundation for Research Development, the Department of Environmental Affairs & Tourism, the Department of Trade & Industry, Richards Bay Minerals (now managed by Rio Tinto), the South African National Parks, the Peace Parks Foundation, the US Fish & Wildlife Services, the International Fund for Animal Welfare, Conservation International, the Mozal Community Development Trust, the World Wide Fund for Nature and several private sponsors. For the past two years the annual budget of the Unit exceeded R 2.5 million. Since 2006 the Unit provided salaries and infrastructures for 14 research scientists and assistants, four post-doctoral fellows and 20 postgraduate students. The research and education programs of CERU focus on conservation ecology and more specifically on the restoration of populations and communities.

For further details please visit www.ceru.up.ac.za

10. COMMUNITY SERVICE OR PROFESSIONAL SKILLS

10.1 Outreach projects

(e.g. project titles, institutions and communities involved, etc.)

- The development and construction of a primary school for the Tembe family in northern KwaZulu Natal
- The development of a forest restoration programme for the Port St Johns municipal district
- The development of a reforestation programme for the Sekhukhune district
- An evaluation of the carbon sequestration potential of the eastern Cape

10.2 Professional service performed

(e.g. courses presented, lectures at professional associations/clubs, radio or TV appearances, outside expert or appointment committee, etc.)

These are on-going and include lectures to conservation societies throughout southern Africa, a variety of national and international radio-discussions, a variety of television productions, talks at photographic associations and general media appearances

Advice and consultation on a regular basis for the following organisations

Breeding of rare and endangered species - National Zoological Gardens (1981 - 1987).
 Relocation of large mammals - Lebowa Government Services (1987 -1989).
 Conservation of mammals - Nature Reserve Authority, Israel (1991 - 1993).
 Environmental Impact Assessment - A ECI (1993).
 Environmental Impact Assessment - SRK (1993 - 1996).
 Environmental impact Assessment - van Riet Landscape Architects (1994 - 2000).
 Richards Bay Minerals (1993 - present)
 Botswana Veterinary Services (1994 - 1999)
 KwaZulu-Natal Nature Conservation Services (1997 - 2001)
 South African Parks Board (1994 – present)
 USAID programme on the restoration of carbon sinks (2001 - 2002)
 GreenGrowth Strategies (2002 – on-going)
 Environmental offset Investments (2003 – on-going)
 The Peace Parks Foundation
 The conservation Committee of the National Geographic Society
 Direção Nacional de Áreas de Conservação

Namibian Ministry of the Environment & Tourism
Producers of the 50/50 television programme
Editors of the Africa Geographic magazine
Editors of the National Geographic magazine
Big Cat Initiative, National Geographic Society

10.3 Clinical service

(e.g. full detail of rank/level of joint appointment, level of clinical service rendering responsibilities, university administration and academic responsibilities, CPD involvement, clinical trials involvement, etc.)

10.4 Involvement with other universities/scientific institutions

(e.g. external examiner, editor of journal, advisory council, CSIR, SA Council for Scientific Professions)

External examination

University of Stellenbosch
University of Potchefstroom
University of Cape Town
University of KwaZulu-Natal
University of the Witwatersrand
North-West University

Editor of Journal

South African Journal of Antarctic Research
Editorial Board of Journal of Environmental Conservation
Editorial Board of Journal of Reproduction
Editorial Board on Journal of Conservation and Diversity

Advisory Councils

Ad hoc Committees, Sub-committees and Task Groups considering aspects of the control of the Marion Island cat and mice populations.

Committee for the establishment of a management plan for the Prince Edward Islands.

Biological Task Group of the South African Scientific Committee for Antarctic Research.

Member of the Editorial Committee of the South African Journal of Antarctic Research.

Trustee of the Charles Astley Maberly Memorial Scholarship, Transvaal Branch of the Wildlife Society of Southern Africa.

Member of the Ethics Committee of the South African National Parks

Foundation for Research Development: Restoration Ecology. Thrust Advisory Committee.

Member of the Advisory Board for "Buro van die Woordeboek van die Afrikaanse Taal"

Committee Member, northern Transvaal Branch of the Royal Society of South Africa

Member of the Science Round Table of the Minister of Environmental Affairs on aspects related to the management of the African elephant

10.5 Referee duties

(journals)

Manuscripts reviewed and refereed for the following scientific journals:

African Journal of Ecology, Animal Conservation, Biological Conservation, Conservation Biology, Conservation Letters, Canadian Journal of Zoology, Ethology, Ecological Letters, Environmental Conservation, Journal of Applied Ecology, Journal of Arid Environments, Journal of Reproduction and Fertility, Journal of the British Society of Animal Production, Journal of Mammalogy, Journal of Endocrinology, Journal of Zoology (London), Journal of

Applied Ecology, Journal of Wildlife Management, Koedoe, Oecologica, PLoS ONE, Restoration Ecology, South African Journal of Zoology, South African Journal of Wildlife Research, South African Journal of Science, Transactions of the Royal Society of South Africa.

11. AWARDS AND SCIENTIFIC/SCHOLARLY RECOGNITION

11.1 Evaluation status as scientist/scholar

(e.g. NRF; first evaluation and at subsequent evaluations and dates

1988 – 1993 - Y
1991 – 1994 - C
1995 – 1998 - C3
1999 – 2007 - C1
2009 – 2012 - C2
2013 – 2017 - C1
2019 – 2023 - B2

11.2 Research awards and prizes

Full details are required

Outstanding academic Achiever, University of Pretoria. 2000 – 2002
Outstanding academic Achiever, University of Pretoria. 2003 – 2005
Outstanding academic Achiever, University of Pretoria. 2006 – 2008
Outstanding academic Achiever, University of Pretoria. 2009 – 2011
Fellow of the Royal Society of South Africa since 2005

11.4 Artistic awards and prizes

Full details required

Agfa photographic Awards 2001
Agfa photographic Awards 2002
Fuji photographic Awards 2004, 2004, 2006, 2007 & 2008

ATTACHMENTS

Biographical information

Professor Rudi van Aarde directs the activities of the Conservation Ecology Research Unit (CERU) as a self-sufficient research group in the Department of Zoology and Entomology at the University of Pretoria. His research focuses on the spatial structuring and dynamics of African elephant populations across southern Africa and on the determinants of the responses of coastal forest communities to ecological restoration. He is the author or co-author of 204 peer-reviewed scientific papers, 13 book chapters, 126 technical reports, 56 popular articles, and has presented his research findings on 198 occasions at national or international conferences and public forums, several of these as invited speaker or guest lecturer. He has supervised 69 PhD and MSc students since 1991, and 11 post-doctoral fellows completed their research under his supervision. He has been a council member of ZSSA, SAWMA and RSSAf, president of SAWMA, and has served on several conservation management committees. He regularly reviews papers for high impact factor scientific journals in his field of specialisation and serves on several international research grant and evaluation committees. He frequently advises industry, government and conservation departments on conservation-related issues. The University of Pretoria has awarded him for exceptional academic achievement on four occasions, and he is a Fellow of the RSSAf.

Van Aarde established CERU in 1998. Grants and contracts that he raises from government associated organisations, wildlife departments and private industries, both nationally and internationally, provide for the employment of research fellows, support staff and post-graduate bursaries. This funding also enables the maintenance of field laboratories and running costs of with research and postgraduate training. Collaborative research (e.g. with Professor Stuart Pimm, Dorris Duke Professor at Duke University, USA) strengthened his academic activity and post-graduate training programs. Van Aarde's research provides a scientific foundation for conservation, both for the management of African elephants and through the restoration of coastal dune forests. His ability to raise long-term funding and logistic support to maintain a long-term and place-based scientific research and quality training of post-graduates brought national and international recognition for his contributions. This also is reflected on increased citation rates and the influence his contributions is having on policy decisions.

His research on elephants focuses on the drivers of demographic variability and heterogeneity in spatial utilization. His development of the 'megaparks for metapopulations' concept provides a platform for elephant management and his more recent research and publications emphasise the interactions between landscapes, habitat, management interventions and the demography of elephant. Through his publications and invited participation in specialist groups he plays a pivotal role in extending management options for elephants.

Van Aarde's research on the restoration of coastal dune forest, a small bioregion within the Maputaland-Pondoland-Albany biodiversity hotspot, is justified by industry's legal commitment to rehabilitate mined landscapes. He and his team of postgraduate students continue to develop and validate sensitive indicators of restoration success based on measures of ecological responses of species and of communities. The project is now well established and van Aarde's scientific achievements here provide a recognised scientific foundation for restoration ecology in southern Africa. His approach finds implementation in the evaluation of restoration success as a sought after outcome of sustainable development that earmarks the activities of major mining houses throughout the world.

Brief description of completed research (2010 – 2017)

The spatial dynamics of southern Africa's elephant populations

My research from 2010-2017 focussed on addressing the following questions. How many elephants should there be? What do elephants do to other species? What can we do for elephants? These revolve on the demographic and spatial responses of elephant populations to different environmental and management conditions as well as to the restoration of the spatial structuring of populations to reinstate meta-dynamics. Barriers and management actions that limit elephant dispersal, artificial water supplies that alter survival, and a spatial configuration of protected areas that hinders seasonal spatial use, may cause demographic anomalies that might explain perceived 'elephant problems'. My research provides solutions to these problems.

Based on the analyses of 73 independent time series we have identified 18 stable populations and characterised through modelling environmental parameters (EVI and distance from water) and social variables (poaching levels) that alter asymptotic levels Robson et al. (2017). Our model predicted asymptotes for non-stable populations and showed a 75% deficit in the 73 populations that collectively represent half of Africa's savanna elephants. We thus now have an ecologically derived and novel estimate of the number of elephants that should occur in most of southern Africa's protected areas and can inform conservation incentives to attain such levels. Our studies on the consequences of stability for other species and on the responses of age specific survival and reproduction to resource limitations that impose stability are still at an early stage but already have produced publishable results (i.e. Trimble et al. 2009; Shrader et al. 2010; Young & van Aarde 2010).

A recent update of elephant impact (Guldmond et al. 2017) suggest that few studies meet criteria to be included in a proper meta-analysis, and that two thirds of those that do so suggest negative impacts that could not be assigned to elephant densities or management histories. Across Africa, impact is not a function of density, but difficult to assess because only a quarter of studies conducted since 1985 provide data for inclusion in our recent meta-analyses (Guldmond et al. 2017). Lack of impact may be due to density dependent resource selection with selection decreasing with increasing density and in response to the distribution of artificial watering points (Purdon & van Aarde 2017). Birth rates varied little from year to year but survival of calves responded negatively to low rainfall (Robson 2016) and high densities, which induces changes in roaming behaviour and which reduces calve survival (Young & van Aarde 2010). Heat spells typical of much of the distributional range of elephants might explain calf mortalities as a cost induced by adaptive behavioural plasticity that limits foraging opportunities (Mole et al. 2016). These findings have important management implications (see Young & van Aarde 2011).

We built demographic profiles for 22 populations after designing a method to age elephants from body measures (Shrader et al. 2006a & 2006b; Trimble et al. 2011) and after evaluating and developing methods to quantify age at first breeding, length of calving intervals, and age-specific survival rates (Ferreira & van Aarde 2008). We related differences in fecundity and survival of 17 populations to rainfall and integrated normalized difference vegetation index (INDVI). For 12 of these populations, INDVI during conception and gestation best explained anomalous age structures. In dry savannas juvenile survival drove such anomalies (Trimble et al. 2009).

Elephants born in high rainfall years survived better than those born in low rainfall years, but the relationship was weak, except for fenced populations with access to artificial water, where rainfall greatly influenced juvenile survival. Food restrictions during droughts therefore reduced calf survival and we suggest that damage to vegetation can be prevented by reducing water sources and removing fences (Shrader et al. 2010). Satellite tracking of 73 breeding herds at 13 locations showed that certain management interventions reduced seasonal

variation in ranging patterns and increased local impacts on vegetation. Artificial water sources allowed more extensive dry season ranging and enabled elephants to use vegetation in areas that would otherwise have been inaccessible (Purdon & van Aarde 2017). Fences also caused elephants to “bunch-up” against them during the wet season, again increasing their pressure on resources (Loarie et al. 2009).

Food availability during the wet season, and heterogeneity in its distribution during the dry season explained home range variability across southern Africa (Young et al. 2009a; Purdon 2016). However, as densities increased this relationship weakened and less preferred habitats were then occupied (Young et al. 2009b; Robson 2016). Across 13 protected areas, dry season daily roaming distances increased with densities and this reduced the survival of weaned calves. This analysis enabled the first quantification of behaviourally-mediated density dependence, but fences and artificial water negated dependence (Young & van Aarde 2010). Artificial water supplies drove vegetation impact by altering range use (Grainger et al. 2005; van Aarde et al. 2006; de Beer et al. 2006; de Beer & van Aarde 2008; Purdon 2016) and dictating habitat selection (Harris et al. 2008; Robson 2016).

Outside protected areas the spatial overlap between people and elephants causes conflict (Jackson et al. 2008; Roever et al. 2014). Range limitations can be addressed by linking protected areas in order to restore seasonal and regional land use patterns (van Aarde et al. 2006; Roever et al. 2013). We advocate scientifically-based management that relies on networks of national and trans-boundary megaparks to restore spatial dynamics (van Aarde & Jackson 2007). Implicit in this solution is the dispersal-associated stabilization in density, which we demonstrated for Africa’s largest elephant population (Junker et al. 2008), whereas anomalous growth rates were typical for populations deprived of dispersal opportunities (van Aarde et al. 2008; Robson 2016). Our literature review (Olivier et al. 2009) provided impetus for the application of metapopulation management but managers tend to rely on experience rather than scientific evidence (Young & van Aarde 2011). Our approach now requires implementation and SANPark’s moratorium on culling, reduced water supplies and increased ranges for elephants provide for the advocated spatial structuring of populations. Our focus on the development of sub-continental scale conservation management options for elephants may also benefit other species, and have positive spinoffs in socio-economic and political arenas.

Based on the satellite tracking of 26 breeding herds for three consecutive years in Kruger National Park we established that artificial waterholes allowed elephants to use areas more than double the distance away from rivers, increasing the total area they used in Kruger by more than a third. Additionally, artificial waterholes increased the intensity of use in some areas. Water provisioning in Kruger alters elephant spatial utilisation patterns. Closing down these artificial waterholes might create a desirable outcome for conservation management centred on promoting ecological processes that may limit elephant numbers and their impact on vegetation (Purdon & van Aarde 2017).

Elephants occur in fragmented and isolated populations across southern Africa. Transfrontier conservation efforts aim at preventing the negative effects of population fragmentation by maintaining and restoring linkages between protected areas. We recently identified possible genetic linkages by comparing the genetic characteristic of elephants in Kruger National Park (South Africa) to populations in national parks in nearby countries (Botswana, Mozambique, Zambia and Zimbabwe. The mtDNA and nDNA population structure were incongruent, likely reflecting female philopatry and male-mediated dispersal. High genetic diversity among elephants in Kruger, and shared mtDNA haplotypes with parks north and south of Kruger suggest that this population was established by multiple founder populations and/or the original genetic diversity of the founder population has since been

augmented through gene flow and immigrations from proximate parks (de Flamingh et al. in review). Our findings highlight the need for conservation initiatives that aim at maintaining connectivity between populations. Such initiatives may provide a sustainable, self-regulating management approach for elephants in southern Africa while simultaneously upholding/maintaining genetic diversity and gene flow within and between protected areas as we have illustrated for northern Botswana (de Flamingh et al. 2014).

Our efforts to answer three simple questions relevant to elephant conservation yielded exciting and original opportunities, proved to be productive and have yielded new opportunities of finding solutions.

Ecological restoration of coastal dune forests in KwaZulu-Natal

Research started in 1992 and for the last eight years emphasized ecological processes that may strengthen or derail forest restoration after strip mining activities. Thirty-eight years of post-mining restoration generated this outdoor research laboratory where the initial reshaping and stabilization of dunes provides for the regeneration of forests through natural processes (van Aarde et al. 1996; Wassenaar et al. 2005; Rolo et al. 2016). Our peer-reviewed science provides rigour for the evaluation of the restoration as a conservation initiative and for pro-active management (Wassenaar et al. 2008; Rolo et al. 2016).

We used our empirical data to verify expected succession, and to determine some of the local and regional drivers of colonisation processes (Olivier & van Aarde 2014; Rolo et al. 2016). We expect age-related regeneration to give rise to increased complexity and heterogeneity as forest communities re-assemble through the addition and replacement of species which may be limited by niche properties and regional events. Furthermore, regeneration should induce convergence towards bench-mark target values in assembly properties. To assess these we continued to survey community properties at various trophic levels along a successional sere. We now have near annual data for a 20 year period on the compositional, structural and functional properties of seral stages of forest regeneration, as well as several old growth forest fragments that serve as benchmarks.

Regeneration trajectories for soil properties, herb, tree, dung beetle, millipede, bird, and mammal assemblages show that rehabilitation enables convergence in community properties within a reasonable period, but idiosyncratic trends vary from one trophic level to another (Wassenaar et al. 2005; Grainger et al. 2011; Rolo et al. 2016). Few assemblages converge exponentially and trends vary with indices. Consequently the acceptance of convergence depends on what one measures (Wassenaar et al. 2005). Variability in composition and structure may be natural, unless induced by site-specific anomalies that could jeopardize restoration. We developed a technique to flag aberrations (Wassenaar et al. 2007) and this allows management to wisely use scarce resources to mitigate aberrations and improve restoration success. Our technique uses a permutation test to identify variables that vary more than expected. Consequently we identified colonization constraints due to distance and isolation effects. Contrary to our expectations patch age only explained the patch occupancy of a third of bird species and half of the woody plant species. Landscape parameters that measure edge, isolation, and area explained patch occupancy for most birds and half of the plant species. Varied responses are constrained by habitat and dispersal, but we cannot ignore regional limitations (Grainger et al. 2011). For instance, for birds Trimble & van Aarde (2011) illustrated that three quarters of bird populations in our study area declined at about 12% per year over a period of 13 years - this implies that bird numbers halved every five years. Below average rainfall may have contributed to declines, but species with larger ranges tended to decline more sharply than did others. Declines may thus be due to environmental changes at a broader geographical scale. These trends have undesirable consequences for restoration.

Taxon-specific regeneration responses differed among taxa. For instance, dung beetles responded to micro-climatic conditions rather than the age of rehabilitating sites (Davies et al. 2003). Colonisation of regenerating forests by millipedes, on the other hand, is by distance to potential source areas (Redi et al. 2005) but induces successional patterns. Soil micro-arthropod communities are re-assembling at much slower rates than all other taxa (Kumssa et al. 2004). Edge effects of roads altered community composition and structure in different ways for millipedes, birds and rodents (Weiermans & van Aarde 2003) and may impair forest restoration. Edges along roads favour exotic invaders but these herbs assembled at rates similar to those of indigenous species and had no discernable effects on non-native plant species (Grainger & van Aarde 2011). Moreover, at the local scale, Grainger & van Aarde (2012) show that pioneer tree biomass and their replacement forest canopy trees support succession as the principle driver of early restoration.

We further validated that succession is the principle driver of regenerating trajectories by comparing predicted values of tree communities attributes to observed values over time. Our results indicate that changes in forest structure and function can be predicted using a space-for-time substitution approach (Rolo et al 2016). The sharply decrease in tree pioneer species at early regenerating stages predicted by a chronosequence was corroborated when surveying the same sites over time. Similarly, we observed that the functional diversity of regenerating forest developed in a predictable fashion and in accordance with the successional models of vegetation development (Rolo et al 2016). We observed that functional trait space, based on regenerating attributes, increased linearly over time. Indicating that tree communities at late regenerating stages are more functionally different than expected by chance. These results corroborate that the assemblage of tree species into communities is more likely to be driven by niche rather than by neutral processes. However, the functional trait space based on reproductive traits may be more linked to processes operating at the landscape scale than to local processes. Indeed, when assessing the functional trait space of regenerating forest based on functional traits that depend on local biotic and abiotic conditions, we observed the opposite pattern, showing a significant decrease over time.

At the regional scale, we developed a model to predict where coastal forests should occur in the absence of anthropogenic disturbances. Our model suggests that 82% of coastal forests in KwaZulu-Natal may have been lost and that the remaining forests now harbour an extinction debt of 14 bird species (Olivier et al. 2013). This highlights the importance of restoration efforts to regain some of the forest habitat that has been lost. To direct restoration efforts at the landscape scale, we developed a spatial model to identify which forest fragments in the region are degenerating and/or regenerating (Olivier et al. in prep). By restoring forest across the landscape, we not only increase forest habitat area, but also increase connectivity among remaining fragments. Our research on similar and other forests in southern Mozambique highlights the importance of connectedness between naturally fragmented forests (Guldmond & van Aarde 2010; Olivier & van Aarde 2014; Freeman et al. 2016). For instance, when human land-use types surround coastal forest fragments, forest specialist bird species disappear from these fragments (Freeman et al. 2017). This likely happens because human land-use types restrict the movements of fragment-dwelling species, but also because these habitats degrade the coastal forest tree community. Moreover, more connected habitats harbour more species of insectivorous bird species (Olivier & van Aarde 2016). Maximising fragment connectivity, but also protecting the tree community within fragments from degradation therefore seems to be an effective strategy to conserve coastal forest species.