



**DST-NRF Centre of Excellence**  
***“Birds as Keys to Biodiversity Conservation”***  
**Percy FitzPatrick Institute, UCT**

**ANNUAL REPORT 2015**

**Reporting Period**  
**1 January - 31 December 2015**

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**CoE Identification**

Name of Director	: Prof. Peter Ryan
Name of CoE	: DST-NRF Centre of Excellence at the Percy FitzPatrick Institute of African Ornithology
Abbreviated CoE name	: PFIAO CoE
Host Institution	: University of Cape Town
Date completed	: 7 March 2016

## EXECUTIVE SUMMARY

### 1. Funding of the CoE for 2015

DST-NRF CoE funding for 2015	:	6 496 054
Carry forward from 2014	:	801 346
Interest earned during 2014	:	3 294
UCT URC support for Hotbirds project in 2015	:	324 803*
Funding from other sources for the CoE in 2015	:	6 494 000**
Total funding	:	R 14 119 497

\* represents UCT's direct contribution to the CoE R324 803 of R6 496 054 = 5%

\*\* funding from sources, other than the DST-NRF or UCT URC 'hotbirds' grants, for projects conducted by the CoE (see Finances Section pages 22 - 25)

### 2. Summary of progress against Five Key Performance Areas

#### (i) Research

The CoE had a record year with 138 papers published in peer-reviewed journals during 2015, 44 in journals with an impact factor rating  $\geq 3.5$ , including 22 in journals with a rating  $\geq 5$ . Dr Arjun Amar received the 2015 Claude Leon Merit Award, Alex Thompson was awarded the 2014 Science Faculty PhD medal during 2015 for his PhD, and Sonja Krüger won the 2015 Purcell Award for her PhD thesis.

#### (ii) Education and Training

A total of 76 Post-doctoral Fellows and post-graduate students (8 Post-docs, 20 PhD, 47 MSc and 1 BSc Hons) registered at South African institutions (13% black and 54% women) were supported by the CoE during 2015. Twenty two students (2 PhD, 7 MSc by dissertation, 12 MSc Conservation Biology and 1 BSc Hons) graduated during 2015. Collaboration with Prof. Derek Engelbrecht at the University of Limpopo (UL) resulted in a further four students visiting the CoE for three weeks during June and July 2015 as interns. Ditiro Moloto completed her BSc Hons at UL with a project through the CoE during 2015 and will register for an MSc at the CoE during 2016.

#### (iii) Information Brokerage

CoE members published 76 semi-popular articles and seven books and chapter contributions to semi-technical books during 2015. CoE members attended eight international and nine local conferences, and presented over 50 seminars and illustrated talks at numerous universities, bird clubs and membership-based societies during 2015. Prof. Peter Ryan chaired the Scientific Committee of the Second International Seabird Conference held in Cape Town in October 2015. The CoE, EWT & SANBI hosted a past and present Rufford Foundation small grant recipients' workshop at SANBI, Kirstenbosch, during April 2015. The workshop was attended by 65 delegates, including the 2015 Conservation Biology MSc course class, and was regarded as a great success, particularly for young scientists.

#### **(iv) Networking**

A broad range of close collaborative working relationships with scientific peers and a variety of conservation NGOs and governmental organisations exists both nationally and internationally. The CoE continues to build much-needed African capacity in the broad arena of biodiversity conservation.

#### **(v) Service rendering**

The CoE actively advised NGOs, government departments and industry on a variety of research and applied conservation topics. CoE members served on 26 journal editorial boards, 63 membership fora and advisory services, and reviewed 134 papers for 63 peer-reviewed journals during 2015.

### **4. Red Flags/concerns for the future of the CoE**

Capacity concerns were reduced with the appointment of Dr Robert Thomson and Dr Susie Cunningham during 2015 bringing the academic capacity of the CoE back to normality. However, Prof. Graeme Cumming left UCT for a position in Australia at the end of June 2015; Dr Claire Spottiswoode from the University of Cambridge has been appointed to take his place as the Pola Pasvolsky Chair in Conservation Biology.

### **5. General Comments**

Following the positive news from the NRF in 2012 that the CoE will receive support for a third phase (2015-2019) with a minimum expectation of the same level of funding during 2015, a strategic plan and a sixth service level agreement (SLA 6) for 2015-2019 were drafted and approved by the CoE Steering Committee on 19 November 2014. The UCT Research Contracts Office has also drafted a renewed Memorandum of Agreement (MoA) between the NRF and UCT for 2015-2019 and renewed CoE collaboration MoAs with the University of Pretoria and the Nelson Mandela Metropolitan University. There are also developments towards creating a collaborative partnership with the University of Limpopo. This annual report is the first year of SLA6 and the renewed MoA between the NRF and UCT.

#### **Gender equity**

The CoE continues to be guided by a proactive recruitment policy to attract female postgraduates to ensure gender parity in the CoE student body. This policy has been successful, with 54% of Post-docs and postgraduate students supported by the CoE in 2015 being women. The academic and support staff gender profile of the CoE has remained at 58% female.

# PROGRESS REPORT

## 1. Scientific Research

### Objective

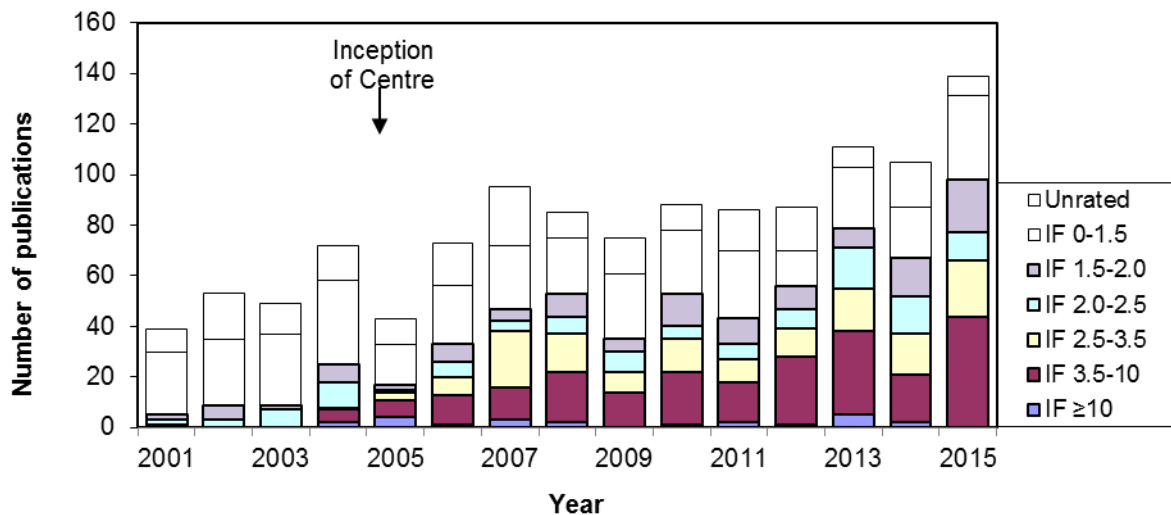
The research strategy of the CoE is aligned to a medium-term goal of producing world-class research outputs, measured as the number of papers published in international, peer-reviewed journals with high scientific impact-factor ratings. To meet this goal, the CoE SLA 6 has a target of publishing  $\geq 60$  peer-reviewed publications per year, with an average of  $\geq 15$  papers with an impact rating  $\geq 3.5$ , of which 5 should have an impact factor  $\geq 5$  each year during 2015-2019.

### Progress

Thirty research projects were supported by the CoE during 2015, including five new projects: drongo-cuckoo parasitic interactions, vulture conservation in Botswana, Lillian's Lovebirds in Zambia, intra-African bird migration, and the impact of human disturbance on waterbirds in the Western Cape.

It was a record year for CoE scientific research publication output, with 138 papers carrying the CoE address published in peer-reviewed journals during 2015 (Appendix 1); 44 papers were in journals with impact factors  $\geq 3.5$ , including 22 in journals with impact factors  $\geq 5$  (Fig. 1).

**FitzPatrick Institute CoE publications in peer-reviewed journals, 2001-2015**



**Figure 1.** Trends in the number and quality of CoE publications (measured by journal 'Impact Factors' IF) before and after the establishment of the Centre of Excellence. To place this in perspective, only five life-sciences journals worldwide (including Science and Nature) have impact factors  $> 10$

Dr Rob Little Guest Edited a special issue of *Ostrich* (2015, Vol. 86(1&2)) in memory of Prof. Phil Hockey, which attracted 20 papers, 17 with PFIAO CoE authors including 12 with Phil as a co-author.

## Awards received during 2015

Dr Arjun Amar received the 2015 Claude Leon Merit Award for early career researchers which is a highly prestigious award recognising outstanding scholarly achievements. Arjun also received the 2015 College of Fellows Young Researcher Award. The award is granted annually to young academics at UCT to support their demonstrated ability of making a significant contribution to their research field.

Alex Thompson was awarded the Science Faculty PhD medal for 2014 for his PhD "Maternal investment and its effects on parent-offspring conflict in the cooperatively breeding Pied Babbler *Turdoides bicolor*". He received the medal and gave a seminar titled 'Begging, vigilance and interspecies interactions in Pied Babblers' on 22 July 2015.

Sonja Krüger won the 2015 Purcell Award for her PhD thesis entitled "An investigation into the decline of the Bearded Vulture *Gypaetus barbatus* in southern Africa." The Purcell Award is awarded annually for the best MSc or PhD on a zoological topic submitted at UCT.

Noelle Tubbs (MSc student) received an Honourable Mention at the 2015 Postgraduate Research Expo, Africa, specific research category, for her work on "Heat stress in African penguins in the face of climate change".

Davide Gaglio (PhD student) won the new category 'Above the line' in the Oceans of Life Photographic Competition for photographs of marine life taken above the surface; the competition is part of the BirdLife South Africa (BLSA) Save our Seas Conference that was held in Cape Town during October 2015. He was the only South African winner, with the other top prizes all going to underwater shots taken in Spain, Italy and the Philippines.

PhD students Otto Whitehead and Davide Gaglio were amongst the top 10 student oral presentations at the 2<sup>nd</sup> World Seabird Conference held in Cape Town during November 2015. Given that over 130 student talks were presented, this is a great achievement by the Fitz CoE.

## 2. Education and Training

### **Objective**

The short-term objective, as outlined in the SLA 6, is for the CoE to support (at least partially) an average of at least 30 postgraduate students and 6 Post-doctoral Fellows per year during 2015-2019. A further target is for black students to comprise  $\geq 30\%$  and women students to comprise 50% of the students supported by the CoE over this period. A medium- to long-term objective is to continue to build a vibrant research environment that instils a rigorous hypothetico-deductive approach to problem solving among the postgraduate student body.

### **Progress**

Twenty PhD, 47 MSc and one BSc Honours students (total = 68) registered at South African institutions were supported directly or indirectly by the CoE during 2015 (Tables 1 & 8). Eight (12%) of these students were black, and 31 (46%) were women (Table 9). Forty (59%) of the students were South African, but there were only two black South African students.

Twenty two students graduated during 2015 (2 PhD, 7 MSc by dissertation, 12 MSc Conservation Biology and 1 BSc Honours). In June 2015, Owen Davies was awarded his PhD, Jessie Berndt, Lisle Gwynn, Minke Witteveen and Blair Zoghby were awarded MScs by dissertation, and Salamatu Abdu, Alex Atkins, Allie Russo, Bruce Baigrie, Jenna Bowker, Kate Cronin, Marcela Espinaze, Francesca Fazey, Liezl le Roux and Juan Millan were awarded MScs in Conservation Biology. In December 2015, Margaux Rat received her PhD, Tegan Carpenter-King (NMMU), Maxine Whitfield (U. Pretoria) and Stefan Schoombie obtained MScs by dissertation, and John Dickens and Dara Sanda received MScs in Conservation Biology. Danielle van den Heever (NMMU) graduated with BSc Hons based in part on projects undertaken through the CoE.

Eight Post-doctoral Fellows were supported by the CoE during 2015 (Table 1 & 6). One Post-doc (Eléonore Hellard) completed her term and was appointed to an academic position within the Department of Biological Sciences, while three new Post-docs (Tiwonge Mzumara, Margaux Rat and Dayo Osinubi) joined the CoE during 2015.

Efforts were made to work with and engage students at HDIs. Initial contacts with the universities of Fort Hare and Zululand were not particularly successful. However, collaboration with Prof. Derek Engelbrecht at the Department of Biodiversity, University of Limpopo (UL) resulted in three students during 2014 and four students (Tebogo Molepo, William Malepe, Mpho Malematja and Ditiro Moloto) visiting the CoE for three weeks during June and July 2015 as interns. Ditiro Moloto completed her BSc Hons at UL with her research project led through the CoE during 2015 and will register for an MSc student at the CoE during 2016, conducting a research project under the supervision of Prof. Peter Ryan.

**Table 1. Summary statistics for student numbers 2004 – 2015 (2004 = prior to CoE)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Post-doc	0	6	9	8	9	12	11	12	13	12	15	8
PhD	6	8	13	18	19	15	18	21	19	21	23	20
MSc	5	8	6	5	7	6	7	6	13	19	20	21
MSc CB	15	11	14	12	11	11	12	13	15	13	13	13
MSc CB <sub>2</sub>	13	15	11	14	12	11	11	12	12	15	14	13
<b>Tot – CB<sub>2</sub></b>	26	33	42	43	46	44	48	52	60	65	71	62
<b>Tot +CB<sub>2</sub></b>	39	48	53	57	58	55	59	64	72	80	85	75

CB<sub>2</sub> = second year of a CB class cohort

Claire Spottiswoode, Rita Covas, Tanja van de Ven, Margaux Rat, Marie-Sophie Garcia-Heras, Claire Doutrelant, Penny Pistorius, Sophie Lardy, Rowen van Eeden and Kyle Lloyd attended a two-day snake identification and handling course in May & July 2015 to allow them to better deal with snake encounters in their study areas.

### 3. Information Brokerage

#### **Objective**

Medium- to long-term objectives are to: (1) make a sustained contribution to the semi-popular literature aimed at popularizing science in the fields of conservation biology in general and ornithology in particular; (2) provide expert views on relevant matters for newspaper and magazine articles; and (3) contribute to books of a semi-technical nature. The CoE also has a SLA 6 target to organized at least one local conference during this stage (2015-2019).

#### **Progress**

Seventy six semi-popular articles and seven books and chapter contributions to semi-technical books were published during 2015 (Appendix 1). In addition, apart from the primary authors, seven CoE members contributed 11 species assessments in *The 2015 Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland* and two members contributed three species assessments for *Birds to Watch in Namibia: Red Data and Endemic Species*, both published in 2015. Numerous CoE members also acted as reviewers for the species assessments in these two books. Both are listed as books published by CoE members, since both have a CoE Research Associate as an author, Dr Ross Wanless and Dr Rob Simmons, respectively.

At least 50 public talks and outreach activities were done by CoE members to partner organisations and interested parties, such as the Sasol Birds and Birding Fair, various NGOs, Environmental Action Groups, Conservancies, Bird Clubs and other membership-based societies during 2015. Various radio interviews also were conducted, including on Cape Talk Radio, Radio 702, OFM Radio, two BBC national radio stations, German and Canadian national radio, the Hectic Nine-9 live television show for the youth on SABC2, 50/50 on SABC3 and Dutch national TV.

CoE staff and students attended eight international and nine local conferences during 2015 (Table 2), at which CoE staff and students received two oral presentation and one poster presentation awards. Prof. Peter Ryan chaired the Scientific Committee of the Second International Seabird Conference held in Cape Town in October 2015.

A highlight for research information brokerage was the CoE's role in organising the 2<sup>nd</sup> World Seabird Conference which took place in Cape Town during October 2015. With 562 delegates from 52 countries, it offered a great opportunity for networking and showcasing our research.

Dr Rob Little and Davide Gaglio presented a Fitztitute CoE stand at the launch of the National Science Week fair at the North-West University Mafikeng Campus on 1 August 2015. The National Science week, launched by the Minister of Science and Technology, Naledi Pandor, is a countrywide celebration of science, initiated by the Department of Science and Technology (DST) in partnership with South African Agency for Science and Technology Advancement (SAASTA) and the North-West Department of Education, and various other stakeholders. The National Science Week initiative of DST aims to contribute to the development of a society which values and appreciates science, engineering and technological fields, to provide a platform for scientists to instill interest in learners to follow careers in the scientific community. The National Science Week programme ran from 1 to 8 August 2015, and some of the activities for learners from over 50 schools included career

exhibitions from over 82 exhibitors from across the country, representing various stakeholders in the scientific community, public lectures, seminars and presentations on the latest innovations made through scientific research.

The CoE also contributed a section on the research activities of the CoE to the UCT 2015 Research Report, and to the Science Faculty contribution to the UCT Social Responsiveness report for 2015.

The UCT Communication and Marketing Department (CMD) prepared a series of research highlights as a photo essay series on the recently upgraded UCT website. The CoE contributed a series during 2015 on the activities of the CoE research projects titled 'Birds Eye View':

[http://www.uct.ac.za/news/multimedia/photo\\_albums/weeklygallery/#BirdsEyeView](http://www.uct.ac.za/news/multimedia/photo_albums/weeklygallery/#BirdsEyeView)

**Table 2. Conferences attended during 2015:** Meeting (month, place), people who attended

<b>British Ornithological Union: Birds in Space and Time conference</b> (March; UK) Alan Lee
<b>Endangered Wildlife Trust (EWT) Birds of Prey Conference</b> (April; Ithala, South Africa) Arjun Amar, Petra Sumasgutner, Gareth Tate, Sophie Garcia-Heras, Ann Koeslag
<b>Rufford Foundation small grant recipients workshop</b> (April; SANBI, Kirstenbosch, SA) Rob Little, 2015 MSc CB Class
<b>American Ornithologists' Union &amp; Cooper Ornithological Society 2015 meeting</b> (July; Oklahoma, USA) Arjun Amar
<b>Fynbos Forum</b> (July; SA) Phoebe Barnard
<b>37<sup>th</sup> Congress of the Zoological Society of Southern Africa</b> (July; Grahamstown, South Africa) Andrew McKechnie, Michelle Thompson, Matthew Noakes
<b>Behaviour 2015 International Conference</b> (Aug; Cairns, Australia) Amanda Ridley
<b>9<sup>th</sup> International Congress of Comparative Physiology and Biochemistry</b> (Aug; Kraków, Poland) Andrew McKechnie
<b>10<sup>th</sup> Conference of the European Ornithologists' Union (EOU)</b> (Aug; Badajoz, Spain) Arjun Amar, Petra Sumasgutna, Gareth Tate, Ann Koeslag
<b>Southern Ground-Hornbill Action Group</b> (Aug; Mabula, SA) Rob Little, Kate Carstens
<b>2<sup>nd</sup> World Seabird Conference (WSCII)</b> (Oct; Cape Town, South Africa) Peter Ryan, Pierre Pistorius, Lorien Pichegru, Antje Steinfurth, Ross Wanless, Timotheé Cook, Lisa Nupen, Alistair McInnes, Davide Gaglio, David Green, Noelle Tubbs, Jenni Roberts, Otto Whitehead, Kim Stevens, Dom Rollinson, Gordon Botha, David Grémillet
<b>Vulpro Vulture conference</b> (Oct, Gauteng, South Africa) Arjun Amar, Robert Thomson
<b>6<sup>th</sup> Diamond Route Research Conference</b> (Oct; Jhb, SA) Andrew McKechnie, Anthony Lowney
<b>Raptor Research Foundation Conference (RRF)</b> (Nov; Sacramento, California, USA) Rowen van Eeden, Sophie Garcia-Heras
<b>Ecology of Animal Migration, Centre for Animal Movement (CAnMove)</b> (Nov; Lund, Sweden) Osinubi
<b>DEA 'Working for the Coast' meeting</b> (Aug; Johannesburg, SA) Peter Ryan
<b>Programme for Ecosystem Change and Society 2015 (PECS)</b> (Nov; Stellenbosch, SA) Hayley Clements

CoE students Ben Dille, Delia Davies, Kim Stevens and Otto Whitehead manned a CoE stall and assisted with the arrangements for a South African National Antarctic Programme (SANAP) SA *Agulhas II* Open Day on 12-13 June 2015 (photo of delegate with albatross). Following the event, a letter was received on behalf of the Deputy Director-General: Oceans and Coasts (Department Environmental Affairs) which expressed sincere gratitude to the CoE for involvement in the SA *Agulhas II* Open Days which they recognised were a great success. The letter also mentioned that members of the Public and Learners really appreciated the informative and interesting work undertaken by the CoE including research done at all the South African National Antarctic Programme's (SANAP's) research bases, i.e.



Marion and Gough Islands including Antarctica. The department is looking forward to many more years of worthwhile association with us.

The CoE, Endangered Wildlife Trust (EWT) and the South African National Biodiversity Institute (SANBI) hosted a past and present Rufford Foundation small grant recipients' workshop at SANBI, Kirstenbosch, during 16-17 April 2015. The 2015 Conservation Biology MSc class were among 65 workshop delegates. This was the first Rufford Foundation grant recipient workshop held in South Africa and the Rufford Foundation representatives were greatly appreciative of the success of the workshop.

A short insert about research into the impacts of domestic cats undertaken by Frances Morling for her MSc Conservation Biology was shown on the 50/50 TV show on Sunday 1 March 2015.

An excellent piece on the CoE Martial Eagle research project in the Kruger National Park also featured on the 50/50 TV show during May 2015.

The Kuruman River Reserve behavioural ecology research team hosted a group of 12 important BirdLife International guests, including Mark Anderson from BLSA, during September 2015. PhD student Tanja van de Ven took them to the babblers, drongo's and hornbills research sites, and gave a talk on these CoE projects that are carried out on the reserve.

#### **4. Networking**

##### ***Objective***

Medium- to long-term objectives are to: (1) establish a wide range of key collaborative associations with scientific peers and peer research groups, both locally and abroad; (2) establish partnerships with conservation organisations and NGOs; and (3) establish strong relationships with business organisations with either direct or indirect interests in the fields of conservation biology and ornithology.

##### ***Progress***

The CoE continued its involvement with networking interactions between institutions directly or loosely collaborating with the CoE (Table 3). Primary collaboration continued with the molecular laboratories of A/Prof. Rauri Bowie at the University of California, Berkeley and Prof. Paulette Bloomer at the University of Pretoria, with Prof. Andrew McKechnie also at the University of Pretoria and with Dr Pierre Pistorius at the Nelson Mandela Metropolitan University.

Close collaborative working relationships with scientific peers now exist both nationally and internationally (Table 2). Additional emphasis has been placed on working with historically black universities in South Africa and African universities, e.g. University of Limpopo, Fort Hare University, Tshwane University of Technology and the Universities of Zimbabwe and Zambia. Eleven of the 15 Post-doctoral Fellows came from nine different foreign countries.

The MSc Conservation Biology Course has continued to build much-needed capacity within and outside of South Africa in the broad area of biodiversity conservation, with the graduation of students from SA (x6), USA, UK (x3), Chile, Columbia, Botswana and Nigeria, and the

enrolment of students from SA (x6), Canada, India, Ireland, Japan, Madagascar, Mauritius, USA, and Zimbabwe during 2015.

### **Prominent research and conservation partners who visited the CoE during 2015:**

Prof. Stuart Bearhop, University of Exeter, who is an ecologist with a range of interests mainly related to migration and foraging ecology of vertebrates (particularly birds) and the application of stable isotope techniques in animal ecology, visited the Fitz CoE during February 2015. He ran a short workshop on some of the practical issues that relate to the use of stable isotopes as natural tracers and presented a special seminar titled "Carry over effects as drivers of fitness in animals" on 9 February 2015.

Prof. Bengt Gustafsson, an Academy of Science of South Africa (ASSAf) Distinguished Visiting Scholar for 2014/15, visited the University of Cape Town and gave a talk titled "The emergence of truth in natural sciences" on 16 February 2015.

Prof. Alexandre Roulin (University of Lausanne – Switzerland), an important figure in the world of colour polymorphism, having written some of the most important papers on the subject over the last 20 years, visited the CoE and presented a seminar titled "The adaptive value of melanin-based coloration: a role for pleiotropy" on 1 June 2015.

Prof. Richard Primack, Editor in Chief of the journal *Biological Conservation* from Boston University, investigates the effects of a warming climate on plants and birds, using historical records, modern observations, and experiments. He visited the CoE from 20-29 August primarily to explore options to produce an 'African' version of his textbook, *A Primer of Conservation Biology*. As a result of discussions held with CoE staff and other interested parties, the decision was taken to make this product available as a freely downloadable pdf. Prof. Primack gave a seminar on 20 August titled "The hottest topics in Conservation Biology".

Dr Steffen Oppel from the RSPB, who visited Cape Town to attend the Second World Seabird Conference, visited the CoE during November 2015 and gave a talk titled: "The decline of Egyptian Vultures in eastern Europe - is conservation management working?"

Dr Francois Mougeot, a Dean's Distinguished Visiting Scholar for 2015, from Consejo Superior de Investigaciones Científicas (CISC) and Instituto de Investigación en Recursos Cinegéticos (IREC) Ciudad Real, Spain, was hosted by the Fitz CoE. He gave a presentation to the Science Faculty on 17 November 2015 titled "Parasites, testosterone and population cycles: insights into population ecology from long-term studies of Red Grouse *Lagopus lagopus scoticus*".

Dr Beatriz Arroyo from the Instituto de Investigación en Recursos Cinegéticos (IREC) (SSIC-UCLM-JCCM), Spain, visited the CoE and gave a presentation on 25 November 2015 titled "Integrating behaviour and conservation management: insights from studies on Montagu's Harriers".

**Table 3. Collaborators during 2015**

Title	Surname	Citizenship	Institution	Gender	Race	% time in CoE
Prof.	Altweg	Swiss	UCT	M	W	5
Dr	Arriero	Spain	U Montana	F	W	5
Prof	Balmford	UK	U Cambridge	M	W	1
Dr	Barker	USA	U Minnesota	M	W	1
Dr	Barnard	UK	SANBI	F	W	10
Dr	Barrowclough	USA	Am Mus Nat Hist	M	W	1
Dr	Bates	USA	Chicago Mus	M	W	1
Dr	Bodin	Sweden	U Stockholm	M	W	5
Dr	Bond	Canada/UK	RSPB	M	W	5
Dr	Burg	Canada	U Lethbridge	F	W	1
Dr	Chama	Zambia	Copperbelt U, Zambia	M	B	10
Dr	Cillingham	UK	Durham	F	W	1
Dr	Cuthbert	UK	WCS, New Guinea	M	W	2
Dr	Dale	UK	Max Planck Inst	M	W	20
Prof	Davies	UK	Cambridge	M	W	1
Dr	Doutrelant	France	CNRS France	F	W	5
Dr	Dranzoa	Uganda	Makerere U	F	B	1
Dr	Dyke	Ireland	UC Dublin	M	W	1
Prof	Fjeldsa	Denmark	U Copenhagen	M	W	1
Dr	Grémillet	France	CNRS	M	W	20
Dr	Hackett	USA	Chicago Mus	F	W	1
Dr	Hatchwell	UK	U Sheffield	M	W	1
Prof	Huntley	UK	Durham	M	W	2
Dr	Jansen	SA	Tshwane U Tech	M	W	1
Dr	Jetz	USA	Princeton U	M	W	1
Dr	Kato	Japan	CNRS France	F	W	2
Dr	Kinahan	Ireland	Frankfurt Zoo Soc	F	W	1
Dr	Lens	Belgium	U Ghent	M	W	1
Dr	Little	SA	EWT	M	W	10
Mr	Magunje	Zimbabwe	BirdLife Zim	M	B	10
Prof	Martinez del Rio	USA	U Wyoming	M	W	1
Mr	Matsvimbo	Zimbabwe	BirdLife Zim	F	B	50
Dr	Midgley	SA	U Stellenbosch	M	W	2
Dr	Mitchell	Australia	U Western Australia	F	W	10
Dr	Phillips	UK	Br Antarctic Survey	M	W	2
Dr	Quillfeldt	German	U Giessen	F	W	1
Dr	Radford	UK	U Bristol	M	W	5
Dr	Raihani	UK	IOZ, London	F	W	5
Prof	Redpath	UK	Aberdeen U	M	W	10
Mr	Reid	Zambia	African Parks	M	W	5
Dr	Robertson	New Zealand	Otago	M	W	1
Dr	Ropert-Coudert	France	CNRS France	M	W	5
Mr	Schepers	Netherlands	WWF -NL	M	W	1
Dr	Smit-Robinson	SA	BLSA	F	W	2
Prof	Sorenson	USA	Boston U	M	W	2
Dr	Stevens	UK	U Cambridge	M	W	2
Prof	Takada	Japan	Tokya Agric	M	W	2
Dr	Tennyson	New Zealand	Te Papa	M	W	1
Prof	Voelker	USA	U Memphis	M	W	1
Dr	Wanless	SA	BirdLife SA	M	W	20
Mr	Willems	Zambia	Kasanka Trust	M	W	10
Dr	Willis	UK	Durham	M	W	2
Dr	Wimberger	SA	Fort Hare	F	W	10
Dr	Wolf	USA	U New Mexico	M	W	5
Dr	Woodborne	SA	CSIR	M	W	2

## 5. Service rendering

### **Objective**

A medium- to long-term objective is to establish formal contact with a range of conservation agencies and other relevant government bodies, such as the Department of Environmental Affairs and the Department of Agriculture, Forestry & Fisheries, to ensure the expertise of the CoE is used to address practical research and information needs. CoE members will continue to render their services to the broader scientific community and the general public.

### **Progress**

Links continue to be serviced with a diversity of conservation agencies, NGOs, government departments, and industry partners. These include the Department of Environmental Affairs (DEA), Department of Agriculture, Forestry & Fisheries (DAFF), the South African National Biodiversity Institute (SANBI), SANParks, IUCN, Conservation International, Fauna & Flora International, the Royal Society for the Protection of Birds (RSPB), BirdLife South Africa & Zimbabwe, the World Parrot Trust, the Endangered Wildlife Trust, the Namibian Ministry of the Environment, the Wildlife Conservation Society, the Nature Conservation Corporation and the South African Deep Sea Trawling Industry Association.

CoE members served on the editorial boards of 26 scientific journals, on 63 membership and advisory services, and reviewed 134 papers for 63 peer-reviewed journals during 2015 (see below). Dr Little was invited to act as Guest Editor for the journal *Ostrich* for a special issue in memory of Prof. Phil Hockey which was published in 2015.

Prof. Peter Ryan, Dr Rob Little and Dr Steve Boyes gave input to the drafting of the Department of Environmental Affairs (DEA) Norms and Standards for avian invasive species management (NEMBA) and for the avian associations (specifically with regards to drafting NEMBA regulations and their subsequent implementation). Prof. Andrew McKechnie also acted as an expert reviewer for the South African National Standard SANS 10386 for the care and use of animals for scientific research, Annex C (Birds).

Prof. Peter Ryan was a member of the UNEP's GESAMP Working Group 40 on the impacts of microplastic debris in the oceans, and during 2015 gave advice to DEA's Working for the Coast Programme (DEA's Extended Public Works Programme) to improve beach cleaning efforts, and gave the keynote address at the Project Implementation Launch of Working for the Coast in Johannesburg. He also gave an invited presentation at the Second African Marine Debris Conference, held at Kirstenbosch in June.

Dr Arjun Amar facilitated a one-day workshop organised by EWT and BLSA during April 2015 to develop norms and standards for bird tagging and tracking for the SA government. Peter Ryan was asked to perform a conservation audit for BLSA's activities in 2015 as part of their new governance structure.

Dr Ross Wanless developed improved policy for reporting seabird bycatch for the International Commission for the Conservation of Atlantic Tunas and the Indian Ocean Tuna Commission (IOTC) during 2015. He also contributed to South Korea's southern bluefin tuna fleet adopting new measures to reduce seabird bycatch, thereby becoming compliant with IOTC's seabird conservation measures.

Perhaps the most significant government or industry policy guidance was that related to the interactions between African Penguin *Spheniscus demersus* conservation and the local fishing industry. Responding to suggestions that fishing pressure had contributed to the African Penguin population decline, the South African government in cooperation with the Pelagic Fisheries Association approved a study in 2008 to determine whether closures to fishing around colonies could yield detectable benefits to penguins. Closures were alternated between four main breeding islands on the west (Robben and Dassen islands) and south (Bird and St. Croix islands) coasts of South Africa. By monitoring the foraging behaviour of African Penguins in Algoa Bay since 2008 during experimental purse-seine fishing exclusion showed the impact of the competition with industrial fisheries on seabirds and the benefit of closing small areas to fishing for the first time. The results are used by the Island Closure Task Team, of the Small Pelagic Scientific Working Group, from the Department of Agriculture, Forestry and Fisheries, to assess the use of fishing exclusion around penguin colonies to increase penguin numbers. SANParks extended the Greater Addo Marine Protected Area in Algoa Bay to include the foraging habitat of African penguins from St Croix Island, the world largest African Penguin colony.

Concurrent with the start of the closure project, an Island Closure Task Team (ICTT) was formed in 2010, including Dr Antje Steinfurth and Dr Lorien Pichegru. The role of the ICTT, which operates under the auspices of the Small Pelagic Scientific Working Group (SWG-PEL) of the Department of Agriculture Forestry and Fisheries, is to advise the Pelagic Scientific Working Group on the merits of closures to purse-seine fishing of all or part of the areas around certain penguin breeding colonies. The Scientific Working Group in turn is a non-statutory body created and appointed by the Chief Director: Fisheries Research & Development to advise on scientific matters, generate advice to support decision-making in the public interest using available scientific data and scholarly research, principally data and methodologies of the natural, social, economic and related sciences, and analyses thereof. The feasibility study reached its final year in 2014. The outcome of the study was presented to the International Stock Assessment Review Panel meeting in December 2015 (DAFF 2015). The SWG-PEL will meet in February 2016 and will base its management recommendations to the Chief Director on the Panel's final report.

In addition, reviews of the closure experiment were conducted by independent panels at UCT in December 2014 and again in December 2015. These panels confirmed the validity of the findings and recommended the experiment be continued for the next few years, in order to refine our understanding of the extend of the impact of fishing and no-take zones on breeding success of penguins and their survival.

One criticism of the preliminary results showing the benefit of fishing exclusions for African Penguins was the absence of knowledge on the prey distribution. PhD student Alistair McInnes worked on a novel and inexpensive method to quantify relative fish abundance using recreational fish-finders. He validated his methods with the help of fishery scientists from the Department of Agriculture and Fisheries (DAFF), conducting two calibration surveys to compare the outputs of the fish-finder with that of a scientific echo-sounder. The results were published in 2015 in *PLoS ONE*. He used customised software to extract echo return data and correction formulas to account for the limited dynamic range in the recreational fish-finder. He is using this method to quantify fish parameters from four years (2011-2015) survey data in Algoa Bay and used these data to investigate the physical drivers of fish variability in the bay. These data are crucial and are currently being used by Alistair and co-workers to control for the natural variation in prey abundance so that the direct effects of purse-seine fishing on African Penguin survival can be assessed. Ultimately these data will be used to recommend appropriate conservation measures for the rapidly declining penguin populations.

As part of her MSc, Jenny Roberts tracked African Penguins from Dassen Island on the West Coasts and Bird Island on the South Coast for the 3<sup>rd</sup> consecutive year, during the pre-moult and post-moult periods. She aims to explore the potential for competition between penguins and fisheries during the non-breeding period. She consistently showed contrasting results between the coasts, with a large dispersal of penguins from the West Coast compared to the South during both pre- and post-moult periods, suggesting that a combination of the low relative fish abundance and higher commercial fishing pressure on the West Coast may force pre-moulting birds to seek food sources farther from the colony, putting them at higher risk of not surviving the annual moult. Recently she also noticed a high proportion of PTTs that stopped emitting on the West Coast, suggesting that the penguin died, were localised in a relative small area off St Helena Bay. She is writing a short note about important areas for penguins during the non-breeding season that requires specific protection.

The CoE also assisted a team of SANParks rangers with manufacturing artificial nests for African Penguins to shelter them from extreme weather events (storms or heat waves) and from predation on land by gulls targeting their eggs and small chicks. Artificial nests made from fiberglass have been placed on different colonies in the past but were proved to be not suited as they retained heat. As a consequence the hatching success in these nests was lower than those of surface nests. SANParks is now exploring different material, such as Styrofoam in cement, which so far has been successful in reducing temperatures inside the nest.

## **Positions on Editorial Boards, Councils, Advisory/Steering Committees during 2014**

### ***Editorial Boards***

- *Acta Ethologica* (Associate Editor; Covas)
- *African Journal of Ecology* (International Review Panel; Barnard)
- *African Journal of Marine Science* (Editorial Advisory Board; Pistorius)
- *Animal Conservation* (Associate Editor; Barnard)
- *Antarctic Science* (Associate Editor; Ryan)
- *Behavioral Ecology* (Editorial Board; Ridley)
- *Biology Letters* (Associate Editor; Spottiswoode)
- *Bird Conservation International* (Associate Editor; Ryan)
- *Bird Study* (Associate Editor; Amar)
- *BMC Climate Change Responses* (Associate Editor; McKechnie)
- *BMC Evolutionary Biology* (Editorial Board; Bowie)
- *Climate Change Responses* (Associate Editor; Barnard, McKechnie)
- *Diversity and Distributions* (Associate Editor; Cumming)
- *Ecology & Society* (Associate Editor; Cumming)
- *Emu – Austral Ornithology* (Associate Editor; McKechnie)
- *Frontiers in Ecology and the Environment* (Editorial Board; Ridley)
- *Frontiers in Marine Science* (Review editor; Pichegru)
- *Ibis* (Editor; Bowie, Associate Editor; Amar, Pichegru, Wanless)
- *International Scholarly Research Notices ISRN Ecology* (Editor; Ridley)
- *International Scholarly Research Notices ISRN Zoology* (Associate Editor; Pistorius)
- *Journal of Comparative Physiology B* (Associate Editor; McKechnie)
- *Landscape Ecology* (Editorial Board; Cumming)
- *National Geographic News Watch* (Contributing Editor; Boyes)
- *Ornis Fennica* (Associate Editor; Thomson)

- *Ostrich – Journal of African Ornithology* (Associate Editors; Little, McKechnie, Ridley; Book Review Editor; Koopman)
- *South African Journal of Wildlife Research* (Associate Editor; Cumming)

### **Membership & Advisory services**

- ACAP Taxonomy Working Group (Ryan)
- African-Eurasian Migratory Landbirds Working Group (Osinubi)
- *Africa Geographic* (Director; Boyes)
- *African Birdlife* (Scientific Advisors; McKechnie, Ryan)
- African Seabird Group (Cook, Pistorius, Pichegru, Steinfurth, Ryan, Wanless)
- American Ornithologists' Union (Bowie, McKechnie)
- American Physiological Society (McKechnie)
- Association for the Study of Animal Behaviour (Flower)
- Association for Tropical Biology & Conservation (Lee)
- Bearded Vulture Task Force of the Birds of Prey Programme of EWT (Chairman- Krüger)
- BirdLife South Africa Council (President; Barnard)
- BirdLife South Africa Conservation Advisory Committee (Chair; Barnard, Member; Ryan)
- BirdLife South Africa Ethics Committee (McKechnie)
- British Ecological Society (Boyes, Flower, Nelson-Flower, Ridley, Tubbs)
- British Ornithologists' Union (Council; Bowie, Spottiswoode; Member; Cunningham, Lee)
- Cambridge Philosophical Society (Ridley)
- Cooper Ornithological Society (Bowie, McKechnie)
- Eastern Cape Forest Management and Research Committee (Boyes)
- Ecological Society of America (Cumming, Tubbs)
- Endangered Wildlife Trust Birds of Prey Programme Advisory Committee (Amar, van Eeden)
- Endangered Wildlife Trust Threatened Grassland Species Programme Advisory Group (Little, McKechnie)
- Faculty Member, 'Faculty of 1000'. See <http://f1000.com/> (Cumming)
- Fellow of Magdalene College, Cambridge (Spottiswoode)
- Ford Wildlife Foundation Advisory Board (Little)
- Forest & Bird Society (Cunningham)
- Galapagos Conservation Trust (Ambassador; Steinfurth)
- Google Earth Outreach Trainer Network (De Vos)
- International Bio-logging Society (Cook)
- International Ornithology Council Taxonomy Advisory Committee (Bowie, Ryan)
- International Parrot Research Group (Africa Coordinators; Boyes, Martin)
- International Society for Behavioural Ecology (Flower, Nelson-Flower, Ridley, Spottiswoode, Thompson)
- IUCN Vulture Specialist Group (Krüger)
- IUCN Red List of Threatened Species (Cook)
- Mabula Ground-Hornbill Project Advisory Board (Vice Chairman; Little)
- Migrant Landbird Study Group (Osinubi)
- National Geographic Society (Boyes)
- National Zoological Gardens Research Ethics & Scientific Committee (McKechnie)
- Raptor Research Foundation (Amar)
- Red Data Book Revision Steering Group (Chair: Barnard, Member; Amar, Wanless)
- Resilience Alliance (Cumming)
- RNSC-SNAAS (Reseau National des Systemes Complexes-Social Network Analysis in Animal Societies) (Rat)

- SAFRING Steering Committee (Barnard)
- Society for Conservation Biology (Barnard, Cumming, Pichegru, Tubbs)
- Society for Integrative and Comparative Biology (McKechnie)
- Society for Systematic Biology (Bowie)
- Society for the Study of Evolution (Bowie)
- South African Biosystematics Initiative Steering Committee (Bloomer)
- South African Bird Atlas Project 2 Steering Committee (Chair; Barnard)
- South African Marine Rehabilitation and Education Centre (SAMREC) (Trustee; Pichegru)
- South African National Standard SANS 10386 The care and use of animals for scientific research, Annex C (Birds) (Expert reviewer; McKechnie)
- South African Young Academy of Science (Founder member; McKechnie)
- Southern African Bird List Committee (Bowie, Ryan)
- Southern African Society for Systematic Biology (President; Bloomer)
- Southern African Wildlife Management Association (Little)
- Southern Ground-Hornbill Action Group (Carstens, Little)
- Sustainable Seas Trust (Chairperson Algoa Bay Hope Spot committee; Pichegru)
- Tristan's Biodiversity Advisory Group (Ryan, Wanless)
- Wild Bird Trust (Trustees; Boyes, Little)
- Wildlife and Environment Society of South Africa (Board member; Pichegru)
- WI-IUCN SSC Cormorant Specialist Group (Cook)
- World Parrot Trust (Africa Director; Boyes)
- World Seabird Union (Africa representative; Pichegru, Wanless)
- Zoological Society of Southern Africa (Members; Cunningham, Krüger, Little, McKechnie, Pistorius)

### ***Manuscripts reviewed for scientific journals during 2015***

*Acta Chiropterologica* (1 McKechnie)

*Acta Ethologica* (1 Covas)

*African Journal of Marine Science* (1 Pistorius, 1 Ryan)

*African Zoology* (1 Spottiswoode)

*American Naturalist* (1 Spottiswoode)

*Animal Behaviour* (1 Cunningham, 2 Flower, 1 Ridley, 1 Spottiswoode)

*Annals of Marine Biology & Research* (1 Ryan)

*Antarctic Science* (1 Ryan)

*Auk* (1 Ridley)

*Behavioural Ecology* (1 Spottiswoode, 1 Ridley, 3 Thomson)

*Behavioural Ecology & Sociobiology* (1 Ridley)

*Biological Conservation* (1 Clements, 1 Flower, 1 Ryan, 2 Sumasgutner)

*Biology Letters* (1 Flower, 1 McKechnie, 1 Ridley)

*Biological Reviews* (1 Flower)

*Bulletin of the African Bird Club* (1 Ryan)

*Canadian Journal of Zoology* (1 Hellard)

*Climate Change Responses* (1 McKechnie)

*Climate Research* (1 Cunningham)

*Current Zoology* (1 McKechnie, 1 Sumasgutner)

*Ecology* (1 Pistorius, 1 Ryan, 1 Spottiswoode)

*Ecology & Evolution* (1 McKechnie)

*Emu* (2 Covas, 1 Ridley)

*Environment & History* (1 Cook)

*Environmental Pollution* (2 Ryan)



*Environmental Research Letters* (1 Ryan)  
*Evolution* (1 Spottiswoode)  
*Frontiers in Ecology and Evolution* (1 Ridley)  
*Functional Ecology* (1 McKechnie)  
*Ibis* (3 Sumasgutner)  
*Indian Journal of Geo-Marine Science* (1 Ryan)  
*Journal of Animal Ecology* (1 Ridley)  
*Journal of Avian Biology* (2 Flower, 2 McKechnie, 1 Thomson)  
*Journal of Biogeography* (1 Bowie)  
*Journal of Comparative Physiology B* (3 McKechnie)  
*Journal of Experimental Biology* (2 McKechnie)  
*Journal of Ethology* (1 Thomson)  
*Journal of Field Ornithology* (1 Ridley)  
*Journal of Ornithology* (1 McKechnie, 1 Spottiswoode)  
*Journal of Zoology, London* (1 McKechnie)  
*Landscape Ecology* (1 Clements, 1 Hellard)  
*Mammal Research* (1 Clements)  
*Marine Biology* (2 Pichegru, 1 Pistorius)  
*Marine Ecology Progress Series* (1 Pichegru, 1 Pistorius, 1 Steinfurth)  
*Marine Environmental Research* (1 Ryan)  
*Marine Pollution Bulletin* (2 Ryan)  
*Molecular Ecology* (2 Bowie)  
*Molecular Phylogenetics & Evolution* (1 Bowie)  
*New Zealand Journal of Zoology* (1 McKechnie)  
*Oikos* (1 Thomson)  
*Open Science* (1 Flower)  
*Ostrich* (1 Barnard, 1 Carstens, 1 Cumming, 1 Cunningham, 1 Flower, 2 Henry, 2 Little, 1 McKechnie, 1 Osinubi, 1 Pichegru, 1 Pistorius, 3 Ryan, 1 Simmons, 1 Smit, 2 Spottiswoode, 1 Thomson)  
*Physiological and Biochemical Zoology* (1 McKechnie)  
*PLoS ONE* (2 Bowie, 1 McKechnie, 1 Ryan)  
*Polar Biology* (1 Pistorius)  
*Proceedings of the Royal Society of London B* (1 Bowie, 1 Flower, 1 McKechnie, 1 Ridley, 1 Spottiswoode)  
*Science* (2 Bowie)  
*Scientific Reports* (1 Sumasgutner)  
*Seabird* (1 Ryan)  
*South African Journal of Science* (3 Amar)  
*South African Journal of Wildlife Research* (1 Little)  
*Trends in Parasitology* (1 Hellard)  
*Wilson Journal of Ornithology* (1 Bowie, 2 Lee, 1 Thomson)  
*Zoological Studies* (1 Cunningham)

## HUMAN RESOURCES

Prof. Peter Ryan was appointed as the Director of the PFIAO/CoE from April 2014, but his previous post was frozen, effectively leaving the CoE with one academic post less, a 20% reduction in academic supervision capacity. Tim Crowe retired at the end of 2013 and that post will be filled by Dr Robert Thomson in August 2015. Dr Susie Cunningham has been appointed with UCT and CoE support to a contract lecturer post initially for three years, but with the intention to extend her position for the duration of the CoE. Her role will be to run the behavioural ecology component of the Hot Birds programme while also ensuring the smooth running of the conservation biology MSc programme.

Chris Tobler (Principal Technical Officer) retired in December 2014 and has been partially replaced by Gonzalo Aguilar, who has taken over the technical aspects of the portfolio. Anthea Links has taken on additional financial management responsibilities and her post has been upgraded accordingly. Chris Tobler continues to assist with aspects of the financial management of the CoE on an *ad hoc* basis.

Further staff changes occurred following the resignation of Margaret Koopman (Niven Librarian) on 31 January 2015 and the resignation of Prof. Graeme Cumming (Pola Pasvolsky Chair in Conservation Biology) on 30 June 2015. Fortunately both posts have been filled, with Susan Mvungi being appointed as the Niven Librarian from July 2015 and Dr Claire Spottiswoode taking up the Pasvolsky Chair in 2016. Phelisa Hans did an excellent job as acting librarian during the first half of 2015, and continues to assist the new librarian in a part-time capacity.

Finally, the CoE Senior Secretary, Tania Jansens, was appointed to a permanent position in the Department of Mathematics at UCT and Denise Scheepers was appointed in her position with the CoE from November 2015.

The following people worked within or were students at the CoE during 2015:

**Table 4. Core CoE team members for 2015**

Title	Name	Citizen	Institution	Gender	Race	% time in CoE
Prof.	Paulette Bloomer	SA	U Pretoria	F	W	10
Dr	Jaqueline Bishop	SA	UCT	F	W	10
Dr	Susan Cunningham*	NZ	UCT	F	W	100
Dr	Claire Spottiswoode*	SA	UCT	F	W	66
Dr	Arjun Amar	UK	UCT	M	W	100
A/Prof	Rauri Bowie	SA	U Cal. Berkeley	M	W	10
Prof.	Graeme Cumming**	SA	UCT	M	W	100
Prof.	Derek Engelbrecht	SA	U Limpopo	M	W	10
Prof.	Andrew McKechnie	SA	U Pretoria	M	W	30
Dr	Pierre Pistorius	SA	NMMU	M	W	40
Prof.	Peter Ryan	SA	UCT	M	W	100
Dr	Ben Smit	SA	NMMU	M	W	20
Dr	Robert Thomson	SA	UCT	M	W	100

\*Appointed during 2015, \*\*resigned during 2015

**Table 5. Administrative and support staff at the CoE for 2015**

Title	Name	Position	Gender	Race
Ms	Anthea Links	SAP Administrator	F	B
Ms *	Tania Jansen	CoE Senior Secretary	F	B
Ms *	Phelisa Hans	Library Assistant	F	B
Ms*	Denise Scheepers	CoE Senior Secretary	F	B
Ms	Susan Mvungi	Niven Librarian	F	B
Ms	Hilary Buchanan	Admin Assistant	F	W
Ms	Margaret Koopman	Niven Librarian	F	W
Mr	Gonzalo Aguilar	Principal Technical Officer	M	W
Dr *	Rob Little	CoE Manager	M	W
Mr	Chris Tobler <i>part time</i>	Principal Technical Officer	M	W

Susan Mvungi replaced Margaret Koopman and Denise Scheepers replaced Tania Jansen during 2015

\* CoE funded.

**Table 6. PFIACoE Post-doctoral Fellows for 2015**

Title	Name	Citizen	Gender	Race	CoE support level	
					Bursary	Running
Dr	Tiwonge Mzumara	Malawi	F	B	No	Yes
Dr	Eléonore Hellard	France	F	W	Yes	Yes
Dr	Sophie Lardy	France	F	W	No	No
Dr	Margaux Rat	France	F	W	No	Yes
Dr	Petra Sumasgutner	Austria	F	W	Yes	Yes
Dr	Dayo Osinubi	Nigeria	M	B	Yes	Yes
Dr	Alan Lee	SA	M	W	Yes	Yes
Dr	Ryan Reissing (NMMU)	SA	M	W	No	No

**Table 7. Honorary Professors and Research Associates for 2015**

Title	Name	Citizen	Institution	Gender	Race	% time in CoE
Dr	Phoebe Barnard *	UK	SANBI	F	W	10
Dr	Rita Covas *	Portugal	CIBIO, Portugal	F	W	80
Dr	Claire Doutrelant	France	CEFE-CNRS	F	W	40
Dr	Kristine Maciejewski	SA	OTS	F	W	20
Dr	Lorien Pichegru *	France	UCT	F	W	100
A/Prof.	Mandy Ridley *	New Zealand	Macquarie U, Aus.	F	W	50
Dr	Lizanne Roxburgh	SA	EWT	F	W	10
Dr	Claire Spottiswoode	SA	U Cambridge, UK	F	W	30
Dr	Antje Steinfurth	Germany	UCT	F	W	100
Dr	Steve Boyes	SA	Wild Bird Trust	M	W	50
Prof.	David Cumming *	Zimbabwe	U Zimbabwe	M	W	20
Dr	Timothee Cook	France	U P et M Curie, France	M	W	20
Dr	Tom Flower	UK	U St Andrews, Can.	M	W	20
Dr	David Grémillet *	France	CNRS	M	W	20
Dr	Andrew Jenkins	SA	UCT	M	W	20
Dr	Ian Little	SA	EWT	M	W	20
Dr	Martim de Melo	Portugal	CIBIO, Portugal	M	W	10
Dr	Anthoni Milewski	Australia	Murdoch U, Aus.	M	W	20
Dr	Rob Simmons *	UK	UCT	M	W	40
Dr	Ross Wanless *	SA	BirdLife SA	M	W	40

\* Official UCT Honorary Professor or Honorary Research Associate

**Table 8. PFAO CoE Students registered, or graduating, during 2015**

\* = thesis students who graduated during 2015

\*\* = MSc CB course students who graduated during 2015

Name	Citizen	Univ.	Gender	Race	Degree	1 <sup>st</sup> year	CoE support level	
							Bursary	Running
Ryklief, Rabia	SA	NMMU	F	B	PhD	2014	No	Yes
Baum, Julia	Germany	UCT	F	W	PhD	2012	No	No
Carstens, Kate	SA	UCT	F	W	PhD	2014	No	No
Clements, Hayley	SA	UCT	F	W	PhD	2014	No	Yes
Garcia-Heras, Sophie	Spain	UCT	F	W	PhD	2014	Yes	Yes
Rat, Margaux *	France	UCT	F	W	PhD	2012	Yes	Yes
Reynolds, Chevonne	SA	UCT	F	W	PhD	2013	Yes	No
Thompson, Michelle	SA	U. Pta	F	W	PhD	2014	Yes	No
van de Ven, Tanja	Netherlands	UCT	F	W	PhD	2012	Yes	Yes
Davies, Owen *	SA	UCT	M	W	PhD	2008	No	No
Henry, Dominic	SA	UCT	M	W	PhD	2011	Yes	Yes
Lowney, Anthony	UK	UCT	M	W	PhD	2015	Yes	Yes
McInnes, Alistair	SA	UCT	M	W	PhD	2012	Yes	No
Noakes, Matthew	SA	U. Pta	M	W	PhD	2015	Yes	Yes
O'Connor, Ryan	USA	U. Pta	M	W	PhD	2013	Yes	Yes
Pietersen, Darren	SA	U. Pta	M	W	PhD	2013	Yes	Yes
Rollinson, Dominic	SA	UCT	M	W	PhD	2013	Yes	Yes
Tate, Gareth	SA	UCT	M	W	PhD	2014	Yes	Yes
van Eeden, Rowen	SA	UCT	M	W	PhD	2013	Yes	Yes
Whitehead, Otto	SA	UCT	M	W	PhD	2014	Yes	No
Abdu, Salamatu **	Nigeria	UCT	F	B	MSc CB	2014	No	No
Angoh, Jennifer	Mauritius	UCT	F	B	MSc CB	2015	No	No
Motlogelwa, Binah (withdrew)	Botswana	UCT	F	B	MSc CB	2014	No	No
Suri, Jessleena	India	UCT	F	B	MSc CB	2015	No	No
Berndt, Jessie *	SA	UCT	F	W	MSc	2013	No	Yes
Bowker, Jenna **	SA	UCT	F	W	MSc CB	2014	No	No
Carpenter-King, Tegan *	SA	NMMU	F	W	MSc	2014	Yes	Yes
Cronin, Kate **	SA	UCT	F	W	MSc CB	2014	No	No
Espinaze, Marcela **	Chile	UCT	F	W	MSc CB	2014	No	No
Fazey, Francesca **	SA	UCT	F	W	MSc CB	2014	No	No
Ferguson, Angela	Zimbabwe	UCT	F	W	MSc CB	2015	No	No
Fleury, Gagriela	USA	UCT	F	W	MSc CB	2015	No	No
Flores, Selena	USA	UCT	F	W	MSc	2015	Yes	Yes
Garbett, Beckie	UK	UCT	F	W	MSc	2015	No	Yes
Kyne, Amanda	USA	UCT	F	W	MSc	2014	Yes	No
Le Roux, Liesl **	SA	UCT	F	W	MSc CB	2014	No	No
Pistorius, Penny	SA	UCT	F	W	MSc CB	2015	No	No
Pretorius, Adele	SA	UCT	F	W	MSc CB	2015	No	No
Roberts, Jenni	Namibia	UCT	F	W	MSc	2014	No	No
Russo, Allie **	USA	UCT	F	W	MSc CB	2014	No	No
Stevens, Kim	SA	UCT	F	W	MSc	2014	No	Yes
Tubbs, Noelle	USA	UCT	F	W	MSc	2013	No	No
Van Velden, Julia	SA	UCT	F	W	MSc CB	2015	No	No
Visser, Elke	SA	UCT	F	W	MSc CB	2015	No	No
Whitfield, Maxine *	SA	U. Pta	F	W	MSc	2012	No	No
Witteveen, Minke *	SA	UCT	F	W	MSc	2013	No	No
Matimele, Hermenegildo	Madagascar	UCT	M	B	MSc CB	2015	No	No
Molepo, Jerry	SA	NMMU	M	B	MSc	2015	Yes	Yes
Atkins, Alex **	UK	UCT	M	W	MSc CB	2014	No	No
Baigrie, Bruce **	SA	UCT	M	W	MSc CB	2014	No	No
Botha, Johnathan	SA	NMMU	M	W	MSc	2015	Yes	Yes
Brink, Christiaan	SA	UCT	M	W	MSc CB	2015	No	No
Cox, Samuel (withdrew)	UK	UCT	M	W	MSc CB	2015	No	No
De Blocq, Andrew	SA	UCT	M	W	MSc	2015	No	No

Dickens, John **	SA	UCT	M	W	MSc CB	2014	No	No
Dilley, Ben	SA	UCT	M	W	MSc	2015	Yes	Yes
Doherty, Keigan	SA	NMMU	M	W	MSc	2015	Yes	Yes
Gaglio, Davide	Italy	UCT	M	W	MSc	2013	Yes	Yes
Gwynn, Lisle *	UK	UCT	M	W	MSc	2011	No	No
Lloyd, Kyle	SA	UCT	M	W	MSc CB	2015	No	No
Millan, Juan **	Colombia	UCT	M	W	MSc CB	2014	No	No
Pallett, John	Namibia	UCT	M	W	MSc	2013	No	No
Rodseth, Edmond	SA	UCT(MCB)	M	W	MSc	2015	No	Yes
Sands, Dara **	UK	UCT	M	W	MSc CB	2014	No	No
Schoombie, Stefan *	SA	UCT	M	W	MSc	2014	No	No
Tokura, Wataru	Japan	UCT	M	W	MSc CB	2015	No	No
Zoghby, Blair *	SA	UCT	M	W	MSc	2012	No	No
van den Heever, Danielle*	SA	NMMU	F	W	Hons	2015	No	Yes

**Table 9. CoE Post-doctoral Fellow and Student demographics in 2015**

	Black			White			Total
	Female	Male	Total	Female	Male	Total	
P-doc	1	1	2	4	2	6	8
PhD	1		1	8	11	19	20
MSc	4	3	7	22	18	40	47
BSc H				1		1	1
Total	6	4	10	35	31	66	76

**Table 10. Places of origin of CoE students supported in 2015**

Target		Number of students supported	%
SA	87%	40	59
SADC*	5%	5	7
African	4%	2	3
Other	4%	21	31
Total	100%	68	100

\*Southern African Development Community countries include Angola, Botswana, Congo (DRC), Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, Swaziland, Tanzania, Zambia and Zimbabwe (South Africa is excluded here)

**Table 11. Research assistants for 2015**

Title	Name	Citizenship	Gender	Race	Based at
Ms	Cara Daneel	SA	F	B	UCT
Mr	Gregory Matumi	Zimbabwe	M	B	UCT
Mr	David Nkosi	SA	M	B	UCT
Ms	Jo-Anne Bentley	SA	F	W	UCT
Ms	Carla du Toit	SA	F	W	UCT
Ms	Samantha Harebottle	SA	F	W	UCT
Ms	Anne Koeslag	SA	F	W	UCT
Ms	Gabriella Leighton	SA	F	W	UCT
Ms	Michelle Malan	SA	F	W	UCT
Ms	Imke Meyer	SA	F	W	UCT
Ms	Christine Moore	Canada	F	W	UCT
Ms	Frances Morling	SA	F	W	UCT
Mr	Cassie Carstens	SA	M	W	UCT
Mr	Mark Cowen	SA	M	W	UCT
Dr	Jerome Fuchs	France	M	W	U Cal
Mr	Alistair Fyfe	SA	M	W	UCT
Mr	Graeme Gerhardt	SA	M	W	UCT
Mr	Craig Haley	SA	M	W	UCT
Dr	Rene van Dijk	UK	M	W	UCT
Mr	Robert Williamson	SA	M	W	UCT

## FINANCES

### Audited Income and expenditure

A copy of the 2015 Income and Expenditure Statements shown below in Table 15 is attached to the *Ernst & Young* Audit Report.

With the retirement of Chris Tobler at the end of 2014 and the resignation of Tania Jansen during 2015, the end of year financial accounting and audit preparation were more testing than usual. However, Chris Tobler assisted as a consultant and Denise Scheepers made huge progress in learning the systems so that there were limited and normal queries listed in the audit process and report regarding compliance, and those listed were of little material significance and were clarified to the auditor's satisfaction. The only exceptions were that the UCT Faculty commitment of 5% of the NRF grant was not clarified, and the online student nominations for 2015 were only completed in early 2016 because of initiation and teething problems with the new NRF online annual reporting system.

### The distribution of funding across the two focal research areas during 2015 and co-funding from other sources

Table 12 reflects the total funding (R12 380 000) for the 29 CoE projects during 2015, according to the approved 2015 CoE budget and additional funds sourced elsewhere (Table 14). Table 13 reflects the overall distribution of funds across the three focal research areas during 2015. Research conducted by the PFAIO which is not funded at least in part by the CoE, and UCT remuneration of Fitz/CoE staff, are excluded from Tables 12 & 13.

**Table 12. Distribution of 2015 research funds according to the source of funds**

	DST-NRF		Other sources	
	bursary	running	bursary	running
	3 350 000	2 694 000	1 640 000	4 854 000
Sub total		6 044 000*		6 494 000
<b>Proportion</b>	<b>48%</b>		<b>52%</b>	

\*the corporate operations funds reflected in the 2015 CoE budget are excluded from the DST-NRF grant here

**Table 13. Distribution of 2015 research funds according to fund source and focal research areas**

Fund source	Research area*	1	2	% within source
DST-NRF**	1	1 990 000	3 804 000	16%
	2			31%
Other funds	1	961 000	5 533 000	8%
	2			45%
Total		2 951 000	9 337 000	
<b>% within research area</b>		<b>24%</b>	<b>76%</b>	<b>100%</b>

\*1 = understanding biodiversity; 2 = maintaining biodiversity

\*\*the distribution of DST-NRF funds reflected here are taken from the 2015 business plan Appendix 2

### Comments on the distribution of CoE and other funds during 2014:

1. The research funds granted by the DST-NRF were marginally less than half of the total funds available within the CoE.
2. The proportional distribution of research area funding is at variance with equal funding per research area, favouring conservation science (maintaining biodiversity), thus satisfying the recommendations of the 2009 review panel. However, it is also evident that sourcing external funds for research on understanding biodiversity is becoming more difficult.

**Table 14. Funds secured from other sources for the 2015 CoE projects**

Bursaries		Running costs		total	
1*	2	1	2		
		25 000		25 000	BirdLife South Africa
	180 000		220 000	400 000	World Parrot Trust
			50 000	50 000	Columbus Zoo USA
			50 000	50 000	Riverbanks Zoo USA
			75 000	75 000	Natural Research Ltd
	100 000		250 000	350 000	Raptors Botswana
			460 000	460 000	NSF-PEER
10 000		290 000		300 000	Clancey bequest
	200 000		1 000 000	1 200 000	J.S. McDonnell Foundation
			200 000	200 000	Blue Skies grant
			50 000	50 000	NSERC
		70 000		70 000	NRF incentives
		66 000		66 000	UCT URC individuals
	300 000			300 000	UCT URC CoE grant
100 000		50 000	25 000	175 000	U Pretoria
100 000		50 000		150 000	U Pretoria/Sweden BGI bilateral grant
		100 000		100 000	U California Berkeley
			25 000	25 000	Tshwane U Technology
	105 000		449 000	554 000	NRF - SANAP
	100 000			100 000	NRF Scarce Skills
			170 000	170 000	Save Our Seas Foundation
			100 000	100 000	Tristan government
			80 000	80 000	British Antarctic Survey
			536 000	536 000	SANAP/DEA
	100 000			100 000	SANBI
	45 000		30 000	75 000	ABAX Foundation
	220 000		78 000	298 000	DOW Chemicals
			150 000	150 000	International Foundation for Science
			70 000	70 000	National Geographic Cons Trust
			115 000	115 000	Cape Nature
80 000		20 000		100 000	General donations
<b>290 000</b>	<b>1 350 000</b>	<b>671 000</b>	<b>4 183 000</b>	<b>6 494 000</b>	

\* 1 = understanding biodiversity; 2 = maintaining biodiversity

**DST-NRF CoE**  
**Birds as Keys to Biodiversity Conservation at the Percy FitzPatrick Institute**  
**CASH FLOW ANALYSIS FOR THE 2015 FINANCIAL YEAR**

DESCRIPTION	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	TOTAL	Annual Budget	VARIANCE
NRF		3 248 027	3 248 027										6 496 054	6 496 054	0
Interest	3 294												3 294	3 294	0
Other (incl. c/f from 2014)	801 346												801 346	801 346	0
<b>TOTAL INCOME</b>	804 640	3 248 027	3 248 027	0	0	0	0	0	0	0	0	0	7 300 694	7 300 694	0
Salaries	-73 100	-78 982	-75 562	-72 289	-75 001	-106 771	-112 722	-117 027	-113 809	-104 664	-100 419	-122 341	-1 152 686	1 004 000	-148 686
Student costs	-1 537 566	-238 056		-90 000	-10 000	-812 511	-90 000		-90 000			0	-2 868 133	3 350 000	481 867
Conferences (incl. Travel)	-4 983	-15 684	-18 151	-30 392	-37 553	-60 660	-24 459	-40 809	-61 386	-114 399		-15 789	-424 265	375 000	-49 265
Equipment													0	0	0
Running	-67 709	-205 422	-226 860	-128 833	-105 019	-160 389	-147 020	-97 387	-66 018	-202 243	-147 584	-149 559	-1 704 043	2 334 000	629 957
<b>TOTAL EXPENSES</b>	-1 683 357	-538 144	-320 573	-321 514	-227 574	-1 140 331	-374 201	-255 222	-331 213	-421 307	-248 003	-287 688	-6 149 127	7 063 000	913 873
<b>NET OUTCOME PROFIT/LOSS</b>	-878 718	1 831 165	4 758 619	4 437 105	4 209 531	3 069 200	2 694 999	2 439 777	2 108 564	1 687 258	1 439 255	1 151 567	1 151 567		

Notes:

- 1 Balance brought fwd matches previous year's Financial Statement
- 2 Shows actual expenditure only (excluding commitments) for all months
- 3 Reflects the entire costs of the CoE including satellite campuses
- 4 Regards income as positive cash flow and expenditure as negative cash flow
- 5 Emailed to the NRF not later than 15 days after the month end



**Table 15. Fitztitute CoE Financial Statements, January to December 2015**

	<b>Operating Fund</b>	<b>Invested Fund</b>	<b>All Funds</b>
<b>Brought forward from 2014</b>	-783 140.13	-18 205.85	-801 345.98
<b>Income</b>	-6 496 054.00	-1 988.99	-6 498 042.99
NRF income	-6 496 054.00		
Other income			
Investment income		-1 988.99	
<b>Net transfer value</b>	0.00	-0.00	-
CR transfer	-0.00	-0.00	
DR transfer	0.00		
<b>Expenditure</b>	6 137 927.12		
Salaries total	1 152 686.33		
Bursaries	2 868 133.00		
Conferences	386 108.83		
Equipment			
Running costs	1 730 998.96		
<b>Carry forward to 2016</b>	-1 141 267.01	-20 194.84	-1 161 461.85
<b>Reconciliation:</b>			
SAP balance @ 31/12/2015	-1 052 767.01		
Advances in hand	-88 500.00		
	-1 141 267.01		

**Notes:**

- 1) No non-specific transfers to other collaborators were made in 2015.
- 2) All funds carried forward to 2016 include advances in hand.
- 3) Both funds reconcile to SAP

## Appendix 1: PFAO CoE Publications for 2015

### Papers in SCI-ranked journals (130)

IF score = Thomson Scientific Impact Factor score (2013 2-year impact factor)

- Acker, P., Grégoire, A., Rat, M., Spottiswoode, C.N., van Dijk, R.E., Paquet, M., Kaden, J.C., Pradel, R., Hatchwell, B.J., Covas, R., and Doutrelant, C. 2015. Disruptive viability selection on a black plumage trait associated with dominance. *Journal of Evolutionary Biology* 28: 2027-2041. <http://dx.doi.org/10.1111/jeb.12717> IF 3.804
- Amar, A. 2015. Using independent nest survey data to validate changes in reporting rates of Martial Eagles between the Southern African Bird Atlas Project 1 and 2. *Ostrich*. <http://dx.doi.org/10.2989/00306525.2015.1089333> IF 0.431
- Baylis, A.M.M., Orben, R.A., Pistorius, P., Brickle, P., Staniland, I., and Ratcliffe, N. 2015. Winter foraging site fidelity of King Penguins breeding at the Falkland Islands. *Marine Biology* 162: 99-110. <http://dx.doi.org/10.1007/s00227-014-2561-0> IF 2.569
- Bray, T.C., and Hockey, P.A.R. 2015. Population genetics and demographic inferences in a recovering shorebird, the African Black Oystercatcher *Haematopus moquini*. *Ibis* 157: 171-176. <http://dx.doi.org/10.1111/ibi.12209> IF 1.861
- Brown, R.M., Techow, N.M.S.M., Wood, A.G., and Phillips, R.A. 2015. Hybridization and back-crossing in giant petrels (*Macronectes giganteus* and *M. halli*) at Bird Island, South Georgia, and a Summary of Hybridization in Seabirds. *PLoS ONE* 10: e0121688. <http://dx.doi.org/10.1371/journal.pone.0121688> IF 4.015
- Cáceres, A., Melo, M., Barlow, J., Cardoso, P., Maiato, F., and Mills, M.S.L. 2015. Threatened birds of the Angolan central escarpment: distribution and response to habitat change at Kumbira Forest. *Oryx* 49: 727-734. <http://dx.doi.org/10.1017/S0030605313001415> IF 1.914
- Caves E.M., Stevens, M., Iversen, E.S., and Spottiswoode, C.N. 2015. Hosts of avian brood parasites have evolved egg signatures with elevated information content. *Proceedings of the Royal Society of London B* 282: 20150598. <http://dx.doi.org/10.1098/rspb.2015.0598> IF 5.808
- Cerfonteyn, M., and Ryan, P.G. 2015. Have burrowing petrels recovered on Marion Island two decades after cats were eradicated? Evidence from Sub-Antarctic Skua prey remains. *Antarctic Science* 28: 51-57. <http://dx.doi.org/10.1017/S0954102015000474> IF 1.639
- Cook, T.R., Bonnet, X., Fauvel, T., Shine, R., and Brishoux, F. 2015. Foraging behavior and energy budgets of sea snakes: insights from implanted data loggers. *Journal of Zoology* 298: 82-93. <http://dx.doi.org/10.1111/jzo.12286> IF 2.108
- Cressey, E.R., Measey, G.J., and Tolley, K.A. 2015. Fading out of view: the enigmatic decline of Rose's Mountain Toad *Capensibufo rosei*. *Oryx* 49: 521-528. <http://dx.doi.org/10.1017/S0030605313001051> IF 1.914
- Cumming, G.S., Allen, C.R., Ban, N.C., Biggs, D., Biggs, H.C., Cumming, D.H.M., De Vos, A., Epstein, G., Etienne, M., Maciejewski, K., Mathevet, R., Moore, C.A., Nenadovic, M., and Schoon, M. 2015. Understanding protected area resilience: a multi-scale, social-ecological approach. *Ecological Applications* 25: 299-319. <http://dx.doi.org/10.1890/13-2113.1> IF 4.126
- Cumming, G.S., Abolnik, C., Caron, A., Gaidet, N., Grewar, J., Hellard, E., Henry, A.A.W., and Reynolds, C. 2015. A social-ecological approach to landscape epidemiology: geographic variation

- and avian influenza. *Landscape Ecology* 30: 963-985. <http://dx.doi.org/10.1007/s10980-015-0182-8> IF 4.044
- Cumming, G.S., Harebottle, D.M., Mundava, J., Otieno, N., and Tyler, S.J. 2015. Timing and location of reproduction in African waterfowl: an overview of .100 years of nest records. *Ecology and Evolution* 6: 631-646. <http://dx.doi.org/10.1002/ece3.1853> IF 2.415
- Cunningham, S.J., Madden, C., Barnard, P., and Amar, A. 2015. Electric crows: power lines, climate change and the emergence of a native invader. *Diversity and Distributions* 22:17-29. <http://dx.doi.org/10.1111/ddi.12381> IF 5.629
- Cunningham, S.J., Martin, R.O., and Hockey, P.A.R. 2015. Can behaviour buffer the impacts of climate change on an arid zone bird? *Ostrich* 86: 119-126. <http://dx.doi.org/10.2989/00306525.2015.1016469> IF 0.431
- Dalton, D.L., Linden, B., Wimberger, K., Nupen, L.J., Tordiffe, A.S.W., Taylor, P.J., Madisha, M.T., and Kotze, A. 2015. New insights into Samango Monkey speciation in South Africa. *PLoS ONE* 10(3): e0117003. <http://dx.doi.org/10.1371/journal.pone.0117003> IF 4.015
- Davies, D., Dilley, B.J., Bond, A.L., Cuthbert, R.J., and Ryan, P.G. 2015. Trends and tactics of mouse predation on Tristan Albatross *Diomedea dabbenena* chicks at Gough Island, South Atlantic Ocean. *Avian Conservation and Ecology* 10(1): 5. <http://dx.doi.org/10.5751/ACE-00738-100105> IF 0.381
- Dean, W.R.J., Milton, S.J., Forsyth, H.P., and Tissiman, D.R. 2015. Fluctuations in bird numbers on sewage treatment ponds in an arid environment, South Africa. *Ostrich* 86: 145-153. <http://dx.doi.org/10.2989/00306525.2015.1029559> IF 0.431
- De Vos, A., Cumming, G.S., Moore, C.A., Maciejewski, K., and Duckworth, G. 2015. Understanding the role of ecotourism attributes for the economic sustainability of protected areas. *Ecosphere*. IF 2.69
- Dilley, B.J., Davies, D., Bond, A.L., and Ryan, P.G. 2015. Effects of mouse predation on burrowing petrel chicks at Gough Island. *Antarctic Science* 27: 543-553. <http://dx.doi.org/10.1017/S0954102015000279> IF 1.639
- Dilley, B.J., Schoombie, S., Schoombie, J., and Ryan, P.G. 2015. 'Scalping' of albatross fledglings by introduced mice spreads rapidly at Marion Island. *Antarctic Science* 28: 73-80. <http://dx.doi.org/10.1017/S0954102015000486> IF 1.639
- Douglas, D.J.T., Buchanan, G.M., Thompson, P., Amar, A., Fielding, D.A., Redpath, S.M., and Wilson, J.D. 2015. Vegetation burning for game management in the UK uplands is increasing and overlaps spatially with soil carbon and protected areas. *Biological Conservation* 191: 243-250. <http://dx.doi.org/10.1016/j.biocon.2015.06.014> IF 4.036
- Edwards, M.K., Mitchell, N.J., and Ridley, A.R. 2015. The impact of high temperatures on foraging behaviour and body condition in the Western Australian Magpie *Cracticus tibicen dorsalis*. *Ostrich* 86: 137-144. <http://dx.doi.org/10.2989/00306525.2015.1034219> IF 0.431
- England, K.J.H., Jackson, C., and Hockey, P.A.R. 2015. A novel methodology for the rapid assessment of waterbird vulnerability to disturbance. *Ostrich* 86: 75-85. <http://dx.doi.org/10.2989/00306525.2015.1030793> IF 0.431

- Espinaze, M., Hellard, E., and Cumming, G. 2015. Analysis of large new South African data set using two host specificity indices shows generalism in both adult and larval ticks of mammals. *Parasitology* 143: 366-373. <http://dx.doi.org/10.1017/S0031182015001730> IF 2.729
- Evans, S.W., Monadjem, A., Roxburgh, L., McKechnie, A.E., Baker, L., Kizungu, R.B., Little, I.T., Matsvimbo, F., Mulwa, R.K., Mwizabi, D., Nalwanga, D., Ndong'ang'a, K., and Combrink, L. 2015. Current conservation status of the Blue Swallow *Hirundo atrocaerulea* Sundevall 1850 in Africa. *Ostrich* 86: 195-211. <http://dx.doi.org/10.2989/00306525.2015.1047808> IF 0.431
- Feeney, W.E., Tronscianko, J., Langmore, N.E., and Spottiswoode, C.N. 2015. Evidence for aggressive mimicry in an adult brood parasitic bird, and generalized defences in its host. *Proceedings of the Royal Society of London B* 282 (2015). <http://dx.doi.org/10.1098/rspb.2015.0795> IF 5.808
- Flower, T.P., Ashton, B.J., Zöttl, E., Olinger, R.M., and Hockey, P.A.R. 2015. Dual parasitism of Fork-tailed Drongos by African and Jacobin Cuckoos. *Ostrich* 86: 189-191. <http://dx.doi.org/10.2989/00306525.2015.1029032> IF 0.431
- Fuchs, J., and Bowie, R.C.K. 2015. Concordant genetic structure in two species of woodpecker distributed across the primary West African biogeographic barriers. *Molecular Phylogenetics and Evolution* 88: 64-74. <http://dx.doi.org/10.1016/j.ympev.2015.03.011> IF 3.989
- Gaglio, D., Cook, T.R., and Sherley, R.B. 2015. Egg morphology of Swift Terns in South Africa. *Ostrich* 86: 287-289. <http://dx.doi.org/10.2989/00306525.2015.1046964> IF 0.431
- Gray, M.M., Parmenter, M., Hogan, C., Ford, I., Cuthbert, R.J., Ryan, P.G., Broman, K.W., and Payseur, B.A. 2015. Genetics of rapid and extreme size evolution in island mice. *Genetics* 201: 213-228. <http://dx.doi.org/10.1534/genetics.115.177790> IF 5.96
- Grecian, W.J., McGill, R.A.R., Phillips, R.A., Ryan, P.G., and Furness, R.W. 2015. Quantifying variation  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  isotopes within and between feathers and individual: is one sample enough? *Marine Biology* 162: 733-741. <http://dx.doi.org/10.1007/s00227-015-2618-8> IF 2.569
- Grémillet, D., Péron, C., Kato, A., Amélineau, F., Ropert-Coudert, Y., Ryan, P.G., and Pichegru, L. 2015. Starving seabirds: unprofitable foraging and its fitness consequences in Cape gannets competing with fisheries in the Benguela upwelling ecosystem. *Marine Biology* 163: 35. <http://dx.doi.org/10.1007/s00227-015-2798-2> IF 2.569
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- Grémillet, D., Fort, J., Amélineau, F., Zakhavova, E., Le Bot, T., Sala, E., and Gavriilo, M. 2015. Arctic warming: nonlinear impacts of sea-ice and glacier melt on seabird foraging. *Global Change Biology* 21: 1116-1123. <http://dx.doi.org/10.1111/gcb.12811> IF 6.91
- Handley, J.M., Baylis, A.M.M., Brickle, P., and Pistorius, P. 2015. Temporal variation in the diet of Gentoo Penguins at the Falkland Islands. *Polar Biology* 39: 283-296. <http://dx.doi.org/10.1007/s00300-015-1781-1> IF 2.027
- Handley, J.M. and Pistorius, P. 2015. Kleptoparasitism in foraging Gentoo Penguins *Pygoscelis papua*. *Polar Biology* 39(2):391-395. IF 2.027

- Hart, J., Hart, T., Salumu, L., Bernard, A., Abani, R., and Martin, R. 2016. Increasing exploitation of Grey Parrots in eastern DRC drives population declines. *Oryx* 50: 16. <http://dx.doi.org/10.1017/S0030605315001234> IF 2.14
- Hellard, E., Pontier, D., Siberchicot, A., Sauvage, F., and Fouchet, D. 2015. Unknown age in health disorders: a method to account for its cumulative effect and an application to feline viruses interactions. *Epidemics* 11: 48-55. <http://dx.doi.org/10.1016/j.epidem.2015.02.004> IF 2.750
- Hellard, E., Cumming, G.S., Caron, A., Coe, E., and Peters, J.L. 2015. Testing epidemiological functional groups as predictors of avian haemosporidia patterns in southern Africa. *Ecosphere*. IF 2.69
- Heystek, A., Pauw, A., and Barnard, P. 2015. Proteaceae nectar sources for nectarivorous birds at landscape level. *South African Journal of Botany* 98: 179-180. <http://dx.doi.org/10.1016/j.sajb.2015.03.047> IF 1.676
- Hobday, A.J., Bell, J.D., Cook, T.R., Gasalla, M.A., and Wang, K.C. 2015. Reconciling conflicts in pelagic fisheries under climate change. *Deep-Sea Research II* 113: 291–300. <http://dx.doi.org/10.1016/j.dsr2.2014.10.024> IF 2.763
- Ibáñez-Álamo, J.D., Magrath, R.D., Oteyza, J.C., Chalfoun, A.D., Haff, T.M., Schmidt, K.A., Thomson, R.L., and Martin, T.E. 2015. Nest predation research: recent findings and future perspectives. *Journal of Ornithology* 156: 247-262. <http://dx.doi.org/10.1007/s10336-015-1207-4> IF 1.766
- Joseph, G.S., Makumbe, M., Seymour, C.L., Cumming, G.S., Mahlangu, Z., and Cumming, D.H.M. 2015. Termite mounds mitigate against 50 years of herbivore-induced reduction of functional diversity of savannah woody plants. *Landscape Ecology* 30: 2161-2174. <http://dx.doi.org/10.1007/s10980-015-0238-9> IF 4.044
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- Krüger, S.C., Simmons, R.E., and Amar, A. 2015. Anthropogenic activities influence the abandonment of Bearded Vulture (*Gypaetus barbatus*) territories in southern Africa. *Condor* 117: 94-107. <http://dx.doi.org/10.1650/CONDOR-14-121.1> IF 1.393
- Krüger, S.C., Reid, T., and Amar, A. 2015. Differential range use between age classes of southern African Bearded Vultures *Gypaetus barbatus*. *PLoS ONE* 9: e114920. <http://dx.doi.org/10.1371/journal.pone.0114920> IF 4.015
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- Lardy, S., Allainé, D., Bonenfant, C., and Cohas, A. 2015. Sex-specific determinants of fitness in a social mammal. *Ecology* 96: 2947-2959. <http://dx.doi.org/10.1890/15-0425.1> IF 6.421

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- Lee, A.T.K., and Barnard, P. 2015. Endemic birds of the Fynbos biome: a conservation assessment and impacts of climate change. *Bird International Conservation* 26: 52-68. <http://dx.doi.org/10.1017/S0959270914000537> IF 1.441
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## **Birds to Watch in Namibia: Red Data and Endemic Species**

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## **Conflicts in Conservation: navigating towards solutions**

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