



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

**ANNUAL REPORT 2013**

**Reporting Period**  
**1 January - 31 December 2013**

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**CoE Identification**

Name of Director	: Acting Director Assoc. 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	: 3 March 2013

## EXECUTIVE SUMMARY

### 1. Funding of the CoE for 2013

DST/NRF CoE funding for 2013	:	5,892,112
DST/NRF additional bursaries	:	660,000
Carry forward from 2012	:	809,499
Interest earned during 2012	:	90,321
UCT URC support for the Pazvolski Chair in 2013	:	196,124*
UCT URC support for Hotbirds project in 2013	:	355,000*
UCT URC support for research page charges in 2013	:	40,561*
Funding from other sources for the CoE in 2013	:	6,518,000**
<b>Total funding</b>	:	<b>R 12, 544,289</b>

\* represents UCT's contribution to the CoE; R591 685 of R5 892 112 = 10.04%

\*\* funding for CoE projects from sources other than the DST/NRF or UCT URC grants

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

#### (i) Scientific Research

A record 111 papers carrying the CoE address were published in peer-reviewed journals during 2013; 103 in impact factor rated journals and eight in non-rated journals, 38 in journals with an impact factor  $\geq 3.5$ , 15 in journals with a rating  $\geq 5$  and five in journals with a rating  $\geq 10$ . The proportion of papers published according to the focal research areas is; characterizing biodiversity = 7, evolutionary ecology = 51 and maintaining biodiversity = 53.

#### (ii) Education and Training

Sixty-eight post-graduate students (21 PhD and 47 MSc) registered at South African institutions (12% black and 51% women) were supported by the CoE during 2013. Twenty students (3 PhD, 2 MSc by dissertation and 15 MSc Conservation Biology) graduated during 2013. Twelve Post-doctoral Fellows were supported by the CoE during 2013.

#### (iii) Information Brokerage

Eighty-four semi-popular articles, one complete book and six chapter contributions to semi-technical books were published during 2013. CoE members attended 24 international and 12 local conferences. CoE members also presented over 50 seminars and illustrated talks at numerous universities, bird clubs and membership-based societies, including four field outreach activities. Prof. Graeme Cumming and members of the CoE arranged the southern African node Resilience Alliance Science Meeting, funded by the NRF, during April 2013.

#### (iv) Networking

A broad range of close collaborative working relationships with over 50 scientific peers and a variety of conservation NGOs and governmental organisations from 16 countries 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 topics. CoE members served on 20 journal editorial boards, 53 membership fora and advisory services, and reviewed 135 papers for 62 peer-reviewed journals.

### 3. Gender and equity impacts of research

A proactive policy on recruiting women maintained a 51% representation of women in the postgraduate student body for 2013. Research project activities are increasingly addressing gender-related issues and community inclusion in the field. CoE projects continued to generate work opportunities related to research activities for adjacent previously disadvantaged community members, with 148 full-time or part-time jobs, mostly filled by women, active during 2013. This included 25 full-time and 77 part-time jobs in South Africa, 12 full-time and 40 part-time jobs in Zambia and four part-time jobs in Angola.

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

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 2014, the only area of concern is that the current level of academic staffing may reach saturation with regards to their capacity to supervise more students. Prof. Tim Crowe retired at the end of 2013 and that post will be advertised during 2014. A/Prof. Peter Ryan is being considered for the Directorship of the PFIAO CoE and his previous post has been frozen, effectively leaving the CoE with one less academic post, a 20% reduction in supervising capacity.

### 5. General Comments

The very sad and untimely passing of Prof. Phil Hockey on 24 January 2013 has left a significant void in ornithology in South Africa, Africa and the World. The management structures of the CoE have also unavoidably been affected. A/Prof. Peter Ryan was appointed as Acting Director from January 2013.

The CoE programme review took place during March 2013 to assess the performance of the individual CoEs from 30 June 2008 to 31 December 2012 in terms of their respective mandates, the commitment of the relevant host universities in terms of support for the CoEs for the next five years, and the overall effectiveness of the CoE programme. The final review panel report and NRF management response were sent to the CoEs on 2 December 2013 and are on the 27 March 2014 CoE Board meeting agenda for discussion.



*In memory of Phil Hockey  
an exemplary ornithologist and research leader*

# PROGRESS REPORT

## 1. Scientific Research

### Objective

The research strategy of the CoE has been aligned to a medium-term goal of producing world-class research outputs, measured as the number of papers published in internationally peer-reviewed journals with high SCI impact-factor ratings. To meet this goal, the CoE SLA 5 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 2012-2014.

### Progress

One hundred and eleven papers carrying the CoE address were published in peer-reviewed journals during 2013; 103 in impact factor rated journals and eight in non-rated journals, as well as eight book reviews and obituaries in rated journals (Appendix 1). Thirty eight of these papers were in journals with impact factors  $\geq 3.5$  (more than double the SLA target), 15 were in journals with impact factors  $\geq 5$  (three times the SLA target), and five in journals with a rating  $\geq 10$  (Fig. 1). The proportion of peer-reviewed papers published according to the focal research areas is; characterizing biodiversity = 7, evolutionary ecology = 51 and maintaining biodiversity = 53.

**FitzPatrick Institute publications in peer-reviewed journals, 2000-2013**

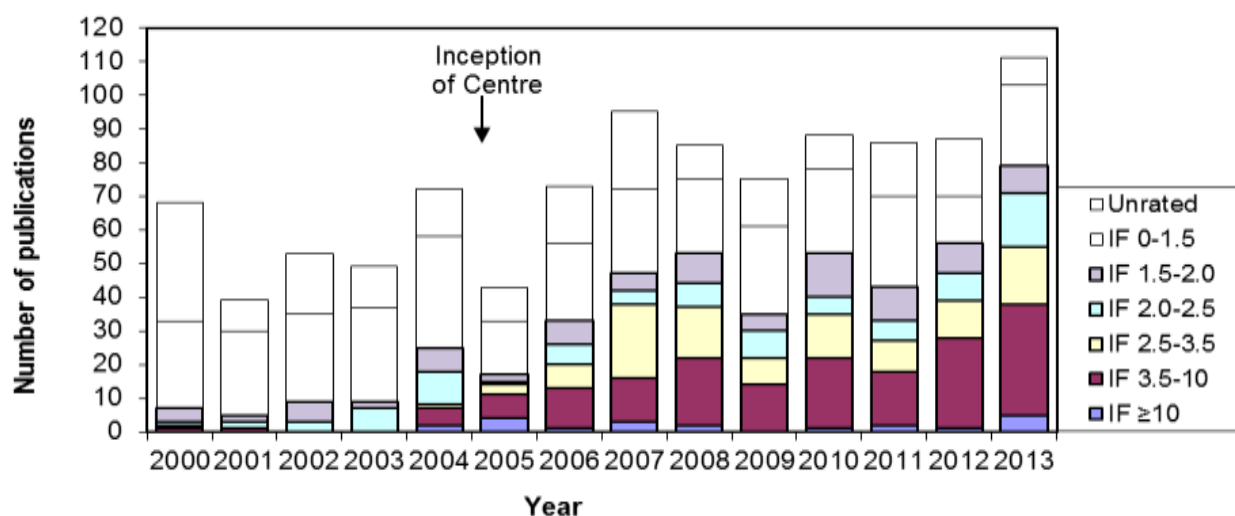


Figure 1. Trend in the quality of CoE publications (measured by journal 'Impact Factors') before and since the establishment of the Centre of Excellence. IF = Impact Factor. To place this in perspective, only five life-sciences journals worldwide (including Science and Nature) have impact factors  $>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

The ten most cited papers for the life of the CoE (2005-2013) and for the history of the PFIAO (1960-2013), analyzed using the *Web of Science* and *Google Scholar* are presented in Appendix 2.

Prof. Graeme Cumming received the prestigious T.W. Kambule NRF-NSTF Award for recognition of his outstanding contribution to science, engineering, technology and innovation (SETI) through research and its outputs over the last 5 to 10 years, at the 15<sup>th</sup> National Science and Technology Forum BHP Billiton Awards dinner in Gauteng on 27 June 2013.

Prof. Graeme Cumming was also awarded the South African Association for the Advancement of Science (S2A3) British Association Silver Medal for 2013. This medal is awarded to researchers under the age of 40 in recognition of outstanding achievements in science.

Post-doc Alan Lee was awarded the best oral presentation at the annual Fynbos Forum in October 2013 for his talk titled 'Between a Rock and Hot place: Implications of climate change for Fynbos endemic birds'.

Post-doc Susie Cunningham was awarded the best oral presentation at the 4<sup>th</sup> Diamond Route Research Conference in Johannesburg during October 2013 for her talk titled 'Parenting under pressure: temperature, behavioural trade-offs and breeding success in desert shrikes.'

MSc student Matthew Noakes was awarded the best poster presentation at the 35<sup>th</sup> Conference of the Zoological Society of Southern Africa held in Tshipise during July 2013.

The CoE was awarded three prizes at the UCT Biological Sciences Biodiversity Conference during December 2013, with PhD students Owen Davies and Chevonne Reynolds being awarded best and runner-up talks, respectively, and MSc CB student Robyn Milne taking the best poster award.

Post-doc Steve Boyes was acknowledged as a 2013 National Geographic Emerging Explorer.

### **Significant scientific publication during 2013**

A paper by Thompson, Raihani, Hockey, Britton, Finch and Ridley titled 'The influence of fledgling location on adult provisioning: a test of the blackmail hypothesis' published in the *Proceedings of the Royal Society B* was featured by Matt Kaplan in *Nature / News & Comments* on 10 April 2013. This paper also received feature articles in *globalpost America's world news site*, *France 24 International News*, *Discover The magazine of Science*, *Technology and the future*, *ioL scitech* and *io9*.

## 2. Education and Training

### *Objective*

The short-term objective, as outlined in the SLA 5, is for the CoE to support (at least partially) an average of  $\geq 30$  postgraduate students and  $\geq 6$  Post-doctoral Fellows per annum during 2012-2014. 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-one PhD and 47 MSc students (total = 68) registered at South African institutions were supported directly or indirectly by the CoE during 2013 (Tables 1 & 8). Eight (12% overall, but 27% of the SLA minimum target) of these students were black, and 35 (51%) were women. Forty-one (60%) of the students were South African, but there were only three black South African students. Twelve Post-doctoral Fellows were supported by the CoE during 2013 (Tables 1 & 6).

Twenty students graduated during 2013 (3 PhD, 2 MSc by dissertation and 15 MSc Conservation Biology). Eight other students (5 PhD - Davies, Kaliba, Mandiwana, Nupen & Smit; 3 MSc - Gwynn, Mitiku & Whitfield) submitted their corrected theses late in 2013 and will graduate in the first half of 2014.

**Table 1. Summary statistics for Post-doc and student numbers 2004 – 2013**

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

2004 = prior to CoE

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

Rowen van Eeden was awarded the UCT Faculty of Science Purcell Memorial Prize in April 2013 for his outstanding MSc dissertation. He has since registered for a PhD with the CoE.

Davide Gaglio was awarded 2013 Italian wildlife photographer of the year for his photographs of Swift Terns taken during his MSc field work on Robben Island.

A/Prof. Rauri Bowie was awarded one of five 2012 Distinguished Teaching Awards for the campus's most prestigious honour for teaching by the University of California, Berkeley on 24 April 2013. The award recognizes teaching that incites intellectual curiosity in students, engages them thoroughly in the enterprise of learning and has a lifelong impact.

Post-doc Susie Cunnigham attended a postdoc supervision training workshop at Stellenbosch University during November 2013.

### 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 5 target to organized at least one local conference during this stage (2012-2014).

#### **Progress**

CoE members published 84 semi-popular articles, contributed to six book chapters and authored one complete book during 2013 (Appendix 1). Steve Boyes, Andrews Jenkins, Rob Little and Peter Ryan contributed a significant number of species accounts for a book titled *The Ultimate Companion for Birding in Southern Africa* which will be published in two volumes in April 2014. Peter Ryan also took over from Phil Hockey early in 2013 as content editor for this book.

The Niven Library catalogue software was significantly upgraded by installing an Amlib Library Management System during 2013. Amlib is an integrated software package which in addition to managing the library database, enables the librarian to install a user database to manage library material loans and to manage incoming journal literature. Amlib is supported by OCLC, the platform which connects the world's libraries and which the resource libraries use to catalogue new material for their databases.

During 2013 the Niven Librarian Margaret Koopman attended a course on Digital Archiving offered by the UCT Department of Library and Information Studies (LIS) to enable her to lead digital data archiving at the CoE. An MoU is now signed by incoming students making data archiving mandatory and ensuring that sufficient metadata (description of the data) accompanies the submitted data. A partnership with SAEON was established, so that CoE data archived with SAEON can in future be made available for further study. The LIS department at UCT invited the Niven Librarian to take advantage of the completion of the Digital Archiving elective to complete a MSc degree in LIS which she will start in 2014.

After a couple of decades of using an external service provider, the role of the PFILO webmaster was internalized during 2013 and will from now on be serviced by the PFILO CoE Administrative Assistant, Hilary Buchanan.

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, various Bird Clubs and membership-based societies during 2013 (Table 2). Various radio interviews have also been conducted, including on Cape Talk Radio, Radio 702, OFM Radio, two BBC national radio stations, German and Canadian national radio, and the Hectic Nine-9 live television show for the youth on SABC2.

CoE staff and students attended 24 international and 12 local conferences during 2013 (Table 3), at which the CoE was awarded three best oral presentations and two best poster presentations. The UCT Department of Biological Sciences hosted a Biodiversity Southern Africa 2013 conference during 2-6 December 2013 at which six CoE staff and students presented oral papers and five CoE students presented posters.



**Table 2. PFIAO CoE public talks and outreach events for 2013 (not conferences)**

<b>Date</b>	<b>NAME</b>	<b>GROUP</b>
10/1/2013	Susie Cunningham	Cape Bird Club
20/1/2013	Rob Little	Steenberg Golf Club
25/1/2013	Phoebe Barnard	EGS Globalization Honours Group, UCT
6/2/2013	Arjun Amar	SanParks Research Centre staff & public
7/2/2013	Alta De Vos	Geo for Private Conservation
19/2/2013	Rob Little	Rondebosch Golf Club WC Managers
14/3/2013	Claire Spottiswoode	BirdLife Zimbabwe, Harare
18/3/2013	Susie Cunningham	Steenberg Golf Club
20/3/2013	Sonja Kruger	WESSA southern Berg branch
13/4/2013	Lorien Pichegru	Cape Town French school
21/4/2013	Rob Little	Steenberg Golf Club
23/4/2013	Phoebe Barnard	Big Fish School of Digital Filmmaking, CT
16/4/2013	Sonja Kruger	Howick Green Society
9/5/2013	Lisa Nupen	International School of Cape Town
9/5/2013	Susie Cunningham	ACDI seminar series
11/5/2013	Phoebe Barnard	BirdLife Overberg, Hermanus
14/5/2013	Susie Cunningham	BirdLife Overberg
14/5/2013	Phoebe Barnard	Big Fish School of Digital Filmmaking, CT
16/5/2013	Jessica Shaw	Wild Card event, Canal Walk CT
16/5/2013	Alan Lee	Lakes Bird Club, Sedgefield
20/5/2013	Phoebe Barnard	Energy Research Centre, EGS UCT
4/6/2013	Alan Lee	SANBI
7/6/2013	Phoebe Barnard	Cresway High School, Retreat
10/6/2013	Lorien Pichegru	Steenberg Golf Club
11/6/2013	Lorien Pichegru	Cape Town French school
19/6/2013	Alan Lee	Hermanus Bird Club
20/6/2013	Alan Lee	NMMU, George
23/6/2013	Lorien Pichegru	Lakes Bird Club, Sedgefield
4/7/2013	Susie Cunningham	Somerset West Bird Club
7/8/2013	Peter Ryan	West Coast National Park
21/8/2013	Ben Dilley	Simon's Town Historical Society
24/8/2013	Kate Carstens	Tanda Tula Safari Camp
29/8/2013	Alan Lee	CapeNature QEM meeting, Oudtshoorn
30/8/2013	Sonja Kruger	Ladismith Bird Club
5/9/2013	Alta De Vos	Geo Training for Conservation Trainers
5/9/2013	Steve Boyes	Somerset West Bird Club
14/9/2013	Steve Boyes	Cape Bird Club
15-17/9/13	Phoebe Barnard	CapeNature, Rocher Pan Nature Reserve
25/9/2013	Rob Simmons	West Coast Bird Club
29/9/2013	Rob Simmons	BirdLife SA
3/10/2013	Sonja Kruger	Midlands Bird Club
23/10/2013	Peter Ryan	West Coast Bird Club
24/10/2013	Peter Ryan	Star of the Sea
4/11/2013	Rob Little	Singita Head Guides' Forum
11/11/2013	Rob Little	Steenberg Golf Club
18/11/2013	Lorien Pichegru	WIOMSA Port Elizabeth
23/11/2013	Margaux Rat	WESSA Kimberley - McGregor Museum

**Table 3. Conferences attended during 2013: Meeting (month, place), people who attended**

<b>2<sup>nd</sup> Climate Impact on Oceanic Top Predators Symposium</b> (Feb; Noumea, New Caledonia) Tim Cook
<b>14<sup>th</sup> Student Conference on Conservation Science</b> (March, Cambridge, UK) John Heydinger
<b>6<sup>th</sup> International Hornbill Conference</b> (April; Manila, Philippines) Kate Carstens
<b>Resilience Alliance Science Conference</b> (April; Cathedral Peak, SA) Graeme Cumming, Alta De Vos, Kristine Maciejewski, Christine Moore
<b>Southern African Program on Ecosystem Change and Society (SAPECS) Colloquium</b> (April; Kirstenbosch, SA) Alta De Vos, Graeme Cumming, Kristi Maciejewski, Christine Moore, Julia Baum
<b>Southern Ground-Hornbill Action Group</b> (May; Gauteng, SA) Rob Little, Kate Carstens
<b>EWT – Birds of Prey Conference</b> (May; Phalaborwa, SA) Arjun Amar, Rowen van Eeden, Sonja Krüger, Chrissie Madden, Daniel Cloete
<b>10<sup>th</sup> Biodiversity planning forum (SANBI)</b> (May, Golden Gate N. P., SA) Alta de Vos
<b>Annual Meeting of the Canadian Society of Zoologists</b> (May; Ontario, Canada) Andrew McKechnie
<b>1<sup>st</sup> African Marine Debris Summit</b> (June; Cape Town, SA) Peter Ryan
<b>International Sustainable Development Research Society (ISDR19) Conference</b> (June; Stellenbosch, SA) Kristine Maciejewski
<b>International Congress on Conservation Biology</b> (July; Baltimore, USA) Phoebe Barnard
<b>35<sup>th</sup> Bi-annual Conference of the Zoological Society of Southern Africa</b> (July; Tshipise, SA) Andrew McKechnie, Rowen van Eeden, Ben Smit, Maxine Whitfield, Matthew Noakes, Ryan O'Connor
<b>37<sup>th</sup> Congress of the International Union of Physiological Sciences</b> (July; Birmingham, UK) Andrew McKechnie
<b>Social Network Analysis in Animal Societies (SNAAS) Workshop</b> (July; Strasbourg, France) Margaux Rat
<b>32<sup>nd</sup> Willi Hennig International Society of Systematic Biology meeting</b> (Aug; Rostock University, Germany) Tim Crowe
<b>European Society for Evolutionary Biology Conference (ESEB 2013)</b> (Aug; Lisbon, Portugal) Tom Flower
<b>Joint meeting of the American Ornithologists' Union &amp; Cooper Ornithological Society</b> (Aug; Chicago IL, USA) Andrew McKechnie
<b>European Ornithological Congress</b> (Aug; Norwich, UK) Arjun Amar
<b>Scientific symposium, Addo Elephant National Park</b> (Aug; Addo, SA) Lorien Pichegru
<b>Behaviour 2013 ASAB</b> (Aug; Newcastle, UK) Claire Spottiswoode
<b>Conference of the International Society for Evolutionary Biology</b> (Aug; Lisbon, Portugal) Tom Flower
<b>131<sup>st</sup> American Ornithologists Union meeting</b> (Aug; Chicago, USA) Rauri Bowie
<b>8<sup>th</sup> International Penguin Conference</b> (Sept; University of Bristol, UK) Pierre Pistorius, Lorien Pichegru, Noelle Tubbs, Rowan van Eeden, Otto Whitehead
<b>Predators and the Californian Current preyscape</b> (Sept; California, USA) Lorien Pichegru
<b>Wind energy and bird impacts workshop (BLSA)</b> (Sept; CT, SA) Phoebe Barnard, Tim Reid
<b>World Wilderness Congress</b> (Oct; Salamanca, Spain) Sonja Krüger
<b>Fynbos Forum</b> (Oct; Cape Town, SA) Phoebe Barnard, Alan Lee
<b>4<sup>th</sup> Diamond Route Research Conference</b> (Oct; Jhb, SA) Andrew McKechnie, Susie Cunningham
<b>1<sup>st</sup> Worldwide Raptor Conference</b> (Oct; Bariloche, Argentina) Arjun Amar
<b>8<sup>th</sup> WIOMSA Scientific Symposium</b> (Oct; Maputo, Mozambique) Pierre Pistorius
<b>ACDI Climate Change Adaptation Colloquium</b> (Nov; Cape Town, SA) Phoebe Barnard
<b>2013 Symposium of Contemporary Conservation Practice</b> (Nov; Howick, SA) Sonja Krüger
<b>Trainer Network meeting &amp; Geo for Good 2013</b> (Nov; California, USA) Alta De Vos
<b>Kempenaers Group at the Max Planck Institute for Ornithology</b> (Dec; Radolfzell, Germany) Alex Thompson
<b>Biodiversity Southern Africa 2013</b> (Dec; UCT, SA) Graeme Cumming, Martha Nelson-Flower, Chevonne Reynolds, Lisa Nupen, Owen Davies, Julia Baum, Noelle Tubbs, Dane Paijmans, Marie-Sophie Garcia-Heras, Philna Botha, Robyn Milne

UCT celebrates Africa Day on 25 May each year, which is an opportunity to highlight UCT's role and contribution to higher education and development in South Africa and the rest of Africa. The week long Africa Exhibition from 20–24 May 2013 aimed to highlight academic research and capacity building endeavours, collaborations and links UCT staff members have forged with continental universities, and the contribution made to the generation of African knowledge. The CoE presented a stand with posters and pamphlets which reflected our activities and impact in Africa.

The CoE also contributed a significant chapter to the UCT 2012 Research Report (pages 100-104 & 108; published during 2013) and the UCT Institutional Planning Department published a section on the outreach activities of the CoE in the annual UCT Social Responsiveness Report with a particular focus on teaching the general public about university activities.

The Cape Parrot Project received extensive coverage during the TV show 50/50 (SABC2) on 28 January 2013. Post-doc Steve Boyes has been selected as a 2013 National Geographic Emerging Explorer. He is one of 17 gifted and inspiring young scientists, innovators and adventurers from around the world being recognized by National Geographic as exciting new visionaries pushing the boundaries of exploration and discovery. Boyes, scientific director of the Wild Bird Trust, is passionate about the wilderness and parrot conservation. He works to preserve and protect Botswana's uniquely pristine Okavango Delta, to mitigate threats bringing parrot species to the brink of extinction throughout Africa and to plant thousands of trees in his forest restoration projects.

Post-doc Tom Flower hosted a one-week drongo filming shoot for Boundless Productions. The sequence filmed will be incorporated into the program 'Talking to the animals' to be screened in the UK on BBC1.

MSc student John Pallett's power line monitoring work was featured in an online article for *Travel News Namibia*, see <http://www.travelnewsnamibia.com/news/bustard-and-power-lines-project-bustard-and-power-lines-project/>, published in May 2013.

Tanya Wagner wrote an article titled 'Too hot to handle' for the online publication *green times* on 4 June 2013 following Post-doc Susie Cunningham's talk at an instalment of UCT's 'Climate Change Impacts & Adaptation Seminar Series 2013'.

<http://www.thegreentimes.co.za/stories/species-protection/item/2094-too-hot-to-handle/>

Following a graduation ceremony press release by UCT's Communication Department, Blanché de Vries published an article titled 'Kommer oor kragdrade in Karoo talle voëls eis' on page 9 of *Die Burger* on 17 June 2013, and Guy Rogers published an article titled 'Saving iconic Karoo bird' on page 12 of *The Herald* on 20 June 2013, both about Jess Shaw's PhD research on the Ludwig's Bustard and power line collisions.

Charné Kemp published an article titled 'Voëlspesie verstom' on Thursday 5 September 2013 in the *Volksblad* which started an electronic media interaction on the PFI/O CoE Sociable Weaver project. <http://www.volksblad.com/nuus/2013-09-05-volspesie-verstom>

CoE Manager, Dr Rob Little, co-ordinates regular feature articles in *SANParks Times* and *Environment* magazine, while A/Prof. Peter Ryan and Prof. Andrew McKechnie act as scientific advisors for *African Birdlife*.

## 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. 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.

A diversity of close collaborative working relationships with over 50 scientific peers from 16 countries now exist both nationally and internationally (Table 4). Additional emphasis has been placed on working with historically black universities in South Africa and African universities, e.g. Fort Hare University, Tshwane University of Technology and the Universities of Zimbabwe and Zambia. Eight of the 12 Post-doctoral Fellows came from seven 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 the SA (x 7), USA (x2), Australia, Canada, Germany, Mauritius, the Netherlands and the UK, and the enrolment of students from SA (x8), Canada, Kenya, Tanzania, the UK and Zimbabwe during 2013.

A/Prof. Peter Ryan spent the week of 22-27 July 2013 at the International Maritime Organization headquarters in London attending the UN's Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) workshop on microplastic pollution in the oceans. In addition to contributing to the workshop report, he was able to network with the leading researchers in this field.

Dr Rob Little participated in the Higher Education Innovation in the Development of Biodiversity Skills Role Player Engagement, Western Cape Regional Workshop held at Kirstenbosch, SANBI, on 25 June 2013 which was facilitated by the NGO *GreenMatter*. The workshop addressed two aims; to increase efficiency and transformation of the biodiversity conservation sector in South Africa. In particular, inputs from the CoE focused on initiating a mechanism to get the CoE's activities (bursaries & project adverts/opportunities) to reach the broadest range of potential black candidates as possible, and requested an update of the published transformation trends in the Biodiversity Sector.

Prof. Graeme Cumming and members of the CoE arranged the southern African node Resilience Alliance Science Meeting, funded by the NRF, which was held in KwaZulu-Natal during 8-12 April 2013.

During June 2013, we hosted ground-hornbill hand-rearers from the Johannesburg Zoo, the Montecasino Bird Park and the Loskop Dam centre, for a fieldtrip to our Southern Ground-Hornbill project research site at the Associated Private Nature Reserves. They were shown wild ground-hornbills and both natural and artificial nests, which was a first for many of them. Hand-rearing ground-hornbill chicks for the re-introduction programme is a laborious and specialised contribution to the conservation of the species. It was our pleasure to host the hand-rearers and treat them to a stay at Angela's Camp. Thanks to Angela's Camp and their staff, Klaserie management, Imperial Truck Rental and the Mabula Ground-Hornbill Project for making this possible.

PhD student Chevonne Reynolds has been assisting with biodiversity surveys, specifically bird counts, for Florida University and the Organisation for Tropical Studies (OTS) who have embarked on a four-year collaboration to study the effects of vegetation change on faunal communities in the Kruger National Park and Swaziland. The project looks specifically at how the removal of big trees by Elephants in the Kruger National Park and the corollary of bush encroachment in Swaziland will affect bird, rodent and bat communities. Chevonne will be involved in collecting the bird survey data for the duration of the project.

### **Prominent research and conservation partners who visited the CoE during 2013:**

Dr Anders Pape Møller of the Laboratoire d'Ecologie, Systematique et Evolution, CNRS, visited the CoE and gave a seminar titled 'Risk taking behaviour in a changing world' on 19 March 2013.

Dr Jonathan Green from the University of Liverpool, who is co-supervising a CoE MSc student, visited the CoE for a week during April 2013 and gave a seminar on 'Field Metabolic Rate in Seabirds - Influence, Limits and Consequences'.

Professor Emeritus Sievert Rohwer at the University of Washington visited the CoE during August 2013 and gave a presentation on 'Moult and Avian Life Histories'.

Dr Gaia Dell'Arciccia, an Italian Post-doctoral Fellow at the Center of Evolutionary and Functional Ecology of the French National Centre for Scientific Research (CEFE-CNRS) in Montpellier, France who is a behavioral ecologist working on the use of olfaction in birds for a number of behaviours, ranging from foraging to homing, and to nests and partner recognition visited the CoE during September 2013 and gave a presentation on 'Smelling home in the wind: the study of olfactory homing in petrels'.

Dr David Grémillet from the Centre National de la Recherche Scientifique, Montpellier, France whose research focuses on the impact of global change on marine top-predators using detailed studies of the ecophysiology of seabirds in their natural environment, based upon novel biotelemetry technologies, metabolic studies and thermodynamic modeling presented a talk titled 'The president birds: designing Marine Protected Areas in the French Mediterranean' on 21 October 2013.

Andre Mader (2004-5 Fitz MSc CB class), now with the UN Secretariat of the CBD, gave a talk on 2 December 2013 about what the Convention on Biological Diversity is, with a focus on how the Convention is increasing the involvement of other levels of government, partly in recognition of the key role of cities in the future of global biodiversity conservation.

**Table 4. Collaborators during 2013**

Title	Surname	Citizen	Institution	Gender	Race	% time spent working in CoE
Dr	Abolnik	SA	Onderstepoort Vet Inst	F	W	2
Dr	Allen	SA	Durban Mus	M	W	1
Dr	Alström	Sweden	Uppsala U	M	W	2
Mr	Anderson	SA	BirdLife SA	M	W	5
Dr	Aronson	France	CNRS	M	W	1
Prof	Balmford	UK	Cambridge	M	W	2
Dr	Barker	USA	U Minnesota	M	W	1
Dr	Barrowclough	USA	Am Mus Nat Hist	M	W	1
Dr	Bates	USA	Chicago Mus.	M	W	1
Dr	Beresford	USA	Stockton College	F	W	1
Prof.	Blignaut	SA	U Pretoria	M	W	1
Dr	Bodin	Sweden	Lund Univ.	M	W	2
Dr	Bonyongo	Botswana	Okavango Res. Centre	M	B	10
Dr	Boucher	SA	U Stellenbosch	M	W	1
Prof.	Brigham	Canada	U Regina	M	W	2
Dr	Burg	Canada	U Lethbridge	F	W	2
Dr	Caron	France	CIRAD	M	W	2
Mr	Chiweshe	France	CIRAD	M	B	2
Dr	Collar	UK	BirdLife International	M	W	2
Dr	Cuthbert	UK	RSPB / WCS	M	W	2
Dr	Doutrelant	France	CEFE-CNRS France	F	W	5
Dr	English	UK	Oxford University	F	W	5
Dr	Gaidet	France	CIRAD	M	W	2
Dr	Gonzalez-Solis	Spain	U Barcelona	M	W	5
Dr	Green	UK	Liverpool U	M	W	5
Dr	Gremillet	France	CNRS	M	W	5
Dr	Fjeldsa	Denmark	U Copenhagen	M	W	2
Dr	Freckleton	UK	Oxford U	M	W	1
Prof.	Hatchwell	UK	U Sheffield	M	W	5
Prof.	Huntley	UK	U Durham	M	W	1
Dr	Irestedt	Sweden	Sw Mus Nat Hist	M	W	2
Prof.	Jansen	SA	Tshwane U Tech	M	W	1
Dr	Jetz	USA	U Cal. San Diego	M	W	1
Dr	Kato	Japan	CNRS	F	B	10
Dr	Kock	SA	WCS	M	W	2
Prof.	Lovegrove	SA	U KZN	M	W	5
Mr	Magunje	Zimbabwe	BirdLife Zim	M	B	5
Dr	Mitchell	Australia	U Western Aus	F	W	5
Dr	Mzilikazi	SA	NMMU	M	B	5
Dr	Quader	India	National Centr Biol Sci	M	B	5
Dr	Raihani	UK	UCL	F	W	10
Prof.	Redpath	UK	Aberdeen University	M	W	10
Prof.	Richardson	SA	U Stellenbosch	M	W	1
Dr	Robertson	NZ	Otago U	M	W	2
Dr	Rupert-Coudert	France	CNRS	M	W	5
Dr	Ross	USA	WILD Foundation	F	W	5
Dr	Seebacher	Australia	U Sydney	M	W	5
Prof.	Swanson	USA	U South Dakota	M	W	1
Prof.	Sorenson	USA	Boston U	M	W	2
Prof.	Takada	Japan	Tokyo U	M	W	2
Dr	Tyler	UK	African Bird Club	F	W	10
Mr	Willems	Zambia	Kasanka Trust	M	W	10
Prof.	Wilson	UK	U Swansea	M	W	2
Dr	Wimberger	SA	U Fort Hare	F	W	10
Prof.	Wolf	USA	U New Mexico	M	W	5
Dr	Wondafrash	Ethiopia	Eth Wildl & Nat Hist Soc	M	B	10

## 5. Service rendering

### *Objective*

A medium- to long-term objective is to establish formal contact with conservation agencies and other relevant government bodies, such as the Department of Environmental Affairs and the Department of Agriculture, Forestry & Fisheries, to ensure that the expertise of the CoE can be 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 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 20 scientific journals, and on 53 membership and advisory services, as well as reviewed 135 papers for 62 peer-reviewed international and local journals during 2013 (see below). CoE members contributed to two NRF grant application evaluations during the year and Prof. Andrew McKechnie participated on the 5-year review panel for the Centre for African Conservation Ecology, NMMU.

CoE Honorary Research Associate, Dr Phoebe Barnard, successfully worked with DEA in 2012-13 to adopt the biodiversity monitoring policy concept of "Biodiversity early warning systems", building on two recent booklets published by SANBI/DEA/UCT (2009 and 2012). Plans were also developed in late 2013 to ignite national conversations on climate change, biodiversity and society using media and social media platforms.

Post-doc Alta De Vos and the protected areas research team have worked closely with the DEA and SANBI to complete the protected area register, particularly to incorporate private protected areas that have been gazetted, but since been lost from official records. The project is also working with SANBI on assessing the contribution of privately-owned protected areas to South Africa's Biodiversity Goals. Alta is also managing projects for the MAPA Project, an NGO making conservation more visible and accessible using online maps. These mapping projects include:

- Assisting project development of protected area register software, enabling managers to communicate information about protected area boundaries to DEA (in progress, release: February 2014). Project manager: March Turnbull, DEA: Rudi Pretorius, Software development: Snowball, Stellenbosch.
- Creating online maps for conservation organisations, including:
  - Shark spotters: [http://www.google.co.za/earth/outreach/tutorials/mapseng\\_lite.html](http://www.google.co.za/earth/outreach/tutorials/mapseng_lite.html)
  - Working for Water: developing a map of [all clearing areas](#)
  - Year in the Wild: developing a Google Earth tour of Mkhambathi Nature Reserve: [http://www.youtube.com/watch?v=u\\_ye6SDkKIM](http://www.youtube.com/watch?v=u_ye6SDkKIM)
- Organized and ran training events:
  - Geo for Private Conservation: <http://trainers2013.mapatraining.org/>
  - Geo for Conservation Trainers: <http://geoforprivateconservation.mapatraining.org/>

Members of the PFIAO CoE Algoa Bay penguin research team by Dr Lorien Pichegru have been monitoring the foraging behaviour of African Penguins in Algoa Bay since 2008 where experimental purse-seine fishing exclusion has shown the impact of competition with industrial fisheries on seabirds and the benefits of closing areas around breeding colonies to fishing. The results were used by SANParks and the DEA in 2013 to increase the extent of their Marine Protected Area permanent no-take zone for purse-seine fishing in Algoa Bay to include foraging habitat of African Penguins from St Croix Island, the world's largest African Penguin colony. This MPA will be declared officially in 2014.

The Cape Parrot project has on the request of the Office of the President and in partnership with DAFF established the Eastern Cape Forest Management and Research Committee to better co-ordinate forest research and link findings to relevant forest managers. Through this, the project has played a fundamental role in the:

- Establishment of three new forest reserves covering over 5 000 hectares in the Amathole Region (Eastern Cape) in partnership with the (DAFF).
- Reduction of the *Afrocarpus falcatus* yellowwood harvesting quota for the Eastern Cape in partnership with DAFF.
- Derivation of terms of reference and job description for a new position at the IUCN that deals with Social and environmental Impact Assessments (SEIAs) for large "greenfield" mining developments in Africa.
- Temporary moratorium on the importation of African Grey parrots from the Democratic Republic of Congo.
- Provision of technical support to the Botswana World Heritage Committee in hosting the UNESCO Site Selection Committee responsible for listing the Okavango Delta as a World Heritage Site.

Research on the Afromontane forests of Angola is being used to support and guide Angola's Ministry of the Environment to develop a conservation strategy for this endangered habitat, including choosing and designing appropriate protected areas.

During 2012 and 2013, the CoE Ludwig's Bustard project contributed information and visuals to a high-level consultancy investigating avian risks for a proposed transmission line through the Kyrgyz Republic, Tajikistan, Afghanistan and Pakistan being conducted by Julia Robinson Willmott, Normandeau Associates linked to Nigel Collar, BirdLife International. In South Africa, research on collision mortality and a large scale experiment to test the efficacy of line marking devices will be used to guide Eskom's future planning of power lines.

The CoE Ground-Hornbill Research Project investigated the positioning of overhead electrical transformer boxes in the Associated Private Nature Reserves (APNR) to determine possible threats to ground-hornbills and raptors perching on these structures. Priority transformers have been selected in areas that are within 3 km of active nests. We also identified priority transformer boxes within areas frequently used by ground-hornbill groups using satellite telemetry data. This project is in collaboration with Endangered Wildlife Trust Wildlife & Energy Programme, Eskom and the Mabula Ground-Hornbill Project. Also within this partnership, the project provides second-hatched chicks for the Ground-Hornbill Action Group's captive-breeding and wild-release programs. Furthermore, Research Assistant Kate Carstens gave project reports to the APNR Joint Committee at three meetings during 2013.

A Biodiversity Management Plan for the Bearded Vulture, facilitated and edited by PhD student Sonja Krüger, was gazetted for public comment during 2013. Sonja also presented a vulture identification and monitoring methods training course for Ezemevelo KZN Wildlife staff during 2013.



Post-doc Ralf Mullers presented the preliminary outcomes of the Shoebill research project in the Bangweulu Wetlands and its implications for conservation strategies to the Board of the Zambian Wildlife Authority on 27 May 2013. He also contributed to the Zambian Single Species Action Plan for Shoebills compiled by the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA), an international program to formulate conservation strategies for Shoebills throughout their range states. He is now developing a Management Plan for the Bangweulu Wetlands Management Board to formulate objectives and strategies to protect Shoebills in the Bangweulu Wetlands and to increase revenue from marketing the Shoebill population for tourism purposes. The completed Management Plan will be presented to the relevant parties in March 2014.

## **Positions on Editorial Boards, Councils, Advisory/Steering Committees during 2013**

### ***Editorial Boards***

- *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)
- *Austral Ornithology* (Associate Editor; McKechnie)
- *Biology Letters* (Editorial Board; Spottiswoode)
- *Bird Conservation International* (Associate Editor; Ryan)
- *Bird Study* (Associate Editor; Amar)
- *BMC Evolutionary Biology* (Editorial Board; Bowie)
- *Climate Change Responses* (Editorial Board; Barnard, McKechnie)
- *Diversity and Distributions* (Associate Editor; Cumming)
- *Ecology & Society* (Associate Editor; Cumming)
- *Emu* (Associate Editor; McKechnie)
- *Ibis* (Editor; Bowie, Associate Editor; Amar, Pichegru, Wanless)
- *ISRN Ecology* (Editor; Ridley)
- *ISRN Zoology* (Associate Editor; Pistorius)
- *Landscape Ecology* (Editorial Board; Cumming)
- *National Geographic News Watch* (Contributing Editor; Boyes)
- *Ostrich – Journal of African Ornithology* (Associate Editors; Bowie, McKechnie, Ridley; Book Review Editor; Koopman)
- *South African Journal of Wildlife Research* (Associate Editor; Cumming)

### ***Membership & Advisory services***

- ACAP Taxonomy Working Group (Ryan)
- Association for Tropical Biology & Conservation (Lee)
- Association for the Study of Animal Behaviour (Flower)
- *Africa Geographic* (Director; Boyes)
- *African Birdlife* (Scientific Advisors; McKechnie, Ryan)
- African Seabird Group (Cook, Pichegru, Ryan, Wanless)
- American Ornithologists' Union (Bowie, McKechnie)
- American Physiological Society (McKechnie)
- Association for the Study of Animal Behaviour (Flower)
- 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)
- British Ecological Society (Boyes, Flower, Nelson-Flower, Ridley)

- British Ornithologists' Union (Council; Bowie, Spottiswoode; Member; Cunningham)
- Cambridge Philosophical Society (Ridley)
- Cooper Ornithological Society (Bowie, McKechnie)
- Eastern Cape Forest Management and Research Committee (Boyes)
- Ecological Society of America (Cumming)
- Endangered Wildlife Trust Birds of Prey Programme (van Eeden)
- Endangered Wildlife Trust Threatened Grassland Species Programme Advisory Group (Little, McKechnie)
- Faculty Member, 'Faculty of 1000'. See <http://f1000.com/> (Cumming)
- Forest & Bird Society (Cunningham)
- Google Earth Outreach Trainer Network (De Vos)
- International Ornithologists' Union (Fellow; Crowe)
- 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)
- Mazda Wildlife Fund Advisory Board (Little)
- National Geographic Society (Boyes)
- National Zoological Gardens Ethics & Scientific Committee (McKechnie)
- Raptor Research Foundation (Amar)
- Red Data Book Revision Steering Group (Chair: Barnard, Member; Amar)
- 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)
- 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, Member; Ryan)
- 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)
- Tristan's Biodiversity Advisory Group (Ryan)
- Wild Bird Trust (Trustees; Boyes, Little)
- World Parrot Trust (Africa Director; Boyes)
- World Bird List Committee (Bowie, Ryan)
- World Seabird Union (Africa representative; Wanless)
- Zoological Society of Southern Africa (Council; McKechnie, Members; Amar, Cunningham, Krüger, Little)

### ***Manuscripts reviewed for scientific journals during 2013***

*Acta Ethologica* (1 Pichegru)

*African Journal of Ecology* (1 Barnard, 2 Boyes, 1 Carstens)

*African Journal of Marine Science* (1 Pistorius)

*American Naturalist* (1 Spottiswoode)

*Animal Behaviour* (2 Flower, 3 Ridley)

*Animal Conservation* (3 Barnard, 1 De Vos, 1 Lee)

*Antarctic Science* (2 Ryan)

*Behavioural Ecology* (1 Flower, 1 McKechnie, 1 Nelson-Flower, 4 Ridley)

*Behavioural Ecology & Sociobiology* (1 Flower, 1 Nelson-Flower, 2 Ridley)  
*Biological Conservation* (1 Cumming)  
*Biology Letters* (2 McKechnie, 1 Ridley, 1 Ryan, 1 Spottiswoode)  
*Bird Conservation International* (1 Lee)  
*BMC Evolutionary Biology* (1 Nelson-Flower)  
*Built Environment Resilience* (1 Cumming)  
*Climate Change Research* (1 Pichegru)  
*Current Biology* (1 Bowie)  
*Current Zoology* (2 McKechnie)  
*Ecology* (1 McKechnie)  
*Ecology & Society* (1 Cumming)  
*Emu* (1 McKechnie)  
*Environmental Research Letters* (1 Barnard)  
*Ethology* (1 Thompson)  
*Frontiers in Ecology and the Environment* (1 Cumming)  
*Global Change Biology* (2 Barnard, 1 McKechnie)  
*Global Ecology & Biodiversity* (1 Cumming)  
*Heredity* (2 Bowie)  
*Ibis* (1 Lee, 1 Ridley)  
*International Journal of Environment and Pollution* (1 Ryan)  
*Journal of Animal Cognition* (1 Pichegru)  
*Journal of Animal Ecology* (2 Ridley)  
*Journal of Applied Ecology* (1 Joseph)  
*Journal of Arid Environments* (1 McKechnie)  
*Journal of Avian Biology* (1 Cunningham, 1 Krüger)  
*Journal of Biogeography* (1 Cumming)  
*Journal of Comparative Physiology B* (2 McKechnie)  
*Journal of Experimental Biology* (3 McKechnie, 1 Pichegru)  
*Journal of Field Ornithology* (1 Nelson-Flower)  
*Journal of Ornithology* (1 Boyes, 1 Crowe, 1 McInnes, 1 Spottiswoode)  
*Journal of Mammalogy* (1 McKechnie)  
*Journal of Maps* (1 De Vos)  
*Journal of Thermal Biology* (2 McKechnie)  
*Journal of Tropical Ecology* (1 Joseph)  
*Journal of Zoology, London* (2 McKechnie)  
*Landscape and Urban Planning* (1 Cumming)  
*Marine Environmental Research* (1 Ryan)  
*Marine Ornithology* (1 Ryan)  
*Marine Pollution Bulletin* (2 Ryan)  
*Molecular Ecology* (3 Bowie, 1 Ridley)  
*Molecular Phylogenetics & Evolution* (4 Bowie)  
*Nature Climate Change* (1 Barnard)  
*Oecologia* (1 Joseph)  
*Organisms Diversity and Evolution* (1 Bowie)  
*Ostrich* (3 Boyes, 1 Cook, 1 Cunningham, 1 Flower, 1 Little, 1 McKechnie, 1 Nelson-Flower, 1 Pistorius, 1 Spottiswoode, 1 Thompson)  
*Physiological and Biochemical Zoology* (3 McKechnie)  
*PLoS One* (1 Bowie, 2 Cook, 1 Joseph, 2 McKechnie, 2 Ryan)  
*Polar Biology* (2 Pistorius, 1 Ryan)  
*Proceedings of the Royal Society of London B* (1 McKechnie, 2 Ridley)  
*Science* (1 Bowie, 1 Ryan, 1 Spottiswoode)  
*South African Journal of Science* (1 Bowie)  
*Trends in Ecology and Evolution* (1 Ridley)  
*Wilson Journal of Ornithology* (1 Bowie)

## 6. Gender and equity impacts of research

### **Objective**

A medium- to long-term objective is to ensure that gender and equity issues are considered in all aspects of the CoE's work, with the goal of maintaining an equal representation of men and women within the CoE in the long term.

### **Progress**

The CoE continues to be guided by a proactive recruitment policy to attract female postgraduates to ensure gender parity in the student body. This policy has been successful, with 51% of Post-docs and postgraduate students in 2013 being women (Table 11). The academic and support staff gender profile of the CoE has remained at 47% female.

CoE research projects continued to generate work opportunities related to research activities for adjacent disadvantaged community members, with 148 full-time or part-time jobs, mostly filled by women, active during 2013. This included 25 full-time and 77 part-time jobs in South Africa, 12 full-time and 40 part-time jobs in Zambia, and four part-time jobs in Angola.

In 2013, the Cape Parrot Project in the Amatole Mountains of the Eastern Cape planted over 20 000 indigenous tree saplings (13 820 *Afrocarpus falcatus*, 4 235 *Harpehylum caffrum*, 3 140 *Olea europea africana*, 485 *Celtis africana*, 460 *Vepris spp.*, and 570 *Calodendrum capense*) last year and erected over 600 artificial nest boxes for parrots in suitable trees throughout the Hogsback area. We have injected much-needed investment into a poorly managed, community-run indigenous tree nursery previously funded by the Danish government, by buying 5 000 indigenous tree saplings. We are teaching local women to use "worm farms" to produce fertilizer and grow saplings. Teams of five local women, supervised by our Community Liaison Officer (jointly employed by the Fitz CoE and BirdLife SA) planted 1 000 indigenous tree saplings in a designated forest patch. They were trained how to take care of these saplings and, following an audit by the Community Liaison Officer, will be paid R10 per sapling every six months (i.e. up to R50 000 each year). The project has also taken over the management of a pecan nut orchard in the grounds of the University of Fort Hare near Alice, where over 280 Cape Parrots feed daily for more than four months of the year. We have fenced this pecan orchard and have contracted women from the local community to gather the pecan nuts, de-shuck and package them. Revenue from this small business will be shared between the local women and the management of the pecan orchard. In addition, the project has initiated the Green Campus Initiative at Fort Hare by planting 750 indigenous trees (wild olives & wild plums) with the Student Representative council and the International Leadership Council hosted by Fort Hare.

- Cape Parrot Project has a "one person per household" employment policy and employed 77 unemployed local community members on a full- or part-time basis in 2013.
- Cape Parrot Project refurbished and restocked 30 "micro-nurseries" and built ten new nurseries in Sompondo, Gilton and Hala Villages. Income from these micro-nurseries amounts to between R1 000 and R5 000 every 6 months for each household.
- Cape Parrot Project paid over R35 000 to three local villages to encourage better stewardship of indigenous forest patches established in 2013. This benefits over 250 local community members as all payments are made by building or refurbishing communal amenities (e.g. community hall).
- Cape Parrot Project employs two black women to take care of "Indigenous Tree Orchards" established as part of the project.

- Cape Parrot Project employs six black women from the local community in Alice to grow 5 000 indigenous trees every 6 months for the project.
- Cape Parrot Project employs two local community members to build, monitor and erect nest boxes in the study area.
- Cape Parrot Project hosted 32 interns from the local communities in partnership with the Wildlands Conservation Trust in 2013.

PhD student Dominic Rollinson works with the BirdLife South Africa, Seabird Division, designing tori bird scaring lines for reducing seabird bycatch from longline and trawl vessels. These lines are made by the Ocean View Association for People with Disabilities, and he facilitates the making and delivery of the lines to the various fishing companies. A large proportion of the profits from each line produced are given to the Ocean View center which is used to help improve the center and for community upliftment.

As in previous years, the brood parasite project in Zambia run by Research Associate Claire Spottiswoode has provided a much needed source of cash income to 40 part-time and 2 full-time research assistants, mostly otherwise unemployed farm labourers. Previously, few of these were women, but we are actively trying to recruit more women to take part in the project. Claire is also a Mentor for the British Ecological Society's mentorship scheme for women in ecology.

Outcomes from the Shoebill project in Zambia have initiated the implementation of a community based nest protection program, employing 12 local Shoebill guards at US\$70 per person per month for 6 months during 2013. The Shoebill project also employed one local Zambian man as a research assistant who was paid US\$175 each month from the research budget. The research project financed the protection of one Shoebill nest, employing two local (Zambian) fishermen for 4 months at US\$140 per person per month. Furthermore, Post-doc Ralf Mullers trained various Bangweulu Wetlands scouts, guides and community members on the technicalities of Shoebill conservation and their interactions with tourists.

Similarly, the Martial Eagle project employed six SANParks game guards from the Kruger National Park to assist with the fieldwork for which they were paid R150/day for 35 days.

The surrounding communities of the Table Mountain National Park have been involved in the Fynbos Endemic Birds Vulnerability Programme as informants and citizen observers during 2013. This programme also employs as a field assistant a rare-sarcoma patient who is a skilled and hardworking field ornithologist and trainee bird ringer. The eastern field site of the programme, Blue Hill Escape Nature Reserve, employed 11 disenfranchised members of the Uniondale community in February 2013 to clear alien vegetation as part of a job creation scheme. A project was initiated in 2013 with the City of Cape Town's Biodiversity Network (Bongani Mnisi), Stellenbosch University (Anton Pauw, Anina Heystek), SANParks and selected underprivileged Cape Flats schools (Crestway High School and others) to establish a climate change adaptation / restoration project to increase connectivity for aerial pollinators across the Cape Flats and within the Cape Peninsula. The CoE will contribute funds to a film on this project during 2014.

The Fitz CoE Algoa Bay research team has been training formerly disadvantaged rangers from SANParks to collect penguin data on Bird Island in the Eastern Cape.

The project at Mount Moco in Angola has employed, on a part-time basis, four young men from the Kanjonde community to run a nursery with forest species that will be used to expand the remaining forest fragments. The project is also promoting Mount Moco as a tourist destination, increasing the work opportunities for the local guides.

The Maluti Drakensberg Vulture Project paid three black men between R3 700 and R6 500 for monitoring vulture nests in their community during 2013.

The Fork-tailed Drongo project has hired a Tswana research assistant from the local community at the research site in Vanzylsrus, Northern Cape during 2013.

PhD student Chevonne Reynolds acted as a mentor for the NRF 100Up Mentor Programme which is a Cape Flats school mentorship programme, where she presented a weekend bird course as a potential introduction to UCT science studies.

## HUMAN RESOURCES

Prof. Phil Hockey passed away on 24 January 2013. Prof. Tim Crowe retired on 31 December 2013. A/Prof. Peter Ryan was appointed as Acting Director from January 2013.

The following people worked within the CoE during 2013.

**Table 5. Core CoE team members for 2013**

Title	Name	Citizen	Institution	Gender	Race	H-index*		% time working in CoE
						ISI	Google Scholar	
Dr	Jacqueline Bishop	SA	UCT	F	W	6	6	10
Prof.	Paulette Bloomer	SA	U. Pretoria	F	W	14	16	10
Dr	Arjun Amar	UK	UCT	M	W	11	16	100
A/Prof	Rauri Bowie	SA	U.Cal. Berk	M	W	20	25	30
Prof.	Graeme Cumming	SA	UCT	M	W	26	33	100
Prof.	Tim Crowe	USA	UCT	M	W	23	28	100
Dr	Pierre Pistorius	SA	NMMU	M	W	14	15	30
Prof	Andrew McKechnie	SA	U. Pretoria	M	W	17	20	40
A/Prof	Peter Ryan	SA	UCT	M	W	33	41	100

\* H-index scores as calculated on 30 January 2014

**Table 6. Post-doctoral Fellows for 2013**

Title	Name	Citizenship	Gender	Race	CoE support level	
					Bursary	Running
Dr	Susie Cunningham	New Zealand	F	W	Yes	Yes
Dr	Alta de Vos	SA	F	W	Yes	No
Dr	Eleonore Hellard	France	F	W	No	Yes
Dr	Kristine Maciejewski	SA	F	W	Yes	No
Dr	Martha Nelson-Flower	Canada	F	W	Yes	Yes
Dr	Guin Wogan*	USA	F	W	No	Yes
Dr	Steve Boyes	SA	M	W	Yes	Yes
Dr	Tim Cook	France	M	W	No	Yes
Dr	Tom Flower	UK	M	W	No	Yes
Dr	Alan Lee	SA	M	W	Yes	Yes
Dr	Ralf Mullers	Netherlands	M	W	Yes	Yes
Dr	Tim Reid	Australia	M	W	Yes	No

\*registered at University of California, Berkeley

**Table 7. Honorary Professors & Research Associates for 2013**

Title	Name	Citizen	Institution	Gender	Race	% time spent working in CoE
Dr	Phoebe Barnard *	UK	SANBI	F	W	5
Dr	Rita Covas	Portugal	CEFE-CNRS, France	F	W	80
Dr	Lorien Pichgru *	France	UCT	F	W	100
Dr	Mandy Ridley *	New Zealand	Macquarie U, Aus.	F	W	50
Dr	Claire Spottiswoode	SA	U Cambridge, UK	F	W	30
Prof.	David Cumming *	Zimbabwe	U Zimbabwe	M	W	20
Dr	David Grémilet *	France	CNRS	M	W	20
Dr	Andrew Jenkins	SA	UCT	M	W	20
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 Research Associate

**Table 8. Students registered for 2013** (includes 2012-2013 CB MSc cohort)

(\* = thesis students who graduated during 2013; \*\* = CB MSc students who graduated during 2013)

Name	Citizen	Univ.	Gender	Race	Degree	1 <sup>st</sup> year	CoE support	
							Bursary	Running
Mandiwana, Tshifiwe	SA	UCT	F	B	PhD	2004	No	No
Okanga, Sharon*	Kenya	UCT	F	B	PhD	2009	Yes	Yes
Kaliba, Potiphar	Malawi	UCT	M	B	PhD	2007	No	Yes
Baum, Julia	Germany	UCT	F	W	PhD	2012	Yes	Yes
Kruger, Sonja	SA	UKZN	F	W	PhD	2011	Yes	Yes
Nupen, Lisa	SA	UCT	F	W	PhD	2008	No	Yes
Rat, Margaux	France	UCT	F	W	PhD	2012	Yes	Yes
Reynolds, Chevonne	SA	UCT	F	W	PhD	2012	No	No
Shaw, Jessica*	UK	UCT	F	W	PhD	2009	Yes	No
van de Ven, Tanja	Dutch	UCT	F	W	PhD	2012	No	Yes
Davies, Owen	SA	UCT	M	W	PhD	2008	Yes	Yes
Henry, Dominic	SA	UCT	M	W	PhD	2013	Yes	Yes
McInnes, Alistair	SA	UCT	M	W	PhD	2012	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	2012	Yes	Yes
Smit, Ben	SA	U. Pta	M	W	PhD	2009	Yes	Yes
Tate, Gareth	SA	UCT	M	W	PhD	2014	Yes	Yes
Thompson, Alex*	UK	UCT	M	W	PhD	2009	Yes	Yes
van Eeden, Rowen	SA	UCT	M	W	PhD	2013	Yes	Yes
Whitehead, Otto	SA	UCT	M	W	PhD	2013	Yes	Yes
Johaadien, Rukaya	SA	UCT	F	B	MSc CB	2013	Yes	No
Namah, Jayeneesh**	Mauritius	UCT	F	B	MSc CB	2012	No	No
Peters, Koebraa**	SA	UCT	F	B	MSc CB	2012	No	No
Mitiku, Asefa	Ethiopia	U. Pta	M	B	MSc	2011	No	Yes
Sadondo, Phenias	Zim	UCT	M	B	MSc CB	2013	Yes	No
Berndt, Jessie	SA	UCT	F	W	MSc	2013	No	Yes
Botha, Philna	SA	UCT ADU	F	W	MSc	2013	No	Yes
Calder, Jordan-Laine	SA	UCT	F	W	MSc CB	2013	Yes	No
Cerfontein, Mia*	SA	UCT	F	W	MSc	2011	No	Yes
Cohen, Lea**	USA	UCT	F	W	MSc CB	2012	No	No
de Souza, Nadia	Kenya	UCT	F	W	MSc CB	2013	No	No
Forsythe, Katherine**	Australia	UCT	F	W	MSc CB	2012	No	No
Gallaher, Kirsten	SA	UCT	F	W	MSc CB	2013	Yes	No
Greenston, Jessica**	USA	UCT	F	W	MSc CB	2012	No	No
Labuschagne, Zanne	SA	UCT	F	W	MSc CB	2013	Yes	No
Liebau, Vera**	Germany	UCT	F	W	MSc CB	2012	No	No
Madden, Christine**	SA	UCT	F	W	MSc CB	2012	Yes	No
Meyer, Corlia	SA	UCT ADU	F	W	MSc	2013	No	Yes
Milne, Robyn	SA	UCT	F	W	MSc CB	2013	Yes	No
Morling, Frances	SA	UCT	F	W	MSc CB	2013	Yes	No
Palframan, Loiuise**	SA	UCT	F	W	MSc CB	2012	No	No
Retief, Kirsten**	SA	UCT	F	W	MSc CB	2012	No	No
Sanguinetti, Carolyn**	UK	UCT	F	W	MSc CB	2012	No	No
Stokes, Tabitha	UK	UCT	F	W	MSc CB	2013	No	No
Tubbs, Noelle	USA	UCT	F	W	MSc	2013	Yes	Yes
Viviers, Bianca	SA	U. Pta	F	W	MSc	2013	Yes	No
Whitfield, Maxine	SA	U. Pta	F	W	MSc	2012	Yes	No
Witteveen, Minke	SA	UCT	F	W	MSc	2013	Yes	No
Bell, Wesley	SA	UCT	M	W	MSc CB	2013	No	No
Campbell, Greg	Canada	UCT	M	W	MSc CB	2013	No	No
Cloete, Daniel**	SA	UCT	M	W	MSc CB	2012	Yes	No
de Greef, Kimon**	Dutch	UCT	M	W	MSc CB	2012	No	No
Dilley, Ben	SA	UCT	M	W	MSc	2013	Yes	No
Gaglio, Davide	Italy	UCT	M	W	MSc	2013	Yes	Yes
Green, David	SA	NMMU	M	W	MSc	2012	Yes	Yes



Gwynn, Lisle	UK	UCT	M	W	MSc	2011	Yes	Yes
Harding, Craig**	Canada	UCT	M	W	MSc CB	2012	No	No
Heydinger, John	USA	UCT	M	W	M. Phil	2012	Yes	Yes
Kinsey, Elliot	Tanzania	UCT	M	W	MSc CB	2013	No	No
Lane, Wade**	SA	UCT	M	W	MSc CB	2012	No	No
Massie, Phil	SA	UCT	M	W	MSc CB	2013	No	No
Noakes, Mathew	SA	U. Pta	M	W	MSc	2013	Yes	Yes
Ortmann, Heinz**	SA	UCT	M	W	MSc CB	2012	No	No
Pajmans, Dane	SA	UCT	M	W	MSc	2012	Yes	Yes
Pallett, John	Namibia	UCT	M	W	MSc	2013	Yes	No
Rishworth, Gavin	SA	NMMU	M	W	MSc	2012	Yes	Yes
Zogby, Blair	SA	UCT	M	W	MSC	2012	Yes	Yes

Graduation in June 2013

PhD – Jess Shaw

MSc – Rowen van Eeden

MSc CB – Lea Cohen, Kimon de Greef, Kat Forsythe, Jessica Greenston, Craig Harding, Vera Liebau, Christine Madden, Heinz Ortmann, Lou Palframan, Koebraa Peters and Caz Sanguinetti

Graduation in December 2013

PhD - Alex Thompson, Sharon Okanga

MSc - Mia Cerfonteyn

MSc CB - Daniël Cloete, Wade Lane, Jayaneesh Namah and Kirsten Retief

**Table 9. Research assistants for 2013**

Title	Name	Citizenship	Gender	Race	Based at
Mr	David Nkosi	SA	M	B	UCT
Ms	Kate Carstens	SA	F	W	UCT
Ms	Samantha Harebottle	SA	F	W	UCT
Ms	Anne Koeslag	SA	F	W	UCT
Ms	Christine Moore	Canada	F	W	UCT
Ms	Antje Steinfurth	German	F	W	UCT
Mr	Thomas Birch	SA	M	W	UCT
Mr	Cassie Carstens	SA	M	W	UCT
Mr	Alistair Fyfe	SA	M	W	UCT

**Table 10. Administrative and Support Staff for 2013**

Title	Name	Position	Based at	Gender	Race
Ms	Phelisa Hans	Library Assistant	UCT	F	B
Mrs	Tania Jansen	Snr Secretary	UCT	F	B
Mrs	Anthea Links	SAP Administrator	UCT	F	B
Mrs	Hilary Buchanan	Administrator	UCT	F	W
Mrs	Margaret Koopman	Librarian	UCT	F	W
Ms	Melissa Stander	Webmaster	UCT	F	W
Dr	Rob Little	CoE Manager	UCT	M	W
Mr	Chris Tobler	Snr technical officer	UCT	M	W

**Table 11: Table of CoE Post-doctoral Fellow and Student demographics in 2013**

These figures include CoE-supported students at collaborating institutions.

	Black			White			Total
	Female	Male	total	Female	Male	total	
P-doc				6	6	12	12
PhD	2	1	3	7	11	18	21
MSc	3	2	6	23	19	42	47
Total	5	3	8	36	36	72	80

## FINANCES

### Audited Income and expenditure

A copy of the 2013 Income and Expenditure Statement shown below on page 30 (Table 15) is attached to the *Ernst & Young* Audit Report.

Responses to the Audit Report explanations of non-compliance:

All the queries regarding compliance were of little material significance and were clarified to the auditor's satisfaction.

### Annual carry-forward

Annual carry-forward by year, in relation to CoE income and expenditure:

Year	Income	Expenditure	Carry-forward
2004	R 2,025,067	R -158,533	R 1,866,534
2005	R 4,026,434	R -2,053,076	R 1,973,358
2006	R 4,153,458	R -2,507,744	R 1,645,714
2007	R 4,026,610	R -3,201,673	R 824,936
2008	R 3,463,943	R -2,842,616	R 621,327
2009	R 3,701,280	R -3,096,507	R 604,773
2010	R 6,363,448	R -4,845,036	R 1,518,412
2011	R 6,794,276	R -5,984,777	R 809,499
2012	R 6,511,355	R -6,390,373	R 120,982
2013	R 6,553,000	R -5,780,329	R 595,539

Expenditure in 2013 was within budget, but still left a carry-forward to 2014 which was largely due to laboratory costs from the University of Berkeley not being invoiced during the year and by some local fieldwork running cost savings. However, a carry-forward is useful as bridging funds for the first month of each year, before the first CoE payment transfer for the year is made by the NRF. High January expenses are made up of commitments made late in the previous year, and more specifically, the disbursement of the first annual tranches of student bursaries.

The 2013 carry-forward was predicted at R150,000 which was included in the expected income for 2014, and the approved expenditure budget for 2014 closely accounts for the expected income, so that tight budget management will be needed to keep expenditure within budget during 2014.

## Co-funding from other sources, and the distribution of funding across the three focal research areas during 2013

Table 12 reflects the total funding (R12 424 000) for the 29 CoE projects during 2013, according to the approved 2013 CoE budget and additional funds sourced elsewhere (Table 11). Table 13 reflects the overall distribution of funds across the three focal research areas during 2013. Research conducted by the PFIAO which is not funded at least in part by the CoE, and UCT remuneration of Fitz/CoE staff, are excluded from Tables 1 & 2.

**Table 12. Distribution of 2013 research funds according to the source of funds.**

	DST/NRF*		Other sources	
	bursary	running	bursary	running
	2,807,000	2,265,000	2,230,000	5,122,000
Sub total		5,072,000		7,352,000
<b>Proportion</b>		<b>41%</b>		<b>59%</b>

\* the DST/NRF portion excludes core CoE running costs

**Table 13. Distribution of 2013 research funds according to the fund source and the focal research areas.**

Fund source	Research area	1	2	3	% within source
DST/NRF	1	730,000	1,039,000	3,498,000	<b>14%</b>
	2				<b>20%</b>
	3		<b>66%</b>		
Other funds	1	755,000	1,266,000	5,331,000	<b>10%</b>
	2				<b>17%</b>
	3		<b>73%</b>		
Total		1,485,000	2,305,000	8,829,000	
<b>% within research area</b>		<b>12%</b>	<b>18%</b>	<b>70%</b>	

1 = characterising biodiversity; 2 = evolutionary ecology; 3 = maintaining biodiversity

### Comments on the distribution of CoE and other funds during 2012:

1. The total CoE funds granted by the DST/NRF for 2013 represents 44.5% (R5,892,112 of R12,753,000) of the total funds allocated to research within the CoE.
2. The proportional distribution of research area funding from CoE funds is at variance with one-third funding per research area, with the overall variance in favour of conservation science (maintaining biodiversity – 70%), thus satisfying the recommendations of the 2009 review panel.

**Table 14. Funds secured from other sources for the 2013 CoE projects.**

Bursaries			Running costs			Total	
1	2	3	1	2	3		
		120,000			400,000	520,000	James S. McDonnell Foundation
				120,000		120,000	Marie Curie FP7 EU grant
					70,000	70,000	ABAX
		150,000				150,000	DOW
					28,000	28,000	THRIP
					60,000	60,000	NamPower - NNF
		400,000			200,000	600,000	OTEP/RSPB
		150,000			600,000	750,000	BLSA/ Roelof vd Merwe Trust
					240,000	240,000	BLSA/ATF
		160,000				160,000	DEA
					200,000	200,000	ACAP
		320,000			40,000	360,000	NRF - SANAP
		80,000			153,000	233,000	NRF Sea-Change
		175,000			300,000	475,000	UCT URC 'hot birds'
				32,000		32,000	UCT URC Amar
				310,000		310,000	BBSRC Royal Society (UK)
				364,000		364,000	FCT Portugese Sci. Foundation
				210,000		210,000	French Research Ministry
				20,000		20,000	OCP funds Hockey
					170,000	170,000	Conservation International CEPF
				50,000		50,000	Wild Bird Trust
				160,000		160,000	National Geographic Cons Trust
					20,000	20,000	UCT URC Cumming
					80,000	80,000	NRF incentive Cumming
		60,000			70,000	130,000	NRF CPRR Cumming
					80,000	80,000	NSERC (Brigham) McKechnie
200,000			100,000		50,000	350,000	NSF Bowie & Wolf
			40,000			40,000	Hellman Foundation
					70,000	70,000	SANBI
					380,000	380,000	WWF-NL
					70,000	70,000	KZN Wildlife
					110,000	110,000	Wildlands Trust
					70,000	70,000	Endangered Wildlife Trust
					240,000	240,000	Maluti Drakbrg Transfrnt Project
					15,000	15,000	IUCN Vulture Specialist Group
415,000						415,000	Clancey bequest
<b>615,000</b>	<b>0</b>	<b>1,615,000</b>	<b>140,000</b>	<b>1,266,000</b>	<b>3,716,000</b>	<b>7,352,000</b>	

1 = characterizing biodiversity

2 = evolutionary biology

3 = maintaining biodiversity

**DST/NRF CoE**  
**Birds as Keys to Biodiversity Conservation at the Percy FitzPatrick Institute**  
**CASH FLOW ANALYSIS FOR THE 2013 FINANCIAL YEAR**

DESCRIPTION	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	TOTAL	Annual Budget	VARIANCE
NRF			2 946 056				2 946 056						5 892 112	5 892 112	0
Interest	12 773												12 773	12 773	0
Other (incl. c/f from 2012)	120 982				350 000								470 982	120 982	350 000
<b>TOTAL INCOME</b>	133 755	0	2 946 056	0	350 000	0	2 946 056	0	0	0	0	0	6 375 867	6 025 867	350 000
Salaries	-66 266	-64 064	-76 679	-69 646	-72 876	-66 533	-72 668	-73 960	-58 895	-93 873	-60 351	-58 416	-834 229	802 000	-32 229
Student costs	-1 272 450	-235 200	-260 700	-47 550		-879 903	-26 600	-80 750	-18 700		-59 500		-2 881 353	2 824 000	-57 353
Conferences (incl. Travel)	-300	-6 697	-4 400	-9 641	-38 990	-30 785	-29 238	-28 539	-7 428	-22 207	-25 857	-7 877	-211 960	340 000	128 040
Equipment													0	0	0
Running	-138 026	-210 497	-215 100	-88 570	-272 242	-127 727	-130 461	-180 948	-111 173	-82 496	-127 640	-167 906	-1 852 786	3 056 000	1 203 214
<b>TOTAL EXPENSES</b>	-1 477 042	-516 458	-556 880	-215 408	-384 108	-1 104 948	-258 967	-364 197	-196 196	-198 577	-273 348	-234 199	-5 780 329	7 022 000	1 241 671
<b>NET OUTCOME PROFIT/LOSS</b>	-1 343 287	-1 859 744	529 432	314 024	279 916	-825 032	1 862 056	1 497 859	1 301 663	1 103 086	829 738	595 539	595 539		

Notes:

- 1 Balance brought fwd matches prev. yr 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 christa@nrf.ac.za not later than 15 days after the month end

**Table 15. Fitztitute CoE Financial Statement, January to December 2013**

	Operating Fund		Invested Fund		All Funds
<b>Brought forward from 2012</b>		-119 761.67		-13 993.52	-133 755.19
<b>Income</b>		-5 892 112.00		-918.61	-5 893 030.61
NRF income	-5 892 112.00				
Other income					
Investment income			-918.61		
<b>Net transfer value</b>					0.00
CR transfer		0.00		0.00	
DR transfer		0.00	0.00		
<b>Expenditure</b>		5 423 263.74			5 423 263.74
Salaries total	834 229.14				
Bursaries	2 531 353.00				
Conferences	200 079.47				
Equipment-vehicles	0.00				
Running costs	1 857 602.13				
<b>Carry forward to 2014</b>		-588 609.93		-14 912.13	-603 522.06
<b>Reconciliation:</b>					
SAP balance @ 31/12/2013		-511 609.86			
Technical adjustments on advances (cash in hand)		-0.07			
Advances in hand		-77 000.00			
		-588 609.93			

**Notes:**

- 2) No non-specific transfers to other collaborators were made in 2013.
- 3) All funds carried forward to 2014 include advances in hand.

## Appendix 1: PFAO CoE Publications for 2013

### Papers in SCI-ranked journals (103)

IF score = Thomson Reuters Scientific Impact Factor score 2012

#### Characterising biodiversity (7):

Alström, P., Barnes, K.N., Olsson, U., Barker, F.K., Bloomer, P., Khan, A.A., Qureshi, M.A., Guillaumet, A., Crochet, P.-A. & Ryan, P.G. 2014. Multilocus phylogeny of the avian family Alaudidae (larks) reveals 4 complex morphological evolution, non-monophyletic genera and hidden 5 species diversity. *Molecular Phylogenetics and Evolution* 69:1043-1056.

IF 4.066

Bowie, R.C.K., Cohen, C. & Crowe, T.M. 2013. Ptilopachinae: a new subfamily of the Odontophoridae (Aves: Galliformes). *Zootaxa* 3670:97-98.

IF 0.974

Fuchs, J., Parra, J.L., Goodman, S.M., Raheirilalao, M.J., vanderwal, J. & Bowie, R.C.K. 2013. Extending ecological niche models to the past 120 000 years corroborates the lack of strong phylogeographic structure in the Crested Drongo (*Dicrurus forficatus forficatus*) on Madagascar. *Biological Journal of the Linnean Society* 108:658-676.

IF 2.413

Fuchs, J., Pons, J.-M., Liu, L., Ericson, P.G.P., Couloux, A. & Pasquet, E. 2013. A multi-locus phylogeny suggests an ancient hybridization event between *Campephilus* and melanerpine woodpeckers (Aves: Picidae). *Molecular Phylogenetics and Evolution* 67:578-588.

IF 4.066

Lotz, C.N., Caddick, J.A., Forner, M. & Cherry, M.I. 2013. Beyond just species: is Africa the most taxonomically diverse bird continent? *South African Journal of Science* 109:Art#0002, 4 pages.

IF 0.835

Oatley, G., Feldheim, K.A., Voelker, G. & Bowie, R.C.K. 2013. Development of twelve tetranucleotide microsatellite loci for white-eyes (*Zosterops spp.*) for use in phylogeographic and hybridization studies. *Conservation Genetics Resources* 5:977-979.

IF 2.183

Ryan, P.G., Klicka, L.B., Barker, K.F. & Burns, K.J. 2013. The origin of finches on Tristan da Cunha and Gough Island, central South Atlantic ocean. *Molecular Phylogenetics and Evolution* 69:299-305.

IF 4.066

#### Evolutionary ecology (46):

Abad, F.X., Busquets, N., Sánchez, A., Ryan, P.G., Majó, N. & González-Solís, J. 2012. Serological and virological surveys of Influenza A virus in Antarctic and sub-Antarctic penguins. *Antarctic Science* 25:339-344.

IF 1.63

Amar, A., Koeslag, A. & Curtis, O. 2013. Plumage polymorphism in a newly colonized Black Sparrowhawk population: classification, temporal stability and inheritance patterns. *Journal of Zoology* 289:60-67.

IF 2.043

Barquete, V., Strauss, V. & Ryan, P.G. 2013. Stable isotope turnover in blood and claws: A case study in captive African Penguins. *Journal of Experimental Marine Biology and Ecology* 448:121-127.

IF 2.263

- Chambers, L.E., Altwegg, R., Barbraud, C., Barnard, P., Beaumont, L.J., Crawford, R.J.M., Durant, J.M., Hughes, L., Keatley, M.R., Low, M., Morellato, P.C., Poloczanska, E.S., Ruoppolo, V., Vanstreels, R.E.T., Woehler, E.J. & Wolfaardt, A.C. 2013. Phenological changes in the Southern Hemisphere. *PLoS One* 8(10):e75514.  
IF 3.73
- Cook, T.R., Lescroël, A., Cherel, Y., Kato, A. & Bost, C.-A. 2013. Can foraging ecology drive the evolution of body size in a diving endotherm? *PlosOne* 8:356297.  
IF 3.73
- Corfield, J.R., Birkhead, T.R., Spottiswoode, C.N., Iwaniuk, A.N., Boogert, N.J., Gutiérrez-Ibáñez, C., Overington, S.E., Wylie, D.R. & Lefebvre, L. 2013. Brain size and morphology of the brood-parasitic and cerophagous honeyguides (Aves: Piciformes). *Brain, Behavior and Evolution* 81:170-186.  
IF 2.885
- Cumming, G. S., Shepard, E., Okanga, S., Caron, A., Ndlovu, M. & Peters, J.L. 2013. Host associations, biogeography, and phylogenetics of avian malaria in southern African waterfowl. *Parasitology* 140:193 – 201.  
IF 2.355
- Cumming, G.S., Ndlovu, M., Mutumi, G.L. & Hockey, P.A.R. 2013. Responses of an African wading bird community to resource pulses are related to foraging guild and food-web position. *Freshwater Biology* 58:79–87.  
IF 3.933
- Cunningham, S.J., Corfield, J.R., Iwaniuk, A.N., Castro, I., Alley, M.R., Birkhead, T.R. & Parsons, S. 2013. The anatomy of the bill tip of kiwi and associated somatosensory regions of the brain: comparisons with shorebirds. *PLoS ONE* 8(11):e80036.  
IF 3.73
- Flower, T.P., Child, M.F. & Ridley, A.R. 2013. The ecological economics of kleptoparasitism: pay-offs from self-foraging versus kleptoparasitism. *Journal of Animal Ecology* 82:245-255.  
IF 4.841
- Fonteneau, F. & Cook, T.R. 2013. New data on gastrointestinal helminths in shags (*Phalacrocorax verrucosus*) at Kerguelen Archipelago. *Polar Biology* 36:1839–1843.  
IF 2.006
- Fort, J., Steen, H., Strom, H., Tremblay, Y., Gronningsaeter, E., Pettex, E., Porter, W.P. & Grémillet, D. 2013. Energetic consequences of contrasting winter migratory strategies in a sympatric Arctic seabird duet. *Journal of Avian Biology* 44:255-262.  
IF 2.02
- García-Heras, M.-S., Cortés-Avizanda, A. & Donazar, J.-A. 2013. Who are we feeding? Asymmetric Individual use of surplus food resources in an insular population of the Endangered Egyptian Vulture *Neophron percnopterus*. *PLoS ONE* 8(11):e80523.  
IF 3.73
- García-López de Hierro, L., Moleón, M. & Ryan, P.G. 2013. Is carrying feathers a sexually selected trait in House Sparrows? *Ethology* 119:199-211.  
IF 1.947
- Green, D. & Pistorius, P. 2013. Living on the bare edge: fitness consequences for Cape Gannets *Morus capensis* at Bird Island, Algoa Bay. *Ostrich* 84:123-127.  
IF 0.468
- Huntley, B., Allen, J.R.M., Barnard, P., Collingham, Y.C. & Holliday, P.R. 2013. Species distribution models indicate contrasting late-Quaternary histories for Southern and Northern Hemisphere bird species. *Global Ecology and Biogeography* 22:277-288.  
IF 7.223



- Jaeger, A., Jaquemet, S., Phillips, R.A., Wanless, R.M., Richard, P. & Cherel, Y. 2013. Stable isotopes document inter- and intra-specific variation in feeding ecology of nine large southern Procellariiformes. *Marine Ecology Progress Series* 490:255-266.  
IF 2.546
- Lei, B., Amar, A., Koeslag, A., Gous, T.A. & Tate, G.J. 2013. Differential haemoparasite intensity between Black Sparrowhawk (*Accipiter melanoleucus*) morphs suggests an adaptive function for polymorphism. *PLoS ONE* 8:e81607.  
IF 3.73
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## **Papers in non SCI-ranked journals (8)**

### **Characterising biodiversity (0):**

#### **Evolutionary ecology (5)**

Mills, M.S.L. 2013. Little-known African bird: Bocage's Sunbird *Nectarinia bocagii* – an Angolan near-endemic. *Bulletin of the African Bird Club* 20:80-88.

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Mills, M.S.L. & Rogerson, M. 2013. How to see Madagascar Pochard *Aythya innotata*, the world's rarest duck. *Bulletin of the African Bird Club* 20:210-215.

Mondreti, R., Davidar, P., Péron, C. & Grémillet, D. 2013. Seabirds in the Bay of Bengal large marine ecosystem: current knowledge and research objectives. *Open Journal of Ecology* 3:172-184.

Pichegru, L., Cook, T., Handley, J., Watermeyer, J., Nupen, L. & McQuaid, C.D. 2013. Sex-specific foraging behavior and a field sexing technique for endangered African Penguins. *Endangered Species Research* 19:255-264.

#### **Maintaining biodiversity (3)**

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Meek, C.S., Richardson, D.M. & Mucina, L. 2013. Plant communities along the Eerste River, Western Cape, South Africa: Community descriptions and implications for restoration. *Koedoe* 55:14p.

Reid, T.A., Wanless, R.M., Hilton, G.M., Phillips, R.A. & Ryan, P.G. 2013. Foraging range and habitat associations of non-breeding Tristan albatrosses: overlap with fisheries and implications for conservation. *Endangered Species Research* 22:39-49.

## **Additional book reviews, obituaries and abstracts in SCI-ranked journals (8)**

Heydinger, J.M. 2013. Book Review: Moa: the Life and Death of New Zealand's Legendary Bird. *Ostrich* 84:169-170.  
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Heystek, A., Geerts, S., Barnard, P. & Pauw, A. 2013. Abstract SAAB Annual Meeting: Flower colour preference of sunbird pollinators. *South African Journal of Botany* 86:160.  
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Little, R.M. & Ryan, P.G. 2013. Obituary: Philip Anthony Richard Hockey – 'Education is what is left when what has been learnt has been forgotten' (8 March 1956–24 January 2013). *Ostrich* 84:v.  
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Little, R.M. & Ryan, P.G. 2013. Obituary: Phil Hockey: 8 March 1956 – 24 January 2013. *South African Journal of Wildlife Research* 43:87.  
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Little, R.M. & Ryan, P.G. 2013. Obituary: Philip Anthony Richard Hockey. *African Zoology* 48:197-198.  
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McKechnie, A.E. 2013. Book Review: Ecological and Environmental Physiology of Birds. *Ostrich* 84:167-168.  
IF 0.468

Oatley, G. 2013. Book Review: Roberts Geographic Variation of Southern African Birds: a guide to the plumage variation of 613 bird races in southern Africa. *Ostrich* 84:93.  
IF 0.468

Ryan, P.G. 2013. Obituary: Phil Hockey (1956-2013). *Ibis* 155:698-700.  
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### **Semi-popular articles (84)**

Amar, A. & van Velden, J. 2013. Scaly-face mite infections in Black Sparrowhawks. *African Birdlife* 1(4):18

Carstens, K. 2013. Hornbills: a brief history. *Klaserie Chronicle* 26:11.

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Lee, A. 2013. Fynbos enigma: Hottentot Buttonquail in the Kouga Mountains. *African Birdlife* 1(6):20-22.

Lee, A., Barnard, P. & Wright, D. 2013. Phoenix of the fynbos. *African Birdlife* 2(1):55.

Lee, A. 2013. Fine feathered fauna of the Fynbos. *Aardvark* September:7.

Little, R. 2013. Tributes to Phil Hockey. *African Birdlife* 1(3):20-21.

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## **Books and Chapters in Books (1 book, 6 chapters)**

Andersson, J., Cumming, D., de Garine-Wichatitsky, M. Dzingirai, V. & Giller, K. (Eds). 2013. Transfrontier conservation areas: people living on the edge. Earthscan, London. ISBN-13: 978-1849712088.

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## Appendix 2. The most cited publications for the life of the CoE (2005-2013) and for the history of the PFIAO (1960-2013) analyzed using the *Web of Science* and *Google Scholar*.

### Top 10 Citations 2005-2013

Hackett, S.J., Kimball, R.T., Reddy, S., **Bowie, R.C.K.**, Braun, E.L., Braun, M.J., Chojnowski, J.L., Cox, W.A., Kin-Lan, H.J., Huddleston, C.J., Marks, B.D., Miglia, K.J., Moore, W.S., Sheldon, F.H., Steadman, D.W., Witt, C.C., Yuri, T. 2008. A phylogenomic study of birds reveals their evolutionary history. *Science* 320:1763-1768.  
504 Citations

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478 Citations

Green, R.E., Cornell, S.J., Scharlemann, J.P.W. & **Balmford, A.** 2005. Farming and the fate of wild nature. *Science* 307: 550-555.  
428 Citations

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