

May 2015



# SAWMA MATTERS

*Electronic newsletter of the Southern African Wildlife Management Association*

## In this issue:

General SAWMA announcements

SAWMA Symposium 2015: final call for abstracts

Membership

SAWMA Membership fees and mailing lists

African Journal of Wildlife research

Upcoming Events

News releases

Namibian communal conservancies: why an integrated programme works

Special Issue of Ostrich in memory of Phil Hockey

Norms and standards for raptor ringing, marking and tracking

**New Book:**  
**OPERATION LOCK AND THE WAR ON RHINO POACHING**

**Interesting Articles published recently**

*Since the previous newsletter there are a number of exciting things to report on: Our symposium is well on track, we just published the first issue of our "New Name" journal (African Journal of Wildlife Research), our new online manuscript submission system has been implemented and some new associate editors have been added to the editorial board. In the light of the current challenges that we are facing in conservation and other areas (such as load shedding in SA!) I thought the following saying is very appropriate to share: "It's better to light a candle than curse the darknes." - Editor*

## SAWMA Symposium 2015 Responsible wildlife management: A key to biodiversity conservation

6-10 September 2015

Horseshoe Inn, Kimberley

Host: Northern Cape Department of Environment and Nature Conservation (DENC)

### FINAL CALL FOR ABSTRACTS

Abstracts must be submitted not later than 31 May 2015 to [elma@mweb.co.za](mailto:elma@mweb.co.za). Please consult the guidelines at the SAWMA website <http://www.sawma.co.za/sym2015.html> for more detail on the format of abstracts.

**ONLINE REGISTRATION AT:** [http://www.sawma.co.za/sym\\_registration\\_2015.php](http://www.sawma.co.za/sym_registration_2015.php)



#### SUBTHEMES:

- Understanding and managing threats to wildlife and biodiversity
- Growing impacts of renewable energy on wildlife
- Biodiversity mitigations and offsets: The future for conservation and wildlife management
- Emerging information to aid wildlife management decisions
- Economic contribution of biodiversity
- Population resilience to pressures
- Legislative impacts on wildlife and biodiversity

ENQUIRIES:  
[elma@mweb.co.za](mailto:elma@mweb.co.za)

## Welcome new student SAWMA members 2015!

Since it was announced that full time students (excluding post-docs) have the option to register as free student members, a number of students from various universities have made use of this opportunity. **Note should be taken that this option is valid for a year and students who joined for this option in previous years should renew annually by providing proof of their student registration records.** Free student members do not receive the printed copy of the journal and only login codes to the online version. The login codes are renewed every year.

### MEMBER NEWS

Congratulations to Jan Venter who recently obtained his PhD and was recently appointed as lecturer at NMMU Saasveld.

Xander Combrink from Ezemvelo KZN Wildlife has also recently received a PhD degree – Congratulations!

And last, but not least congratulations also to Dan Parker, who recently welcomed another boy into his family!



Join the SAWMA Facebook group at: <https://www.facebook.com/groups/88830115458/>.

AND

The SAWMA LinkedIn Group  
<http://www.linkedin.com/groups/Southern-African-Wildlife-Management-Association>



### SAWMA Membership fees 2015:

Invoices for membership fees for 2015 were emailed to all paying members of SAWMA during the past two weeks. Thanks for your prompt responses! Please let me know if you did not receive your invoice and I will resend it.

Local individual members:	R390-00/year
Fulltime Student members (Local):	R200-00/year (see announcement below)
Fulltime Student members (Foreign):	R390-00/year (see announcement below)
Pensioners:	R200-00/year
Foreign individual members:	USD 108-00/year
Local Institutional Subscribers:	R720-00/year
Foreign Institutional Subscribers:	USD 205-00/year

**Please remember to use your surname/invoice as reference and email proof of payment to [elma@mweb.co.za](mailto:elma@mweb.co.za)** – it makes tracking payments easier.

Interested in becoming a formal part of the SAWMA Community? Feel free to contact Elma Marais ([elma@mweb.co.za](mailto:elma@mweb.co.za)) or visit our website at <http://www.sawma.co.za/>

### SAWMA Mailing list

The SAWMA mailing list is continually growing in numbers. Currently there are two lists/groups: One group receives only the SAWMA Matters, general SAWMA announcements and limited news while the other group receives the above as well as more news snippets, adverts for vacancies, bursaries, and scholarships.

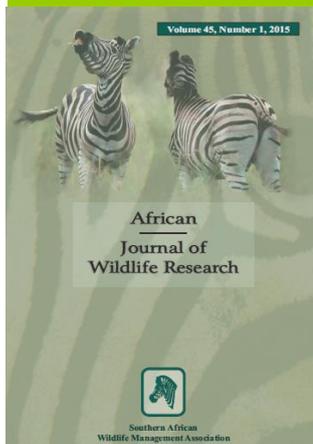
Should you wish to add anyone to the service, change or suspend your own email address, or want to move to the other list, please do not hesitate to contact the SAWMA Secretariat ([elma@mweb.co.za](mailto:elma@mweb.co.za)). Also: you may choose the email delivery options:

**Abridged Email:** one summary email of new activity per day; **Digest Email:** up to 25 full new messages in a single email; **All Email:** receives each message as it arrives.

By scrolling to the bottom of a received email the link to the mailing group is displayed where you can click to change the above, or you can simply contact Elma Marais ([elma@mweb.co.za](mailto:elma@mweb.co.za)). Alternatively: visit the SAWMA website: [www.sawma.co.za](http://www.sawma.co.za) and simply view the news flashes on the welcome page from time to time!

Lastly it must be emphasised that any view or opinion expressed in the news emails may not necessarily be that of SAWMA or the SAWMA management, but merely information shared to all.

Please keep sharing and forwarding jobs, events and other news for distribution to this network!



### New Editors

Welcome to the new internationally based associate editors recently added editorial board:

#### Prof Elissa Cameron

School of Zoology,  
University of Tasmania,  
Australia

#### Dr Andrew Loveridge

Department of Zoology,  
Oxford University, UK

#### Dr Peter Paulsen

Inst. of Meat Hygiene,  
Meat Technology and  
Food Science,  
University of Veterinary  
Medicine, Vienna

We trust our journal can only grow with the current strong editorial team on board!

At the same time two of the existing editors have decided to leave the board after a few years of serving the journal: Prof Mike Perrin and Dr Guy Balme. Thanks to both for your most valuable input!

### REQUEST:

Please send the links/PDF's of all your recent published articles in other journals. We would like to share it on our website and mailing groups.

### Volume 45 number 1:

The first issue of the journal under its new name, African Journal of Wildlife Research is now available at [www.sawma.co.za](http://www.sawma.co.za) and in printed format. Printed copies have already been distributed from the mailing house and should reach members soon.

### Contents

#### Review article:

The conservation movement in Zimbabwe: an early experiment in devolved community based regulation — G. Child & B. Child

#### Research articles:

Fluctuations in bush and rock hyrax (Hyracoidea: Procaviidae) abundances over a 13-year period in the Matopos, Zimbabwe — R.E. Barry, N. Chiweshe & P.J. Mundy

Challenges managing herbivores in the contractual Postberg section of West Coast National Park — C. Cowell & S. Ferreira

Genetic identification of invasive walking catfish, *Clarias batrachus*, intermingled with African catfish, *C. gariepinus*, in South Africa — J.P. Grobler, S. Ndyogolo, J. Barasa, R. Abila, H. Bindeman & A.F.J. Schlemmer

Assessing the release success of rehabilitated vervet monkeys in South Africa — A.J. Guy, D. Curnoe & O.M.L. Stone

Break on through to the other side: the effectiveness of game fencing to mitigate human-wildlife conflict — M.K. Kesch, D.T. Bauer & A.J. Loveridge

Seed dispersal by South Africa's only forest-dwelling guenon, the samango monkey (*Cercopithecus mitis*) — B. Linden, J. Linden, F. Fischer & K.E. Linsenmair

Efficacy of different cooling methods for capture-induced hyperthermia in antelope — J. Sawicka, A. Fuller, L.G. Fick, R.S. Hetem and L.C.R. Meyer

Pair formation during summer exonerates Helmeted Guineafowl, *Numida meleagris*, as a germinating maize seedling destroyer — J.H. van Niekerk

#### Short communications

Shedding light on reflective prisms as potential baboon (*Papio hamadryas*) deterrents in the Cape Peninsula, South Africa — B.S. Kaplan & M.J. O'Riain

Winter scavenging rates under power lines in the Karoo, South Africa — J.M. Shaw, R. van der Merwe, E. van der Merwe & P.G. Ryan

### Login codes for online journal:

New login codes have been activated recently. Changing our journal name has complicated the login process slightly: At present there are three links to the online journal from the SAWMA website: [www.sawma.co.za](http://www.sawma.co.za):

**Latest issues (AJWR)** will take you to the following link:

[http://reference.sabinet.co.za/sa\\_epublication/wild2](http://reference.sabinet.co.za/sa_epublication/wild2) (login to view full text)

**Latest issues (SAJWR)** will take you to the following link:

[http://reference.sabinet.co.za/sa\\_epublication/wild1](http://reference.sabinet.co.za/sa_epublication/wild1) (login to view full text)

**Open Access Content SAJWR** will take you to all articles published longer than 24 months ago: [http://reference.sabinet.co.za/sa\\_epublication/wild](http://reference.sabinet.co.za/sa_epublication/wild) (no login required)

### Online submissions of Manuscripts

The online submission platform is in place and a number of manuscripts have already been submitted via this system. Prospective authors can submit manuscripts at: <http://www.editorialmanager.com/sawma/default.aspx> or visit our website, [www.sawma.co.za](http://www.sawma.co.za) and click on online manuscript submission. If you do not have something to submit at this stage, we invite you to please visit the site and register an account as author and/or reviewer through the "Register New User" link on the main page. After your account is created you can log in as author or reviewer, depending on your specific role.

### Special Carnivore Issue

The Special issue on carnivores is still in production and should be published in July/August. This issue will not be printed and will only be available to paying subscribers and members by means of login codes.

## Australasian Wildlife Management Society Conference: 23-26 November 2015



**VENUE:** Mercure Hotel, Perth WA

**THEME:** Wildlife Management in a Changing Environment

As part of our agreement with AWMS, SAWMA members get AWMS member registration rates should they wish to attend the conference. Head to <http://www.awms.org.au/conference> to download information. Registrations are already open, so if there are any SAWMA members who wish to register, you just need to fill the registration form in and then enter the discount code; the price will then be recalculated to membership rates. The discount code is SAWMA2015.

## Fynbos Forum: 3rd to 6th August 2015

**VENUE:** NG CHURCH HALL, MONTAGU

**THEME:** Biome Boundaries

**Session Themes:** Papers and posters are invited under these broad themes and are expected to include contributions on:

- Interaction between people and nature
- Biodiversity-based business
- Job and skills development in biodiversity
- Trends in protected area management
- Youth programmes
- Alternative energy
- Ecosystems
- Sustainable utilisation of fynbos products
- Climate change
- Invasive species
- Restoration ecology

**Contact:** Chris Stuart: [fynbosforum2014@gmail.com](mailto:fynbosforum2014@gmail.com)

## Symposium of Contemporary Conservation Practice: - 2 to 6 November 2015

**VENUE:** Fern Hill Conference Centre ,Howick, KwaZulu-Natal, South Africa

This symposium offers a platform for the conservation community to share and explore issues and recent developments in the science and practice of conservation, and in understanding and communicating the value of biodiversity to society. It seeks to identify solutions to critical issues and to impact policy in order to enhance conservation efforts – in Africa and beyond. It also aims to promote partnerships between government agencies, conservation authorities, non-governmental organisations, legal practitioners, communicators and other relevant professionals and stakeholders, to address the contemporary conservation challenges of our world.

This is a CONSERVATION SYMPOSIUM not just a science forum – its scope is conservation in its full context – including governance, science, management, decision-making, stake-holder engagement and the assessment of effectiveness of efforts and interventions. It is of relevance to decision-makers and policy developers, conservation managers, scientists, law makers and to communities and stakeholders who live in and depend on the use of biodiversity.

### KEY THEMES AND FOCUS AREAS

- Protected area management effectiveness, Management of protected areas and buffer zones & Transboundary conservation
- Conserving in the face of global change
- Ecological processes, Conservation genetics & Threatened species conservation
- Advances in monitoring and surveillance
- Mitigating threats to biodiversity, Wildlife Crime & Invasive alien species
- Valuing biodiversity, Ecosystem goods and services, Resource economics, Biodiversity and livelihoods & Natural resource use Land-use planning and development, Securing critical biodiversity areas & Enabling partnerships
- Cultural heritage and conservation history
- Media and communication
- Legal, policy and ethical frameworks, Global / multinational agreements & Wildlife law and animal welfare

For any queries, contact Freyni or Erica: [secretariat@conservationsymposium.com](mailto:secretariat@conservationsymposium.com);  
+27 (0)49 842 4335 or +27 (0)83 256 7202



The 8<sup>th</sup> International Congress for Wildlife and Livelihoods on Private and Communal Lands: Livestock, Tourism, and Spirit, held in September 2014 at Estes Park, Colorado produced 115 videos from all symposia at the event. You can access them at [http://digitool.library.colostate.edu/R/?func=collections&collection\\_id=4667](http://digitool.library.colostate.edu/R/?func=collections&collection_id=4667)



## Namibian communal conservancies: why an integrated programme works

*Laurie Marker, Louisa Richmond-Coggan & Matti Nghikembuan  
Cheetah Conservation Fund*

The Cheetah Conservation Fund has been undertaking community capacity building projects across Namibia for the past 25 years. Over that past few months the Cheetah Conservation Fund's activity level in Hereroland has risen significantly as we drive our capacity building programme forward. The aim of the programme is to share vitally needed information with the communal farmers that reside across four key conservancy areas that make up Hereroland. These communities are our neighbours as we all come under the umbrella of the Greater Waterberg Landscape. A conservancy is an open system which means that both livestock and wildlife of all varieties can move freely across a large area. This means that we here at CCF share our wildlife with our neighbours so we all must be a part of protecting now and in the future. A conservancy means that its members work together for the great good and that farmers have greater choices about where they graze their livestock. This is particularly important when there are periods of drought and water and grass become scarce. It means that farmers can move greater distances from their villages and into difference areas of the conservancy to ensure their livestock and in turn their livelihoods are kept health. CCF fully supports the conservancy system which is why we have become a driving force in building capacity throughout the conservancies of Namibia and currently with a focus on Hereroland.

In 2012 CCF visited 400 villages that makeup the 4 conservancies and conducted a survey which included questions on how they look after their livestock and what problems do you they have with predators. Based on this detailed survey CCF developed farmer training workshops that covers specific topics and issues that were highlighted in 2012. Approximately 23,000 people live and work across the four conservancies (African wild dog, Ozonahi, Otjituuo, Okamatapati) that make up Hereroland. Raising livestock, especially cattle, is the main form of income for families across this area. However, this has come at a price to the local wild game species and carnivores of the area. The numbers of wild herbivores such as kudu and eland across Hereroland are minimal. This is because they have either been hunted and eaten or driven away as access to water sources have been fenced off for the sole use by livestock. The livestock management has been very poor which has lead to over grazing and in turn bush encroachment which means there is limited food for the game species. These factors have combined to make the long-term persistence of carnivores across the area very difficult. Firstly in a balanced ecosystem their prey would be the wild game species however, as only livestock reside in the area the carnivores are killing them. The farmers want to protect their livestock so they actively kill and persecute the carnivores, such as the cheetah and wild dog. If this cycle is not broken then soon a time will come when there won't be any carnivores left in Hereroland or for that matter Namibia.

As part of the capacity building programme CCF has hired of four Local Facilitators within the four conservancies (Abiud Kandinda: African Wild Dog, Kapenauarue Katjiveri: Otjituuo, Alexander Mbarimuu: Ozonahi and Ebenhard Karita: Okamatapati). Three are the conservancy committee chairman and one is a member of the conservancy. The four facilitators were chosen as they are already seen a leaders of their conservancy and are therefore able to engage their members to attend our workshop trainings. Every week two workshops take place in villages across one conservancy totalling 8 days a month. We are using a combination of CCF staff and a Local Mentor Mr. Karamata, who comes highly recommend from the FSB mentoring programme as well as being local to the area. Our experts teach workshops on a variety of topics which include; kraal management, grazing management, record keeping and finances, biodiversity, human-wildlife conflict, veterinary care and many more. So far we have averaged 27 participants per workshop and what is encouraging is that 34% have not attended a farmer training workshop before. Therefore, we are reaching a new audience as well as re-connecting with prior participants. The gender ratio at the workshops is 1 female to 1.7 males. CCF and our local facilitators have actively encouraged females to attend the workshops as they are also on the farms looking after livestock. The pattern of human-carnivore conflict can clearly be seen in Hereroland as so far 84% of participants have stated that they are losing 20 or more individual animal to predators over the space of a year. We are utilising the radio as the primary form of communication with the conservancy members. Our aim is to not only promote the workshops but provide feedback and lively discussions on a variety of topics from livestock health to rangeland management.

Through education and practical experiences the farmers are putting into place ways to manage their livestock that allows for the inclusion of wild game and carnivores alongside their livestock. CCF vision for Hereroland is that we want it to be an area famous for cheetahs and wild dogs. An area that is on the must see tourist route in Namibia and in return the conservancy members can gain an alternative income from tourism. By conducting workshops in craft production and business management the hope is that the farmers will be able to diversify their income base. The aim is to reduce their reliance on cattle as a single income source by enabling them to diversify and have multiple income streams. CCF will continue to work hard to empower the communal farmers of Namibia as they are the custodians of Namibia's wildlife including the amazing cheetah and wild dog.

### Facebook Site for Carnivore Papers:

A FB site dedicated to southern African carnivores. has just been started by Prof Michael Somers. This site aims to post and discuss new papers on any aspects relating to the management, conservation, and ecology of African carnivores. If you are interested, lease join the group at <https://www.facebook.com/groups/1055508914479231/>

## Special Issue of Ostrich in memory of Phil Hockey

By Dr Rob Little – DST-NRF Centre of Excellence, FitzPatrick Institute, UCT



Following the sad and untimely passing of Phil Hockey in January 2013, BirdLife South Africa suggested that a special issue of Ostrich be published in memory of Phil as a leading and influential African ornithologist. I was invited as Guest Editor for these special issues (Volume 86(1&2)) and it was a pleasure and an honour to work with a variety of contributing authors, all of whom made a special effort to submit exemplary manuscripts either co-authored by Phil or within the focus areas of Phil's research career.

The respect of Phil's contributions to ornithology attracted 20 papers for these special issues, 12 including Phil as a co-author. There are eight papers on coastal bird ecology, four on avian life history evolution and habitat dynamics, three investigating avian responses to climate change, three on waterbird movements, one on the population metrics of Fynbos birds and a final note on the discovery of a breeding population of Blue Petrels *Halobaena caerulea* on Gough Island. The first five shorebird papers focus on the African Black Oystercatcher *Haematopus moquini*, fittingly the cover image for 2015 taken by Jessie Walton, and the species on which Phil led a research programme for more than 25 years. These papers bring this chapter of a long-term single-species study to a close. It has seen the species down-listed from Near-Threatened in 1994 to being removed from the Red Data Book of birds of South Africa, Lesotho and Swaziland in 2015.

Three papers on avian responses to climate change deal with behavioural buffers, fine-scale patterns of habitat use, and the impacts on foraging behaviour and body condition. These papers emanate from the research programme which Phil developed with Andrew McKechnie during 2009 and which now has projects in the Kalahari Desert of southern Africa, the Sonoran Desert of North America, and deserts of Western and South Australia. Three papers on the temporal abundance and movements of waterbirds include an investigation into the fluctuation of bird numbers at sewage treatment ponds in an arid environment in South Africa, a review of the implications of waterfowl movement ecology for conservation and disease transmission, and insights into the challenges of monitoring mobile waterbird populations from studies in southern Africa. Hopefully these special issues will also help raise the profile of Ostrich, our 'Journal of African Ornithology', and encourage researchers to submit papers of broad ornithological interest to the journal. Abstracts of the papers in these issues can be viewed at [www.tandfonline.com/toc/tost20/current](http://www.tandfonline.com/toc/tost20/current)



### Norms and standards for raptor ringing, marking and tracking

Issued by BirdLife Africa – Johannesburg, May 2015:



South Africa's raptors are important environmental indicators and monitoring of, and research into several species helps to improve our knowledge and inform conservation decision-making. Given the growing interest in raptor ringing, marking and tracking in South Africa, the Endangered Wildlife Trust (EWT) and BirdLife South Africa are of the opinion that the current approach to these activities should be reviewed. Information obtained through the tracking of birds with satellite and other sophisticated tracking devices can provide answers to important research questions that can ultimately contribute to their conservation. This will provide conservationists and decision-makers with a better understanding of movements of birds which can help inform placement of wind turbines and other infrastructure which can pose a significant risk to some bird species.

Handling birds and attaching devices to them can, however, pose inherent risks for the individual birds. These risks must be minimised, and must be justified in terms of the expected science and conservation outcomes for the species from the deployment. The ad hoc fitment of tracking devices where the research questions are unclear is considered to be unethical.

A workshop to discuss the requirements to undertake these ringing, marking and tracking activities was therefore recently held at Ithala Game Reserve, KwaZulu-Natal, and co-hosted by the EWT's Birds of Prey Programme and BirdLife South Africa's Terrestrial Bird Conservation Programme. The outcomes of the discussions will provide guidelines in terms of ensuring a more rigorous approach with regard to the training of researchers and the permitting of projects which involves these activities.

The South African Bird Ringing Unit (SAFRING) keeps a record of all bird ringing undertaken in the country. A "ringing" qualification is also granted through SAFRING following a rigorous training process. All ringing, marking and tracking projects have to comply with the relevant legislation which is ultimately controlled by the provincial nature conservation ordinances.

.....Next page

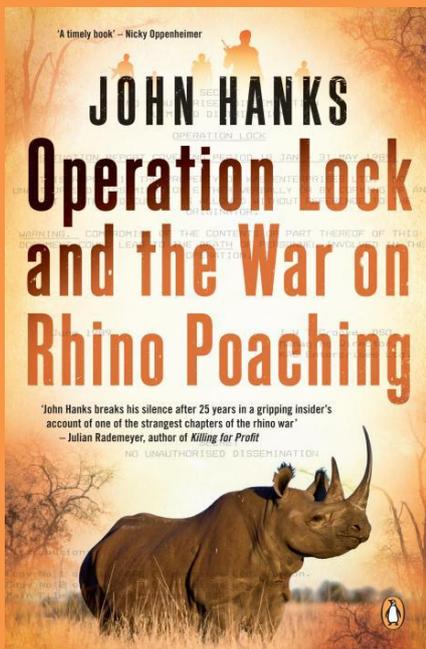
The meeting was of the opinion that, for all projects involving marking and tracking, the granting of provincial permits should be subject to ethical approval by a relevant ethics committee. The workshop participants also agreed to the establishment of a committee to oversee projects which involve this work, following the example of the British Ornithological Trust, UK. The advisory committee will comprise representatives from relevant organisations, such as SAFRING, South African National Biodiversity Institute (SANBI), BirdLife South Africa and the EWT.

It was further suggested that norms and standards should be developed to provide clear guidance on the sharing of marking and tracking data as well as the storage of such information in a central database. Researchers and specialists are also encouraged to share the lessons they have learnt from their work. This would improve tracking methods and techniques, thus minimising impacts on birds during future studies.

The EWT, BirdLife South Africa and SAFRING acknowledge the importance of bird ringing, tagging and tracking. These technologies are amongst the most important and powerful tools in recent ornithology providing key information which informs conservation decisions.

For more information, or interviews please contact: Dr Hanneline Smit-Robinson: BirdLife South Africa, Terrestrial Bird Conservation Programme Manager, [conservation@birdlife.org.za](mailto:conservation@birdlife.org.za); Tel +27 11 789 1122. André Botha: Endangered Wildlife Trust.

## OPERATION LOCK AND THE WAR ON RHINO POACHING JOHN HANKS



The aggressive poaching of rhinos needs to be countered with equal aggression. So argued Prince Bernhard of the Netherlands, the founder president of the World Wide Fund for Nature (WWF), at a 1987 meeting with John Hanks, conservation expert and WWF's head in Africa. The result was Operation Lock, a secret initiative funded by Prince Bernhard and staffed by former SAS operatives.

Operation Lock set up headquarters in Johannesburg and extended its reach into neighbouring states: Namibia, Zambia, Botswana, Swaziland and Mozambique. Its operatives planned to train game rangers, to pose as rhino horn traders in order to entrap buyers, and to expose the kingpins who were driving the trade. It was a controversial approach, all the more because it was working within apartheid South Africa in the late 1980s. When the existence of the project was finally leaked, WWF denied any involvement, and John Hanks took the fall.

In *Operation Lock and the War on Rhino Poaching*, John Hanks finally tells the story of these explosive events from 25 years ago. As a leading international authority on conservation, he also deals with the scourge of rhino poaching up to the present, and gives powerful and controversial criticism of some of the current policies to curb poaching.

**John Hanks** is a zoologist with a PhD from Cambridge and with over 45 years of experience in a wide variety of conservation management and research projects in several African countries. He has held a number of important positions, including chief professional officer for the Natal Parks Board; professor and head of the Department of Biological Sciences at the University of Natal, as well as the first director of that university's Institute of Natural Resources; the director of the Africa Programme for WWF International (based in Gland, Switzerland); the chief executive of WWF-South Africa; and the first executive director of the Peace Parks Foundation.

**ISBN:** 978 1 77022 729 3 | **RRP:** R250.00 | **CLASSIFICATION:** Conservation, autobiography

For more information, contact Surita Joubert at [sjoubert@penguinrandomhouse.co.za](mailto:sjoubert@penguinrandomhouse.co.za) | 021 460 5462

or visit [www.penguinbooks.co.za](http://www.penguinbooks.co.za)

## Developing fencing policies for dryland ecosystems

*Sarah M. Durant et al.*  
Journal of Applied Ecology

The debate on “to fence or not to fence” is still continuing. According to a study by the Zoological Society of London (ZSL), Wildlife Conservation Society (WCS) and other groups, published in the April edition of the Journal of Applied Ecology, new policies must be developed before fences are erected - particularly in dryland ecosystems. The study says that policies are needed to evaluate whether fences should be erected and should be evaluated based on wildlife movement and distribution, climate change predictions, costs and benefits to local people, and other factors

This Policy Direction article is a new article type relating to policy implementation and decision making. The focus of these articles is to inform and improve policy.

Read the blog: <https://appliedecologyblog.wordpress.com/2015/04/20/the-development-of-fencing-policies-and-its-relevance-to-the-convention-of-migratory-species/>

### ABSTRACT SUMMARY:

- In dryland ecosystems, mobility is essential for both wildlife and people to access unpredictable and spatially heterogeneous resources, particularly in the face of climate change. Fences can prevent connectivity vital for this mobility.
- There are recent calls for large-scale barrier fencing interventions to address human-wildlife conflict and illegal resource extraction. Fencing has costs and benefits to people and wildlife. However, the evidence available for facilitating sound decision-making for fencing initiatives is limited, particularly for drylands.
- We identify six research areas that are key to informing evaluations of fencing initiatives: economics, edge permeability, reserve design, connectivity, ecosystem services and communities.
- Policy implications. Implementing this research agenda to evaluate fencing interventions in dryland ecosystems will enable better management and policy decisions. The United Nations Conventions on Migratory Species (CMS) and to Combat Desertification (UNCCD) are appropriate international agreements for moving this agenda forward and leading the development of policies and guidelines on fencing in drylands.

Read the full article at: <http://onlinelibrary.wiley.com/doi/10.1111/1365-2664.12415/full>

## Elucidating the significance of spatial memory on movement decisions by African savannah elephants using state-space models

*Leo Polansky, Werner Kilian, George Wittemyer*

PROCEEDINGS OF THE ROYAL SOCIETY OF LONDON B: BIOLOGICAL SCIENCES 25 March 2015

### ABSTRACT:

Spatial memory facilitates resource acquisition where resources are patchy, but how it influences movement behaviour of wide-ranging species remains to be resolved. We examined African elephant spatial memory reflected in movement decisions regarding access to perennial waterholes. State-space models of movement data revealed a rapid, highly directional movement behaviour almost exclusively associated with visiting perennial water. Behavioural change point (BCP) analyses demonstrated that these goal-oriented movements were initiated on average 4.59 km, and up to 49.97 km, from the visited waterhole, with the closest waterhole accessed 90% of the time. Distances of decision points increased when switching to different waterholes, during the dry season, or for female groups relative to males, while selection of the closest waterhole decreased when switching. Overall, our analyses indicated detailed spatial knowledge over large scales, enabling elephants to minimize travel distance through highly directional movement when accessing water. We discuss the likely cognitive and socioecological mechanisms driving these spatially precise movements that are most consistent with our findings. By applying modern analytic techniques to high-resolution movement data, this study illustrates emerging approaches for studying how cognition structures animal movement behaviour in different ecological and social contexts.

Find the article at: <http://rspb.royalsocietypublishing.org/content/282/1805/20143042> and a letter in response to the article at: <http://rspb.royalsocietypublishing.org/content/282/1805/20150473>

Also read: <http://source.colostate.edu/an-elephant-never-forgets/>

## ***Mycobacterium bovis* infection in the lion (*Panthera leo*): Current knowledge, conundrums and research challenges (Review Article)**

Ignatius M. Viljoen, Paul D. van Helden, Robert P. Millar  
Veterinary Microbiology, Volume 177

### **ABSTRACT:**

*Mycobacterium bovis* has global public-health and socio-economic significance and can infect a wide range of species including the lion (*Panthera leo*) resulting in tuberculosis. Lions are classified as vulnerable under the IUCN Red List of Threatened Species and have experienced a 30% population decline in the past two decades. However, no attempt has been made to collate and critically evaluate the available knowledge of *M. bovis* infections in lions and potential effects on population. In this review we set out to redress this. Arguments suggesting that ingestion of infected prey animals are the main route of infection for lions have not been scientifically proven and research is needed into other possible sources and routes of infection. The paucity of knowledge on host susceptibility, transmission directions and therefore host status, manifestation of pathology, and epidemiology of the disease in lions also needs to be addressed. Advances have been made in diagnosing the presence of *M. bovis* in lions. However, these diagnostic tests are unable to differentiate between exposure, presence of infection, or stage of disease. Furthermore, there are contradictory reports on the effects of *M. bovis* on lion populations with more data needed on disease dynamics versus the lion population's reproductive dynamics. Knowledge on disease effects on the lion reproduction and how additional stressors such as drought or co-morbidities may interact with tuberculosis is also lacking. Filling these knowledge gaps will contribute to the understanding of mycobacterial infections and disease in captive and wild lions and assist in lion conservation endeavours.

Find the article at: <http://www.sciencedirect.com/science/article/pii/S0378113515001431>

## **Priorities for global felid conservation**

Amy J. Dickman, Amy E. Hinks, Ewan A. Macdonald, Dawn Burnham and David W. Macdonald  
Conservation Biology, Volume 29

### **ABSTRACT**

Conservation resources are limited, necessitating prioritization of species and locations for action. Most prioritization approaches are based solely on biologically relevant characteristics of taxa or areas and ignore geopolitical realities. Doing so risks a poor return on conservation investment due to nonbiological factors, such as economic or political instability. We considered felids, a taxon which attracts intense conservation attention, to demonstrate a new approach that incorporates both intrinsic species traits and geopolitical characteristics of countries. We developed conservation priority scores for wild felids based on their International Union for Conservation of Nature status, body mass, habitat, range within protected area, evolutionary distinctiveness, and conservation umbrella potential. We used published data on governance, economics and welfare, human population pressures, and conservation policy to assign conservation-likelihood scores to 142 felid-hosting countries. We identified 71 countries as high priorities (above median) for felid conservation. These countries collectively encompassed all 36 felid species and supported an average of 96% of each species' range. Of these countries, 60.6% had below-average conservation-likelihood scores, which indicated these countries are relatively risky conservation investments. Governance was the most common factor limiting conservation likelihood. It was the major contributor to below-median likelihood scores for 62.5% of the 32 felid species occurring in lower-likelihood countries. Governance was followed by economics for which scores were below median for 25% of these species. An average of 58% of species' ranges occurred in 43 higher-priority lower-likelihood countries. Human population pressure was second to governance as a limiting factor when accounting for percentage of species' ranges in each country. As conservation likelihood decreases, it will be increasingly important to identify relevant geopolitical limitations and tailor conservation strategies accordingly. Our analysis provides an objective framework for biodiversity conservation action planning. Our results highlight not only which species most urgently require conservation action and which countries should be prioritized for such action, but also the diverse constraints which must be overcome to maximize long-term success.

Find the article at: <http://onlinelibrary.wiley.com/doi/10.1111/cobi.12494/full>

### **The new African Journal Archive (AJA) website is now available.**

The archive preserves journal literature emanating from publishers and societies in Africa and includes searchable collections of journal articles that have been digitised back to the earliest possible issues.

For more information visit [www.ajarchive.org](http://www.ajarchive.org)

## Identification of policies for a sustainable legal trade in rhinoceros horn based on population projection and socioeconomic models

Enrico Di Minin, Jussi Laitila, Federico Montesino-Pouzols, Nigel Leader-Williams, Rob Slotow, Peter S. Goodman, Anthony J. Conway, and Atte Moilanen  
Conservation Biology, April 2015, Volume 13-2

### ABSTRACT

Between 1990 and 2007, 15 southern white (*Ceratotherium simum simum*) and black (*Diceros bicornis*) rhinoceroses on average were killed illegally every year in South Africa. Since 2007 illegal killing of southern white rhinoceros for their horn has escalated to >950 individuals/year in 2013. We conducted an ecological-economic analysis to determine whether a legal trade in southern white rhinoceros horn could facilitate rhinoceros protection. Generalized linear models were used to examine the socioeconomic drivers of poaching, based on data collected from 1990 to 2013, and to project the total number of rhinoceroses likely to be illegally killed from 2014 to 2023. Rhinoceros population dynamics were then modelled under 8 different policy scenarios that could be implemented to control poaching. We also estimated the economic costs and benefits of each scenario under enhanced enforcement only and a legal trade in rhinoceros horn and used a decision support framework to rank the scenarios with the objective of maintaining the rhinoceros population above its current size while generating profit for local stakeholders. The southern white rhinoceros population was predicted to go extinct in the wild <20 years under present management. The optimal scenario to maintain the rhinoceros population above its current size was to provide a medium increase in anti-poaching effort and to increase the monetary fine on conviction. Without legalizing the trade, implementing such a scenario would require covering costs equal to approximately \$147,000,000/year. With a legal trade in rhinoceros horn, the conservation enterprise could potentially make a profit of \$717,000,000/year. We believe the 35-year-old ban on rhinoceros horn products should not be lifted unless the money generated from trade is reinvested in improved protection of the rhinoceros population. Because current protection efforts seem to be failing, it is time to evaluate, discuss, and test alternatives to the present policy.

Find the article at: <http://onlinelibrary.wiley.com/doi/10.1111/cobi.12412/epdf>

### Movements of a Secretarybird tracked for more than two years!



Taemane, a Secretarybird tracked with a sophisticated satellite tracking device, became the first Secretarybird ever to be tracked for more than two years. The information obtained from this bird will be of immense value to conservationists in their work to conserve the globally *Vulnerable* Secretarybird.

Dr Hanneline Smit-Robinson, Terrestrial Bird Conservation Manager at BirdLife South Africa, stated that the data, together with the data received from tracking devices fitted to ten other Secretarybirds, will allow researchers to better understand the movement patterns and habitats used by this species. Even though the project is still in the data collection phase, valuable discoveries have already been made.

The data show that most of the immature birds moved long distances from their nest site and then returned to their natal areas a few months later. Ernst Retief commented that BirdLife South Africa hope to receive tracking data from these birds for many years to come. The information will contribute to the conservation of the Secretarybird.

For more information, images or interviews please contact: Ernst Retief: [ernst.retief@birdlife.org.za](mailto:ernst.retief@birdlife.org.za); Tel + 27 72 223 2160  
Dr Hanneline Smit-Robinson: [conservation@birdlife.org.za](mailto:conservation@birdlife.org.za); Tel +27 11 789 1122.

### Southern African Wildlife Management Association

PO Box 217  
Bloubergstrand 7436

PHONE:  
+27 -21-5541297

FAX:  
0866729882

E-MAIL:  
[elma@mweb.co.za](mailto:elma@mweb.co.za)  
[www.sawma.co.za](http://www.sawma.co.za)

*Please note that any view or opinion expressed in this newsletter may not necessarily be that of SAWMA or the SAWMA management.*

If you would like to share your news with other SAWMA members, please forward it to the following email address: [elma@mweb.co.za](mailto:elma@mweb.co.za)

Warm regards until next time,

Elma Marais  
(Newsletter Editor - SAWMA)

Thank you to the Department of Animal Sciences of Stellenbosch University  
for officially sponsoring the SAWMA laptop