



# Newsletter

April 2017

## Quarterly newsletter of the WDA AME

Volume 3, Issue 1

### Special Announcements:

- The WDA AME committee is pleased to announce the annual meeting, in collaboration with the TAWIRI Scientific Conference in Arusha, December 6th-8th, 2017
- Student members are urged to apply for sponsored membership of the WDA. Application form available at [www.wildlifedisease.org/wda/SECTIONS/AfricanMiddleEast.aspx](http://www.wildlifedisease.org/wda/SECTIONS/AfricanMiddleEast.aspx)
- Proceedings of the 2015 Bovine TB outreach day in South Africa are available online at [www.wildlifedisease.org/wda/MEMBERAREA/MemberResources/WDAREportsfromtheField.aspx](http://www.wildlifedisease.org/wda/MEMBERAREA/MemberResources/WDAREportsfromtheField.aspx)

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## WDA AME Annual Meeting December 6-8th, 2017

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Wildlife Disease Association (WDA)-Africa Middle East (AME) Section has organized a **WDA-AME Wildlife Disease Symposium** as part of the **11<sup>th</sup> Tanzania Wildlife Research Institute (TAWIRI) Scientific Conference** that will be held at the Arusha International Conference Centre (AICC) in Arusha, Tanzania from 6-8 December 2017.

TAWIRI conference will be held under the theme: **“People, Livestock and Climate change: Challenges for sustainable biodiversity conservation”**. The special WDA-AME Wildlife Symposium will be under the sub-theme: **“Wildlife Diseases and Ecosystem Health”**.

WDA-AME Wildlife Disease Symposium is entitled: **“The role**

**of Wildlife Health Professionals and the increasing trend of emerging and re-emerging diseases at wildlife-livestock-human interface”**.

**The objectives of the symposium include:**

1. To mobilize wildlife health professionals to proactively engage in investigation and outbreak responses of infectious diseases of wildlife origin
2. To equip wildlife health professionals with current knowledge and status of infectious diseases
3. To update wildlife health professionals with advances in one health approaches to disease investigation and outbreak responses

Call for abstracts will be open from 01st March to 30th July 2017. Abstracts should be limited to a maximum of 300 words for both oral and poster presentations. Specifically, the abstract should be organized as follows; title, name(s) of author(s) and ad-

resses, brief background/objectives of the study, methodology, results and conclusion. Authors of accepted abstracts for oral/poster presentation will be notified by September 30th 2017. Abstracts for the WDA-AME Wildlife Disease Symposium should be submitted to [mugishalaw@gmail.com](mailto:mugishalaw@gmail.com) for special handling and submission by the section. The abstract should be submitted together with the filled registration form.

Early bird registration fee is 270,000 TZS for developing countries and 250 USD for developed countries. Late or onsite registration is 350,000 TZS for developing countries and 300 USD for developed countries. Early bird registration is open from 1st March – 30th August 2017.

For more details see [http://www.tawiri.or.tz/index.php?option=com\\_content&view=article&id=26&Itemid=25](http://www.tawiri.or.tz/index.php?option=com_content&view=article&id=26&Itemid=25)

## Know your officials for Wildlife Disease Association (Africa & Middle East section) 2016-2018

**Stephen Maina Chege**  
**Vice Chair—WDA AME**  
**Senior Veterinarian**  
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The Wildlife Diseases Association (WDA) was founded in March 1951. WDA's mission is to acquire, disseminate, and apply knowledge of the health and diseases of wild animals in relation to their biology, conservation, and interactions with humans and domestic animals.

The WDA constitution provides for membership subdivisions or Sections for members who have common scientific interests or share common geographical boundaries, and a number of WDA sections have been organized over the last several decades. They include; Australasian Section, the Nordic Section; the European Section; the Latin American Section; the Wildlife Veterinary Section and the African Middle East section. The sections of WDA unite with common interests and bridge disparate geographic regions.

Joining any of the WDA sections comes with benefits which include but not limited to; access to the Journal of Wildlife Diseases and other WDA publications (online or hard copy); contributing to better health management of wildlife; Access to wildlife health experts throughout the world which comes in handy for consultations; reduced registration fees at WDA conferences; student scholarships and awards; free online access to WDA conference programs and abstracts and over 1,200 journals when cited in Journal of Wildlife Diseases papers; contribution to electronic distribution of information on health of wildlife free of charge to more than 135 less economically developed countries; reduced author charges for articles published in the Journal of Wildlife Diseases and online services for members. More details at <http://www.wildlifedisease.org/wda/HOME.aspx>

Taking over from the outgoing officials, the newly elected officials of the Africa and Middle East section would like to work with all of you to achieve the following:

Recruit more members in to the section

Organize a conference or a symposium within the period 2016-2018.

Seek members to actively contribute to the WDA – AME newsletter with an intention of publishing quarterly newsletters.

Active section website by end of

2018.

With everyone's input we can achieve the above objectives.

### THE COMMITTEE

Chairperson - Dr Thomas Manyibe Nyariki (PhD) is the chair of the Africa and Middle East Section of Wildlife Disease Association (WDA/ AME) and the Regional Coordinator for sub-Saharan Africa of the Wildlife Health Specialist Group of IUCN/ WHSG. He is a member of the Scientific Committee of the EcoHEALTH Core Project of Future Earth. He is a member of the Kenya Veterinary Association (KVA) and duly registered as a veterinary surgeon by the Kenya Veterinary Board (KVB).



**Chairperson Thomas Nyariki**

Vice – Chairperson - Dr Stephen Chege holds a Master of Science degree in Veterinary epidemiology & economics and a Bachelor's degree in Veterinary medicine. He is currently working as a senior veterinarian at Al Ain Zoo (UAE) and previously worked in Africa with Free-ranging wildlife and has great interests in diseases at the human-livestock-wildlife interface.



**Vice Chairperson Stephen Chege**

Treasurer – Dr Annie Cook is a post-doctoral fellow in epidemiology at the International Livestock Research Institute. She plays a role in the investigation of the epidemiology of diseases at the wildlife-domestic-human interface.



**Treasurer Annie Cook**

General Secretary - Dr. Lawrence Mugisha is an expert in Wildlife Health and Biodiversity Conservation, Great Ape Conservation and Primate Health, Eco- Health and Livestock Research, Disease Management and Surveillance using One Health Approach with a broad range of Leadership and Management Experiences.



**General secretary Lawrence Mugisha**

Deputy Secretary - Dr. Keyyu holds a PhD in disease ecology with specialization in ecosystem and population health. His research work is mainly on diseases at the wildlife-livestock-human interface especially zoonotic diseases.



**Deputy Secretary Julius Keyyu**

Committee member - Dr. Obanda holds a PhD on applied Veterinary Parasitology from the University of Nairobi. He has over 10 years' experience in research focusing on disease ecology specifically interested in addressing questions on host-parasite interactions, but also involved in wildlife disease investigation and surveillance as well as pathogen discovery studies.



**Committee member Vincent Obanda**

Student representative – Dr Momanyi was recently appointed as a member of the Kenya Veterinary Association, Publicity and IT Innovations sub-committee for a 2-year term period (2016-2018). His current research seeks to evaluate the implementation of One Health in Kenya using the NEOH One Health framework.



**Student rep Kelvin Momanyi**

## Cold-Stun Syndrome in marine turtles in the United Arab Emirates

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Cold Stunning syndrome occurs when a marine turtle becomes hypothermic and is unable to swim or dive. The syndrome has been documented in the eastern shores of the United States, Gulf of Mexico and Western Europe. This syndrome is also found in marine turtles in the Arabian Gulf.

The Arabian Gulf provides a vast expanse of uninhabited coastline and marine life that make it an ideal feeding and nesting grounds for marine turtles. Predominantly the endangered green turtle (*Chelonia mydas*), and the critically endangered hawksbill turtle (*Eretmochelys imbricate*) reside within the Gulf, with the loggerhead turtle (*Caretta caretta*) and the giant leatherback turtle (*Dermochelys coriacea*) in less abundance.

The Gulf is a shallow body of water with an average depth of about 50 meters. This results in rapid surface/water absorption, with surface temperatures greater than 30° C in summer months, and dropping to 18° C in winter.

Marine turtles, like all reptiles, are ectothermic, meaning their body temperature is directly dependent on their external surroundings. They are adapted to a small range in temperature known as, the preferred optimal temperature zone (POTZ). The POTZ is species specific, and if the ambient temperature falls outside of the POTZ, the animal is at risk of illness.

With rising temperatures in the summer, marine turtles of the Gulf tend to migrate to deeper waters to avoid the excessively warm temperatures. In the winter months, November to March, the ambient temperature and sea temperature drops in the region offering little solace to turtles. Older turtles appear to be more adaptable

to the drop in temperature, however the young are quite sensitive.

Each winter, in the United Arab Emirates (U.A.E.), beach goers and waterman find hundreds of juvenile sea turtles, washed ashore or floating in the sea, due to Cold Stun Syndrome. The cold sea temperature decreases the turtles' metabolic rate, also decreasing their immune system. Yearling turtles are most affected by this condition. Found debilitated and weak, the turtles tend to possess a high barnacle burden, from being sessile and having compromised locomotion. Unable to swim or feed, the turtles become anorexic and dehydrated. Cold-stunned turtles are in poor health and usually have bacterial and fungal infections in addition to an increase in parasite loads. A Cold stunned turtle (Fig. 1) is shown. Without veterinary intervention, the prognosis of the debilitated turtles is poor.

The U.A.E. is fortunate to have a rehabilitation program, the Dubai Turtle Rehabilitation Project (DTRP) in conjunction with Emirates Wildlife Protection Office. This facility reha-

bilitates hundreds of injured and ill turtles a year. When ambient and sea temperatures increase, the fit turtles are released. The marine turtles of the Gulf face other anthropogenic threats such as habitat destruction, drowning in fishing lines and nets, ingesting foreign objects from polluted seas and exposure to toxins. They are an important part of the health of Gulf marine ecosystem and efforts to protect, conserve, and learn about the regional marine turtles is warranted.

Acknowledgements to Emirates Wildlife Protection Office and Dubai Turtle Rehabilitation Project (DTRP) for the rehabilitation marine turtles in the U.A.E; and to the intensive research performed by Marine Turtle Conservation Project of Emirates Wildlife Society–World Wild Fund that recorded and compiled the current data on the Gulf marine turtles.

In case you find a sick or injured turtle in the Emirates, please contact DTRP at +971 043017198 or email [baaaquarium@jumeirah.com](mailto:baaaquarium@jumeirah.com).



**Figure 1: Cold stun juvenile hawksbill with heavy barnacle load.**  
Photo credit: Dubai Turtle Rehabilitation Project

# Tuberculosis as an Emerging (Re-Emerging) Disease in South African Wildlife

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Bovine tuberculosis (BTB) has been recognized as a threat to wildlife health in South Africa since the 1990's when veterinarians in Kruger National Park identified cases in buffalo herds in the southern area of the park. However, sporadic cases of BTB have been reported throughout the country since the initial identification in a greater kudu and common duiker in the Eastern Cape in 1929. Since that time, *Mycobacterium bovis* has been found in more than 21 species in South Africa.

Although a Bovine TB Eradication Scheme was introduced in 1969 to address the issue in cattle, changes in national and provincial veterinary structures, lack of funding and trained personnel, and disease prioritization have resulted in failure to control the disease in South Africa. With the growth in the private game industry and translocations associated with conservation programs, there were new challenges in detecting and managing BTB in species for which there were no available diagnostic tests. In addition, the previous eradication schemes for BTB and brucellosis did not include wildlife since there was a misperception that these species were not important in disease maintenance.

Recent outbreaks of BTB in wildlife in multiple new locations around South Africa illustrate the importance of an integrated approach to control strategies (Figure 1). It is estimated that between 70,000 and 200,000 wild animals are moved annually in South Africa. This represents a significant potential risk for moving diseases. Examples have been documented for BTB spread associated with translocation of wild-

life. One game reserve with genetically valuable African buffalo was found to have a high prevalence of BTB which was traced back to introduction of untested greater kudu, blue wildebeest and impala onto the farm. This has resulted in quarantine and costly testing of the current stock.

Discovery of *M. bovis* on a property results in quarantine, resulting in loss of income from animal products and ecotourism, inability to move animals for conservation or breeding programs, and stigmatization. Without accurate ante-mortem diagnostic tests, these restrictions become permanent, effectively isolating the wildlife population. In addition, livestock that border areas with infected wildlife are at risk of spill-back. This has already occurred in rural cattle that border the Kruger National Park.

Recent confirmation of *M. bovis* infection in free-ranging white (Figure 2) and black rhinoceros in Kruger National Park has led to a halt in translocations. Inability to move



**Figure 2: TB lesions in a White Rhino**

animals to other locations has confounded anti-poaching efforts and conservation programs.

Development of new diagnostic techniques for detection of BTB in wildlife and their implementation in disease surveillance programs are critical to mitigate the spread of diseases to new locations and populations, especially those that are fragmented and contain endangered species. Research, communication between wildlife, veterinary, regulatory and public health professionals, and implementation of a One Health approach is essential to stemming the re-emergence of this disease.



**Figure 1: Map of recent bovine TB outbreaks in wildlife in South Africa**  
 Courtesy of Dr. LM deKlerk-Lorist

## Grazing for Change Conference Report

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The Grazing for Change conference brought over 300 participants on 8<sup>th</sup> February 2017 at the National Museums of Kenya from a wide range of stakeholders working at the wildlife-livestock interface, to discuss the opportunities and challenges facing this evolving sector, and explore the incentives driving the preservation of the rangelands, and concurrently launching the Mara Training Centre, a member of the Global Savory network. The Mara Training Centre is committed to sustainable rangeland management that allows space and resources for all people, cattle, and wildlife.

### **The wildlife/livestock interface in Kenya's conservancies**

In his keynote address, KWCA Founding Chief Executive Officer, Dickson Ole Kaelo (Figure 1) stated that collaborative efforts are critical especially at a time when seasons and rains are failing/unpredictable and that connected landscapes are very important for not only wildlife but also communities. He also shared his experience when working at ILRI where they managed to demonstrate through wildlife counts that areas grazed by livestock become very important nutrition hotspots for wildlife.

### **Keeping landscapes open for wildlife and people**

In her keynote address, Director of the Center for Collaborative Conservation, Robin Reid started off by mentioning that the first task is to keep landscapes open for people and wildlife with the second task being to grow enough grass, have good governance, secure profits, stop poaching and insecurity. She empha-



**Figure 1: KWCA Founding Chief Executive Officer, Dickson Ole Kaelo**

sized that the second task is super-important and the most difficult when it comes to running conservancies. She reiterated that unless the first task is achieved the second one may not be realized.

### **The land and livestock enigma**

In his keynote address, president and co-founder of The Savory Institute, Allan Savory (Figure 2) started off by stating, "None of our problems are being caused by anything but ourselves". He reinforced that the holistic management model is applicable to Kenya if there will be a transition of the management and policies from reductionist to holistic; with the focus being directed to address the root causes of desertification and not the symptoms. He reaffirmed the Savory Institute support to Kenya in implementing the model by provision of the necessary materials and technical assistance.

### **The wildlife heritage and sustainability challenge**

In her keynote address, CEO of Kenyan Conservation NGO WildlifeDirect, Paula Kahumbu (Figure 3) urged the participants to: Promote and support leadership from top down and bottom up approaches; enlist support of everyone by making information available through traditional and new media; and identify

critical pathways to mobilize the best vehicles to drive urgent responses and to help solve problems. Her concluding remarks were that government decisions need to be grounded in good science to demonstrate, test and prove before acting using novel solutions that will have impact consistently.

### **Panel Discussion: Creating win-win scenarios for enterprise (Figure 4)**

Livestock remains an integral part of pastoral communities and contributes 70% to household income as compared to tourism which contributes 30% even in the most thriving conservancies. The future is for tourism as an industry to be innovative in such ways that they can incorporate the local lifestyles and turn them into experiences, rather than looking at them as hindrances to the experiences of the traveler/tourist. Every intervention should not be an incentive rather a transformative-intervention to move people to a place where they can properly and positively engage in designing their future.

### **Panel Discussion: Putting ideals and concepts into practice**

Conservancies are transitioning to a much better state since poaching as well as cattle rustling have declined.



**Figure 2: President and cofounder of The Savory Institute, Alan Savory**

Conservancies should be viewed as a tool for land management with an already developed system of livestock and wildlife. The rule of law must underpin everything that we are doing and therefore conservancy rules or regulations must be enforceable, upheld and with adequate penalties when bridged.

**Panel Discussion: Continuing need for research (Figure 5)**

There is tension between livestock and wildlife that can be ameliorated through research and innovation to have an endpoint of better livelihoods and not just alleviating poverty but to transform people’s lives in meaningful ways. There was also recognition that we need to have a healthy environment to have a healthy population. It was observed that already a lot of people are dropping out of pastoralism because of urbanization, which also presents a challenge to the conservation of the environment and wildlife e.g. railway development. It was noted that the recent agreement in Paris presents lots of opportunities for scientific ideas especially when it comes to the rangelands e.g. carbon credits. There are social-anthropological gaps in research in terms of people’s

needs and engagement especially on how initiatives/projects impact people on a much wider scale and factoring in unforeseeable/indirect consequences. Some of the ongoing research at ILRI mentioned were: carbon credit payments in rangelands, developing drought adapted grasses, MCF & ECF vaccine development, work on Trypanosomiasis by retrogressing the gene conferring resistance, and the index-based livestock insurance.

**The contributions and networking of the Savory**

In his presentation, Chief Operating Officer-Savory Institute, Tre Cates

highlighted that the Savory network mandate is to help learning centres (hubs) globally by giving them the tools and help provide implementation support to pastoralists, practitioners, governments, NGOs support livelihoods, build solutions, and create the change outcomes, that they want to reach at their local context. He clarified that “holistic management” is a decision-making framework that allows one to identify what is locally relevant and cautioned against taking it as “prescription”.

**Impacts on communities through training**

In his presentation, lecturer at the University of Nairobi, Oscar Koech enlisted the training modules to be offered at the Mara Training Centre as: Livestock husbandry and breeding; with holistic management being tackled by the Savory institute; disease management and One Health; climate risk management; financial management; wildlife-livestock complementarities; and the module on alternative livelihoods. He elaborated that prospects are that the centre to offer vocational training to communities, youth groups, practitioners, producers, experts, and managers equipping them with the right information to be implemented at the local conservancies and communities with an ambitious target of expanding the training to other regions of



**Figure 3: CEO of conservation NGO WildlifeDirect, Paula Kahumba**



**Figure 4: Panel discussion: Creating win-win scenarios for enterprise**

Kenya and East Africa.

**Opinion of participants on how conservancies will change in the next 10-20 years**

With the right business model (not dependent on tourism) there is certainty that conservancies will survive the next 10 years.

The devolved county governments in Kenya present an opportunity for conservationist to engage and assure their active participation in the sustainability of conservancies.

The conservancy institution would mutate into land ownership by the community and not by institutions catalyzing more engagement in conservation activities, health care, and improved interaction with the government.

The tension between land legislature, the constitution and conflict between land rights and conservation attributable to the drive towards private ownership will change if only real wealth and opportunities are offered to communities.

The unfaceted perception of conservancies as a way of conserving wildlife and working with the community will change to a way of doing rural development where the government offers support and engages the community conservancy institution as a

way of delivering its government programmes.

The conservancies will transition from simply addressing community aspirations to having very clear goals on what conservancies stand for in Kenya. Moreover they will be aligned with the country's sustainable development agenda and this should ultimately influence policy to secure conservancies in the long term.

**Conclusions**

It was concluded that everyone has a role to play in generating knowledge and solutions. Change is inevitable

but lessons from nature inform us that the more diversity we have the more stable the ecosystem. Participants were urged to strive in protecting and safeguarding planet earth for future generations. It is important to take greater ownership of science and make it available to the public.

Communities were challenged to think of conservation beyond the monetary benefits/earnings and start thinking about sustainability through innovation. Investors and landowners were advised that to accrue the best value from an enterprise it is important to determine the most appropriate land use activity that provides room for livestock, the community, preserves heritage and conserves wildlife. The government (tourism sector) was challenged to come to terms with the fact that the value of wildlife and livestock are all embedded in the cultures of communities and therefore need to integrate all of them in the tourism packages.

An in-depth report with a narrative covering all Presentations and Panel Discussions will be available on the Mara Training Centre website (<http://www.maratrainingcentre.com>), as well and links to the video recordings of all sessions. Also view the conversion on Twitter using the hashtag #Grazing4ChangeKE



**Figure 5: Panel discussion: Continuing need for research**