

# COMBATING WILDLIFE CRIME in EAST and SOUTHERN AFRICA THROUGH WILDLIFE FORENSICS

By George E. Otiang'a-Owiti (BVM, MSc, PhD)

I invited Dr. George E. Otiang'a-Owiti to be a guest columnist for the spring IGW issue. He was an enthusiastic attendee at our Wildlife Field Forensics annual training seminar in May 2014. I thank director Ken Goddard and coordinator Darrell Hegdahl of the US Fish and Wildlife Service Forensics Lab for honoring my request for Dr. Owiti's visit to the lab, and I thank Dr. Owiti for the following article. – C. Gonder

Over the years, global crime in wildlife has escalated and become much more sophisticated and well-organized. Shrinkage of habitats and the trans-border demand for wildlife derivatives has resulted in decline of many species. Illegal wildlife trade presents a serious threat to the survival and conservation of many endangered species. The impacts of illegal trade can be wide-ranging and will, of course, vary from locality to locality, country to country with the precise impacts varying depending on the sector. Combating wildlife crime is therefore essential for preservation of our natural heritage in Africa through contemporary policies, legal and institutional reforms. Global statistics indicate that poaching of rhinoceroses, elephants and other key species has escalated dramatically during the past few years. For example, during the last three years, Kenya lost over 100 rhinoceros through poaching, while some Range States like

South Africa lost over 2000 rhinos. Apart from this, rhino horn stockpiles in Africa are at risk of illegal trade. A total of almost 18 tons of rhino horn have been documented in East and Southern Africa. These stockpiles are an indication of the ongoing fight against wildlife poaching as well as those recovered as retrievals from animals that died from natural or management-related causes or from poached animals or seizures. The high value of such stockpiles; however present a risk since weak control measures may cause theft or misregistration thus fueling illegal trade.

The level of wildlife crime is escalating yet our ability to train adequate personnel to tackle the wave of illegal wildlife killings and trade are no match

for this spiraling increase. Effective prosecution is hampered by lack of concrete expert evidence that can link a poacher to a confiscated rhino horn or ivory and relate it to a specific poaching incidence. With increasing wealth in East Asia, the demand for rhino horns in traditional medicine is likewise increasing, particularly in Vietnam, China and Thailand. Rhino horns are used as main ingredients in 'magic' medicine to revive comatose patients, cure cancer and fevers, aid male sexual stamina (an aphrodisiac) and fertility, treat inflammatory disorders, and other ailments associated with toxicity and bodily heat generation. Rhino horns can fetch between USD 65,000-80,000 per kilogram, creating a firm and lucrative demand for these products in wildlife trade. The horn is also used to make ornately carved handles for ceremonial daggers, called jambiyas in Middle East. It is now more expensive than platinum and gold. Aside from feeding the demand, Asian countries largely con-



Left to right: Dr. Potter and author at crime scene. Dr. Potter, author and trainees of the course at the scene of crime. Author and a Veterinarian look for the bullets.



**Clockwise from top left: Poached black rhino with its horns removed (Courtesy of KWS Rhino Program). Author with a rhino skull. Dr. Cindy Harper demonstration how to use the E-Rhodus software application**

tribute as trading points in the illegal trade of rhino horns and it is important that investigators are conversant with the various forms of the horn.

Wildlife forensics is a relatively new method of law enforcement around the world and has not yet caught the full attention of wildlife experts in Africa. There have been thousands of seizures and a slew of cases filed all over this region, but convictions are rare in wildlife crime cases since many cases simply cannot be pursued without good scientific and legal support. A conviction rate close to 5% in rhino and elephant poaching is particularly shocking, considering the steadily falling species population. In the light of this development Wide World Fund for Nature-African Rhino Program organized a one week regional conference in Naivasha, Kenya. The aim was to introduce key aspects of illegal wildlife trade that affect critical endangered species in Africa; concepts of forensics and aspects of wildlife crime scene investigations with a focus on the rhino; the implementation of the Rhinoceros DNA indexing system (RhODIS®) and its role in supporting law enforcement, including demonstra-

tion of e-RhODIS Software Applications for Forensic Data Collection were covered extensively.

The RhODIS® provides an inventory of live, hunted, poached and dehorned rhinoceros and rhinoceros horns in stockpiles as well as a traceability system to track rhinoceros and horn movement. The need to adopt these investigative techniques that use sophisticated technology and forensic sciences is critical. Forensic data/information strengthens criminal prosecution and if these technologies are well developed in Africa for wildlife crime prosecution, they will go a long way in helping improve on convictions. The training was centered on wildlife crime scene investigation and conducted in collaboration with trainers from South Africa (Doctors Cindy Harper and Rod Potter) and other Kenya Wildlife Service (KWS) Officers. The main theme of the conference was highlighting the wildlife crime scenario associated with in situ rhino poaching and RhODIS-DNA Technology as a tool to support rhino poaching investigations.

In the conference, a mock crime scene was enacted using a zebra. The participants were given an opportunity to investigate the spot, manage and process the crime scene. The action included methods of collecting, preserving, and analyzing the crime scene. Emphasis was placed on recording minute details during investigation,

which negated the chances of the evidence being questioned during a trial. The process of collection of evidence and the precautions that need to be taken during the process were also reiterated and discussed.

The training that I attended during the 8th annual Wildlife Field Forensics: Advanced Training for Wildlife Crime Scene Investigators at Seeley Lake Montana and a follow up visit to National Fish and Wildlife Forensics Laboratory in Ashland, Oregon between 13th and 16th May 2014, gave me the “spring board” to be the Lead Facilitator in the conference. The conference lasted for 6 days (26-31 January 2015) and during this period the officers received interactive lectures, demonstrations and hands on exposure to crime scene management. Twenty four participants attended the Convention of a Conference on Scene of Crime Trainers and included wildlife investigators, wardens and prosecutors from Rhino Range States of Botswana, Uganda, Tanzania and Kenya. I gave a talk on the wildlife crime and illegal trade and the role of the law enforcement officials in dealing with the rise of illegal wildlife crime in Africa. I also gave presentations on the various wildlife forensic techniques and practical demonstration on some aspects of crime scene management and necropsy, amongst others.

It is anticipated that the knowledge and skills acquired can be useful in meeting challenges of the officer’s daily work including follow-up actions that are to be taken when seizures are made, crime scenes are investigated, information is gathered or evidence presented to court. This we believe will significantly enhance the chance of good results, which in most cases should be a conviction that deters wildlife criminal acts in future. 🐘

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