

The newsletter of the Society for Wildlife Forensic Science

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SWFS NEWS

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TRAFFIC

Wildlife forensic scientists from around the world met at a workshop in South Africa in June to discuss the technical development of DNA forensics for investigating illegal poaching and trade in rhinoceros.

The workshop, funded by USAID through the Wildlife-TRAPS Project and the WWF African Rhino Programme, brought together scientists, enforcement officers and investigators from source, transit and consumer countries of rhino horn. Various branches of South Africa's Police Service were represented, as was the country's Department of Environmental Affairs (DEA).

Since the rhino poaching upsurge in Africa started in 2008, over 5,000 rhinos have been poached across the continent. "The reach of the transnational organized criminals behind the poaching has extended to all major rhino range States, undermining rhino conservation successes achieved over the last two decades; threatening both African rhino species if increasing poaching levels cannot be brought under control" said Dr Richard Emslie from the IUCN SSC African Rhino Specialist Group.

One of the aims of the workshop, organized jointly by the University of Pretoria's Veterinary Genetics Lab (VGL), TRAFFIC, WWF and TRACE Wildlife Forensics Network, was to coordinate rhino forensics at an international level. Scientists from Malaysia, Thailand, Vietnam, Indonesia, Hong Kong, South Korea, South

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The workshop took scientists and enforcement officers to a rhino crime scene in Kruger National Park, allowing them to see two poached rhinos. Photo © Simon Robertson

Welcome from the SWFS President

Dear SWFS Members,

Welcome to the second issue of SWFS News. Our first publication in January was well received, so we're looking to continue with the newsletter and keep our membership informed of what's happening in the world of wildlife forensic science. As usual there is a lot going on and I'm sure we've not captured it all, but please enjoy reading and as always, consider contributing to future editions.

From a personal perspective, the past six months have flown by. It's now a year since our Missoula meeting and therefore only another twelve months until Edinburgh 2017! Plans are in full swing, we hope to have a conference website up soon and the local team are really looking forward to hosting the Society's first meeting in Europe.

Related to this I was fortunate enough to have the opportunity to attend a European non-human forensics meeting in Prague in April, where I met a lot of like-minded scientists working together to support the development and application of standards and new techniques. Sounds familiar? Have a look at the article on page 5.

The SWFS board has recently voted to develop a new Technical Working Group (TWG) to replace SWGWILD and we hope this process will be completed by the end of the year. Dr Lucy Webster, head of the UK wildlife DNA forensics lab at SASA, will chair the TWG, which is planning to meet in the autumn to finalise its terms of reference and discuss future activities.

The Society is also gearing up to be represented at the upcoming CITES Conference of the Parties (CoP17) happening in Johannesburg, South Africa, at the end of September. This gathering of over 180 national CITES delegations happens every three years and involves around 2,500 delegates from

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Rhino Forensics to Expand to Address International Needs

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Delegates visited a rhino crime scene in Kruger National Park. © Dr Cindy Harper

Africa, Kenya, Botswana, Namibia, Netherlands, United Kingdom, Australia, Czech Republic, and India, including many SWFS members, attended the meeting to learn more about the issues on the ground, and about RhODIS[®], the current rhino DNA profiling and database system, developed by VGL.

Workshop delegates and all African rhino range States supported the development and use of standardized global forensic rhino DNA methods, to support species identification as well as individual sample matching.

According to Dr Cindy Harper, Director of VGL, a major output of the meeting was that it detailed the requirements of a simplified method to facilitate the sharing and roll out of an improved RhODIS® compatible analysis system to multiple laboratories across the world that can become the international standard capable of producing comparable DNA profiles, which can be loaded onto a global database.

"While the RhODIS® system is already a proven tool for the investigation of rhino poaching cases and has been used in a number of prosecutions; the refinement and roll out of a recognized international forensic rhino DNA standard should positively support enforcement action and investigation of trade routes at an international scale," she said.

Dr Joseph Okori, leader of WWF's African Rhino Programme, noted the critical role of the global forensic community to combat rhino crime and said that DNA analysis is starting to help improve knowledge of trade routes and inform other aspects of rhino management.

Nick Ahlers, who manages the Wildlife-TRAPS Project for TRAFFIC and IUCN, said "another aim of this workshop was to build relationships between different scientists from countries important in the illegal rhino horn trade, and we've certainly achieved this given the positive feedback by the range, transit and consumer countries that have participated this week."

But the impacts of this workshop extend beyond rhinos. While poaching threatens to wipe out rhinos, it "is also devastating local communities through associated criminality, violence and theft," said Dr Sara Carlson, a Biodiversity and Natural Resources Specialist at USAID. "DNA forensics is a critical tool in the fight against wildlife crime and the outcomes of this workshop are likely to have impacts beyond rhinos to other species involved in the illegal wildlife trade."

Delegates also saw a demonstration of the eRhODIS data collection app and how versions of these apps in other languages could be developed in future.

They also visited a rhino poaching crime scene in Kruger National Park, where participants saw two poached rhinos whose horns had been savagely hacked off with an axe. The park loses about two rhinos a day to poaching, and both black and white rhino populations in the park appear to have started to decline.

"This really brings home the reality of the rhino horn trade and justifies our recent transfer of 14 seized rhino horn samples to the South Africa Government for RhoDIS DNA testing to aid enforcement," Dr Jeffrine Rovie, from the National Wildlife Forensic Laboratory in Malaysia, said.

It is that type of collaboration and support, fostered by this workshop, that is needed to help the rhinos.