CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Seventieth meeting of the Standing Committee
Rosa Khutor, Sochi (Russian Federation), 1-5 October 2018

FINGERPRINTING TECHNIQUES TO BATTLE PANGOLIN POACHING

This document is submitted by the CITES Management Authority of the United Kingdom of Great Britain and Northern Ireland in relation to agenda item 30.1.*

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Introduction

A pioneering new project has trialed fingerprinting techniques to battle pangolin poaching.

Forensic fingerprinting techniques will now be used in the battle against illegal wildlife trade as new methods of lifting fingermarks from trafficked animals were announced on 28 June 2018.

Researchers at the University of Portsmouth and international conservation charity ZSL (Zoological Society of London), with support from the UK Border force, developed the technology with one particular animal in mind - the pangolin. Pangolins - also known as scaly anteaters because of their appearance - are found throughout Asia and Africa, but their numbers are dwindling as a result of poaching for international trade. Around 300 pangolins are poached every day, making these unusual animals the most illegally trafficked mammals in the world. Their meat is considered a delicacy in China and Vietnam, while their scales are used in traditional Asian medicine. They are also used in traditional African bush medicine. All trade in pangolin meat and scales is prohibited under the Convention on International Trade in Endangered Species (CITES).

The technique

This new method uses gelatine lifters with a low-adhesive gelatine layer on one side, which are used universally by forensic practitioners for lifting footwear marks, fingermarks and trace materials off various objects in criminal investigations.

In a preliminary trial, the researchers tested the usability of gelatine lifters for visualising finger marks on pangolin scales. Using 10 pangolin scales from several species, supplied by UK Border Force, each scale was gripped by five participants. A gelatine lifter was applied to the scale, removed and scanned using a BVDA GLScanner system which provided 100 fingermarks (one from the front and one from the back of the scales).

The fingermarks were then graded for the presence of ridge detail on the University's BVDA gel imaging scanner and 89% of the visualised gelatine lifts examined produced clear ridge detail. This means that law enforcement agencies may be able to use this information to identify persons of interest who have come into contact with the scale.

Christian Plowman, Law Enforcement Advisor for ZSL, said: "This project is a great example of how multiple organisations are working together to not only develop methods that work, but to optimise the methods for use in wildlife crime investigations.

Uses for the technique

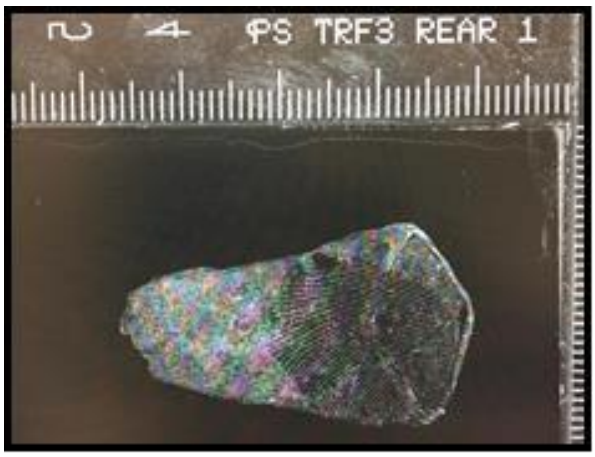
Wildlife trafficking is a significant factor in the loss of habitats and species. While forensic science techniques are being used as part of the investigation process, these are not always optimised for the context of wildlife forensic investigations and in the environments where the investigations take place.

This technique creates a quick, easy and usable method for wildlife crime investigation in the field to help protect these critically endangered mammals. It is another tool that we can use to combat the poaching and trafficking of wild animals."

Gelatine lifter packs have been developed for Wildlife Rangers in Kenya and Cameroon to help in their fight against illegal poaching of pangolins. Each pack contains 10 gelatine lifters, scissors, insulating packs, evidence bags, a roller and a simple pictorial guide for the Rangers to follow. The field packs for the Kenyan wildlife service were initially provided for the examination of poached elephant ivory and dead elephants killed by poachers.

A fundamental element to this method is its application, it is easy to use and employs low-level technology. This is important for rangers in the field who need to be able to get good quality fingermarks very quickly to ensure their own safety and to facilitate law enforcement in developing countries who may not have access to more advanced technologies and expensive forensic equipment."

The study involved researchers from the University of Portsmouth and ZSL (Zoological Society London). The researchers hope to present their findings at the Chartered Society of Forensic Sciences later in the year.



An example of a fingerprint found using the new technique

Photo credit: University of Portsmouth

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