Scientists in battle against trafficking

Scientists from the Royal Zoological Society of Scotland are sharing forensic techniques with investigators in Asia to help enforcement agencies pursue more wildlife crime prosecutions. Credit "TRACE/RZSS"

A Darwin Initiative project, part-funded by The Royal Zoological Society of Scotland, is helping to fight one of the biggest threats to wildlife by using genetics to directly target the lucrative illegal black market trade in flora and fauna in south east Asia.

Practical enforcement of wildlife trade legislation in the south east Asian region is seriously hampered by lack of experience, coordination, expertise and capacity. As part of the three-year £200,000 forensics project, genetics experts in Edinburgh are now sharing their skills and knowledge with enforcement agencies in ASEAN countries (Brunei, Cambodia, Indonesia, Lao, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam). The first regional wildlife forensic workshop took place in Kuala Lumpur in August 2010, and the hope is that shared techniques will allow greater accuracy in the collecting and processing of forensic data which could help bring about more wildlife crime prosecutions.

Recently back from his trip to Malaysia, joint leader of the workshop Dr Rob Ogden said: "The wildlife of south east Asia is one of richest in the world and as a result has one of the biggest battles with wildlife crime. In Europe, where

resources and techniques have advanced significantly in DNA analysis and genetics, forensic analysis is now an established enforcement tool in fighting wildlife crime.

“In areas such as south east Asia, where arguably these techniques could have the most benefit, organisations are overwhelmed by the sheer incident numbers and a lack of experience or knowledge in using these techniques to help their investigations. We hope we can share our knowledge to help investigators collect data accurately to enable species identification as well as confirm their geographical origins. These two indicators are crucial in building evidence about what crime has occurred.”

Pangolins are endangered due to the popularity for food and traditional medicine. Credit “Chris Shepherd/TRAFFIC”

As fellow project scientist Dr Ross McEwing continued, as science continues to develop enhanced investigative techniques it is hoped that the risk of being caught will act as more of a deterrent. “If an animal is still recognisable then you can usually identify it without the need for DNA analysis. But even then, knowing where it has come from can have a huge impact on potential criminal leads and, if it is still alive, on its survival rate once it is returned.

“When an animal or even a plant can’t be identified this is when forensic techniques can seriously come into play. For instance, pangolins are endangered due to the popularity of wildlife trade for food and traditional medicine. Once seized – unless returned to their original habitat – they tend to die so being able to tell where the animal is from is important in order to support its return. These forensic techniques can

also help to identify whether indistinguishable meat is from these protected animals.”

As well as providing specialist training courses that will help develop the capacity for wildlife forensic investigations, the Scottish team is also giving guidance on laboratory systems to support forensic processing and web resources to help share best practice, tried and tested techniques and benchmark species’ DNA guides.