



Forensics Working Group

FWG Terms of Reference

- Published on Defra PAW website
- Objective: to assist in combating wildlife crime through the promotion, development and measured review of DNA and forensic techniques
- FWG supports the whole of PAW UK, providing tools to assist enforcers

FWG Composition

- Representatives of UK government departments, police, UK Border Agency, government endorsed forensic laboratories and secure NGOs
- 2-3 meetings a year, informs and informed by PAW Steering Group

Improved Information available

- Collated cases that have used forensics
- Awareness of tests available
- Legal Eagle articles
- Forensic Wildlife Crime Handbook (Oct 2012)
- PAW / NWCUC / TRACE websites

Sampling Kits

- Practical kit for use in the field
- Maximising evidential opportunities
- Easy-to-use
- Consumable replacements
- Advice and guidance, contacts



Forensic Analysis Fund

- Match-funding for wildlife forensic analysis
- Information provided by investigator, assessed by FAF panel
- Conditions of funding (media / costs)
- New improved form (2012)
- Communication and awareness
- Monitoring of effectiveness

FAF - Selected case studies

1. Illegal trade in ivory
2. Rhino horn smuggling
3. Hare coursing

1. Illegal ivory trade

- Trade in ivory is only legal if it is from an elephant that died before 1947 and it is worked
- Online trade opened a new opportunity for potential illegal trade in ivory
- Age of ivory from appearance can be faked



1. Illegal ivory trade

- NWCU had intelligence relating to potential illegal ivory sales on eBay
- Alerted Hampshire Police who carried out a search on the premises
- 33 items of ivory seized
- Accused claimed they were pre 1947
- FWG suggested carbon dating



1. Illegal ivory trade



- Radio-carbon dating – new forensic tool to date ivory
- Nuclear bomb testing enrichment of C_{14} since 1950s
- Can identify ivory that is from elephants alive after the ban in trade (1947)

1. Illegal ivory trade

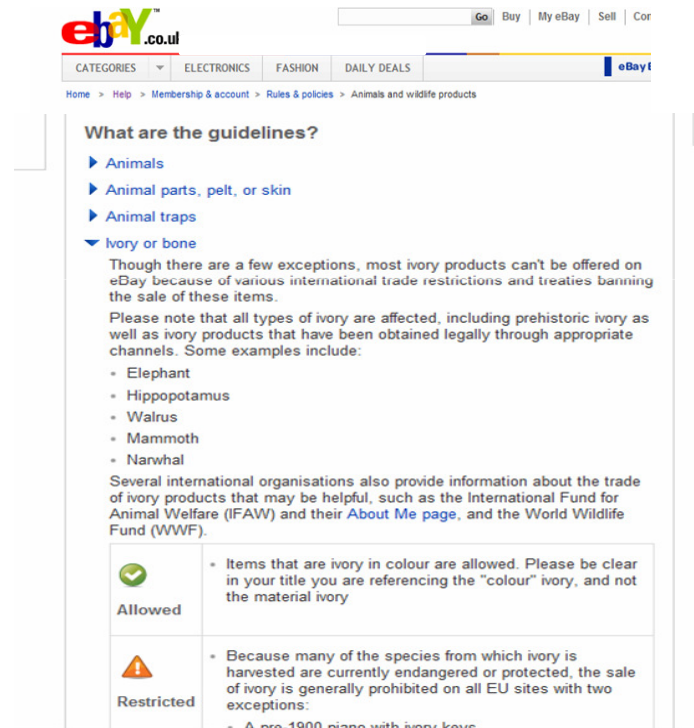


- SUERC – carried out radio-carbon dating on a number of items
- Tests showed that these items not pre 1947
- Therefore the ivory items on sale were illegal
- Forensic evidence accepted by court

1. Illegal ivory trade

Outcomes

- No conviction (the jury took pity on the defendant) but...
- Good media coverage
- Knowledge of new test available
- Ban on trade in ivory on eBay in 2009



2. Rhino horn smuggling

- Massive increase in rhino poaching since 2007
- Driven primarily by demand for rhino horn for traditional Asian medicines
- Problems
 - Identifying rhino horn in trade – species identification
 - Working back along the supply chain – individual matching



2. Rhino horn smuggling



Rhino DNA tests

- Identify species from horn/powder in trade
- Can match horn in trade to specific poaching incidents

2. Rhino horn smuggling

- 2009 - Manchester UKBA stop a man boarding a flight on route to China
- Rhino horns recovered from his luggage
- TRACE Wildlife Forensics Network - DNA analysis confirmed white rhino horn – but where from??



2. Rhino horn smuggling



- UKBA tracked down recent deceased rhino from Colchester zoo. Zoo had incineration certificate and had kept reference blood sample (very useful!). Zoo not to blame.
- DNA profile from blood sample match that of horn.
- Horn DNA 17,000 times more likely to originate from Colchester rhino than any other rhino.

2. Rhino horn smuggling

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5 October 2010 Last updated at 17:17

Airport rhino horn smuggler jailed for 12 months

An antiques dealer who tried to smuggle rhino horns out of Manchester Airport has been jailed for 12 months.

Donald Allison, of Lancashire, hid the two horns in a sculpture as he tried to board a flight to China.

The horns, which could be worth up to £600,000, were from a rhino called Simba which died at Colchester Zoo.

They were destined for the lucrative Chinese medicine market to be sold in powder form. Allison, 62, was sentenced at Manchester Crown Court.

Airport-based UK Border Agency (UKBA) officers foiled the plan on 30 June 2009 after intelligence reports suggested a plot to smuggle white rhino horns on to a flight from Manchester Airport to China via Amsterdam.



Donald Allison was jailed for 12 months

Outcomes

- Conviction
- 12 month jail term
- Significant publicity of the case and the Rhino DNA profiling technique
- Future applications to establish DNA database of museum/zoo specimens in the UK

3. Hare coursing

- Coursing is one of the UK wildlife crime priority areas
- Hard to catch offenders in the act
- Possible DNA transfer from dog to coursed animal
- Can link suspects to offences via their dogs



3. Hare coursing



- March 2011: three men seen on a country estate in Merseyside late at night
- Police attended – men had lamping equipment and two lurcher-type dogs
- Fresh hare carcass found in the vicinity
- Suspicion of hare coursing

3. Hare coursing

DNA analysis – SASA
Wildlife DNA Forensics unit



- DNA from 2 dogs recovered from hare
- Does not match either of the suspects dogs

DNA evidence provides NO support to the proposition that these men coursed this hare

3. Hare coursing



Outcome

- Charges relating to hare coursing dropped
- Animal welfare charges being brought by RSPCA

Consider the importance of exclusion as well as inclusion for investigations

Take home messages

- Forensic analysis queries? Contact the PAW Forensics Working Group – see contact details
- Many different tests available
- Apply to FAF - contribute 50% of forensic analysis costs