# Forensic Biology & Serology

PRESENTATION

Topic: Significance of Wildlife Forensic & Organization Involved

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#### Wildlife Forensic

- ▶ Wildlife forensics is a relatively new field of criminal investigation. Its goals are to use scientific procedures to examine, identify, and compare **evidence** from crime scenes, and to link this evidence with a suspect and a victim, which is specifically an animal. Killing wild animals that are protected from hunting by laws, also called poaching, is one of the most serious crimes investigated by wildlife forensic scientists. Other crimes against wildlife include buying and selling protected animals and buying and selling products made from protected animals.
- One of the most critical problems facing wildlife forensic scientists is identifying a particular species from crime scene evidence. For example, wildlife forensic scientists may have to distinguish if a piece of leather on a watchband is made from a protected animal, like an elephant or a zebra, or if it comes from a non-protected animal, like a cow or a horse

- Crime against wildlife and their derivatives involves four major categories:
- The illegal taking or poaching.
- Possessing.
- Trading, shipping or moving.
- Inflicting cruelty or persecution of wildlife in breach of these laws.

# Offences Against Wildlife

- killing,
- poaching
- , maiming,
- poisoning
- , or torturing

an animal is a cognizable offense and immediately FIR must be lodged in the area police station. The punishment for such an act is rigorous imprisonment which may extend to five years or fine or both.

#### Nature of Wildlife Crime

- DAMAGE TO HABITAT (Including grazing, encroachment, pollution etc.)
- ► IMPORT/EXPORT (Smuggling)
- ► TRESPASS
- ► DOMESTIC TRADE
- ► CRUELTY
- ► HUNTING/FISHING
- ▶ POSSESSION

### Wildlife Protection Act, 1972

The Indian Parliament enacted the Wildlife (Protection) Act in 1972, which provides for the safeguard and protection of the wildlife (flora and fauna) in the country. This is important legislation and forms an integral part of the environment and ecology

This Act provides for the protection of the country's wild animals, birds, and plant species, in order to ensure environmental and ecological security. Among other things, the Act lays down restrictions on hunting many animal species. The Act was last amended in the year 2006. An Amendment bill was introduced in the Rajya Sabha in 2013 and referred to a Standing Committee, but it was withdrawn in 2015.

# Significance of Wildlife Forensic

Wildlife crime, whether it be in the form of poaching, trade in exotic species, illicit logging, protected species persecution, or any other type of illegal exploitation of flora and fauna, is a pervasive and omnipresent danger to species preservation and conservation. Following closely behind drugs and arms trafficking and trafficking in humans, wildlife crime is a billion dollar threat that spans countries and continents.

Using forensic science to aid in wildlife investigations is a fairly new practice but one that is gaining traction, especially in areas where there are meager resources. Due in part to recent discoveries and research into the utilitarianism of DNA in poaching cases, forensics has come to the forefront in natural resource exploitation and regulation. It is a science not confined to human crime; it can be applied to wildlife and environmental illegalities as well.

Wildlife forensics can be broadly defined as the application of science to legal concerns involving biological resources. More specifically, forensic science in these types of investigations can be used to track and identify criminals by the use of evidentiary analysis, whether it be DNA, trace evidence such as hair or feathers, animal tracks, classification of animal products or imported, exported, or traded goods, or the simple recognition of what constitutes indisputable, demonstrative evidence.

## Organization Involved in Wildlife Forensic

There are a number of organizations involved in supporting the development of wildlife forensic science. Some of the key partners working at an international level to build capacity, set standards, coordinate programs and fund activities are listed here.

#### ▶ TRACE Wildlife Forensics Network

TRACE Wildlife Forensics Network is a UK-based NGO with an international remit to promote the use of forensic analysis to support wildlife law enforcement. TRACE provides training and advice to scientists worldwide and has helped develop wildlife forensics networks in Southeast Asia and Africa.

#### United Nations Office on Drugs and Crime

The United Nations Office on Drugs and Crime is the global leader in the fight against illicit drugs and transnational organized crime. UNODC implements a program to address 'Crimes that Affect the Environment and leads on wildlife forensic work for the International Consortium for Combating Wildlife Crime (ICCWC).

#### USFWS Forensic Laboratory

The US Fish and Wildlife Service Forensic Laboratory in Ashland, Oregon, offers a wide range of forensic techniques for wildlife crime investigation and has a global remit under CITES to provide international wildlife forensic services.

#### ▶ The Netherlands Forensic Institute

The Netherlands Forensic Institute (NFI) is the Dutch national forensic laboratory NFI offers advice, assistance and expertise in many forensic disciplines, including wildlife forensics and wildlife crime scene investigation.

► The Society for Wildlife Forensic Science

The Society for Wildlife Forensic Science, established in 2009, is an international member based organization that works to improve standards, support practitioners and represent the wildlife forensic science community.

#### ► TRAFFIC

TRAFFIC is a non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development. TRAFFIC is a strategic alliance between WWF and IUCN, the International Union for Conservation of Nature.

► The NOAA Fisheries Forensics Laboratory

The NOAA Fisheries Forensics Laboratory is dedicated to the forensic analysis of marine species in the USA. This includes investigations concerning marine mammals and reptiles, as well as marine fish, either living in US waters or imported through trade.

#### ► African Wildlife Forensics Network

The African Wildlife Forensics Network is a collective of wildlife crime scene and forensic laboratory practitioners, together with wider wildlife law enforcement stakeholders. They work to provide access to forensic science for African wildlife law enforcement agencies.

#### CONCLUSION

While animals and plants are the victims in the crimes of illegal wildlife trade and animal abuse, society also pays a heavy price when those crimes are used to fund illegal drugs, weapons and terrorism. Links between human trafficking, public corruption and illegal fishing have also been reported. The continued development and integration of wildlife forensic science as a field will be critical for successful management of the many significant social and conservation issues related to the illegal wildlife trade and wildlife law enforcement.

#### REFERENCE

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