How Zoo Atlanta’s Animals are Aiding the USF&W Forensics Lab in the Fight Against Illegal Animal Trafficking

**How It Works:**
My contact at the lab is a wonderful woman named Doina Voin. She makes sure everything is as easy as possible for getting samples to the lab. She provides me with forms to fill out listing what is being sent, she sends me a cooler with ice packs when I am ready to ship carcasses and even includes bags and Fed Ex labels already filled out! For blood samples, vials are provided and for the hair samples, little baggies with labels on them are ready to go. It can’t get much easier than this!

**Abstract**
One of the projects I am responsible for as hospital keeper at Zoo Atlanta is combing through the approved research requests to find out which ones need assistance from the veterinary department. Usually this means I read through the submissions and find out which ones request biological samples from the animals. When a planned immobilization occurs, the veterinarians or the veterinary technicians draw blood for various lab tests both run in-house and sent to outside labs. What may not be realized is that the blood collected is probably used for more than just the standard health check. It might be used by a researcher who is monitoring the cardiac health of their gorilla collection, or maybe a different researcher is testing testosterone levels in their meerkat pack.

My main interest lies with a research project submitted by the US Fish and Wildlife Service Forensics Lab in Ashland, Oregon. Smuggling and poaching of animals and their body parts has an immensely negative impact on the wild populations of the animals we work with on a daily basis. Everything from rhino horns used as an aphrodisiac to live parrots collected for the pet trade are consistently transported via smuggling operations. What may not be known, is that in the process of apprehending and prosecuting those guilty of such crimes, law enforcement must be able to prove that what they have confiscated is actually from a protected species. If the only evidence seized are some feathers on a decorative fan or a bag of mystery powder, how does the Forensics Lab prove those items are from a Macaw or a Rhino? This is where Zoo Atlanta helps out. When we draw blood from our animals during routine health exams (immobilization or voluntary), we can set aside a few drops of the blood to provide USFW after a necropsy has been complete. From the carcass, they can collect tissue samples (for DNA materials), feathers, hair, teeth, nails and claws for comparison to artifacts in question.

By providing these samples to the Forensics lab, our animals provide valuable materials that help prosecute those people who are taking a toll on wild populations on the same animals we work with on a daily basis. It is another way animals in captivity can help their wild counterparts.

**How the Items are Used at the Lab:**
We have extensive databases of wildlife materials/parts incorporated into our reference material collection: tissue, hairs, osteo material, gall bladders, blood, eggs, rosewood. All these materials have acquired, with all your help !!!, are accessioned in our freezers and cryo freezers, follow the validation path and become permanent part of our collection, to be used as reference material in casework, developing of new laboratory protocols, competency/proficiency testing and research.

We do provide support to State Law Enforcement entities and to countries signatory to the CITES treaty. Our lab capabilities are: Genetics for species, gender and individualization, Criminalistics with Chemistry (pesticides ID), Firearms (matching), Latent Prints, Trace (paint, fibers, keratins, biles, questioned documents), Pathology (cause of death determination), Computer forensics, Digital/Audio (enhancement), Digital Imagery and Morphology with Mammals, Birds and Herps capabilities.

(email communication from Doina Voin, US Fish and Wildlife Service Forensics Lab)

**References:** Photos by author or USFW Forensics Lab

**Acknowledgements:** Doina Voin, US Fish and Wildlife Service Forensics Lab