**Lead (Pb) levels in Namibia’s predators and scavengers**

The University of Namibia (UNAM) is working with the Namibian Lead Poisoning Working Group (NLPWG) under the chair of the Ministry of Environment, Forestry and Tourism, to better understand the levels of lead (Pb) from ammunition in mammalian and bird predators and scavengers. We are collecting blood, feather / hair and bone samples from across the country to carry out this analysis. The samples will be processed at the UNAM campus, and the dissolved material will be sent to Japan for analysis, as part of a Namibia-Japanese collaborative research programme.

Please find sample, species and collection details on the back of this form.

* Please put a **label on each sample** with your name and the **sample number**, e.g. Fred Blogs # 1;
* Please complete a data sheet (this form) per sample, being sure to put on the **correct sample number**.

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| --- | --- |
| **SPECIES**: | **SAMPLE NO**.: |
| **Mammal sample** (please tick): □blood; □hair, □bone – name of bone: |
| **Bird sample** (please tick): □blood; □feathers, □bones – name of bone: |
| **Sex**: □Male; □Female; □Unknown  | **Age**: □Adult; □Subadult; □Immature; □Nestling; □Unknown |
| **Cause of death**: | **Date of death**: |
| **Location of mortality – Region**: |
| **Location of mortality - Farm, Conservancy** (or other description): |
| **Location of mortality – coordinates / GPS if available**:  |
| **History of animal**: □wild unmarked, □wild marked / tagged, □captive, □other |
| **Land use at site of mortality**: □conservation - state, □conservation - private, □game farm, □large-stock (cattle) farm. □small-stock sheep/goat farm, □mixed game and livestock, □communal conservancy, □communal land outside conservancy, □other - explain: |
| **Extra notes**: |
| **Your name**: | **Organisation**: |
| **Cell:** | **e-mail:** |

Please send marked samples and data sheets to:

Dr Mark Jago, Veterinary School, Neudam, or

Dr Lorinda Hart, Biological Sciences, UNAM, Windhoek

Mr Kenneth /Uiseb, Ministry of Environment, Forestry and Tourism, Windhoek, or

Dr Chris Brown, Namibian Chamber of Environment (20 Nachtigal Street) Windhoek – whichever is easiest.

For more information, or if you need help with delivery / collecting of samples, please contact Henriette at admin@n-c-e.org or on 061 240 140 or cell 081 162 5807. THANK YOU!

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| --- | --- | --- |
|  | Mammal samples | Bird samples |
| Species | lionspotted hyaenabrown hyaenaleopardcheetahAfrican wild dogblack-backed jackal | White-backed VultureLappet-faced VultureCape VultureWhite-headed VultureHooded VultureBateleurTawny EagleYellow-billed / Black KiteGround Hornbill |
| Blood | Yes | Yes |
| Feathers | - | Yes |
| Hair / fur | Yes | - |
| Bone | Long bones | Long bones |

We collect these different samples because the level of lead (Pb) in blood usually reflects the exposure of the animal to lead during the previous few weeks to months. Lead levels in feathers and fur / hair reflect exposure over the past year or so, while lead levels in bone reflect lifetime exposure.

Please do **not kill** animals for these samples – only collect from dead animals or those undergoing procedures for other purposes (e.g. drawn blood from animals being captured for translocation, being equipping with tracking equipment, etc).

**Collecting and storing procedures:**

1. Blood: Fresh blood drawn from live animal, 1 – 2 ml in a sealed vial. The blood sample must be labelled with a unique Sample Number for each animal. Complete this data form for the blood sample from each animal, being sure to put on the same sample number. The sample number connects the sample with the animal.
2. Feathers: primary feathers are preferred but any large feather from the wing (e.g. secondaries) or tail will work. Try and collect old and newer feathers (worn and less worn) from each dead bird – 4 or 5 feathers per bird. Wrap the feathers per bird into an aluminium foil packet and place into a plastic bag. The feather samples from one bird must be labelled together with a unique sample number. Complete this data form for the feather samples from each bird, being sure to put on the same sample number.
3. Hair / fur: Use a clean pair of scissors (so as not to contaminate between samples) to clip a sample of hair / fur from the back of the head to upper neck. Cut the hair close to the skin. Collect about 50 strands of hair per animal. Place the clipper hair into a small packet made of aluminium foil, and place this into a sealed plastic bag. Place a labelled with a unique Sample Number for each animal into the plastic bag. Complete this data form for the hair / fur sample from each animal, being sure to put on the correct sample number.
4. Bones: long bones, from the fore- or hind limbs, i.e. femur, tibia, fibular, humerus, radius, ulna. Collect only one bone per animal (not one of each type of bone). Bones can be fresh or old. Put a label on the bone with a unique sample number and complete this data form being sure to put on the same sample number. Place the bone into a plastic bag.