

SAMPLE COLLECTION PROTOCOL

Environmental lead exposure in raptors from mainland Australia

Lead investigator:

Jordan Hampton (University of Melbourne)

Background:

Tissue samples or whole frozen dead birds of six species of raptors from mainland Australia that are known to scavenge are being solicited for a study into lead exposure:

1. Wedge-tailed eagles (*Aquila audax*)
2. Little eagles (*Hieraaetus morphnoides*)
3. Whistling kites (*Haliastur sphenurus*)
4. Black kites (*Milvus migrans*)
5. Black-breasted buzzards (*Hamirostra melanosternon*)
6. Brown goshawks (*Accipiter fasciatus*).

Eligible specimens:

Any freshly dead birds of the above six species for which preservative (e.g. formalin or ethanol) has not been used.

Samples desired:

Two main options exist for providing samples to the study:

1. Store whole birds in a freezer until they can be collected by, or couriered to, the lead investigator.
2. If freezer space is limited or post-mortem examinations are being performed for other reasons, collect desired samples into preferred storage containers until they can be collected by, or couriered to, the lead investigator.

Sample collection guidelines:

If the second option outlined above is followed, these are the samples and containers required:

1. **Bone:** the ideal sample is a piece of proximal (upper) femur >1 cm³. This sample can be removed with a chisel or similar. The sample can be placed in a snap-lock bag and frozen, refrigerated or left at room temperature. Bones other than femur are also acceptable if femur is unavailable.
2. **Liver:** ideally the whole organ or a portion >1 cm³, removed from a recently deceased bird with a scalpel or clean knife. This sample can be placed in a sterile urine pot, cryotube or snap-lock bag and frozen. **Please don't use tissue preservatives.**
3. **Feather:** one flight feather. This sample can be placed in a snap-lock bag and kept at room temperature.

Sample transport:

The lead investigator is happy to arrange pickup if samples or whole birds can be stored in freezers until a convenient date.

Fauna licenses:

Licences to allow collection of fauna samples for each state and territory will be managed by the University of Melbourne.

Extra data required (see attached data collection sheet):

- Date
- Site (GPS coordinates preferred)
- Species
- Cause of death, if known

Biosecurity:

Appropriate biosecurity measures should be followed when handling wildlife. To minimise the risk of zoonotic disease transmission during cadaver handling or sample collection, all study participants are requested to wear appropriate PPE (gloves and face mask) and to follow guidelines provided in the National Wildlife Biosecurity Guidelines:

https://wildlifehealthaustralia.com.au/Portals/0/Documents/ProgramProjects/National_Wildlife_Biosecurity_Guidelines.PDF

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