THE FROZEN ARK PROJECT

Saving the DNA and viable cells of the world's endangered species

SAMPLE COLLECTION PROTOCOL – GENERIC

1. ZOO-BASED ANIMALS - Vertebrates

Opportunistic samples taken from live animals during clinical procedures:

a) Blood (for DNA) – **collected into EDTA plastic (purple capped) tubes** (1ml). **Take at least 2 tubes**, preferably 4 (*2 to be retained, 2 for Frozen Ark repository at Nottingham*). Volume is not critical (Can split 1ml between 4 tubes) but the sample needs to **remain un-clotted**. Store ASAP at -20°C then ASAP/or directly at -80°C. **Labelled with unique identification** (e.g. ARKs #), **species** (common name will suffice provided taxonomic name recorded on inventory), **sex**, **name of collection**, **date of sampling**.

b) Blood (for DNA) – **collected onto Whatman®/FTA cards** (do not flood them). Take at least 2 cards, preferably 4 (to be split as above). Allow them to dry then store at ambient temperature in separate FA/original collection envelopes/bags (envelopes are better as cards do not 'sweat'). **Label** as for EDTA blood samples.

Opportunistic samples taken from dead animals at post mortem examination:

a) Skin (for DNA) – collected as soon after death as practical. **Take at least 2**, preferably 4 **x 1cm^2** pieces (to be split as above). Collect those for FA into a single bag/tube, and those for original collection into a single bag/tube. Store ASAP at -20°C then ASAP/or directly at -80°C. **Label** as for EDTA blood samples.

b) Skin (for cell culture attempt) – collected as soon after death as practical, and in this instance surgical preparation necessary to achieve minimal bacterial contamination. **Take 2 x 1cm^2** pieces into a plastic tube containing sterile saline (0.9%) and send overnight by first class mail to Jude Smith, The Frozen Ark, School of Biology, University Park, Nottingham, NG7 2RD **Always call Jude Smith before sending to forewarn** (0115 9513219, mobile 07786501040 – leave a message) or e-mail jude.smith@nottingham.ac.uk.

2. AQUARIUM-BASED ANIMALS

a) Opportunistic samples taken from live animals during clinical procedures, and dead animals at post mortem examination, can be exactly as for zoo-based animals. **Gill clips may be more appropriate** than skin for DNA and cell culture attempts in the case of fish. Rapid processing and sending are more important as autolysis is rapid.

3. LIVE ANIMALS

a) Samples taken from live animals during clinical procedures – blood as for both above. Blood collected onto **Whatman®/FTA cards** may be the only practical and/or legal sample for international movement.

b) Opportunistic samples taken from dead animals at post mortem examination – skin as for both above. Attempts at cell culture almost certainly impractical.

4. OTHER POTENTIAL DNA SOURCES FROM LIVE AND DEAD ANIMALS

a) Skin – plucked feather/hair, buccal smears, surgical biopsies (portion of diagnostic ones).

b) Non-invasive matter – faeces, passed placenta.

c) Archives of ethanol preserved samples (blood, skin, or other tissues).