Callimico Necropsy Protocol

The Callimico International Studbook committee (former International Studbook Keeper, North American SSP Veterinary Advisor, and representatives from the University of Illinois and University of Wisconsin) are nearing completion of analysis on a general worldwide pathology review that should be published soon. We are also specifically following up on the high incidence of myelolipomas in this species. We have already built a data base of over 2000 death reports. We plan to continue analysis of these reports and address additional health issues. Please submit all necropsies to the International Studbook Keeper Callimico01@yahoo.com or Sheila.Wojciechowski@czs.org

Callimico goeldii Necropsy Procedure

1. **Refrigerate** the body if there will be a delay before necropsy (delays should be avoided since autolysis proceeds rapidly). **Do not freeze the body.**
2. **Record** all relevant historical information.
3. **Weigh** the animal.
4. **Perform an external exam** - note any musculoskeletal abnormalities, ectoparasites, evidence of trauma, skin lesions, etc.
5. **Examine body orifices** for patency, exudates, fecal staining around anus and tail, etc.
6. Evaluate **nutritional condition** based on fat stores and relative muscle mass.
7. Make a ventral midline incision from the mandible to the pelvis with a sharp scalpel or scissors. Note any accumulations of fluid or exudate in the abdomen and obtain a swab for bacterial and/or fungal culture and cytology if appropriate.
8. **Note if diaphragm is intact** and if there is negative pressure. Open the diaphragm with a scalpel blade. Cut the ribs and open the thorax. Note any accumulations of fluid or exudate in the thorax and obtain a swab for bacterial and/or fungal culture and cytology if appropriate.
9. Obtain a sterile blood sample for bacterial culture by direct heart puncture using a 1-3 cc syringe with a 25-22 gauge needle.
10. Remove the internal organs and examine each systematically. Note the quantity and nature of ingesta throughout the gastrointestinal tract.
11. Obtain samples for histopathology using the tissue list provided as a guide. **Save samples of all lesions.**

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TISSUE CHECK LIST

All of the following tissues may be placed together in a single container of 10% neutral buffered formalin. **The volume of formalin should be 10 times the volume of all tissues collected.** The tissues should be no thicker than 0.5cm to ensure proper fixation.

Skin
Muscle (thigh)
Sciatic nerve (with thigh muscle)
Tongue
Esophagus
Stomach
Duodenum
Jejunum
Ileum
Cecum
Colon
Liver with gallbladder
Pancreas
Spleen

Kidney
Urinary bladder
Ovary or testis
Uterus
Lymph node
Adrenal gland
Thyroid and parathyroid
Thymus (if present)
Trachea and lung
Heart (atrium & ventricular wall with great vessels)
Pituitary
Brain
Eye
Femoral bone marrow

Freeze portions of the following tissues: Liver, Spleen, Lung, Brain, Heart, Kidney. Freeze each tissue separately (at least 10g of each tissue if large enough). Store tissues in an ultra-low freezer (-70°C). If an ultra-low freezer is not available, conventional freezing is acceptable. These tissues may be discarded after a definitive diagnosis is established, but **if possible, should be saved for future research purposes.**

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Neonatal Necropsy Procedure

The follow procedures are in-addition to the general necropsy protocol for this species.

1. Determine sex, if possible.
2. Examine and fix placenta and any fetal membranes that are available.
3. Determine degree of maturity/immaturity of fetus.
4. Determine crown-rump measurement.
5. Examine umbilicus (fix section of umbilical stump and surrounding skin in formalin).
7. Note internal malformations (anomalies, diaphragmatic hernia).
8. Determine if the animal was stillborn. Place a section of lung tissue in 10% buffered formalin, if the lung sinks, the animal probably did not breath. If the lung floats, the animal probably breathed.
9. Examine stomach contents (milk, meconium, etc.).
10. Proceed with remainder of necropsy protocol for *Callimico goeldii*. 

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Callimico goeldii Necropsy Report Form

Institution: __________________________________________________________
Address: __________________________________________________________
Date of Death: ________  ID#________  Studbook #____________
Birth Date/Age: ________  Sex:__________  Weight (Kg):__________
Necropsy Date:__________  Necropsy Location:________________

History:
Enclosure mates:___________________________________________________
Indoor enclosure:_____  Outdoor enclosure:______
Weather/Indoor climate (approx. temp., windy, rainy, etc.):____________________
Movements or relocations:____________________________________________
Diet:_____________________________________________________________
Contraceptive implant type____________  Implant#________  Implant wt._____

Clinical history (include clinical signs, lab work, treatment and circumstances of death):

Gross Examination

General external exam (nutritional condition, skin, body orifices, superficial lymph nodes)

Musculoskeletal system (bones, bone marrow, joints, skeletal muscle)

Respiratory system (nasal passages, trachea, bronchi, lungs, diaphragm, regional lymph nodes)

Cardiovascular system (heart, pericardial sac, great vessels, valves)

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Digestive system (mouth, teeth, tongue, esophagus, stomach, intestines, regional lymph nodes)

Liver, gall bladder, pancreas, spleen (size, color, consistency)

Urinary system (kidneys, ureters, bladder, urethra)

Reproductive system (ovaries/testes, uterus, cervix, penis/vagina, accessory sex glands, mammary glands, placenta)

Endocrine system (thyroid, parathyroid, adrenal and pituitary glands)

Central nervous system (brain, meninges, spinal cord)

Sensory organs (eyes, ears)

Laboratory results (microbiology, cytology, fluid analysis, etc.)

Prosector ___________________________ Date____________

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