Zoological Parks Board of New South Wales

Australian Registry of Wildlife Pathology

The following are some interesting cases that have passed through the Registry recently. These reports originate from free-ranging animals, and native fauna held in a variety of zoos, fauna parks and private collections.

DECEMBER 1999

- Feathertail glider – captive, NSW - died with acute, severe bacterial pneumonia
- Banded Lapwing – captive, NSW - euthanasia was elected after the bird was diagnosed with a severe fungal plaque that obstructed the entire left primary bronchus
- Gouldian finch – captive, NSW - multisystemic mycobacterial infection and hepatic amyloidosis. Presumably, chronic inflammation associated with mycobacteriosis resulted in the formation of abundant inflammatory proteins and deposition of amyloid in the liver.
- Australian Magpies and Pied Currawongs - several wild birds in NSW died with severe tracheal parasitism and secondary pneumonia caused by the roundworm *Syngamus trachea* (confirmed by Ian Beveridge).
- Shingleback skink – research colony, South Australia - most likely as a result of oestradiol toxicity
- Children's python - South Australia, captive - intranuclear inclusion bodies were noted in the brain, kidney and pancreas. Suspected Inclusion Body Disease.
- Mala - Alice Springs - exertional myopathy, acute renal tubular necrosis, haemorrhage into the eye. Trauma and exertion occurred during attempt to capture

JANUARY 2000

- Welcome swallow – captive, NSW - euthanased due to a chronic pendulous cloaca caused by an infection with fungal hyphae, yeast and bacteria
- Budgerigar – captive, NSW - died during examination to investigate marked feather loss over the head and neck. Microscopic examination revealed a multisystemic lymphoma
- Short-beaked echidna - Biopsy of skin samples from several captive echidnas to investigate hair loss and crusty skin. This seems to be a relatively common complaint of captive echidnas. Microscopic examination of several skin biopsies reveals either mild hyperkeratosis, or fungal epidermal inflammation. Fungal culture from these animals often tends to identify various species of Trichophyton, Microsporum, Aspergillus, and Trichoderma, irregardless of the histolopathology results. It is suspected that most of these organisms originate from the soil that animals are burrowing in and that fungal culture does not reflect epidermal invasion. Griseofulvin therapy has provided clinical benefit to animals whose biopsies reveal fungal invasion of the epidermis.
  Although mites have been found upon several skin scrapings their contribution to the skin lesions is uncertain. Nutritional skin disease caused by either an imbalance in fatty acid composition of the diet or deficiency in vitamin A is suspected.
- Little penguin – wild, NSW - adult male with a fractured leg, pelvis and spine, most consistent with being struck by a boat
- Little penguin – wild, NSW, adult female - died with severe V shaped injuries to the abdomen, most likely caused by a boat propeller

- Little penguin – juvenile, wild, NSW - emaciated, with a mild oral infection with single celled parasites (trichomonads). Most likely a young bird that failed to find sufficient food as it became independent.
- Blue-tongued skink - massive ulceration of the skin around the ears, and thickened skin at the bases of the legs (*Trichophyton terreste*). This is a common fungal isolate within ulcerative skin lesions of blue-tongued lizards.

FEBRUARY 2000

- Tasmanian Devil - captive - Euthanased due to debility and neurologic signs 10 days after a series of skin tumours were surgically removed. Gross post mortem examination revealed multisystemic tumours. Skin tumours consisted of squamous cell carcinoma, cystic endometrial hyperplasia, keratinising epidermal cyst, and a round cell tumour.
- Water Rat - captive - Euthanased due to chronic hind limb weakness. Gross post mortem examination revealed a large mass in the chest. Microscopic examination of the tissues demonstrated a chronic ulcerative bladder infection, mild inflammatory reaction within the brain. The large chest tumour was composed of lymphoid tissue.
- Brush-tail possum - wild - euthanased due to blindness. Intranuclear inclusion bodies in renal tubules the kidney may reflect lead poisoning, viral infection, or merely host protein. Testing was carried out to determine tissue concentrations of heavy metals. Viral culture was also carried out. Both returned normal results.
- Common koel - wild - examined three birds due to reports from rehabilitators of many sub adult koel suffering from paralysis and neurologic disease. Each of the three birds had evidence of spinal trauma at the level of the first and second thoracic vertebrae. Microscopic examination of tissues did not reveal any underlying disease; however, funds were not available to rule out underlying toxicity.
- Peregrine falcon - wild - euthanased due to an infected fracture in one wing. Post mortem examination revealed an incidental, but interesting finding of roundworm parasites within one of the air sacs (*Serratospiculum* sp. confirmed by Ian Beveridge)