The Australian Registry of Wildlife Health

Zoological Parks Board of New South Wales

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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.

May 2006

- Centralian carpet python – captive, NSW - the snake was aged and had been suffering from a fused spine (spondylosis). The snake was euthanased when it was found with a fractured spine and transacted spinal cord in the middle of the most severely fused portion of the spine. The snake also had small inclusion bodies present in the cytoplasm of hepatocytes and renal tubular epithelial cells, suggestive of Inclusion Body Disease of Boids. Portions of liver have been forwarded to NSW DPI for electron microscopy to characterise whether they represent the presence of viral particles (5209.1).

- Bilby – captive, NSW - found dead - thin with ulcerated gums, acute systemic bacterial infection with *Streptococcus bovis* (4985.2).

- Plains rat – captive, NSW - euthanasia due to weight loss, weakness, and a palpable abdominal mass. The animal had a large ovarian adenocarcinoma (3 cm x 2.5 cm) replacing the left ovary and two small hepatic lobes prolapsed into the thoracic cavity through a diaphragmatic hernia (5227.1).

- Loggerhead turtle - The turtle was found on a beach at the central coast with a fractured right front flipper. The animal was in rehabilitation care for two months when it became anaemic and very weak and euthanasia was elected. The turtle had multiple granulomas in the lung but acid fast bacteria and fungi were not evident within the lesions. The animal also had a moderate burden of intestinal parasites, most likely trematodes, that were adherent to the cryptal epithelium and invading the lamina propria. (5206.1)

- Green turtle - Toronto, NSW - euthanased after being found in a profoundly emaciated state with fishing line protruding from the mouth and cloaca, severe associated ulcers and fibrinous inflammation along the commissures of the mouth. The animal's shell was found to be remarkably thin, and the animal had its entire gastrointestinal tract plicate along a strand of fishing line. A hook was found to be penetrating the wall of the large intestine, 30 cm from the cloaca. The large intestine was ruptured near the fishing hook and a pocket had formed in the coelomic cavity containing fibrin and faecal concretions (5210.1).

- Tawny frogmouths x 2 – wild - euthanasia due to severe CNS signs and the suspicion of *A. cantonensis* infection. One bird had evidence of this parasite infection, while the other bird was found to have severe cranial fractures (5208.1, 5213.1).

- Little Penguin – Warriewood, NSW - subadult female found emaciated and with haemorrhage into the intestinal tract. Presumably this bird failed to thrive after leaving the roost.

JUNE 2006

- Red-browed finches – quarantine, NSW – proventricular cryptosporidiosis, megabacteriosis and microfilaraemia found in several birds found dead from a group in which polyomavirus infection has been diagnosed by situ hybridisation (5240.1-5240.8).

- Yellow-tail cockatoo – captive, NSW - euthanasia due to poor body condition and lack of response to therapy. Found to have proventricular enlargement and partial obstruction due to severe mucosal oedema and ductular hyperplasia in response to low numbers of a probable spirurid nematode (5255.1).

- Java sparrows – captive, NSW - six fledglings/ juveniles from the same aviary found dead over the course of a few weeks. A few had evidence of drowning or trauma. The only notable histological finding was intestinal coccidiosis in most birds (in very large numbers in some), but not obviously associated with other intestinal pathology (5285.1-5285.6).

- Australian koel – captive, NSW – aged bird submitted with inability to use its feet. No significant skeletal abnormalities on radiographs. Recovered poorly from anaesthetic and died overnight. Histology revealed severe generalised lymphoplasmacytic hyperplasia, with intermingled macrophages in some areas, particularly the region of the adrenal gland, where there were occasional clusters of small intracellular protozoa, not typical of either coccidia or Microsporidia (5292.1).

- Grey-headed flying fox – captive, NSW – in very poor body condition, found dead with acute suppurative myocarditis and bacteraemia due to *Staphylococcus aureus* (5271.1).

- Agile wallaby – captive, NSW - euthanasia due to severe arthritis involving the stifle and poorly responsive to treatment. Post-mortem confirmed severe fibrosis of tissues in and around the joint, suppurative arthritis with pure culture of *Fusobacterium necrophorum* from synovium. The pathogenesis of the infection wasn't obvious, as there was no evidence of a penetrating wound in the region of the stifle, or focus of infection elsewhere that could have caused bacteraemia (5284.1).

- Salt-water crocodile – captive, NSW - juvenile found dead. Poor body condition, ulcerative dermatitis, and moderate distension of the stomach with hair and atrophy of the gastric mucosal glands suggestive of maladaptation or husbandry issue (5294.1).

- Black-headed python – captive, NSW - euthanasia due to lethargy and neurological signs. Histological findings included sclerosis and partial blockage of a large intracerebral artery and marked leukencephalomalacia involving the brainstem, unassociated with inclusion bodies or significant inflammation (5297.1.)

- Tammar wallaby - juvenile (being hand-reared from captive colony, NSW) - euthanasia due to ongoing neurological problems. Histological examination of the brain revealed a large area of malacia, typical of an ischaemic cause, with the age of

the lesion consistent with the onset of neurological signs, although there was no known history of trauma (5254.1).

- Diamond python – private, NSW – confiscation animal, possibly showing neurological signs. Histology on the brain revealed low numbers of large intranuclear eosinophilic inclusion bodies in glial cells in the brainstem, unassociated with necrosis or inflammation. This lesion, which has been noted in several other diamond pythons in the Registry database, is not a lesion of OPMV or IBD but could represent other viral (eg. Herpes virus or adenovirus) infection (5239.2).

- Black swan – Pymble, NSW – euthanasia due to severe pododermatitis lesions overlying bony protuberances of phalangeal joints and chronically fractured clavicle, with inability to fly explaining these foot lesions in a wild bird (5260.1).

- Australasian Gannett – wild, NSW - submitted by local vet after rehab and unsuccessful release attempt. Euthanasia due to two fish hooks in coelom on radiograph. The hooks were in the proventriculus, with one penetrating the wall, almost through to the peritoneum (5262.1).

- Brushtailed possum – wild, NSW – submitted for investigation of skin lesions, which carers feel they are seeing a lot of seasonally. Gross necropsy revealed chronic skin ulcerations mainly involving bony protuberances of the tuber coxae and hip joints, most notably on the right side, where there was also severe muscle scarring and contracture. Histologic lesions reflected chronic ulceration and associated granulation tissue and fibrosis, with no evidence of a primary aetiology. The lesion appearance and distribution are typical of a classic case of "exudative dermatitis", a syndrome of unknown aetiology in this species (5253.1).

- Rabbit – wild, NSW - several found dead in urban area with swollen erythematous, crusty eyelids, lips, vulva/prepuce - typical histological lesion of myxomatosis (5296.1, 5296.2). One of the rabbits also had severe biliary coccidiosis and regional ischaemic necrosis in the liver due to fungal invasion of portal triads (5296.1).

- Green turtle - found floating in Lake Macquarie - euthanasia due to three large deep linear apparently painful wounds to dorsal carapace, typical of propeller wounds. Necropsy revealed the lesions to extend the full thickness of the carapace and possibly involve the spinal canal, with the peritoneum largely preventing the infection from entering the coelom (5249.1).

- Blue-tongued lizard – wild, NSW - juvenile found on residential porch, fed pork meat, mango and banana for one month. Euthanasia due to severe spinal deformity and metabolic bone disease (5258.1).

JULY 2006

- Black-faced cuckoo shrike – captive, NSW - euthanased due to severe weakness, ascites and palpable thoracic/coelomic mass. Necropsy revealed a large fungal (*Aspergillus fumigatus*) granuloma involving the interior aspect of the sternum and compressing the left side of the heart (5335.1).

- Bleeding heart pigeon – captive, NSW – Severe necrotising hepatitis with minimal inflammatory response but abundant intralesional gram positive bacteria, identified on culture as *Listeria monocytogenes*. Acute hepatitis with or without myocarditis is

apparently the most common manifestation of infection with this environmental organism in birds (5338.1).

- Brown cuckoo dove – captive, NSW - presented with dyspnea and euthanased following work-up which revealed enlarged liver and spleen with white foci. Necropsy and cytology revealed disseminated atypical mycobacteriosis (speciation pending) (5340.1).

- Koala – captive, NSW - anaesthetised and examined due to unilateral exophthalmos. Euthanased when fine-needle aspirate of white subconjunctival infiltrate at lateral aspect of sclera revealed neoplastic lymphocytes. Gross necropsy confirmed lymphoma, with extensive infiltrates in gastric wall, diaphragm and myocardium. Lymphosarcoma is the most common form of neoplasia diagnosed in koalas, this being the second case this month submitted to the Registry (3089.3).

- Diamond python – captive, NSW - euthanasia due to poor righting reflex and body tone. Gross necropsy unremarkable. Histology revealed severe leukencephalomalacia primarily involving the brainstem, with mild associated non-suppurative inflammation but no inclusion bodies. The aetiology of this lesion is unknown, but viral infection hasn't been ruled-out (5334.1).

- Eastern grey kangaroos – Nowra, NSW - Multiple juveniles found dead at a NSW navy base. Formalin-fixed tissues from one dead wallaby and a fresh carcass were submitted for disease investigation by the veterinarian at the request of local rangers. Gross findings were limited to very poor body condition and large numbers of various gastric nematodes (likely *Rugopharynx rosemariae*, among others). The gastric mucosa had a diffuse "morocco leather" appearance due to marked hyperplasia of the mucosa (5345.1, 5345.2).

- Rainbow lorikeets – various North Sydney suburbs, NSW - WIRES reported an increase in the numbers of juvenile lorikeets being found on the ground unable to fly but apparently otherwise normal. Four affected birds were submitted for disease investigation. The TZ wildlife clinic had also seen a number of birds with similar signs during the same period. Gross necropsy and histological examination of tissues revealed most birds to have psittacine beak and feather disease, with a few others having evidence of previous trauma. The outbreak rapidly subsided, perhaps due to increasing age and decreasing susceptibility of the cohort to circovirus infection, or dispersal of the birds (5304.1-5304.4, 5305.1-5305.3, 5256.1, 5270.1, and 5251.1).

- Quoll – Martinsville, NSW – euthanasia due to chronic infected jaw fracture and very poor body condition. Necropsy revealed massive numbers of nematodes in the abdominal cavity and liver, probably aberrantly migrating larval *Ophidascaris spp*., a gastrointestinal nematode of pythons (5302.1).

- Diamond python – Helensburgh, NSW - found repeatedly out in the open in state park recreational area, taken to local vet by park rangers, submitted to TZ wildlife clinic for severe egg binding. Egg binding resolved, but snake euthanased due to persistent lethargy and problems moving caudal one-third of body. Necropsy revealed severe necrotising salpingitis from which *Streptococcus bovis* was cultured (5307.1).

- Sea snake – Maroubra Beach, NSW – found onshore, extremely dehydrated, with red bruising around head and tail, died overnight. Necropsy revealed muscle damage associated with bruising, histology pending (5333.1).

- Flat-back turtle – central coast, NSW - Thin juvenile wild turtle died after a few days of variable clinical signs, being active and apparently normal at times, but lethargic at others, variable appetite. Necropsy revealed necrotising bronchopneumonia involving one lung and acute coelomitis due to *Aeromonas hydrophila* (5344.1).

- Eastern snake-necked turtles – Colo, NSW - National Parks and Wildlife reported numerous turtles being found dead or moribund in ponds in Wollemi National Park. Necropsy of three turtles revealed anaemia, hypoproteinaemia and severe wasting with no gross evidence of infectious disease. The problem is likely an ecological one, with turtles unable to find sufficient food over the last few years to have adequate reserves to make it through the winter (5343.1-5343.3).