



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 2000

- Rainbow lorikeets - captive, NSW - 5 birds in a mixed species aviary died with septicaemia (*Salmonella typhimurium*).
- Magpie Larks - wild, NSW - 2 nestlings died with fibrinous coelomitis (*Salmonella typhimurium*). Phage typing indicated that the *S. typhimurium* in the lorikeets differed from that in the magpie larks.
- Common wombat - captive, NSW - 3 year old wombat euthanased due to severe degenerative joint disease in the hips. Post mortem examination revealed septic polyarthritis with *Staphylococcus aureus* with avascular necrosis of one femoral head.
- Pheasant Coucal - captive, NSW - died emaciated with a gizzard filled with concretions of ingesta. The bird was aged and also had multiple biliary adenomas.
- Goodfellows tree kangaroo - captive - euthanased with a massive infection in the spleen, kidneys and spine. Bacteria were not isolated, probably due to the combination of antibiotics that the animal had been treated with prior to death. Leptospirosis was ruled out as the cause of the kidney lesions. The kangaroo also had an underlying dilated cardiomyopathy.
- Water Rat - aged, captive - euthanasia. Thyroid gland adenoma, phaeochromocytoma in one adrenal gland (but no obvious evidence of hypertension to indicate that the tissue was hormonally active).
- Little Penguin (2) - wild, NSW - died with hepatosplenomegaly and miliary red foci within the myocardium. Histopathology revealed an acute infection with a malaria-like parasite. *Clostridium perfringens* was also isolated within the tissues, however, it was the malarial-like organisms that were evident histologically at the margins of foci of necrosis in the heart, liver and spleen of each bird.
- Southern Giant Petrel - wild - young bird, thin, fibrous material filling gizzard.
- Ringtail possum - wild - rodenticide toxicity and extensive subcutaneous and abdominal haemorrhage

JANUARY 2001

- Pigeon - wild, NSW - found emaciated with a severe head tilt and green faeces pasted in the feathers surrounding the vent. NSW Agriculture was notified that the bird may have been infected with Newcastle's Disease Virus. Histopathology, however, revealed no evidence of viral infection, and severe bacterial enteritis.
- Black footed tree rat - captive, NSW - thymic lymphoma
- Guinea Pig - captive, NSW - euthanased due to debility. *Salmonella typhimurium* was isolated within multiple liver abscesses. This case highlights the need to wash hands after handling animals.
- Fiordland crested penguin - captive, NSW - died with an acute infection with a single celled malarial parasite, in combination with *Clostridium perfringens*. The lesions were identical to those seen in 2 wild Little Penguins listed above.
- Kookaburra - wild bird with a deformed foot also had severe mite infestation.
- Pied currawong - Confiscated by NSW NPWS when found tied upside down in a carport to deter birds from eating grapes.

- Platypus - wild - juvenile male found emaciated, anaemic and with a massive tick infestation.
- Short tailed shearwater - wild - emaciated. Had a severe infection throughout the renal collecting ducts with trematode parasites.
- Tawny frogmouth - wild - euthanased due to seizures, paralysis and emaciation. Roundworm larvae, confirmed by Dave Spratt to be *Angiostrongylus cantonensis*, were found throughout the brain and spinal cord.
- Tawny frogmouth - wild, NSW - gunshot wounds.
- Red Kangaroo - Northern Territory - Reported to have annually recurring pruritic skin lesions. Lesions consistent with insect bites were present within the skin and were surrounded with mononuclear cells containing small single-celled parasites.

FEBRUARY 2000

- Regent honeyeater - part of recovery program - bacterial ventriculitis. Secondary dehydration and urate nephrosis.
- Long-nosed bandicoot - captive, NSW - biopsy of abdominal masses that were composed of necrotic lumps of adipose tissue. Steatitis in cats has been associated with mycobacteriosis, yet acid fast organisms were not evident within the masses.
- Central netted dragon - captive - bacterial infection at the base of the brain extending into the eyes.
- Green sea turtle - wild - euthanasia due to chronic weight loss, debility and buoyancy problems. Intestinal tract blocked with faeces - common occurrence in green sea turtles, but the cause is not understood. We received several written and verbal comments after describing a similar case in the last report. It seems that there are many factors that may contribute to severe constipation in sea turtles and we do not fully understand the pathogenesis involved.
Similarly, we have been seeing a variety of green turtles with abnormal buoyancy. Lesions in the gastrointestinal tract, respiratory tract, nervous system, and the shell can all be related to clinical signs of abnormal buoyancy in sea turtles, adding to the complexity of achieving an accurate diagnosis in the live animal.
- Square-tail kite - young animal being hand raised - rickets. Nutritional deficiency
- Red-necked Wallaby - captive, ACT - Non-suppurative encephalitis. Toxoplasma or Neospora sp.
- E. grey kangaroo - being hand raised in VIC - multiple large skin nodules on the face and extremities. Poxvirus lesions
- Common bentwing bat - found injured in NSW. Dislocated finger. Interesting fungal infection in the skin.
- Fat-tailed dunnart - NT - widespread mycobacterial (tuberculosis) infection. This organism seems quite common in this captive group of dunnarts.
- Carpet Python - captive, NSW - lymphoma
- Wedgetail eagle - wild, western NSW - emaciated. Evidence of a possible viral infection throughout the intestinal tract. Unfortunately no samples were retained frozen to allow viral culture.
- Carpet pythons - 6 young animals died after being confiscated from an unlicensed individual. All animals died as a result of dehydration/starvation, but one snake also had a systemic infection with an unusual species of Salmonella and bacterial colitis.

MARCH 2001

- Regent honeyeater - part of the recovery program - euthanased due to respiratory distress. Aspergillosis
- Budgerigar - captive, NSW - hepatic lipidosis. Unusual case of mycobacteriosis with no evidence of hepatic granulomatous inflammation.
- Purple crowned lorikeet - captive, NSW - 4 birds with acute haemorrhage enteritis caused by an unusual strain of *E. coli*.
- Brush tailed rock wallaby - captive - euthanased due to severe bacterial (*Fusobacterium necrophorum*) infection in one lung that extended out into the chest cavity
- Ringtail possum - 2 wild young ringtail possums found in separate incidents with extensive thickening of the skin and hyperkeratosis associated with *Candida* sp. infection.

- Green sea turtle - wild - biopsy of a segment of intestine that was removed due to a narrowing of the lumen due to chronic inflammation.
- Flathead frog - NT - cloacal prolapse. A very rare species of frog known to occur in only one remnant location
- Agile wallaby - NT - suppurative inflammation in the kidneys, incidental infection with single celled parasites *Klossiella* sp. within cytoplasmic vacuoles within the renal tubular epithelium
- Carpet python - NT, captive - found to have evidence of a terminal bacterial infection, but inclusion bodies in the liver and kidney were highly suggestive of inclusion body disease of boids.
- Carpet python - kept in captivity for NSW NPWS education programs. Died after being presented with respiratory distress. Respiratory distress caused by a narrowing of the trachea due to marked proliferation of lymphoid tissue. Infection with an unusual bacterium suspected and additional tests are being conducted to confirm the diagnosis.
- Tiger Snake - captive - Euthanasia due to severe infection of the cloaca and hemipenes. The snake had a severe burden of a number of parasites, which is highly suggestive that the animal was wild caught. The snake suffered from gastric cryptosporidiosis, pulmonary nematodiasis, and coccidial infection of small intestinal enterocytes. *Proteus* sp, *Pseudomonas aeruginosa*, and another un-identified anaerobe were identified within the hemipenal granulomas.