

Australian Registry of Wildlife Health

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 2007

- Dingo - captive, NSW - euthanasia due to age related debility. The animal had instability of the cervical spine leading to compression of the spinal cord and degeneration of the nerves supplying the hind end of the body. Histopathology also revealed chronic degenerative and inflammatory changes in the kidneys associated with age. The identification of *Helicobacter*-like bacteria in the stomach was also an interesting, but incidental finding (5760.1).
- Booroolong frog - captive, NSW - the frog was found dead on exhibit. Histopathologic findings were of encephalitis caused by a single celled parasite within the brain and meninges. These parasites have been consistently found in dead adult booroolong frogs, but they were not evident in the animals that were euthanased upon arrival. Further special stains and immunohistochemistry ruled out the presence of *Toxoplasma gondii* and *Neospora caninum*. Electron microscopy will be conducted to identify the parasite associated with mortality in this endangered species. (5780.1).
- Little Penguin - captive, NSW - a biopsy was taken to investigate a firm mass found to be protruding from between the right eye and nostril. The mass is a chondrosarcoma, a malignant tumour of cartilaginous origin. This is an unusual finding. Due to the nature of the mass, it is likely to regrow and has the potential to become invasive (5497.2).
- Hawksbill turtle - rehabilitation, NSW - first admitted to TZ wildlife hospital in December 2006 and found dead April 2007. The turtle died with necrosis of the urinary bladder. The bladder was heavily populated with bacterial colonies. The animal also had early signs of bacterial pneumonia (with mycobacteriosis). The turtle had an underlying obstruction of the intestinal tract with solidified ingesta. It is not uncommon for juvenile turtles to strand with marked colonic impaction, but the pathogenesis of this syndrome is uncertain. Dehydration, anorexia, ingestion of foreign bodies, altered intestinal motility due to hypothermia, altered diet or heavy metal exposure have been postulated as possible contributing factors. (5708.1).
- Common Dolphin - wild, NSW - the dolphin stranded at Kurnell and was found to circle and tilt to the left, thus it was euthanased. Post mortem examination revealed a foreign body (fish fin spine) that had penetrated through the stomach wall, causing severe inflammation within the pancreas and mesenteric lymph nodes. There was an adjacent focus of inflammation around the liver capsule associated with the presence of roundworm parasites. The animal also had a large focus of necrosis in the brain, associated with the presence of migrating parasites. The animal also had incidental trematode infection throughout the biliary tree. (5806.1).
- Rainbow lorikeet - wild, NSW - the bird was euthanased when found emaciated, dehydrated and weak at Balmoral beach. The bird had evidence of fibrinous inflammation throughout the coelomic cavity, and non-suppurative inflammation in the brain and myocardium. The bird had intranuclear eosinophilic inclusion bodies within hepatocytes. The combination of lesions is suggestive of viral infection, and terminal bacterial infection - *Pseudomonas luteoa* was isolated in the liver and kidney. Chlamydia antigen capture tests on the tissues were negative. (5789.1)

June 2007

- Spotted tree frog - captive, NSW - severe inflammation and necrosis in the heart - suspected bacterial or protozoal infection (5829.1).
- Spotted tail quoll - captive, NSW - died with a ruptured bladder associated with the presence of a papilloma-like mass within the prostatic urethra. The animal had other papilloma-like lesions at the edge of the mouth and along the tail. The animal had a chronic history of having unusual cystic change of the sweat glands along the face, shoulders and thighs. The quoll had numerous nematode parasites (most likely the stomach ascarid of snakes, *Ophidascaris* sp.) burrowing through the lung, liver, free within the coelomic cavity and in the left pulmonary artery. The quoll had degenerative changes in the central nervous system, which is not uncommon in older quolls (5178.3).
- Feather tail glider - captive, NSW - a spindle cell tumour was diagnosed based on an impression smear taken from an ulcer at the margin of the mouth. This diagnosis was confirmed on gross and microscopic post mortem examination (5827.1).
- King Quails - captive, NSW - 1 animal with a ruptured eye - mycobacteriosis (5814.1), 1 animal with a large mass at the back of its head - invasive spindle cell tumour (5825.1).
- Spinifex hopping mouse - captive, NSW - multisystemic lymphoma (5837.1)
- Green and golden bell frog - Sydney Olympic Park, NSW - Chytridiomycosis (5835.1), the frog also had a gastric ulcer, which is quite unusual. *Aeromonas caviae* was isolated within the intestinal tract and liver.
- Little Corella - Newcastle, NSW - 80 animals died in two episodes of mass mortality thought to be associated with malicious intoxication at the University of Newcastle (5817.1).
- Flatback turtle hatchling - euthanased after being found with chronic trauma - traumatic amputation of the flipper. Incidental flatworm (trematode) infection in the small intestine (5821.1).
- Antarctic prion - wild, NSW - blown inland during heavy winds, found to have intestinal haemorrhage and urate nephrosis - probably due to a combination of ischaemia and dehydration. Incidental single celled parasites in the kidney (coccidia), and gastric roundworms (5820.1).
- Rainbow lorikeets - wild, NSW - 8 animals of 16 found dead on a single property in Forestville. Only one bird was submitted in an appropriate form for diagnosis and it had haemorrhage into its lungs - intoxication/viral infection? Unfortunately only fixed tissues were submitted, so it is not possible to conduct viral culture and toxicology (5831.1).
- Grey headed flying fox - wild, Sydney, NSW - found dead with haemorrhage into the intestine and into the eyes (5834.1).
- Grey headed flying fox - Canley Heights, NSW - one of several animals with neurological disease (5851.1).
- Brushtail possum - Sydney, NSW - submitted from a wildlife carer group as one of four animals to die in rehab care, in the same aviary. The animal was thin and dehydrated, with a pattern of resolving stress related alopecia along the back and head. The possum also had nematodes migrating through the central nervous system - presumptive *Angiostrongylus cantonensis* (5811.1).

July 2007

- Land mullet - captive, NSW - euthanased due to repeated bouts of diarrhoea and isolation of zoonotic agents in the faeces (*Salmonella* spp., *Shigella* spp). On examination the animal had a large tumour in the caudal coelomic cavity - adenocarcinoma (5842.1).
- Spotted tree frog - captive, NSW - a second animal from quarantine found dead with severe necrosis and inflammation in the heart (5848.1).
- Short-beaked echidna - captive, NSW - the animal's chest cavity was filled with granulomas and abscesses, which compressed the lungs into a small space. Pigmented fungi were evident within the

lesions. The animal had evidence of congestive heart failure, likely due to restrictive cardiomyopathy. Smaller foci of granulomatous inflammation were evident within several organs, but no mycobacteria were evident (5869.1). Infection with pigmented fungi, chromomycosis, is quite unusual in mammals. It is also quite unusual for fungal infections to be associated with purulent lesions.

- Grey-headed flying foxes - wild and captive - , Sydney, NSW - several animals found dead over June/July (5839.1, 5866.1, 5872.1, 5872.2, 5881.1, 5880.1). Most of the animals have only evidence of congestion and haemorrhage in the liver, lungs and eyes - arbovirus infection?
- Grey headed flying foxes - Canley Heights, NSW - increased numbers of dead flying foxes reported (5851.1, 5859.1, and 5863.1).
- Subantarctic fur seal - Cronulla, NSW - died shortly after being admitted into care - emaciated , microphthalmia (congenital defect resulting in a very small and non-functional eye) - (5838.1).
- Subantarctic fur seal - Huskisson, NSW - euthanasia due to a fractured ulna, fractured carpal bone, and large open flipper wound. Suspected traumatic injury. (5885.1).
- Subantarctic fur seal - Kurnell, NSW - Euthanased due to emaciation and diarrhoea. Gross post mortem examination revealed a cataract in the left eye, marked intestinal burden of ascarids and *Diphyllobothrium latum* and multi-focal bronchial parasitism. Microscopic examination of the tissues also revealed multi-focal non-suppurative inflammation in the brain, lymphoid cell depletion in the spleen, small intestinal ulceration and multi-focal bronchitis. Given the degree of lymphoid cell depletion, non-suppurative inflammation in the brain and multi-focal bronchitis, previous exposure to Morbillivirus should be ruled out in this animal. Unfortunately no serological tests are available for Morbillivirus/ Phocine Distemper Virus in Australia. (5887.1).
- Tasmanian devil - captive, QLD - mast cell tumour (5841.1).
- Tasmanian devil - captive, QLD - hypersensitivity dermatitis (5841.2).
- Rainbow lorikeet - Castle Hill, NSW - two animals from a reported mass mortality of more than 15 birds. One of the birds was markedly decomposed and unfit for examination and the other bird had severe necrotising and haemorrhagic enteritis - a syndrome seen in rainbow lorikeets (usually in the warmer months). This syndrome is most often associated with an overgrowth of *E. coli* or *Clostridium* sp. (5843.1).