

The Australian Registry of Wildlife Health



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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.

JUNE 2005

- Risso's dolphin - NSW Dept. of Environment and Conservation (DEC) - found dead on Coogee beach - neonate with severe contusions to the dorsal body wall and several bite wounds - probable trauma from another cetacean (4727.1).
- White bellied sea eagle - NSW DEC - the animal died with soft tissue wounds consistent with electrocution. Microscopic examination of the tissues revealed severe muscle degeneration caused by fibrinoid necrosis of blood vessels, a common finding with electrocution (4745.1).
- Flatback turtle - NSW - juvenile - Died emaciated with metabolic bone disease and severe mycobacterial pneumonia (*Mycobacterium chelonae*). The animal most likely acquired mycobacteria while housed in a marine fish tank prior to being brought to a rehabilitation facility; emphasizing the need for strict quarantine of wildlife in rehabilitation care (4715.1).
- Green turtle - NSW DEC - Subadult - was euthanased due to emaciation, anorexia, debility and constipation. Necropsy examination identified abundant solidified faeces within the rectum. This kind of severe rectal obstipation has been seen frequently in subadult green turtles, but the cause of the syndrome is unknown (4735.1).
- Saltwater crocodile - captive, NSW - male - died after a history of penile prolapse and ulceration over the last several months. The crocodile had a severe fungal pneumonia with an unusual organism (*Metarhizium anisopliae*) and ultimately drown leading to acute septicaemia with *Klebsiella oxytoca* and *Aeromonas caviae* (4723.2).
- Eastern Quoll - captive, NSW - the quoll was euthanased due to progressive ataxia. The quoll had degenerative changes in the spinal cord, which has been previously reported in aged quolls (4732.1).
- Bilby - captive, NSW - the bilby was euthanased due to neurological dysfunction that did not respond to therapy. During necropsy, several haemorrhages were identified within the brain and spinal cord. Upon histological examination numerous nematode parasites were found burrowing through the brain, associated with severe haemorrhage and inflammation, which was confirmed to be caused by *Angiostrongylus cantonensis* infection by Dr. Dave Spratt (4686.1).

- Brushtail possum - rehab, NSW - a large carcinoma (possibly mammary) was surgically removed from the thigh (4704.1).
- King parrot - wild, NSW - died with an acute fibrinous coelomitis and hepatitis, probably due to an acute bacterial infection (4716.1).
- Tiger snake - captive, NSW - Biopsy of a necrotic mass infected with an unusual *Salmonella* isolate (*S. subspecies 4*) found an underlying soft tissue tumour - fibrous histiocytoma. The snake died within a couple of weeks of the biopsy, but the carcass was not submitted for necropsy (4687.1).
- Little penguin - captive, NSW - the bird was emaciated and died after a period of respiratory distress. The bird had a severe, multisystemic infection with mycobacteria (*M avium*). There were large granulomas present in the lungs, and the infection penetrated (ruptured) the intestine (4725.1).

JULY 2005

- False killer whales - Dr. Cleve Main of Agriculture WA submitted digital photographs and a pathology report from a mass stranding event. One animal died and approximately one hundred animals that had stranded were successfully returned to the sea. The dead animal had subacute encephalitis, possibly associated with a viral infection, and it had acanthocephalan parasites (*Bolbosoma capitatum*) burrowing into the intestinal wall (squid intermediate host) and trematode flukes were identified in the subcutaneous tissues and colon (4763.1).
- Tasmanian Devil - captive, NSW - digital photographs and a pathology report were submitted from a Tasmanian devil with a pouch mass (sebaceous adenoma) and two perianal pedunculated masses (sebaceous adenoma, apocrine sweat gland adenoma) (4765.1).
- Rainbow lorikeet - wild, NSW - submitted with many yellow skin lumps due to a clinician's suspicion of pox virus infection. Many 4 - 17mm firm, yellow subcutaneous lumps were present over the head, neck and wings. The lumps were composed of keratin and large numbers of mites. A single similar case is contained within the Registry, and in that animal a unique Knemidocoptes mite was identified. Histological examination of the liver in this animal identified a number of intranuclear inclusion bodies, raising the suspicion of an underlying viral infection. Electron microscopy of liver tissue was undertaken at NSW DPI and no viral particles were identified (4771.1).
- Bilby - captive, NSW - was euthanased as an aged animal due to the presence of an abdominal tumour of blood vessel origin (haemangiosarcoma) (4770.1).
- Feathertail glider - captive, NSW - the glider was euthanased due to the presence of a large tumour (fibrosarcoma) containing a microchip, on the rump. Several microchip related soft tissue tumours have been reported in feathertail gliders and other small marsupials (4773.1).

AUGUST 2005

- Carpet python - captive, NSW - update from a previous report. The snake had a proliferative and non-suppurative pneumonia, with intracytoplasmic inclusions present within the respiratory epithelium, pancreatic ductal

epithelium, and ureteral epithelium. These lesions were highly suggestive of Ophidian Paramyxovirus (OPMV) infection, thus electron microscopy was undertaken at NSW DPI. The inclusion bodies were found to contain no viral particles, however, some protozoa were seen attached to the respiratory epithelium (possible cryptosporidiosis?). (4701.1).

- Pig-nosed turtle - an adult female pignose turtle was found on a golf course in Sydney with severe, subacute traumatic injuries to its front limbs. The turtle was euthanased due to the severity of the injuries, and during necropsy the animal had marked follicular development throughout the ovaries. It is very unusual that this Northern Territory species would be found in Sydney in the middle of winter, with ovarian development. It is suspected that this animal was either a pet or recently transported from the Northern Territory.
- Pygmy sperm whale - DEC - neonatal animal that seemed to have drown after a brief period of anorexia. The sperm whale had nematodes burrowing into the stomach wall (4829.1).
- Short-beaked echidna - rehab, northern NSW - the animal was one of several animals in rehab care to be found with severe fur and quill loss - skin and quill biopsies were submitted for culture and histological examination. The animal's quills and skin follicles were infected with fungi, and *Alternaria* sp. fungi were isolated from the quill biopsies. Similar samples from another affected animal were submitted to NSW DPI - Wollongbar, and *Fusarium* species were isolated from the quills. The pathogenesis of these fungal infections in wild short-beaked echidnas is uncertain and treatment is difficult due to the presence of fungi deep within the quill pulp cavities where drug delivery is very difficult (4827.1).
- Brushtail possum - rehab, Victoria - The animal was in the later stages of hand raising when it died suddenly with a severely fatty liver, most likely due to diet related obesity (4802.1).
- Yellow bellied glider captive, NSW - aged animal was euthanased after a two year history of suffering from severe bacterial sinusitis. *Pseudomonas aeruginosa* and *Bacteriodes fragilis* were isolated numerous times from the animal's sinuses over the course of the illness. The glider had age related dental attrition, and numerous missing teeth from previous dental extractions (4793.1)
- Feathertail glider - captive, NSW - osteosarcoma found surrounding a microchip on the animal's back. Microchip associated sarcomas are not uncommon in feathertail gliders, although most are fibrosarcomas. These chip associated tumours have also been seen in kowari, and bilbies. This animal had severe ectoparasitism with mites and underlying enteritis, probably bacterial (4804.1)
- Spinifex Hopping Mouse - captive, NSW - one animal was submitted from a captive research colony due to numerous mortalities in the collection. The animal examined had a severe tapeworm infection, with probable secondary bacterial infection in the intestine. This type of parasitism could cause significant health effects in a colony. The parasites were identified by Dr. Ian Beveridge as *Rodentolepis fraternalis*, the dwarf tapeworm, which is a cosmopolitan worm often found in mouse colonies, but it is the first known report of the parasite in Spinifex hopping mice (4811.1).

- Boa constrictor - named "feather" - captive, NSW - acute pneumonia with intracytoplasmic inclusion bodies - viral infection, em pending (4828.1).

SEPTEMBER 2005

- Tammar wallaby - digital images and pathology report submitted by Dr. Dave Spratt - animal captive - ACT - a pouched young was found with numerous wart like skin lesions. The case is being investigated by CSIRO sustainable ecosystems (4858.1)
- Tammar wallaby - research colony, NSW - young animal being hand raised, died with acute pulmonary congestion, oedema and haemorrhage, and multifocal tracheal mucosal ulceration, with other foci of loss of cilia and desquamation of the respiratory epithelium. *Streptococcus bovis* was isolated in the pulmonary parenchyma, but the significance of this finding was questionable given the complete lack of inflammation within the trachea or lungs. *Bordetella bronchisepticum* was not isolated within the trachea. Tissues were submitted to NSW DPI for viral culture to rule out acute viral infection, and no viruses were isolated. (4837.1).

A swamp wallaby and bridled nail tail wallaby from western NSW have also died suddenly with very similar pulmonary and tracheal lesions within a few days of the death of the tammar wallaby (4849.1, 4855.1). Numerous rabbit deaths associated with rabbit calici virus infection were reported over the same time period in western NSW. It may be that with good rains this year arbovirus are circulating in increased numbers. NSW Health has been notified and they may augment their sentinel flocks to include this geographic region.

- Quokka - captive, NSW - died with acute haemorrhage and necrosis in the heart, which could have been caused by either an acute infection with EMC virus, or a nutritional myopathy. EMC virus was suspected due to a lack of myopathy within skeletal muscle, however, viral culture was undertaken and EMC was not identified (4836.1).
- Northern Quoll - captive, NSW - aged animal euthanased due to hind end ataxia and weakness. The quoll had large numbers of discs prolapsed into the spinal canal and impinging on the spinal cord (causing large foci of malacia and extensive Wallerian degeneration). The quoll also had a large hepatoma. There has been a published report of degenerative demyelinating disease in the spinal cords of quolls where they apparently ruled out the presence of prolapsed discs, however, this is one of several cases of prolapsed discs we have seen in aged quolls. Demineralising and examining the entire spinal column may increase the sensitivity in detecting prolapsed discs and thus the cause of some cases of spinal cord degeneration. (4833.1)
- Brush-tailed phascogale - captive, NSW - the phascogale was found with severe fur loss, bite wounds on the rump, consistent with cagemate trauma, and a large bladder containing stones and bacteria. Euthanasia was elected. The phascogale had numerous stones composed of magnesium ammonium phosphate and a bacterial infection (*Enterococcus faecalis*) in the bladder, and one very small kidney with inflammation and interstitial fibrosis. There was also a granuloma in the lung containing *Mycobacterium* species, and mycobacterial granulomatous dermatitis - Mycobacterial speciation is pending (4861.1).

- Centralian Carpet python - was found with numerous proliferative lesions incorporating and surrounding the spine. There was a displaced transverse fracture through the largest spinal lesion - tests pending (4864.1)
- Australian fur seal - captive, NSW - aged animal that was euthanased after a course of severe and painful lameness. The animal had a very large (15 cm diameter) soft tissue tumour - sarcoma - in the arm pit. Another pedunculated soft tissue tumour was attached to the large intestinal wall. The animal also had bilateral cystic and adenomatous change in the thyroid glands, nodular hyperplasia of the adrenal cortices, and an ovarian granulosa cell tumour. Although the thyroid and ovarian lesions had the potential of being hormonally active, thyroid hormone and estradiol concentrations in this animal were normal (serum had been banked at the time of the animal's death and was tested subsequent to the histopathological examinations) (4820.1).
- Loggerhead turtle - rehab, NSW - the very small turtle had been in captive care for months. It had a soft shell/metabolic bone disease, and died with septicaemia - species, indicating most likely aspiration of pond water. The turtle had an underlying granulomatous pneumonia associated with *Mycobacterium chelonae* and *fortuitum* (4841.1).