

The Australian Registry of Wildlife Health



Quarterly Case Summary

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.

FEBRUARY 2005

- Ringtail possum - Mycobacteriosis was ruled out in a wild possum with suspicious mesenteric granulomas. The possum was euthanased due to severe dehydration and poor body condition. Upon necropsy the possum was found to have a large retroperitoneal abscess and several large granulomas in the mesenteric lymph nodes. *E. coli* was grown in pure culture from the affected nodes (coligranuloma) and no acid fast organisms were identified. (4542.1)
- Satin bowerbird - rehabilitation, central coast, NSW - deaths were reported in two groups of satin bowerbirds (6 birds total) being hand-reared in 2 different facilities (mixed species aviaries) on the central coast. The birds had been treated with baytril, but with no apparent clinical response. Only one bird was submitted for necropsy and this animal had multisystemic tissue necrosis and non-suppurative inflammation associated with a *Toxoplasma* or *Neospora* like parasite. The wildlife carers were informed of the diagnosis and the need to keep wild animals and their food/bedding away from domestic cats and dogs (4554.1).
- Brushtailed phascogale - captive, NSW - aged animal was euthanased when it was found to be in poor condition, with multiple lumps in the skin of one foot and a large mass palpable in the abdomen. The lumps in the foot were squamous cell carcinomas that were rapidly invading adjacent soft tissue up the leg. The abdominal mass was a liver carcinoma that had spread to the kidney and lungs (4539.1).
- Diamond Python - captive, NSW - euthanased due to progressive nervous system dysfunction, predominantly ascending flaccid paralysis and loss of righting reflexes. The snake had evidence of inclusion bodies within nuclei of cells in the brain and kidney, but this location of inclusions is not characteristic of Inclusion Body Disease of Boids (cytoplasmic inclusion). Similar intranuclear inclusion bodies have been seen in other captive and wild caught diamond pythons. The clinical syndrome in diamond pythons has been referred to as "floppy diamond python syndrome". Electron microscopy will be conducted to further characterise the nature of the inclusions. (4557.1)
- Clamorous reed warbler - captive, NSW - one warbler died with systemic coccidiosis, spread of a single celled parasite from the intestinal tract within white blood cells to other organs in the body (4541.1). This is the first report of systemic coccidiosis in reed warblers to the Registry. The infection is difficult to diagnose based on histological examination of tissues, and the diagnosis in this animal was made possible by finding zoites circulating in monocytes in a splenic impression smear. Buffy coat smears can be examined to assist in making a diagnosis in the live animal.
- TFM - wild, NSW - Euthanasia with signs of central nervous system dysfunction. *A. cantonensis* parasites seen in the brain and spinal cord (4537.1).
- Ringtail possum - wild, NSW - euthanased due to signs of central nervous system dysfunction. No traumatic injuries were identified on necropsy. Tissues will be submitted to NSW DPI to rule out an acute viral infection. Unfortunately toxicological tests are too expensive, particularly when there is no known exposure to particular toxins (4552.1).

MARCH 2005

- Brushtail phascogale - captive - aged animal was euthanased when it was found to have hind limb paralysis and a mammary mass. The phascogale had multisystemic

mycobacteriosis. Both *Mycobacterium avium*, and *Mycobacterium abscessus* were isolated within the lesions (4592.1).

- Green turtles - two juvenile green turtles were submitted alive, but weak and debilitated. Each animal was euthanased due to having a poor prognosis for release. Each animal was found to have large intestinal obstruction and ulceration caused by severe constipation with very hard faeces. The devitalised intestinal wall then presumably allowed the invasion of bacteria into the blood stream. Colonic obstruction in young sea turtles is not uncommon, but the cause of the syndrome is not understood. One turtle had portions of balloon in its stomach, but this was unrelated to the intestinal obstruction (4579.1, 4607.1).
- Koala - captive, NSW - Biopsy of a mass found at the edge of the mouth revealed a papilloma, further investigations are underway to determine if there might be a virus associated with the lesion (4583.1).
- TFM - wild, NSW - Two birds euthanased due to an inability to stand. Nematodes evident migrating through the spinal cord and brain (presumptive *A. cantonensis*) (4585.1, 4597.1).
- TFM - Euthanased after sustaining a fracture when hit by a car. The frogmouth had several granulomas in the brain and inflammation in the spinal meninges that were highly suggestive of previous *A. cantonensis* infection. Perhaps the previous parasite infection altered the bird's fine motor skills increasing its chance of traumatic injury (4586.1).
- TFM - wild, NSW - Died under anaesthetic shortly after arrival. Found to have extensive encephalitis associated with a *Toxoplasma* like parasite (4576.1).
- Magpie - a sub-adult animal was submitted by WIRES and euthanased due to poor body condition and very poor feathering. This seems to be a syndrome in some young magpies, and some of these birds also have ricketts. Affected magpies are usually heavily parasitised by a wide variety of pathogenic organisms. This magpie was suffering from pox virus lesions, *Xenocordón* species burrowing through the oral mucosa, the pox lesions and ventriculus were invaded by yeast and fungal hyphae, there was a heavy burden of intestinal coccidia, and a heavy burden of cryptosporidia within the mucosa of the bursa of Fabricius. Ectoparasites were present on the feathers, and the clinical history was suggestive of Knemidocoptes infestation of the skin on the feet (4584.1). The cause of the poor body condition, bone and feather abnormalities in these birds is suspected to be a poor absorption of nutrients associated with these varied infections.

APRIL 2005

- Red Fox - wild, western NSW - the fox was euthanased due to signs of central nervous system dysfunction. The fox had respiratory lesions consistent with canine distemper virus infection, and cytoplasmic inclusion bodies present in the adrenal gland and bronchial epithelium. Fixed tissues were forwarded to Australian Animal Health Laboratories for Lyssavirus exclusion and canine distemper virus diagnosis (4615.1).
- Kangaroo Island Kangaroos - captive, VIC - euthanased due to progressive loss of body condition. Upon gross necropsy, numerous firm lesions within the liver, pancreas and omentum, and multiple large hepatic and omental abscesses were identified. Histological examination of tissues revealed cholangiocellular carcinoma involving the liver, pancreas and omentum, granulomatous enteritis containing intracellular acid fast bacilli, and multiple hepatic and omental abscesses. *Mycobacterium smegmatis* was identified within the hepatic abscesses (4630.1). Two red kangaroos that had historically shared a paddock with the Kangaroo Island kangaroo had died with similar hepatic and perihepatic abscesses and *Mycobacterium avium* was growing in culture from one of these animals.
- Platypus - adult, male, captive, BIOPSY - samples were collected from papillary skin lesion on the feet to allow for diagnostic work to be conducted to identify if a papilloma virus is present (4545.1).
- Broad headed snake - captive, NSW - found dead with a severe fibrino-necrotising colitis and terminal septicaemia caused by *Salmonella arizonae*.
- Tasmanian Devil - adult, male, captive, BIOPSY - skin mass was found to be formed by benign epithelial lined cysts containing keratin (4639.1).
- Koala - captive, adult, female, BIOPSY - skin mass growing on the neck was found to be a squamous cell carcinoma *in situ* (3089.1).

- Feral Pigeon - from the Sydney area - The bird was emaciated, had fibrinous coelomitis, and was confirmed to have chlamydiosis based on an antigen capture test. This is the first report to the Registry of chlamydiosis in a wild animal in the Sydney area (4627.1), although there are numerous reports of chlamydiosis in psittacines in the Blue Mountains region.
- Australian Pelican - wild, NSW - rangers observed members of the public hand feeding bread rolls to the pelican and then the bird began to choke. The bird was taken to a vet clinic once it was able to be caught, but it died shortly after admission. The bird had a necrotising oesophagitis, presumably associated with pressure necrosis from the lodged foreign body (4643.1).
- Port Jackson's Sharks - captive, NSW - Two sharks that were wild caught and are being maintained for a research project were euthanased due to severe bilateral keratitis, and unilateral ruptured corneas. Histopathology identified a severe non-suppurative meningoencephalitis associated with the presence of metazoan parasites. A single parasite was also evident in one of the ruptured eyes. Portions of formalin fixed brain have been forwarded to Dr. Ian Beveridge for parasite identification (4622.1 & 1).
- TFM - wild, NSW - 3 animals with granulomatous meningitis and nematodes evident within their spinal cords. Presumptive *Angiostrongylus cantonensis* infection (4641.1).

MAY 2005

- Tawny frogmouths - 3 frogmouths submitted for necropsy this month. One frogmouth had fibrinous arthritis of the shoulder joint, containing *Pasteurella multocida*, and a pulmonary granuloma containing *Aspergillus fumigatus*. Each of the frogmouths had granulomatous meningitis suggestive of *A. cantonensis* infection, but no worms were seen in the sections of central nervous tissue. (4656.1, 4671.1, 4676.1)
- Grey-headed flying fox - wild, NSW - the bat was found fitting in the middle of Centennial Park, and died shortly after it was taken to a nearby vet clinic. The bat had severe unilateral pneumonia and epidarditis. Histopathology pending (no samples submitted yet for microbiology due to concern of zoonotic disease).
- Carpet python - captive, NSW - euthanasia was elected after a history of several months of progressive neurological dysfunction. Eosinophilic cytoplasmic inclusions were identified within various cells in the brain. Consistent with a diagnosis of inclusion body disease of boids (4660.1).
- Diamond python - wild, NSW - the snake was found by the side of a road and was thought to have been hit by a car. The animal was euthanased after supportive care failed to improve its listlessness, and the snake was found to have poor righting reflexes. Post mortem examination identified marked, bilateral distention of the cranial portions of the ureters with urates and there was associated granulomatous inflammation within the walls of the ureters. There were also large numbers of ascarids burrowing into the stomach wall. Microscopic examination of tissues revealed numerous small eosinophilic intranuclear inclusions within astrocytes and nerve cell bodies throughout the brain (4680.1). This pattern of progressive flaccid paralysis and intranuclear inclusion bodies within the CNS of wild and captive diamond pythons has been previously reported to the Registry and is sometimes called "floppy diamond python syndrome".
- Black swan - wild, WA - digital images and written reports were submitted by Dr. Cleve Main representing animals found on Lake Monger observed with pallor, crusting and multifocal ulceration of the beak and face, conjunctivitis and uveitis, with inflamed sclera and iridae, and bumblefoot. The investigators consider that the birds may have been exposed to a contact irritant or photosensitising agent. Some of the birds had elevated serum concentrations of liver enzymes, which could be consistent with exposure to a photosensitising agent (4666.1).
- Gilbert's potoroo - captive, WA - Dr. Cleve Main submitted tissues to the registry of a potoroo with multisystemic cryptococcosis. Based on the histological findings, the infection most likely followed the classic pattern of infection beginning in the nasal cavity and spreading to the lung and meninges surrounding the brain, with the blood brain barrier protecting the central nervous system until the later stages of infection (4665.1).