ADENOVIRUS, TAWNY FROGMOUTH (CASE 460.1)

CASE HISTORY
Adult female tawny frogmouth (*Podargus strigoides*) found attacked by a cat. Left eye closed, blood in mouth. On exam, left eye and caudal pharynx punctured. Treated for 10 days, but corneal ulcer persisted and retinal detachment suspected. Euthanasia elected.

GROSS PATHOLOGY
External examination: The left eye is coated with green fluorescent material - fluorescein.
Hydration: good
Muscle mass: reduced
Fat deposits: reduced
Internal examination: No visible lesions.

HISTOPATHOLOGY
No visible lesions: lung, kidney myocardium.

Ventriculus: The koilin layer is thick and contains several portions of insects, surrounded by bacteria.

Proventriculus: The mesentery contains a focal lymphoid infiltrate.

Testes: Spermatogenesis is not evident within the spermatic cords.

Liver: Haematopoietic cells are evident within the periportal tissues. Centrolobular areas are often pale and hepatocytes in this area have dropped out of section (Fig 1). A small number of cells in these regions have rounded cell margins and pyknotic nuclei. Hepatocytes at the margins of these lesions occasionally have peripheralisation of chromatin and eosinophilic nuclear inclusion bodies (Fig 2).

Thyroid gland: Thyroid follicles contain moderate quantities of colloid and have low cuboidal epithelium. Parathyroid tissue is evident within the adventitia of the thyroid gland.

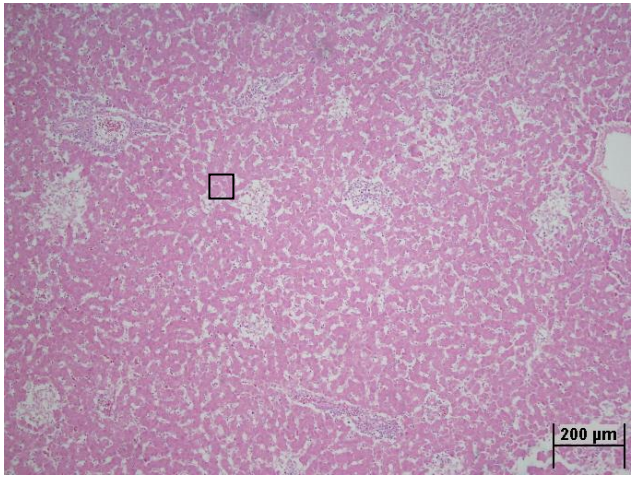

Fig 1 Liver centrilobular necrosis. H&E 10x

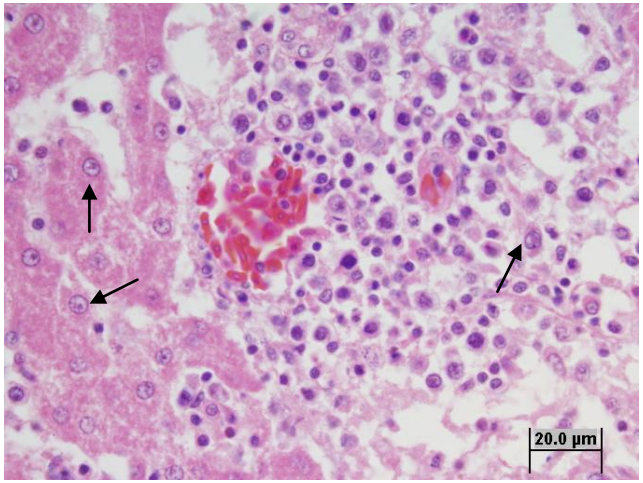

Fig 2. Liver (see inset Fig 1) Centrilobular necrosis and hepatocytes with intranuclear inclusions (arrows). H&E 100x

OTHER MICROBIOLOGY
Splenic impression smear: 1+ bacilli

MORPHOLOGICAL DIAGNOSIS
Euthanasia
Corneal ulceration - detached retina - left eye
Mild centrolobular hepatocellular necrosis - adenovirus

COMMENTS
The bird sustained an ocular injury in a cat attack. The injury did not heal with treatment and euthanasia was elected. It is uncertain whether the adenovirus hepatitis contributed to the bird's initial risk of being attacked. Several types of adenovirus occur in birds, with effects ranging from none, to hepatitis, enteritis, tracheitis, amd immunosuppression and lymphoid depletion.

REFERENCES
MACKIE JT, BLACK, D AND PRIOR, H. (2003) Enteritis associated with adeno-virus-like particles in captive lorikeets. Aust Vet J, 81: 293-295

Case interpretation: Karrie Rose. Photography and case construction: Damien Higgins

TARONGA CONSERVATION SOCIETY AUSTRALIA
Australian Registry of Wildlife Health