



## Significant disease events out there?

Hi everyone

Another SDI with a large number of mortalities is described in this newsletter – great to see a definitive diagnosis through field and lab work.

The first recognition of *E. canis* in northern WA was May 2020 – in the last 12 months it has certainly taken hold in WA and NT. There's a summary below of diagnostic samples and a link to an excellent resource for diagnosis, treatment and management of canine ehrlichiosis.

Lil Stedman is working on plans for a one-day face-to-face Masterclass in Darwin on Friday 12<sup>th</sup> November. This will be a terrific opportunity to get behind the scenes in the Berrimah Lab (where do all those SDI submissions go? and who does what with them?). Save the date. By the way - this is the day after the LIVEXchange21 Conference (10-11 November) also in Darwin.

SDI submissions have been slow in the last while – keep your eyes out for significant disease events and do get into the investigations that make professional vet work particularly rewarding.

Cheers Kev

Newsletter #30 (10 June 2021)

## What plant is this?



Answer below

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## Sudden death of 70+ merino ewes in central west Qld

On 17 February 2021, approximately 70 mature merino ewes were reported dead on a property in central west Queensland.

All of the deaths were in an area where the animals had been located for 12 months with no known issues. Rams had been put in with the ewes in December 2020. Late in the previous week there had been rain which had caused a fresh flow of water in the creek that runs through this paddock. The paddock had been checked 4 days prior with no problems seen.

The ewes were weak, showing signs of abdominal pain, then going down and becoming recumbent.

Dead animals had haemorrhage or fluid containing ingesta present from the nostrils and mouth. The 12 animals that were still alive were recumbent, some dragging themselves short distances. Most were still able to hold their heads up and had produced normal faecal pellets.

Field differential diagnoses based on history and clinical signs included various toxicities (nitrate, oxalates), botulism, pregnancy toxemia, milk fever (hypocalcaemia), humpyback staggers.

Given the history of recent rainfall, Pigweed was considered a likely culprit. Pockets of this plant were observed on inspection of the paddocks involved.

On suspicion of oxalate toxicity, the remaining animals were removed from the paddock and supplied with a high fibre feed source.

Two animals were selected for euthanasia and post-mortem sampling. Animal 1 appeared to be very weak, with an increased respiratory rate and frothy, green liquid

present at nostrils. Animal 2 was recumbent, otherwise no abnormalities were noted. Blood sampling was performed prior to euthanasia via gunshot.

On post-mortem, Animal 1 was found to have congestion of cranial-ventral lung lobes. Feed matter was found within the airways. No other gross abnormalities were noted. This ewe was early pregnant (foetus approximately 2.5cm). Animal 2 was further along in gestation (foetus approximately 15cm). No gross abnormalities were observed.

Aqueous humour; fresh and preserved samples of lung, spleen, heart, kidney, liver and small intestine; gut contents and faeces were collected and sent to the lab.

Lab results:

- Clostridium perfringens epsilon toxin detection by ELISA – negative
- Nitrate and nitrite in biological fluid – negative
- Cyanide – insufficient sample
- Biochemistry - severe hypocalcaemia with evidence of renal compromise (azotaemia and hypermagnesaemia).

Histopathology in both animals: Moderate, acute, diffuse oxalate nephrosis. Abundant fan or rosette-shaped, refractile crystals are present within cortical tubules and collecting ducts throughout the cortex and medulla. Moderate numbers of cortical tubules show epithelial degeneration and there is multifocal tubular dilation. Occasional cellular and hyaline casts are present. The crystals are strongly birefringent under polarising light microscopy, consistent with calcium oxalate.

**Acute oxalate toxicity was confirmed on clinical biochemistry and histopathology.**

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Q. What plant is this?

A. Portulaca oleracea (Pigweed or Purslane)

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**Reminder – watch Selina Ossedryver’s great summaries of plant poisonings in northern Australia**  
[NABS Masterclass March 2021](#)



Source DAWE, courtesy of Dr John Beadle,  
All Creatures Veterinary Clinic, Broome



Source DAWE, courtesy of Professor Peter Irwin

## Canine ehrlichiosis one year on

It's been just over a year since ehrlichiosis was first found in dogs in the Kimberley region of Western Australia. The tick-borne disease is now considered established in most areas of northern Western Australia and Northern Territory.

Any dog that currently lives, or in the last year has lived, in an area where either *Ehrlichia canis* or its vector, the brown dog tick (*Rhipicephalus sanguineus*) are established, are most at risk of disease. Meaning, sadly, pretty much all dogs in northern Australia are potentially at risk.

NT have published an excellent [clinical guideline for vets](#) – to help vets diagnose and manage cases of ehrlichiosis.

Tick prevention is also a hot topic (and also covered in the guideline) – remember that products that require the tick to feed prior to kill are **not** effective at preventing infection with tick-borne diseases, including (but not limited to) ehrlichiosis.

**Infection with *E. canis* is a nationally notifiable disease – if you suspect ehrlichiosis in a dog, get in touch with your government vet directly or via the EAD hotline (1800 675 888).**



## Patient Zero podcast

For those of you with long distances to drive, here's an interesting Radio National podcast called [Patient Zero](#).

Each episode features a disease outbreak - the first realisation that something beyond the norm is happening and how events subsequently unfold. Although the focus is on diseases affecting people, the experiences of the clinicians and epidemiologists involved are highly relatable.



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### Key contacts for the NABS SDI network

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**Newsletter sent on Kevin's behalf from the team at Harris Park Group**

Let us know anything you'd like covered here or on the website