NABSnet Newsletter

#56 | 20 August 2025

NABSnet info

Kevin Bell

Bill Tranter

Hi all in our NABSnet network

Our Cattle Skin Survey continues – with a few tweaks to make it easier for you, and for collating the results. Having samples from northern cattle skin lesions has been tremendously valuable – to know what's out there (including lots of buffalo fly sensitivity!) and for LSD 'evidence of absence'.

NAQS is continuing the funding – so $600+GST / property sample-set available. The changed logistics make sending pictures, submission forms and invoices easier and quicker for you. More info below - print out the new instruction sheet, download the submission form and take up the opportunity.

And there's a separate request for your input about skin surveillance via a short online survey being run by Ausvet – please participate.

The SDI this issue – multiple horses suddenly and severely ill. This investigation provided an opportunity to rule out a lot of EADs.

Do always consider doing a NABSnet SDI if there are multiple animals involved, of livestock, horses or poultry, that present symptoms of sudden death, neurological, respiratory, skin or ill-thrift. The lab work is free, and the subsidy of $2500 helps make the investigation more affordable for clients. And we can share info about types disease across the network.

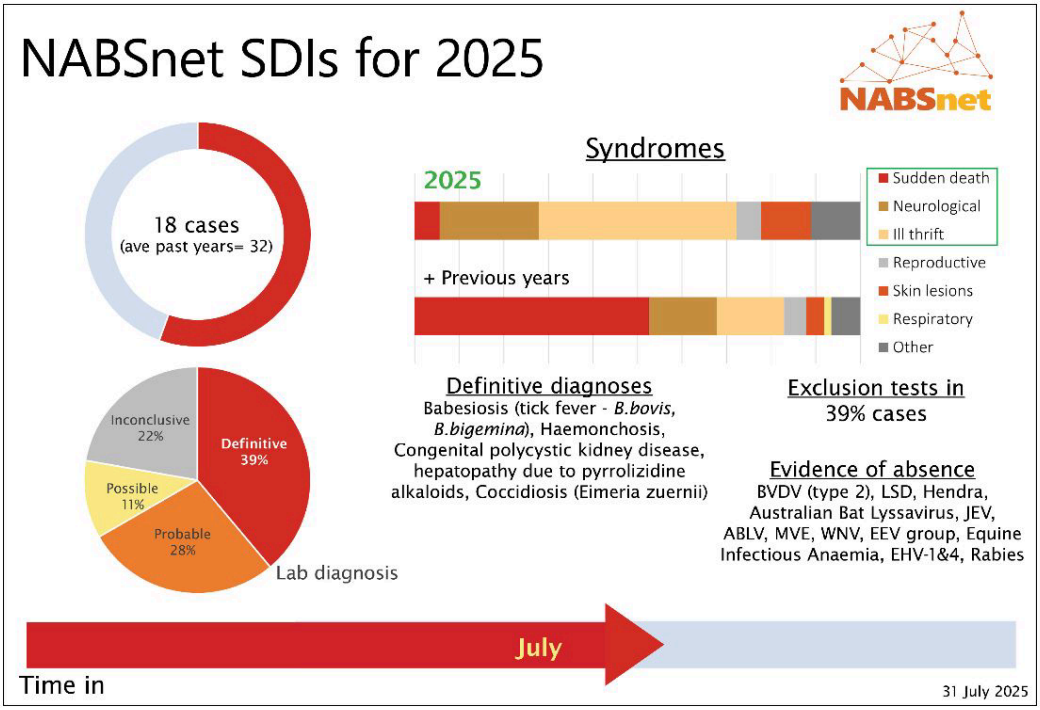
Big welcome to Tom De Ridder who has joined NABSnet as Teagan's replacement. Many of you will know Tom from his various roles in the north – east and west – but for those who don't, we've asked him about his career.

Other things Included:

- What poison plants are these? A couple more 'quiz' images to get your botanical brains going
- Info on the rabies challenge in Timor-Leste and Australian assistance

Cheers Kev and Bill

NABSnet SDIs dashboard



SDIs in the last 6 months

Date	Location	Animal species	Presenting Syndrome	Numbers [sick / dead / at risk]	Diagnosis with lab findings	Diagnostic confidence	NND exclusions
Feb-25	NT	cattle	long dead carcases	? / 100 / 200	No diagnosis	inconclusive	None
Feb-25	QLD	cattle	illthrift and death in heifers	? / 12 / 42	Tick fever (*Babesia bovis)*	definitive	None
Feb-25	QLD	cattle	illthrift and death in weaners	8 / 3 / ?	Polycystic kidney disease - congenital	definitive	BVDV (type 2)
Mar-25	QLD	cattle	neurological signs and death	? / 80 / 240	Salt toxicity from water deprivation	probable	None
Mar-25	QLD	cattle	necrotising skin lesions	18 / 0 / 40	Open to date - further lab work	inconclusive	LSD
Mar-25	QLD	cattle	illthrift, diarrhoea	3 / 10 / ?	Haemonchosis	definitive	None
Mar-25	NT	cattle	illthrift	3 / 0 / 50	Congenital heart failure; Zamia toxicity	probable	BVDV (type 2)
Mar-25	WA	cattle	neurological signs, aggression	3 / 2 / 180	Tick fever (*Babesia bigemina)*	definitive	Rabies, Australian Bat Lyssavirus
Mar-25	WA	avian	neurological signs, death	? / 3 / 12	Nodular tapeworm & botulism	probable	None
Apr-25	WA	horses	sudden and severe distress leading to euthanasia	0 / 3 / 16	Likely plant toxicity - ironwood	inconclusive	Hendra, JEV, ABLV, MVE, WNV, EEV group, Equine herpesvirus
Apr-25	QLD	horses	neurological signs, icterus	2 / 5 / ?	pyrrolizidine alkaloid toxicosis	definitive	Hendra, Equine Infectious Anaemia, EHV-1&4
May-25	QLD	cattle	stiff gait and sudden death	3 / 5 / 110	Likely plant toxicity	inconclusive	None
May-25	WA	cattle	skin lesions	50 / 0 / 200	Hypersensitivity dermatitis	probable	LSD
Jun-25	QLD	cattle	ill thrift, diarrhoea, moribund	324 / 2 / 1373	Coccidiosis (*Eimeria zuernii*)	definitive	None

What plants are these?

Cattle Skin Survey - continues, with some changes

Keep sending samples of skin lesions that you see during routine work. This helps further describe the typical range of skin conditions in northern Australia and contributes to the 'evidence of absence' of LSD. It's also an opportunity to remind people who work with cattle to watch for skin lesions.

We've made the process more streamlined to make it easier for busy vets in the field and for collation of the results.

NOW you send the photos and submission forms by email (not text message), dispatch the samples, and then send the invoice. You no longer need to send in the results – they will be collated from the lab.

BUT for the samples to be eligible for the subsidy, we must receive images and the additional Cattle Skin Survey submission form by email to NABS@aff.gov.au

How to participate

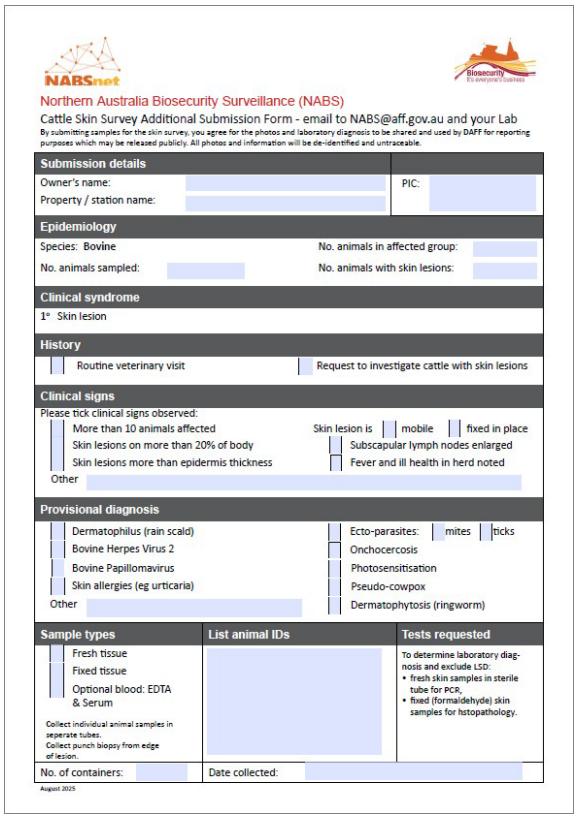
1. Take photos of the lesions
2. Get punch biopsies (fresh + fixed)
3. Collect serum and EDTA bloods (if possible, not critical).
4. Fill in the Lab submission form **AND** the Cattle Skin Survey submission form. Both forms are necessary so we can analyse the data.
5. Email photos and both submission forms to the state lab (email addresses below) **AND** to NABS@aff.gov.au
6. Pack and freight samples and submission forms to your relevant state lab, to arrive the next day.
7. Send an invoice for $600+GST to NABS@aff.gov.au

Email photos and submission forms to:

NT: BVL.DITT@nt.gov.au or
QLD: bslclo@daf.qld.gov.au or
WA: DDLS@dpird.wa.gov.au

AND
NABS@aff.gov.au

download instructions and submission form here



Northern Australia Biosecurity Surveillance (NABS)

Cattle Skin Survey Additional Submission Form - email to NABS@aff.gov.au and your Lab

By submitting samples for the skin survey, you agree for the photos and laboratory diagnosis to be shared and used by DAFF for reporting purposes which may be released publicly. All photos and information will be de-identified and untraceable.

Submission details

Owner's name:

Property / station name:

PIC:

Epidemiology

Species: Bovine

No. animals in affected group:

No. animals sampled:

No. animals with skin lesions:

Clinical syndrome

1° Skin lesion

History

Routine veterinary visit

Request to investigate cattle with skin lesions

Clinical signs

Please tick clinical signs observed:

More than 10 animals affected

Skin lesions on more than 20% of body

Skin lesions more than epidermis thickness

Other

Skin lesion is mobile fixed in place

Subscapular lymph nodes enlarged

Fever and ill health in herd noted

Provisional diagnosis

Dermatophilus (rain scald)

Bovine Herpes Virus 2

Bovine Papillomavirus

Skin allergies (eg urticaria)

Other

Ecto-parasites: mites ticks

Onchocercosis

Photosensitisation

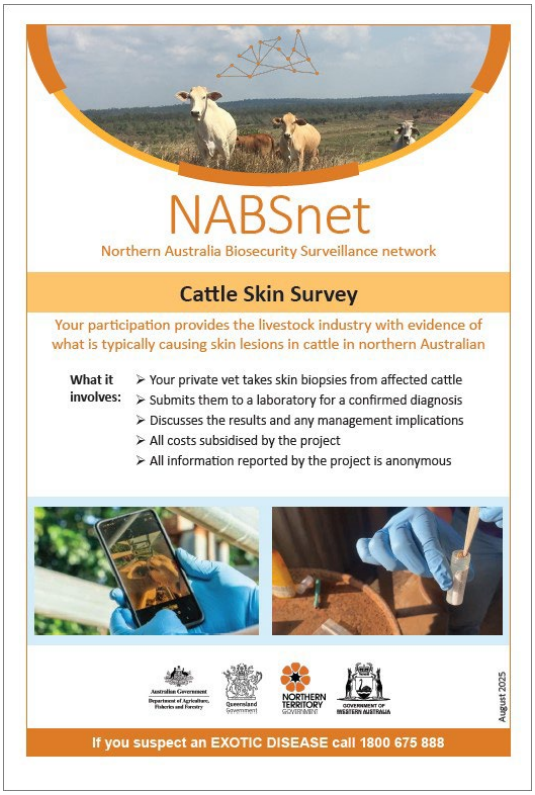
Pseudo-cowpox

Dermatophytosis (ringworm)

Sample types	List animal IDs	Tests requested
Fresh tissue Fixed tissue Optional blood: EDTA & Serum Collect individual animal samples in seperate tubes. Collect punch biopsy from edge of lesion.		To determine laboratory diagnosis and exclude LSD: • fresh skin samples in sterile tube for PCR, • fixed (formaldehyde) skin samples for histopathology.
No. of containers:	Date collected:	

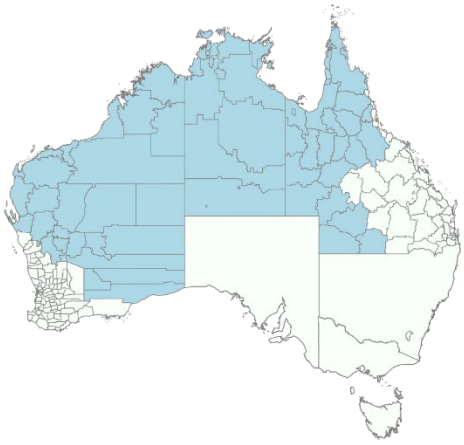
August 2025

You must send photos and this submission form to NABS@aff.gov.au to be eligible for the subsidy



There is also a flyer which you can give to clients

Please contribute - online survey about skin diseases



Ausvet request for 10-15 mins of your time...

If you work with cattle anywhere in the shaded part of the map - your input will be much appreciated

Ausvet, on behalf of DAFF, are conducting a survey to understand current general surveillance practices for skin diseases in northern Australian cattle.

We are asking all veterinarians that work with extensively managed cattle to **complete a 10-15 minute online survey**, which will help enhance our preparedness for disease responses in northern Australia.

All responses are strictly confidential and will only be published as aggregated data; no individuals will be identified. We are seeking responses from as many individual veterinarians as possible (rather than the survey being completed on behalf of a veterinary practice). Your valuable insights are very much appreciated.

Please complete the survey by the **31st August 2025.** For more information, the full participant information sheet is available here. If you would like to discuss any aspect of the survey, please get in touch with Robyn Hall (robyn.hall@ausvet.com.au) or Isabel MacPhillamy (isabel.macphillamy@ausvet.com.au).

Thank you for continuing to safeguard Australia's northern cattle industry.

Rebekah Burns BVSc BSc (Vet) Hons MANZCVS
Veterinary Officer (Epidemiology)
Department of Agriculture, Fisheries & Forestry

Access the survey via this QR code, or at

https://www.surveymonkey.com/r/JT6FKR9

Note: this survey is for private vets engaged in extensive cattle work. A separate survey for accredited vets (AAVs) conducting export-related work, on-plant vets and government vets will be distributed through other channels. Please do the survey most relevant to you.

SDI - Sudden death in 3 muster plant horses

In April 2025, in the Kimberley region WA, 3 of 16 mustering horses that had recently arrived at the property showed sudden distress with profuse sweating, generalised muscle tremors and stiffness, leading to euthanasia.

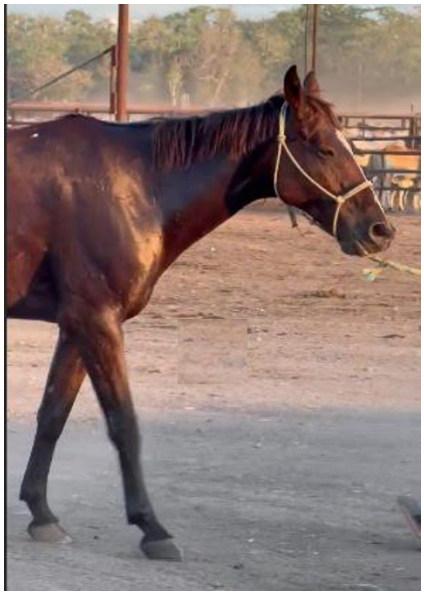
The horses had come from a property 2 hours away and were kept in a yard next to a feedlot for around 2 weeks. There was no grass in the paddock only the weed *Sida acuta* (common wireweed) but locally grown Rhodes grass hay was provided.

The muster horse yard

While mustering one horse was noted to be stumbling and lethargic so he was left in the paddock to rest. The next day the horse had rapidly deteriorated and was found with profuse sweating, generalised muscle tremors and stiffness. The decision was made to euthanise the animal - it was assumed to be an isolated case.

The next afternoon another horse from the same plant was found with similar clinical signs: severe muscle tremors, ataxia which seemed like she was about to go down or have a seizure, profuse sweating with normal temperature, pounding tachycardia with arrythmia. The decision was made to euthanise and do a post-mortem examination.

Two days later a third horse in the same paddock had clinical signs and was euthanised however a post-mortem was not performed.



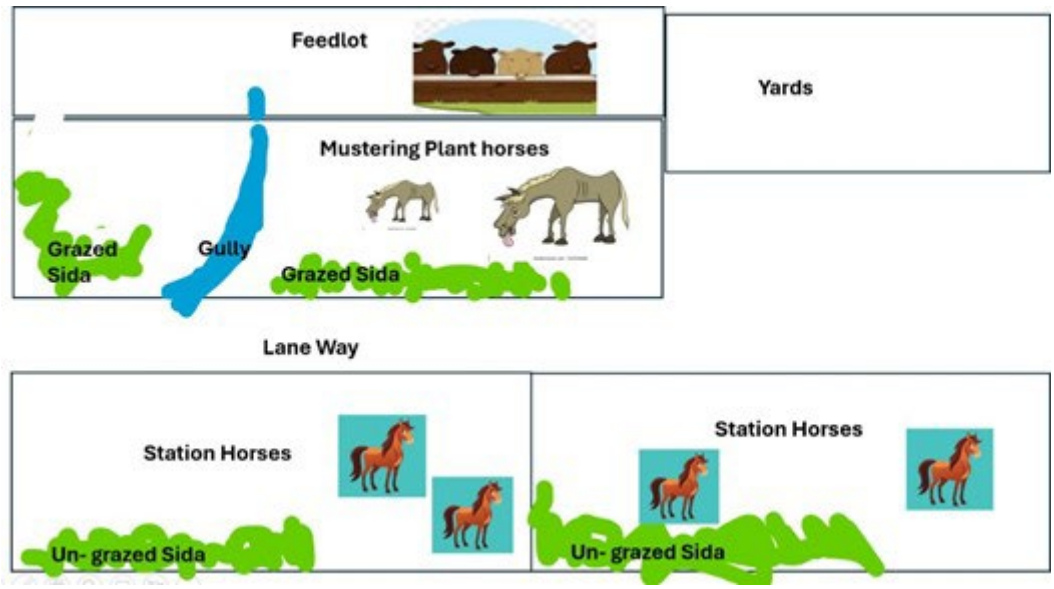
Third horse affected

There were approximately 20 station horses in other yards within 500m of the affected plant horses. None of the station horses were affected.

All the horses were being fed the same hay. It was noted that the Sida weed was being heavily grazed in the paddock with the deaths but not in the yards nearby with station horses. The yard with the plant horses contained a gully with algae present and was also closest to the feedlot.

There were no ironwood trees in the horse yards however they are known to be on the property.

There was no exposure of the horses to bats.



Gross findings: No major gross findings were seen on post-mortem examination.
Fresh and fixed brain, heart, lung, spleen, skeletal muscle, liver and jejunum were submitted to the lab, with nasal swabs in VTM, ocular fluid, bloods, serum and faeces, feed samples and water from the gully.

Field diagnosis: Toxicity was suspected. Differentials included monensin toxicity from the feedlot, blue green algae, toxicity from the Sida weed and ironwood toxicity.

Laboratory findings:

- Blood / tissue samples were negative for Hendra, Japanese Encephalitis, Bat Lyssa Virus, Murray Valley encephalitis, West Nile virus and herpes virus.
- Serum biochemistry revealed a marked hypochloraemia with normal sodium which was likely due to metabolic alkalosis or from the excessive sweating both horses exhibited. An increase in CK and AST was seen in both horses likely due to the muscle tremors.
- Ammonia/nitrate levels were unremarkable. Selenium and copper were adequate. Lead was negligible.

- Histology revealed no major abnormalities which ruled out monensin and *Sida acuta* toxicity due to the obvious changes these toxins create on heart tissue histologically.
- No infectious agents were cultured from the fresh samples.
- No toxins were found in feed or water samples. No annual ryegrass toxin was found in the faeces.

Ironwood toxicity was considered to be the most likely differential because of the clinical signs and lack of significant findings at the lab.

Animal / management / environment risk factors:
Cooktown ironwood is a highly toxic plant - less than 50g of dry material can kill a horse or cow within 24 hours. All parts of the plant are toxic including dried/dead leaves. Splinters from the wood can also cause reactions.

There is little information about the pathophysiology that occurs after animals ingest ironwood however it contains high levels of alkaloids which likely cause the clinical signs. Stock with ironwood toxicity display staring eyes, pale gums, difficult breathing and an irregular heartbeat prior to death. There is little found grossly on post-mortem and no specific pathology linked to ironwood.

Horses generally will not eat unfamiliar plants if other grazing materials are available however leaving hungry horses in a yard with weeds is very high risk of them consuming something toxic. Young green shoots are most consumed.

Horses new to the area are more likely to eat toxic weeds as they are not familiar with them so extra caution should be taken with new horses.

Although there were no trees identified in the yards, it is possible that the large number of cockatoos around the feedlot had dropped branches or leaves of the ironwood tree into the plant horses' yard. Another possibility is that a small amount of ironwood was present in the bale of hay fed to the plant horses.

Recommendations (strategies to increase resistance and reduce exposure):

- Horses should have access to good quality hay or pasture 24 hours per day

- Walk paddocks/ yards and remove any identifiable toxic plants before putting horses in them
- Do not put hungry horses in a yard containing weeds without providing hay or roughage
- Purchase hay from reliable sources and throw out hay if suspicious material is seen in it

Timor to the Top End: tracking rabies risk in the region

Australia is historically free of classical rabies but as spread of this devastating disease expands in our closest neighbours, so does the risk profile of an incursion into northern Australia.

Rabies is endemic in Indonesia, including West Timor. In March 2024, the first dog rabies case and a human rabies fatality were reported in Timor-Leste's Oecusse municipality. In June 2025, rabies was declared a *Public Health Emergency of National Significance* by the Timor-Leste Ministries of Health and Agriculture in response to an increase in human case numbers. As of July 2025, dog-mediated rabies has been confirmed in five of Timor-Leste's 14 municipalities, with a total of seven human case fatalities reported in four of these municipalities. Rabies continues to spread further eastward, with the capital city of Dili at high risk.

With financial backing from the Australian Government Department of Foreign Affairs and Trade (DFAT), the Office of the Australian Chief Veterinary Officer (OCVO) has assisted Timor-Leste with technical, operational and logistical support in rabies control. This has included vaccinating over 50,000 animals, training animal health officers and helping develop a national rabies management plan.

However, ongoing challenges such as a porous land border, high canine population turnover, limited animal control, vaccine hesitancy and low community awareness, hinder sustained vaccination coverage. The OCVO's continued assistance aligns with the 'Zero by 30' Global Strategic Plan, a collective goal of the World Health Organisation, the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health to

eliminate human deaths from dog-mediated rabies by 2030. This collaboration supports Timor-Leste's public health and contributes to keeping Australia rabies-free.

Timor-Leste rabies vaccination hubs

Photo Credit: Office of the Chief Veterinary Officer

The risk of cross-border transmission to Australia via illegal animal importation or wildlife increases as rabies spreads closer. Northern Australia's large population of free-roaming dogs and limited resources for population management will make response to a rabies incursion complicated. The prolonged incubation period (three months on average) of rabies, combined with inconsistent surveillance across with north, will make early detection difficult. Eradication, and then proof of freedom from disease, will be even more complex.

Preventing rabies from entering Australia is essential to protect public health and maintain our rabies-free status. With outbreaks escalating in nearby regions like Timor-Leste, strong border biosecurity, vigilant surveillance, and community awareness are critical to keeping this deadly disease out.

Is everyone in your practice getting the NABSnet newsletter?

If not, or if they are relying on you forwarding them a copy each time, encourage them to sign up to receive it direct and keep up-to-date with info relevant to cattle practitioners across the north. Super easy to do: click here

First name, last name, email - and it's done

Welcome Tom De Ridder

Life adventures – great and small

Big welcome to Tom De Ridder who has joined the NABSnet team to co-lead the project with Cass Wittwer.

Many of you will know Tom already from his times on the Atherton Tablelands, in Broome or Cairns, as a private practitioner, government vet or in the biotech industry. Getting to know more about him involves some yarning…

Your veterinary journey, Tom - where did you start and why?

It was early. We lived out west of the Atherton tablelands where my dad was the head of parks and gardens in the local shire. We did School of the Air through Cairns and so pretty much from preschool onwards I was with the cattle station kids and intrigued with station life.

And I think James Herriot had a lot to do with it! As a kid I watched the ABC show, All Creatures Great and Small - the old series. We were very much into books and I read and reread his whole series all the way through primary school.

In year 10 at Atherton State High I did work experience with the vets at Atherton and Malanda and that cemented my direction - I wanted to be a vet from then on. I took a year off after high school and went through the NT and taught at the school at Santa Teresa, went up to Tiwi Islands. Then just basically lived out of the Malanda clinic doing odd jobs there before starting at Murdoch.

You graduated in 2007 – what next?

Well actually I was a pretty keen Irish fiddle player. My whole family was into the folk music and I played lots of traditional Irish music so I thought - I'm going to see Ireland. I got a job in a mixed practice in Letterkenny, County Donegal – and it was just like living a story out of James Herriot – with the extra challenges of having to understand thick Irish accents and complex directions to get to farms! I spent a couple of fantastic years in Ireland – and did a huge number of calvings, lambings and Caesarians.

But Oz called?

JCU was just starting up, and Tablelands offered me a job working there again and helping teach the students. So there were a couple of years in practice and then the Dept in WA was recruiting field vets and I made my way to Bunbury and then to Broome as a government vet.

That was just at the time that BJD had become an issue in the north. It was a very quick education in industry consultation, dealing with the unpleasantness of quarantine and trying to get people through – helping them see a way out – proving freedom. It was tough, but also a really great job – one of the best. The Kimberley is amazing.

By 2015 my dad was sick so I came back to FNQ and joined NAQS in a contract role, working in Cairns. Not long afterwards the white paper funding was announced and there were lots of new ways of approaching improved biosecurity in northern Australia – and NABSnet was one of them.

Then I had the opportunity to do something very different – to work with a start-up biological life sciences company run by ex-CSIRO scientists. They were developing and testing the cancer treatment efficacy of a new pharmaceutical derived from the Australian Blushwood Tree, native to a small area of rainforest on the Atherton Tableland. And the wound healing capacity of other new drugs. This was drug discovery using ecological understanding of what plants do to protect themselves – very exciting stuff.

Tom with his son Ali and wife Nadia

And now, back to NAQS and biosecurity in the north, and getting deep into NABSnet planning. Veterinary science is such a remarkable career - a degree with amazing latitude for different application of our skills. I don't think there's a degree out there that can rival the flexibility that we have as vets.

And what about outside work – other passions?

Well having a 5-year-old takes a lot of your time, and it's joyful time that I gladly give – time helping form a human character, and forming us too. Parenthood teaches us so much more about ourselves - my wife and I really love that. I spend a lot of my time with my son Ali out in the bush, just as I did with my dad when we were kids. And I love anything to do with crafts - bush leather work and woodworking. Things that connect the head and the heart to the hands and give us a sense of self-sufficiency and having solutions.

Q. What plants are these?

1. Leaves and flowers of a Cooktown ironwood tree

Cooktown ironwood (*Erythrophleum chlorostachys*), is a leguminous tree endemic to northern Australia. It is semi-deciduous, dropping foliage in response to prolonged winter dry periods. It suckers prolifically from the roots.

All parts of the plant are extremely poisonous, and the species has been responsible for many stock fatalities with the main toxin being diterpenoid alkaloids. Common syndromes seen is ‘sudden death’; anorexia, pallor, cardiac arrythmia, diarrhoea with blood, disturbed vision, dyspnoea and death.

Further reading: Australia’s Poisonous Plants, Fungi and Cyanobacteria: A Guide to Species of Medical and Veterinary Importance, 2020, Ross McKenzie, DOI: 10.1071/9781486313877

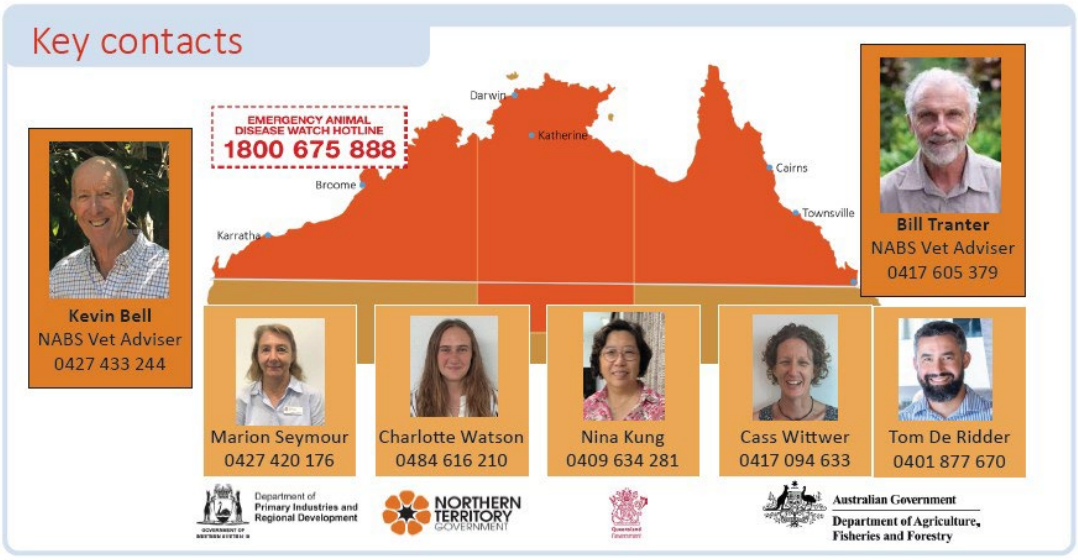
2. Leaves and flowers of *Sida acuta* Common wireweed

Sida acuta, the common wireweed, is a flowering plant in the mallow family. It is believed to have originated in Central America but now has a pantropical distribution. It invades open woodlands, pastures, waterways, plantations, crops, gardens, disturbed sites, roadsides and waste areas.

Although it is grazed occasionally, infested areas are usually ignored by stock.

In northern Australia *Sida acuta* is considered an invasive species, and the beetle *Calligrapha pantherina* was introduced from Mexico in 1989 as a biological control agent.

Key NABSnet SDI contacts



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NABSnet

Missed earlier NABSnet newsletters? read them here

Sent on Kevin and Bill's behalf from the team at Harris Park Group

Let us know any topics you'd like to see covered in future issues.