

Meeting Notice

Date Sunday 22nd November

Venue ; Mike O'Keefe Woodland Centre , 80 Mann St, Armidale.

Time ; 10.30 am – 12.30.

***** Christmas Lunch 12.30- 2.30pm *****

Followed by ; Guest speaker . . Lisa Doucette ... Owllett nightjars' (showing us her completed research project)



*** please contribute something FESTIVE for the lunch.*****



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Northern Tablelands Wildlife Carers
PO Box 550 Armidale 2350

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Newsletter of The Northern Tablelands Wildlife Carers Issue No 83 November 2009
Phone - 1800-008290 www.ntwc.org.au

Shooting in National Parks proposal loses Government support

Good news - opposition from environment and animal welfare groups, and the community has helped influence

State Cabinet's

decision not to support the Game and Feral Animal Control Amendment Bill. Introduced into the NSW Upper House by the Shooters Party this month.

The Bill proposed opening up recreational shooting in our national parks, threatening native

animals and jeopardising the safety of park users. Several species of birds and four species of kangaroos were on the hit list of native species that would become fair game for licensed hunters under this legislation. Duck hunting would also have been reintroduced to NSW. While the legislation did not allow the

shooting of endangered and threatened species, there were concerns that once amateur

suffering before a prolonged death or permanent debilitation.

Public land,



private exploits



The Game and Feral Animal Control Amendment Bill would have made it an offence for anyone to approach or in any way interfere with people hunting in national parks with a proper license. In fact, members of the public were not allowed to approach within 10 metres of a

licensed person hunting on declared public hunting land. This measure effectively restricted public access to national parks and impedes on the right to protest against amateur hunting activities.

There was no way of determining if the shooting would occur in an ethical and humane manner. Amateur hunters may have wounded animals, causing unnecessarily cruel pain and

Do not replace sound control measures with amateur attempts

Contacts for Northern Tableland Wildlife Carers (NTWC)

- Chairman - Harold Heffernan 6778-1357
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- Snake Co-ord - Colin Wood - 677833329
- Training Officer - Linda Dennis 0416014466
- Write to NTWC PO Box 550 Armidale 2350

Northern Tableland Wildlife Carers is a network of trained volunteers licensed by NSW National Parks and Wildlife Service. We rescue, rehabilitate and release injured, sick, orphaned & unwanted native fauna. Any assistance please call the above numbers in your area.

Membership \$15 single and \$20 family year for authorised and support members. All donations over \$2 are tax deductible.

This Newsletter is designed by Colin Wood and printed by New England Credit Union.

Teistra Country Wide are also proud to be a sponsor of NTWC



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Draft Procedure for Urban Wildlife Rescue.

Date August 2009

Situation: Wildlife Rescue and Relocation requirements in Urban Zones.

NVA : 1. **Assessment on site** by authorised / trained wildlife carer NTWC 1800 008 290 , WIRES 6778 4994

2. **Capture for treatment = bagging and sedation on site.** Macropods: Treatment stat. with Vit E + Selenium IMI and sedation. Assistance available from ADC ranger Steve Sauer with Tranquilliser gun Ph. 6770 3627, mobile 0408 668 486 NPWS, OH&S assessment Phone

3. **Removal** (Koalas and Possums) = bagging for treatment or Release.

* Electricity pole = Call Country Energy ph. Assistance ;

SES ph..... NPWS phone.....

Police ph 6771 0699, ADC ranger ph. 6770 3627

4. **Relocation** : Macropods, herding out of town along wildlife corridor.

Assistance available from : ADC ranger ph 6770 3627

NPWS ph. NTWC 1800 008 290, WIRES 6778 4994

5. **Euthanasia** = on site after Assessment by: NTWC 1800 008 290. And

6. **Body removal** = transport to ADC Waste transfer station for deep burial

Fundraising and Petition;

The 'Pamper Hamper' raffle is proving very popular so a big thankyou to Jill for persuading local businesses to make a small donation which have come together to make some very happy pampered winners. We can also thank Jill and Brian for printing raffle tickets packed with information, also the posters which have helped greatly.

Selling days have been at Centro and Plaza and SLEX expo. Colin organised loan of the NECU tent which took 3 of us and 6 extra helpers to put up. Unfortunately we had to abandon on the Saturday when the second dust storm arrived but the alternative accommodation in the big pavilion was ideal. Being close to wine tasting and fresh coffee we were fortunate to have a great spot for selling and signatures.

The Petition was started by myself and Jenni Drewitt after we became aware of the proposed amendment to the Game and Feral Animal Control Amendment Bill which has been put to State Parliament by the Shooters Party. There is an on-line petition with Nature Conservation Council but we felt many would prefer not to do it that way. The Shooters Party has proposed the opening up of National Parks for licensed shooters/hunters. Not only would the shooters like to shoot feral animals without the management of NPWS, they seek to have other feral animals introduced as 'target species' and a license to target selected native animals. Already we have heard of wildlife surveyors being advised to wear hi-viz vests in state forests because no one can be sure if shooters are active. This will also be a requirement in National Parks if this proposed amendment is passed in Parliament. We have submitted over 300 signatures to Richard Torbay for presentation to the Legislative Assembly, ready for the reintroduction of the bill during this term.

I want to thank those who helped at each stall and hope for some new faces at the last stall at Centro on 18th November. **Raffle draw is 26th November so please return all tickets at the next meeting.** NTWC urgently needs funds to continue to assist our joey carers with subsidised milks.

quickly as did the frost bite to her eyes, feet and cloaca. Her ears took the longest to heal however – and the tips actually fell off completely.

Chilli is now a happy, normal little wombat – except for her funny short ears! But we think she is beautiful!

Chilli will be in care for another 18 months or so before being soft released back into the wild. We'll keep you updated on her care.



A happy (short eared) Chilli!

© Fourth Crossing Wildlife

What is a Wombat

Vombatus ursinus

“The coarse-haired wombats are most at home in the forests, and are well distributed throughout the ranges of Southern Australia and Tasmania. They live during the day in large holes, which they excavate into the side of a hill or bank, and come out during the late afternoon or evening to feed. Quiet, inoffensive, and rather wary they are seldom

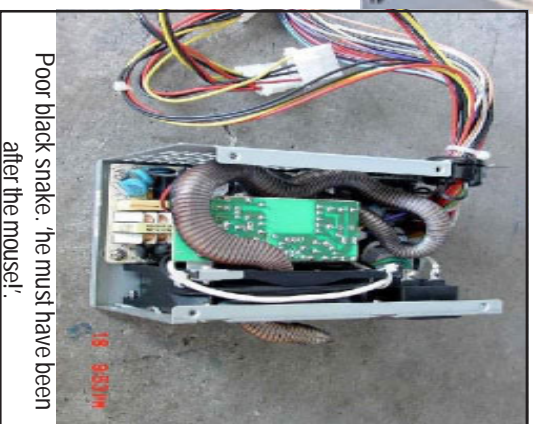
seen abroad in daylight, but a dull rainy afternoon will tempt them out earlier than usual.

To look at a wombat one would never suspect that such an animal had a sense of humour, but if the confidence of one is gained it may make a delightful pet, and be very playful. In this respect

Mr Brackett states: ‘I was handling a wombat belonging to Mrs O’Connell, of Bullialaba; this was a female six months old. The animal was at liberty

and had burrows in the garden, but never attempted to interfere with any of the plants or flowers. It would come to be petted and loved to be nursed just like a baby, yet it was playful, and amused me very much by trying to jump and roll when I was playing with it. It would also suddenly rear upon its hind-legs and try to butt me, just as a goat would do. This animal would follow the kiddies about the paddocks, and when hungry would walk into the house, and make a funny little noise to anyone it could find, until it got something to eat. If taken up to be nursed it quietly shuts its eyes and tries to sleep.’”

from “The Wild Animals of Australasia” by Le Souef & Burrell, 1926.



Poor black snake: ‘he must have been after the mouse!’

Hunting is not an effective means of feral animal control. Ad hoc efforts do not strategically contribute to successful animal management and may undermine professional control measures. Ineffective hunting measures damage an environment already under increasing stress from the impacts of climate change.

The Nature Conservation Council believes there are more strategic and humane ways of controlling feral animals in national parks, including professional aerial shooting and biocontrol measures. Using guns, dogs or even bows and arrows for animal control is ineffective and damages the environment. We joined with other key environment and animal welfare groups to condemn the destructive Game and Feral Animal Control Amendment Bill. We welcome both the State Government and Opposition refusing to support the Bill.

Report reveals ‘mega-diverse’ Australian wildlife

A new report has found that nearly 90 per cent of Australia’s mammals and reptiles are found nowhere else in the world.

The audit by Australian scientists, titled Numbers of Living Species in Australia and the World, found there are nearly 1.9 million known animal and plant species on the planet.

Environment Minister Peter Garrett says the review includes the discovery of a number of new species unique to Australia.

“We know that Australia is a mega-diverse continent, but this is absolutely confirmation of that,” he said.

“I guess the other thing is it shows we are actually discovering new species, with some 48 new reptiles, eight new mammals, 1,100 flowering plants and nearly 1,000 mites, spiders and scorpions also being discovered.”

The report found that only about a quarter of

Australia’s flora and fauna has been discovered and named.

It also found that in the last three years, 18,000 new species were discovered each year. About three-quarters of those were invertebrates.

Mr Garrett says the audit is a crucial benchmark. Details of the official audit will be unveiled by Mr Garrett at the Australian Institute of Marine Science, south of Townsville.

Link: <http://www.abc.net.au/news/stories/2009/09/29/2699122.htm>

2010 (nwrc) National Wildlife Rehabilitation Conference WEBSITE

The 2010 Adelaide Conference website is now operational at nwrc.com.au, or just Google nwrc.

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Apology to Linda Dennis. It was omitted that she wrote the article in issue 82 about ‘Koalas’

Do you utilise Our

Website as much as you

could? www.ntwc.org.au

Main advantages of using the website

You can print out your

- Membership form
- Foster Care report
- Milk request form
- Animal transfer form
- Animal report form
- You can have access to most carer organisation throughout Australia
- Have access

to lots of useful links for education and help for native animals

- Read the latest and older issues of you newsletter
- See lots of photos of animals in care and those that have been released
- Lots of stuff to help you care for our native animals

- Check out the snakes in our area and see which are non; partly or very venomous
- Leave a message for our committee

In future, to save on postage and paper we will be sending out emails with the website address of the latest newsletter to all who have internet access.

Please register you email address with Colin at turton37@bigpond.com

SNAKES (ORDER SQUAMATA)

“Contrary to popular belief, venom is not used by snakes for aggression against larger animals such as man, but may in certain circumstances be used in self-defense against such animals. Its primary purpose is: rapid subjection of prey of size suitable for consumption. Since a snake has no limbs with which to capture or hold prey, and since its comparatively delicate teeth might be damaged if it attempted to hold a violently struggling animal, it needs a different method of capture. The result is that some snakes possess a most compact, quick-acting, and efficient killing mechanism: the venom glands.



Consequently, a snake does not use its venom indiscriminately, but only in pursuit of prey or when attacked or provoked. Since man does not represent prey to a snake, it will not normally use its venom on man. In fact Eric Worrell reports that “many times when I have been collecting snakes I have cornered specimens that have struck and hit my legs without opening their mouths; biting is only a last resort - snakes show no anxiety to expel venom: they do not waste it unnecessarily.”

All authorities agree that venomous snakes are not habitually aggressive and will glide away at the approach of man, if given the opportunity. It is estimated that perhaps 80 per cent of snake “attacks” and bites take place when someone is attempting to kill or otherwise attack the snake. The other 20 per cent of cases occur when accidental contact takes place, as when a snake is stepped on in the bush. Its automatic reaction is, of course, to strike.”

from “Australia’s Wildlife Heritage”, Serventy & Raymond, editors, 1973.

Chilli the Wombat.

Story and photos by Linda Dennis

Chilli the Wombat lives up to her name for three reasons:



Chilli's ears showing extensive frost bite.

1. When Chilli was rescued and came into care, at about the 1kg mark, she had been beside her dead mum on the side of the road for a couple of days. She was lucky to be alive. The poor little girl had received bad frost bite to her ears, back of the



After a couple of weeks, Chilli's ears are healing well.

feet, above the eyes and on her cloaca. (She had been pretty chilly!). The little Bare-Nosed Wombat also had parasite wounds literally from head to toe and a couple dings to her head and back also. Chilli was a very distressed little wombat, initially – as you could well imagine with so many injuries. She had deep stress hollows on her temples, indicating severe distress. We put her on a heat pad as she was so frail and we knew that she wouldn't be able to regulate her own temperature. In our efforts to mother her well, we accidentally put her on too

much warmth and she became as **hot as a chilli!** All silliness aside, this is one thing to really watch out for in wombats – they cannot tolerate high temperatures and can become extremely heat distressed when the ambient air temperature rises above 25 degrees Celsius. We noticed in time though, thank goodness, but I think if we'd left her too much longer without checking we may well have lost her.

2. After such a terrible start to life one would think that a little critter would be jittery and anxious or maybe even cranky and intolerant. But not little Miss Chilli. She is one of the most laid back, relaxed and happy wombats that I have ever cared for – in fact, **if she was any more chilled she'd be frozen!**

We started treating Chilli's myriad of wounds, kept her on pain medication for a while (those ears must have hurt a lot) and she was also on antibiotics for any potential secondary infection which often accompany frost bite injuries. Benn Bryant, senior veterinarian at Western Plains Zoo, directed us in her veterinary care and with Benn's help Chilli improved in leaps and bounds (in more ways than one).... no, she's not a kangaroo, she's a wombat - but she still loves to leap and bound when playing! What a total pleasure it is to witness a happy wombat joy in play.

The smaller wounds on her body healed



Chilli's ears have healed and hair is started to regrow

Wombat

by *Colin Gibson*

Up along the wide rambling plateau,
By rocky tops and narrow boulder passes
Where the sun behind the snow gums casts the shadows
That knit together night's blanket on the grasses,

Where crisp winds tug and twist among the sally
And rattle the blue-leaved wattle and mottled gums,
Out in the open of a broad upland valley,
From the bowl of granite-earth the wombat comes;

And across the star-lit acres among the tussock
He shakes his shoulders, pricks his ears and plods,
Snorting like a muscle-bound mound of mullock
Come to life among the grasses and sods.

For tonight the smoothest soil his teeth will grind,
The freshest shoots, and tillers sweet with dew,
And soft white puff-balls his nose will find
Among fibrous roots so nourishing to chew.

Here at night's swampy corner he claws the bank,
Probes and prods laboriously about,
Burrowing like a hairy little tank
With earth and mosses burying his snout;

And kicks aside the overburden and spoil,
Concentrating on the task he has at hand
As one that can communicate with soil
In a language only the earth can understand.

Then along the well-worn path he always follows
He drops an oblong message under his tail,
Then passes, gruffly grunting at his fellows,
And sniffs the moonlight that fall upon his trail.

Kooka & Houdini

by Daphney Mandel Hayes

The beginning of 1996 my husband & I were on the way to Sydney when I viewed a Kookaburra



Parks & Wildlife for having him, this upset me no end so I contacted the National Parks & Wildlife and told them my story and they gave me a license to be able to have him.

The next thing I needed to find out how to look after him, so I contacted the Australia Zoo in Sydney they gave me great help but I needed to find out more, it came to my attention there was a lady in Adelaide doing a theses on the Kookaburra so I contacted her she told me that Kookaburras do not laugh in captivity but this knowledge was soon put to bed as Kooka was sitting on the bottom step inside with my cat and started to laugh so much so that we could not hear each other, so I told her she would have to change her thinking on that score.

sitting on the side of the road. I stopped to check to see if anything was wrong. He was bleeding from under the wing, when I lifted the wing I could see he must have been in flight when he was hit maybe with a car as the muscle under the wing was torn, I wrapped him in a clean cloth and drove on to

scone vet. I told him I was on my way to Sydney and that I would call on my way back to see how he was progressing.

On my way back home to Tamworth I called into the Scone Vet i thought he may have passed away as he did not look to well when I dropped him off, to my surprise he was alive and looking very good, they gave him to me with instructions of what to do with the medication they gave me to put under his wing.

When I arrived home I was at a loss as to how to treat this wonderful bird, my first call was to Wires for advice but was not ready for the reception I received which quite surprised me. I was told I could not have the Kookaburra and would have to put him down or be fined \$2,000 by the National

We went to Sydney again and I found a small book on everything to do with and about the Kookaburra. A young fellow from South Tamworth Animal Hospital use to give me frozen mice.

Kooka had the run of the back yard which he shared with my 4 poodles and my 2 cats they got along just fine, every October November when the other wild Kookaburras would come around and try to take over his territory he would give off a distress call and the dogs would run out to protect him and chase them away, they were very protective of Kooka when he was in trouble.

He had his own ladder and special spots he liked to roam within the back yard, never a day went by without him having his regular bath this he loved to do in his own red bath.

One day he somehow got out of the yard under the gate at the side of the house, I was frantic I called the radio station and the police one of the teachers herd the radio and contacted me, she told me she rang and wires picked it up and that it was

at the Piper Street Vet I called them by phone and they informed me that it was being operated on to

Houdini he did not like the idea that someone else was going to share his space and there were a few



scriapes but soon everything settled and life went on with both being very happy in the back yard so long as each one knew their place. They both had their own cage into which they went at night time and then out into the yard in the morning, but if the day was not socialable then into the house they would come as being invalids they did not have the

advantage of being able to fly and build up their energy to keep them warm

A blue faced honeyeater comes into care.

by Julia Rose

(Entomyzon cyanotis)

Alternative names: "Banana-bird", "Blue-eye"



This is the first time I have seen or cared for one of these very handsome birds. That blue is such an electric colour. Thankfully this one recovered quickly and was released back to its harem along the Armidale creeklands.

'Wilburts' story.

by Julia Rose

'Wilbur' is the name my sister gives to all the male antechinus which share her home.



nose length from a domestic mouse and there are masses of wonderful teeth in the mouth as well. Easy identification is to look for the two rodent front teeth which introduced house mice and rats have.

Mating habits of the Antechinus

This marsupial mouse from Australia makes the list due to his sheer tenacity when it comes to making love. While most guys would die to get a little action, this guy actually dies when he gets a little action. Well not a little, more like a lot. The antechinus can spend up to 12 hours mating! In fact, this super mouse gets so distracted he forgets to eat, drink and sleep. Between that and the steroids that build up in his blood, he doesn't stand a chance. His male makes the most of it, filling herself up

These amazing creatures eat with relish all the spiders, roaches, moths and lots of other insects,

with sperm until the end of the breeding season. But don't feel too sad about the passing of

dear old dad. With him out of the picture, there's more food for those left behind -- plus he likely died a very happy mouse!



she never needs chemical insect control. If a Wilbur should happen upon a neglected mars bar it is dragged off for a special family feast. Otherwise they generally stay away from the pantry food and there is never any 'mouse' smell with any droppings.

As you can see from the photo of a recently deceased 'Wilbur' (? the 5th) the size of the antechinus male testis is rather large for his body weight, explaining the mating frenzy which happens followed by an early death. Antechinus are members of the bandicoot family which included Bilbies. The photo shows the different head and

Rescue of Native Animals in Armidale.

After a recent 'media frenzy' event in Armidale of a wallaby euthanasia by local police NTWC felt there was a need to put together a working procedure for all parties involved. Mobile phones capacities cannot be overlooked today and the speed at which images can be posted all over the world is amazing.

So a Standard operating procedure (SOP) is nearing completion after a good workshop at our last meeting NTWC then contacted NPWS, Police, ADC council Ranger, SES and WIRES to get to a point where we now have a DRAFT Native animal rescue SOP. See page 15 for SOP

Newsletter of The Northern Tablelands Wildlife Carers
excreting oocysts to other animals. If there is no
antibody, the cat can become infected and will shed
oocysts for one to two weeks after exposure.

Pyrimethamine and sulfadiazine are the two
drugs used to treat toxoplasmosis. They act
together to inhibit Toxoplasma reproduction.
However, **pyrimethamine may be unpalatable
or even toxic to some cats. Another choice is
the antibiotic clindamycin, which has fewer
side effects.** Alternative veterinarians recommend
modalities such as herbs, homeopathy, and
acupuncture to treat the symptoms of toxoplasmosis.
No vaccine is available as yet.

What can you do to control the spread of
Toxoplasma? **Restrict your pet cats from
access to rodents and birds, and give them
only cooked meat, commercially prepared cat
food, and pasteurized dairy products. Don't
allow them to scavenge in garbage cans.**

Transmission of oocysts present in garden soil,
children's sandboxes, litter boxes, and anywhere
cats may defecate can be avoided by wearing
rubber gloves during contact with contaminated soil
or litter. Wash your hands thoroughly after contact.
Cover sandboxes to prevent cats from defecating in
them. Get rid of faeces from litter boxes every day,
and disinfect them with scalding water or dry heat;
chemical disinfection is not effective in destroying
oocysts.

If you are pregnant, or plan to become pregnant
soon, test your cats for antibodies to Toxoplasma.
As mentioned above, do not allow cats access to
birds, rodents, uncooked meat, and also unpa-
steurized dairy products. Don't handle litter boxes;
have another person change them daily. Stay
away from free-roaming cats because they can be
contaminated with oocysts. **Keep any outdoor cat
from contact with bedclothes and any
furnishings that you use.** Don't handle a cat that
seems ill. Wash uncooked vegetables thoroughly
before eating. Wash hands thoroughly with soap
and water after contact with soil and cats.

[http://www.essortment.com/all/
whatsitoxoplas_rhiv.htm](http://www.essortment.com/all/whatsitoxoplas_rhiv.htm)

What is FAWNA

www.fawna.org.au/

FAWNA (For Australian Wildlife Needing Aid) is a
volunteer wildlife rescue and rehabilitation service
for injured and orphaned native wildlife. FAWNA
operates on the mid north coast of NSW and is
licensed by NSW National Parks and Wildlife
Service (NPWS).

FAWNA's volunteer members are situated
throughout the Kempsey, Hastings, Greater Taree
and Gloucester local government areas, covering
12,914 sq kms. All share a concern for the plight of
the thousands of disadvantaged wildlife which, in
the main, need assistance due to human interfer-
ence in some way.

FAWNA operates a 24hr emergency telephone
service where members are on duty to answer
calls from the public for wildlife needing assistance.
Fawna Duty Officer 6581 4141

FAWNA undertakes an educational role through
schools and community groups, creating an
awareness of the reasons why wildlife need human
assistance, and what people can do to help protect
and restore wildlife habitat.

FAWNA is administered by a management
committee elected annually by the membership. For
rescue and rehabilitation purposes membership is
divided into three local government regions with
annually elected Coordinators and Assistants for
fauna species groups.

The Aims and Objectives of FAWNA

* To rehabilitate native wildlife for return to their
natural environment.

* To relocate native wildlife which is under threat
or causing distress to the public into a natural
habitat for that species.

* To train volunteer members to carry out the
rescue and care of native wildlife and encourage
protection of the environment.

* To review policies and initiate actions in pursuit
of its objectives and aims.

Vet Student Tracks Turtle Threat to People

by Debbie Bannan
Alames Cook University vet science student
has flagged the first case of a captive-bred turtle
suffering from a highly infectious disease, which has
the potential to spread to humans.

Association inviting her to present the paper at the
Unusual and Exotic Pets Annual Conference in
Sydney this month (Oct 9-11).

"I am so happy that my paper has been
accepted into the conference pro-
gram," she said. "The physiology of
exotic animals is so different to
mammals making them really intellectu-
ally challenging, so anything I can do
to help raise awareness about caring
for these fascinating creatures I am
delighted to share."

Debbie's paper, entitled 'Metastatic
acid-fast bacilli infection in a captive-
bred freshwater Emydura macquarii
turtle — lessons to be learnt', is based
on a case she was involved in last
year.

"I was doing some volunteer work
at Aachilpa Veterinary Group when
this turtle presented with strange
lesions on its front left forelimb and the
right side of its plastron bridge," she
said.

A second year student, Debbie Bannan said that
what was most concerning about the case was that
the pathogen had never before been found in a
captive aquatic reptile in Australia.

"If these infections are getting into our homes, we
need to know how to recognise and treat them
before they spread to other captive animals and
humans," she said.

Despite a hectic class schedule and extramural
placements in the holidays, which is enough to
keep most Vet students busy, Debbie still had
enough fuel in the tank and dedication to boot to
write up the case as a scientific paper.

The mature-age student is now seeing the fruits
of her labour with the Australian Veterinary



"Osteomyelitis (inflammation of the
bone) was diagnosed and the forelimb was
amputated. I took the turtle home for rehabilitation
but after three months its health deteriorated rapidly
and unfortunately it had to be euthanized."

In addition to the osteomyelitis diagnosis, the post
mortem revealed the turtle was in fact riddled with
extensive multi-organ granulomatous masses,
identified as metastatic mycobacterium disease.

"Mycobacterium is very common in reptiles and
can often be an overlooked and misdiagnosed
disease," said Debbie. "What was most concerning
about this case was that the pathogen had never
before been found in a captive aquatic reptile in
Australia."

"Mycobacterium has significant zoonotic potential

so if these infections are getting into our homes, we need to know how to recognise and treat them before they spread to other captive animals and humans. The unfortunate outcome is that treatment is often lengthy and, at times, unsuccessful."

Usually the territory of postgraduate students, Debbie is the first student in this burgeoning undergraduate Vet Science program to have success of this kind.

JCU's Associate Professor Leigh Owens, who encouraged Debbie to write up the case, said that thing that impressed him the most was Debbie's drive to be involved in the investigation, the oral presentation and paper on top of her scholastic responsibilities.

"I was also impressed with the reflective nature of the case where Debbie tried to assess what she learnt and what she would do differently next time," he said.

Despite spending the first ten years of her working life as a midwife, Debbie always leaned towards a scaller, slimmer brood.

"As a child I was always bringing home frogs and various other weird and wonderful creatures," she said.

Debbie plans to undertake an Honours project before pursuing practice in exotic and wildlife medicine.

"I feel that as more and more people are keeping exotics as pets, veterinarians need to gain a greater insight into the care, treatment and management of these animals," she said. "I also think great advances could be obtained in the knowledge of caring for our own native wildlife so we can do more in terms of conservation, management and treatment."

Debbie thanked A/Prof Leigh Owens, pathologist Dr Jenni Scott and Dr Graham Brown from Aachilpa Veterinary Group for their assistance and encouragement.

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Toxoplasmosis & Cats

Toxoplasmosis is a disease of cats as well as other mammals and birds caused by a parasite called *Toxoplasma gondii*. *Toxoplasma* infection is common, but full-blown disease is rare. *T. gondii* is important because virtually all warm-blooded animals, including man, can become infected with it. Domestic, wild, and feral cats can transmit *Toxoplasma* infection to humans.

Cats have a 20% to 60% infection rate with *T. gondii*. Its prevalence is related to factors including the ingestion of infected animals such as rodents and birds or raw meat. Stray and feral cats have a higher incidence of infection than pet cats, and older cats have more of a chance of acquiring it.

Toxoplasmosis is most common in cats less than two years old, possibly because of their poorly developed immune response. In an older cat, a recurrent infection may be due to the presence of feline leukaemia virus or feline immunodeficiency virus, which suppress its immune response.

Symptoms of toxoplasmosis include anorexia, weight loss, lethargy, difficulty breathing (because of pneumonia), eye inflammation, and fever. Other symptoms are vomiting and diarrhoea, neurological symptoms, swollen lymph nodes, and jaundice.

The life cycle of the *T. gondii* parasite has three stages: cyst, oocyst, or tachyzoite. **A cat may eat cysts in infected rodents or birds, or other raw meat**, whereupon the organisms will begin to multiply in the wall of the small intestine, producing the second stage, oocysts. These are excreted in the faeces for two to three weeks. Then they may become spores, and become infectious to other animals, including humans. Most exposed cats shed oocysts during acute *Toxoplasma* infection, but not after. Oocysts are very hardy and can survive in moist shaded soil or sand for months.

In the intestine, some *Toxoplasma* organisms multiply as tachyzoites, which spread to other sites in the body. This stage eventually ends, and a "resting" stage produces cysts in the muscles and

brain. Most of these cysts probably remain dormant indefinitely.

Most cats show no symptoms of infection with *Toxoplasma*. Sometimes toxoplasmosis occurs, **mostly to kittens and young adult cats**, with lethargy, depression, loss of appetite, and fever. Pneumonia is often a major symptom. Liver inflammation may lead to vomiting, diarrhoea, and jaundice. The

pancreas may be inflamed and the lymph nodes enlarged. Other signs are inflammation of the retina, abnormal-sized pupils, blindness, lack of

coordination, personality changes, circling, ear twitching, difficulty in chewing and swallowing food, seizures, and loss of control over urination and defecation.

As much as 50% of the human population in the United States and 20% to 80% of

all domestic animals are infected with *Toxoplasma*, harbouring its cyst form. If given the opportunity, the cyst can produce disease in immuno-compromised patients, such as people with AIDS.

But the greatest concern for humans is transmission of *Toxoplasma* from mother to foetus. Up to **45% of American women between the ages of 20 and 39 have already been exposed to**

***Toxoplasma* and are therefore immune.** But in mothers who first acquire *Toxoplasma* infection during their pregnancy, about one-third to one-half of their infants born to mothers are also infected. *Toxoplasma* infection of the foetus is least common, but the disease is most severe, if the mother has been infected during the first trimester of pregnancy.

Toxoplasma infection is most common, but the disease is least severe or without symptoms, if the infection occurs during the third trimester. Most women infected during pregnancy have no symptoms of the infection themselves, but there is about a 40% chance that the foetus will acquire the infection, and be born prematurely or even stillborn. In

about 10% of these cases, severe neurological or eye disease will result. *Toxoplasma* infection results in over three thousand human congenital infections annually in the United States, most of them with no symptoms. In symptomatic individuals, symptoms may appear at different times: at birth, or weeks, months, or even years later.

In AIDS patients or those being treated for cancer or organ transplantation, enlargement of the lymph nodes, eye and neurologic disturbances, respiratory problems, and heart disease are common symptoms. For these patients the mortality rate is high.

The good news is that most studies show that **contact with a pet cat or a neighbour's cat will not increase the risk of acquiring toxoplasmosis, unless these animals are allowed to roam and hunt or eat raw meat. However, contact with stray and feral cats can be risky.**

Blood serology tests may indicate recent infection with *T. gondii*, but not a definitive diagnosis of toxoplasmosis. Its diagnosis relies on the history of the patient, symptoms, and the results of laboratory tests, including an antibody titer test and microscopic examination of tissues. If a healthy cat has high antibody levels, that means it has been previously infected and is now probably immune and not

