ACTHA Inc. News
Oct - Nov '16
Newsletter of the ACT Herpetological Association Inc.

ACTHA contact details
PO Box 160
Jamison ACT 2614
E-mail: info@actha.org.au
Website: **www.actha.org.au**

In this issue

Rosenbergs' big day out: a very special event happened on 24 Sept '16, turn to page 2!

How land management influences connectivity for herpetofauna: Nicole Hansen, ANU, was our guest speaker in August '16, page 3.

Burrowing into ACTHA's past: 1992 & 1993, page 5.

The Australian & International Scene:

3-for-1 fossil find a windfall for Palaeontologists, page 6.

Australia's rarest tortoises get new home to save them from climate change, page 6.

How the snake got its extra-long body, page 8.

90-year-old tortoise rescued from rubbish tip after 2.5 hour hunt through 1,000 bin bags, page 9.

Your Committee for 2015 - 2016

President	Dennis Dyer
Vice President	**Ric Longmore***
Secretary	Vacant
Treasurer	Margaret Ning
Newsletter Editor	Mandy Conway
Webmaster	Angus Kennedy
Public Officer	**John Wombey ***
Excursion Officer	Mandy Conway
Conservation Officer	Joe McAuliffe
Committee Members	Jason Spurr
	Iris Carter
	Greg Flowers
	Peter Child
	Nicole Hansen
Student Representatives	Vacant

* *Denotes Life Members*

Diary date

The *bi-monthly* meetings of the Association are usually held on the **third Tuesday of the month at 7.30pm**. Our usual venue is:

***Belconnen Soccer Club*, Hawker**
(cnr Belconnen Way & Springvale Drive)

Upcoming meeting

Tuesday, 18 October 2016

Following our AGM, our Guest Speaker **Matthew Higgins** will be talking about **'Adventures with Rosie: monitoring Rosenberg's Monitor on Mt Ainslie 2013-2016'**

'Rosenberg's Monitor is a large goanna that is rarely seen in the ACT. It is listed as a threatened species in NSW, Victoria and South Australia. This presentation looks at these beautiful reptiles in an ACT context, focusing on a project that recorded key activities of the monitors on Mt Ainslie in central Canberra. The project was a partnership between Matthew Higgins and ACT Government Senior Ecologist Don Fletcher. The project also recorded other characteristic behaviours of the goannas and received strong media coverage at the time .'

This is a presentation not to be missed and better seen in person rather than reading about some of it in the next Newsletter!

Annual General Meeting

Notice is hereby given of the 2016 AGM of the **ACT Herpetological Association Inc**. to be held at the Belconnen Soccer Club, in conjunction with our meeting on **Tuesday, 18 October 2016**, at 7.30pm.

All members welcome!

Agenda

Present, Apologies, Minutes of the Previous Annual General Meeting, President's Report, Treasurer's Report, Election of Office Bearers, Other Business.

Nominations are therefore called for the following positions:
President, Vice-President, Secretary, Treasurer, Public Officer and Committee members. Nominations may be emailed to mandycnwy@gmail.com or posted to PO Box 160 Jamison ACT 2614. If no nominations have been received for a position prior to the AGM, nominations will be accepted from the floor of the Meeting.

Rosenbergs' big day out: a prequel to Matthew Higgins' presentation at our forthcoming ACTHA meeting

"Friends,

The last time I emailed many of you was in February to say that the parent Rosenberg's Monitors 'Rosie' and 'Rex' had successfully completed their guarding of the egg-stash inside the Mt Ainslie termite mound and had disappeared back into the bush. Then began the long wait as the eggs incubated inside the mound. Research from Kangaroo Island indicated that hatching might be in September (even allowing for Canberra's colder winters). So, like any nervous father, I've been visiting the mound with increasing frequency of late.

As Lewis Carroll might have said, the frabjous day has arrived! Yes on 24 September (a few days over eight months since the night of egg-laying) the first hatchling appeared, (*as per the image below left*). Unlike Lace Monitors where the mother returns to dig out the hatchlings (and despite what some otherwise very good field guides might say), young Rosenberg's dig their own way out. They follow the old filled-in tunnel dug by the mother at egg-laying time which is softer than the surrounding mound material (tunnel repaired courtesy of the long-suffering termites). The hatchling appeared several times at the hole, flicking its tongue as it sensed the air. I believe it, and its probably dozen or so siblings, had not at that stage ventured outside the mound and had only got as far as the exit hole, which had only been dug just before my visit this day. Temperature will determine when they venture beyond the mound. Mortality rates for hatchlings are very high but we can at least hope that some of the young make it to sexual maturity. To give you a sense of scale for the photo, the exit hole is about the size of a 5 cent piece.

This is a wonderful moment, representing as it does another generation of a rare ACT species, officially listed as threatened throughout most of its range in Australia, going forth into the great Australian bush (in this case, an inner city nature reserve almost in the centre of the National Capital!). It is also a great conclusion to the project run by Don Fletcher and I."

Matthew Higgins

But wait... on 2 October Matthew advised:

"Another landmark day at the Mound on the Mount - first sighting of a hatchling beyond the exit hole and the mound, saw more showing their heads from within as per previous days. More could have been out and about before I got there. The two travellers were returning to the hole when I saw them (*image above right*). The orange markings are certainly a beautiful feature at this age. The hatchlings are about 25cm long."

Images by Nicole Hansen

How land management influences connectivity for herpetofauna

Nicole Hansen, Fenner School of Environment & Society ANU, was our guest speaker at our August '16 meeting where she presented her mid term review on her PhD progress to date: the study of reconnecting fragmented agricultural landscapes.

This summary by Mandy Conway & Nicole Hansen

Nicole's PhD research is part of a collaborative project between the Fenner School of Environment & Society ANU, Central Tablelands and Central West Local Land Services (LLS) and the Lake Cowal Foundation, to improve the effectiveness of revegetation sites created by the LLS's corridor projects. Her presentation mainly focussed on reptiles.

Problem no. 1: Habitat loss = biodiversity loss

Agricultural development has led to broad scale habitat loss and isolation of native vegetation, essentially what we call fragmentation. The rural landscape of the western Lachlan Catchment is one of the most fragmented and cleared agricultural regions of Australia. "The intensive grazing and cropping of these areas has largely isolated habitat patches. Ecologists are interested in understanding how we can manage current resources to enhance conservation management actions through movement." Nicole said.

Problem no. 2: Large knowledge gap on reptile use of fragmented landscapes

"One solution to counteract fragmentation is to create bridges between isolated patches in the form of restorative plantings.

"Corridors are important as many species need to move between isolated areas and the surrounding landscape to enable them to expand their home range, for the younger ones to find their own home, and most importantly to maintain genetic diversity. This would essentially minimise or prevent local extinction.

"In fact millions of dollars, time and resources are spent annually on restoration and corridor projects globally."

Most research examples have generally focused on the value of plantings for woodland birds, but evidence of use by other faunal groups, particularly reptiles, is hugely underestimated.

Why are reptiles important?

"We know very little about reptiles in agricultural landscapes. This is because they are largely understudied and this is partly due to their cryptic or secretive nature. They are also particularly hard to catch!" Nicole said.

Reptiles are great for a number of reasons including pest control (eating mice and rabbits) and disease control (consumption of road kill and dead livestock), performing an essential ecosystem service. An aspect not often thought about is that the venom of a number of snake species, including brown snakes and taipans, is studied for medical research like Alzheimer's and Parkinson's diseases and blood disorders. "We don't want to lose these animals before we understand their uses in medicine. Conserving these animals by understanding their needs in the agricultural landscape cannot be emphasised enough."

Nicole has 11 sites based within the wheat belt of the NSW Lachlan Catchment, which spans from near the Griffith area to Young - it is all

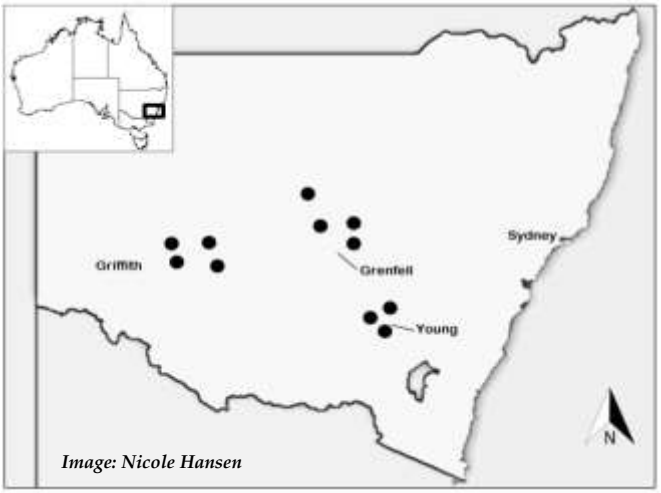


Image: Nicole Hansen

(How land management influences connectivity for herpetofauna, cont'd,...)

extensively cleared landscape.

"The bush in my remnant areas ranged from box gum wood land in the east to Mallee scrub to the west." Nicole said.

Image: Nicole Hansen

Image: Nicole Hansen

Image: Nicole Hansen

Image: Nicole Hansen

Image: Nicole Hansen

Image: Nicole Hansen

: Nicole Hansen

Study design

Image: Nicole Hansen

"My experimental design for generally all of the surveys looked at a habitat patch next to four contrasting land management types: a cereal cropping paddock, restoration plantings (largely funded by Local Land Services), pasture and course native woody mulch.

"We used a variety of methods to catch reptiles and look at what they were doing in these landscapes. This included pitfall and funnel trapping, radio-tracking, fluorescent powder tracking, wildlife cameras and plasticine models.

Results

1500+ animals were caught including 34 reptile species. These included dragon and monitor lizards, elapid snakes, pythons, typical geckos, snake-lizards, skinks and blind snakes. A Mulga snake filled up one entire pitfall trap, which was quite intimidating. Interestingly, quite a few frogs were caught, even though chemicals would have been used to treat crops.

Nicole is still exploring and trying to understand whether the reptiles are using the corridors for their intended purposes to connect with other isolated patches of habitat or whether they're just extending their habitat using the corridor.

The big picture: research outcomes

Nicole is still trawling through all the data that she collected but essentially she hopes to prove the quality of the modified land management types.

- Improve the quality of modified land by 'softening' it = reduce fragmentation effects on isolated habitat patches.
- Address the important problem of how to increase connectivity across agricultural landscapes to reduce risk of species decline and extinction.
- Inform national policies and ecologically sustainable agricultural planning eg stewardship payments.

Nicole finished her presentation by thanking the 42 volunteers that helped with this project. Someone from Sweden, another from New Zealand and others from all corners of Australia; universities, work experience and people genuinely interested in reptiles. Nicole was chuffed that some of these people have now entered the study of reptiles.

Image: Nicole Hansen

Burrowing into ACTHA's past

By Mandy Conway

Some of the more interesting inclusions in ACTHA's newsletters during 1992 follow.

Feb - Mar 1992

- Mon Repos Turtle Research Centre, Bundaberg QLD, by Jo Vandermark and other ACTHA members who went on the trip as volunteers

Apr - May 1992

- 'Problems in the biology and evolution of Australian snakes', Dr Allen Greer, advertised speaker for Apr Mtg
- Lizard Diversity in Central Australian Deserts', Dr Craig James, CSIRO, advertised speaker for May Mtg
- 'The Biology and Evolution of Australian Lizards', by Allen E. Greer, book review by John Wombey

June - July 1992

- 'Parental Care in the Hip-pocket Frog', Mike Mahoney, Uni of Adelaide, advertised speaker for June Mtg
- 'Dragons', John Wombey, advertised speaker for July Mtg
- ACTHA field trip to the Bredbo area, 9 May, by John Wombey
- ACTHA field trip 'Reptiles in the home paddock' on Sun 21 June, by Stephen Sarre

Aug - Sept 1992

- Harold Ehmann, author of 'Encyclopedia of Australian Animals', advertised speaker Aug Mtg
- 'Beautiful tadpoles - reproduction in frogs', Prof Michael Tyler, advertised speaker for Sept Mtg
- *- 'The Natural and Cultural Significance of Mulligan's Flat, Gungahlin ACT', Joint Submission by six member organisations of the Conservation Council to Hon Rosemary Follett on 27 July 1992, by Dierk Von Behrens
- ACT P&CS asks for ACTHA's input on its 'Reptile Policy' and 'Contributions to the - Vertebrate Atlas of the ACT'

Oct - Nov 1992

- 'Reptiles and frogs of the Snowy Mountains', Dr Will Osborne, advertised speaker for Oct Mtg
- 'Australia Day Honours List: John Cann awarded', by Arthur Georges
- 'Freshwater Tortoises of Australia', John Cann, advertised speaker for Nov Mtg
- *- ACTHA members take a field trip on 26 Sept '92 to the **Hume Industrial Estate ACT** to search for reptiles. (***Earless Dragons found in numbers***)
- Frog call species list: 26 Sept '92 at Narrabundah and Symonston, ACT

Interesting inclusions in ACTHA's newsletters during 1993:

Feb - Mar 1993

- 'Agamids - are they really the most primitive lizards?', Dr Geoff Witten, RMIT, advertised speaker at Feb Mtg
- 'From extinction to distinction; the amazing story of the rediscovery of the Adelaide Blue-tongue Lizard (*T. adelaidensis*)', Dr Mark Hutchinson, SA Museum, speaker at Mar Mtg
- *- 'Action plans for threatened Australian reptiles (Dr Hal Cogger) and amphibians (Dr Mike Tyler)', article by Sally Stephens
- Bandy Bandy (*Vermicella annulata*) found in Queanbeyan

Apr - May 1993

- 'The Herpetofauna of Uluru', Dr David Carter, advertised speaker at April Mtg
- '*A. parapulchella*: How much do we know?' Sandie Jones, advertised speaker at May Mtg
- 'Report on Burra field trip, 21 Mar '93', by Stephen Sarre

June - July 1993

- 'Reptiles of Africa', Ross Bennett, advertised speaker for June Mtg
- 'Frogs of Western Australia', Rick Zentelis, advertised speaker for July Mtg
- 'Proposal for research on *Delma impar*, the Striped Legless Lizard, article by Helen Osmond, ANU

Aug - Sept 1993

- 'Slithering, sliding, slippery snakes', John Wombey, advertised speaker for Aug Mtg
- 'Reptilian Eggs: Incubation and Development', Mike Thompson, advertised speaker for Sept Mtg

Oct - Nov 1993

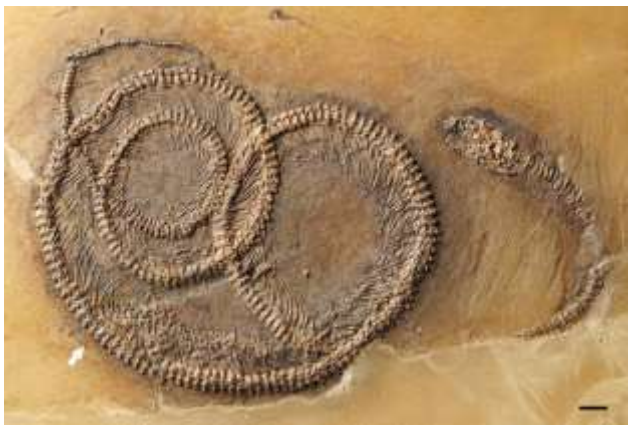
- 'Ecology of *Delma impar* in the ACT', Helen Osmond ANU &'Taxonomy of *Tympanocryptis lineata* in the ACT', Warwick Smith ANU, advertised speakers for Oct Mtg
- 'Genetic variation in two Western Australian gecko species', Stephen Sarr, advertised speaker for Nov Mtg
- 'Reptiles and Grassland Conservation', article by Helen Osmond ANU

The Australian & International Scene

Many thanks to member Tony Lawson for continuing to send through interesting links!

3-for-1 fossil find a windfall for Palaeontologists

By Nathaniel Scharping, 'Discover, science for the curious', 7 September 2016



Above: An image from the study showing the juvenile snake that ate a lizard that ate an insect. The arrow points to the tip of the lizard's snout. Credit: Krister T. Smith

It's not often that palaeontologists uncover a fossil that reveals what its dinner ate for dinner.

Working in Germany's Messel Pit, a prehistoric volcanic lake, researchers found an insect inside of a lizard inside of a snake, all preserved for posterity in ancient sediment. It's essentially a prehistoric *turducken*, although not one you're likely to serve up at Thanksgiving dinner.

There's Levels Here

This particular example of fossil-ception let researchers peer into a 48-million year old food chain, and bolsters theories about the dining habits of this particular species of snake, likely belonging to the genus *Paleopython*.

Much like their boa constrictor cousins, it was thought that these ancient snakes altered their dietary habits as they grew up, shifting from smaller lizards and amphibians to mammals, birds and other reptiles, according to *National Geographic*.

Finding this lizard, an extinct species of stem-basilisk, inside of a juvenile snake confirms that the species did indeed dine on smaller reptiles when they were young. The insect inside of the lizard evaded classification, although it's shimmering, iridescent shell was still visible.

The researchers published their findings last month in the journal *Palaeobiodiversity and Palaeoenvironments*.

Area of Interest

The Messel Pit has yielded a number of important finds over the years due to the excellent preservation of the fossils within. The pit was a volcanic lake during the Eocene epoch, some 56 to 34 million years ago. The lake was toxic at deeper levels, and creatures that swam too far down would perish and sink to the lake bed, where they were preserved for ages. Other notable fossils from the lake include bats and horses, as well as two turtles caught in the midst of love-making.

Researchers often peer into the digestive tracts of fossils to find out what they were munching on millions of years ago. Doing so provides important information on not only their diet, but their habits, range and role in the broader ecology of their time. It's not often that these fossilized snapshots encompass three trophic levels, however — the only other known instance is of a fish inside an amphibian inside a shark.

Australia's rarest tortoises get new home to save them from climate change

By Calla Wahlquist, the guardian, 17 August 2016

Endangered species: Natural range of critically endangered Western Swamp Tortoise increasingly untenable owing to reduced rainfall.

Above: Western Swamp Tortoises are released at Moore River, WA, to help the species recover in the wild. Credit: Parks and Wildlife WA.

(The Australian & International Scene, cont'd,...)

Twenty-four of Australia's rarest tortoises have been released outside their natural range because climate change has dried out their remaining habitat.

The natural range of the critically endangered Western Swamp Tortoise, *Pseudemydura umbrina,* has shrunk to two isolated wetlands in Perth's ever-growing outer suburbs, and a herpetological expert, Dr Gerald Kuchling, said reduced rainfall and a lowered groundwater table made those areas increasingly untenable.

The juvenile tortoises – between three and four years old – were released at Meerup, 360km south of Perth, and into an established colony at Moore River National Park, 130km north of Perth.

Above: A radio tracker attached to one of the 12 Western Swamp Tortoises released into the wild at Moore River, north of Perth, as part of a government program to help the species recover. Credit: Parks and Wildlife WA.

It's the first time climate change has driven the assisted colonisation of a vertebrate species, after attempts in the US and Britain to translocate plants and butterflies, respectively.

Western Swamp Tortoises were believed to be extinct until the species was rediscovered in the 1950s. There are about 230 living in the wild, most of which were bred in captivity at Perth Zoo and released.

But Kuchling said it was very difficult to be accurate about swamp tortoise numbers because "...they are very cryptic and hard to find." Their natural range is constricted to a small area of the Swan Valley which happens to overlap with the footprint of greater Perth.

The soil and water at Meerup in the D'Entrecasteaux National Park on WA's south-west coast may be a bit cold for the tortoises now, but by 2050 conditions will be ideal, according to climate modelling done by researchers at the University of Western Australia.

"The expectation is that in spring they will probably grow at a slower rate," Kuchling told Guardian Australia. "What I hope is the trial will give us an indication if it makes sense to do more releases and translocations of the tortoises to the area now, or if, due to the current climate differences, the potential that the species will grow up well there is not there."

Dr Nicola Mitchell, a senior lecturer in evolutionary biology at the University of Western Australia, was part of a team that conducted extensive modelling to find an area in WA that would, by 2050, mirror the conditions in the Swan Valley in the 1960s.

The tortoises put on weight and grow in the wet season and undergo an eight-month aestivation (which is similar to hibernation but for warmer months) in the summer. In the 60s, Mitchell said, they could expect the water to last for seven months; now it regularly runs out in three.

"Climate change is really what this whole story is about," she said. "It's a world first, we think, for moving a reptile out of range because of climate change."

Kuchling has been working with the elusive tortoises since he moved to Perth from Austria in 1987. He helped Perth Zoo, which had been running a captive breeding program for six years with no success, have its first batch of eggs, and has since worked on efforts to save the species.

About 700 zoo-bred Western Swamp Tortoises have been released in the 28 years since, many of which have not survived to maturity. That's fairly normal among tortoises, Kuchling said, but there have been some setbacks.

In the early 90s researchers lost a lot of juvenile tortoises to raven attacks and, in 2002, a bushfire swept through the Mogumber Nature Reserve, killing most of the newly established colony.

The tortoises have been fitted with radio trackers and will be monitored by researchers from the University of Western Australia in a joint project with the Department of Parks and Wildlife.

How the snake got its extra-long body

By John Mulley, Bangor University, TheConversation, 9 August 2016

The fairground freak shows of the past are a testament to our fascination with unusual animals. Given the similarities between most furry, four-legged mammals, it's not surprising that we often look at the more weird and wonderful members of the animal kingdom and ask questions like "Why does a spider have so many legs?" or "Why are snakes so long?".

The answers can usually be found in evolution and genetics. More specifically, we need to study how animals have evolved so that the shape and layout of their bodies are formed as they grow from embryos (part of evolutionary developmental biology). If we want to know why a snake is so long, we need to start looking at snake embryos.

One group of researchers from the Instituto Gulbenkian de Ciência in Portugal has done just that. They found that one gene in particular plays a key role in shaping the snake's extra-long body. The researchers were able to prove this by turning on the same gene in mice to produce animals with much longer than normal bodies.

There are basically two ways a vertebrate animal can evolve a long body: by increasing the size of vertebrae (as in a giraffe's neck) or increasing the number of vertebrae (as in a goose's neck). This increase can take place in the neck, the trunk or the tail.

In the case of snakes, their extreme length is a product of a longer trunk, as shown by the large number of vertebrae possessing ribs. These continue to grow far beyond what is typical for other reptile embryos thanks to the faster vertebrae formation during development, and their unusual "Hox" genes, which determine which type of vertebrae develop.

The researchers already knew that mice with mutations in a gene called Gdf11 have longer trunks, as well as an unusual mass of cells in their tails. These cells express a variety of genes including those involved in the separation of the trunk and the tail as the embryo forms. This suggests these mutants' bodies had a problem in deciding when to stop making trunk vertebrae and when to start making a tail. The researchers thought that these Gdf11 mutants could potentially offer insights into the processes underlying body elongation in snakes.

The mutated Gdf11 is similar to another gene found in snakes and mice known as Oct4. Individual genes rarely work alone and are usually part of a wider network of genes that work together to send and receive signals within and between cells, turning other genes on and off. In this way, a single mutation can have a large effect on an organism because it can impact a number of other genes and processes downstream.

Extra long mice

The researchers thought that a change in the way Oct4 was turned on and off was responsible for the evolution of the snake's long body, causing embryos to make more trunk vertebrae. To test this theory, they manipulated the Oct4 gene in mice embryos and found that the animals did indeed grow more trunk vertebrae. They also found that the development of a longer trunk also affected the growth of the animals' limbs, suggesting a trade off between the body parts.

The next step was to use available genome sequences of the King Cobra (*Ophiophagus hannah*) and Burmese Python (*Python molurus*) to try to identify the other pieces of snake DNA associated with vertebrae growth. This was difficult because there were gaps in the genome and problems identifying which bits of DNA were associated with which genes. But the researchers were able to catch tantalising glimpses of regions of DNA that were the same between mice and snakes and that may be involved in regulating the Oct4 gene. This

included some DNA that seemed to have been rearranged in snakes, possibly affecting their activity.

Although we're still searching for the exact DNA-level changes underlying these processes, this study helps fill in an important piece of the puzzle of how the snake developed such a long body. Even more excitingly, the researchers think understanding how Oct4 and its associated genes work may prove vital to explaining how certain reptiles are able to regenerate their tails.

90-year-old tortoise rescued from rubbish tip after 2.5 hour hunt through 1,000 bin bags

By Sarah Knapton, The Telegraph (UK), 9 Aug 2016

Above: Zuma the 90 year-old tortoise is back home in London after a trip to the rubbish tip.

A pet owner was forced to rifle through 1,000 bags of rubbish when her 90-year-old tortoise hitched a lift in a bin lorry and ended up at the local tip.

Sarah Joiner contacted after releasing Zuma was missing from his home in Central London, believing he had crawled into a rubbish bag.

Using satellite tracking, the council tracked down the refuse lorry to a waste treatment facility operated by Veolia.

Luckily for Zuma the collection vehicle, carrying 10 tonnes of waste, had not yet tipped its waste into the massive storage bunker which processes thousands of tonnes of waste.

After dressing in protective clothing, Mrs Joiner and staff used a thermal imaging camera to hunt for the lost tortoise amid 1,000 bags of rubbish. He was eventually found amid a pile of lettuce leaves and plucked to safety.

Mrs Joiner, 56, who suffers from multiple sclerosis, said: "Thank you is never going to be enough. It was amazing teamwork; there was no nonsense about it just enormous good will in finding him."

Spurred Tortoise Zuma, whose full name Montezuma, has lived with Mrs Joiner for 40 years, has now returned safely to his home.

Cllr Melvyn Caplan, Westminster City Council's Cabinet Member for City Management and Customer Services said: "We've all had that feeling of panic when we realise we've lost something, but when it's a much loved family pet then it really is a disaster.

"I commend our staff and colleagues at Veolia for pulling out the stops to ensure a successful reunion between Zuma and Sarah."

Lynn Davis, Contract Manager at Veolia added: "I'm delighted that were able to find Zuma and return him to Mrs Joiner unharmed, he really has survived against the odds. The team were all keen to help when they heard what had happened and together we were able to ensure that the search was conducted safely and effectively.

"This was certainly a different way to spend a Friday afternoon and I'm just relieved we were successful."

Above: Ms Joiner spent two and a half hours looking for Zuma.

Annual General Meeting

Notice is hereby given of the 2016 AGM of the **ACT Herpetological Association Inc**. to be held at the Belconnen Soccer Club, in conjunction with our meeting on **Tuesday, 18 October 2016**, at 7.30pm.

All members welcome!

Agenda

Present, Apologies, Minutes of the Previous Annual General Meeting, President's Report, Treasurer's Report, Election of Office Bearers, Other Business.

Nominations are therefore called for the following positions:
President, Vice-President, Secretary, Treasurer, Public Officer and Committee members. Nominations may be emailed to mandycnwy@gmail.com or posted to PO Box 160 Jamison ACT 2614. If no nominations have been received for a position prior to the AGM, nominations will be accepted from the floor of the Meeting.

ACTHA 2016 - 2017 Membership Renewal Last Chance!

Membership now costs $20 for individuals/family

Membership year runs from 1 July 2016 to 30 June 2017. 'Herpetofauna' is an additional **$15** per annum**.**

Payment at our June meeting would be appreciated.

OR a direct Deposit to:

ACTHA, BSB 112-908, A/c 486822880

(*PLEASE! Don't forget to note your name so we can identify whose payment it is on our Bank Statement.)*

OR a cheque made out to ACTHA at PO Box 160, Jamison Centre, ACT 2614

Queries? please email margaretning1@gmail.com

ACTHA News
PO Box 160
Jamison ACT 2614