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ACTHA News
Aug - Sept 2008
Newsletter of the ACT Herpetological Association Inc.

2008-2009 ACTHA MEMBERSHIP IS NOW DUE - STILL ONLY $10!

To make sure your membership remains current please come to our August Meeting, or see the back page of this issue for subscription payment options.

YOUR COMMITTEE

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Newsletter Editor	Mandy Conway
Public Officer	John Wombey
Excursion Officer	Ric Longmore
Committee Members	Christian Robertson
	Philip Robertson
Student Representative	Jake McAuliffe

DIARY DATE

The *bi-monthly* meetings of the Association are held on the *third Tuesday of the month* at 7.30pm, Western Districts Rugby Club, Catchpole Street, Macquarie, Belconnen.

UPCOMING MEETINGS

Tuesday, 19th August 2008

Living on "Burrowed" Time:
The biology and ecology of Australian burrowing frogs

Dr Beth Mantle, Waterwatch Coordinator,
ACT Frogwatch Coordinator,
Ginninderra Catchment Group

The hot and dry Australian desert is the last place you'd expect to find frogs, and for most of the year this is true. But for a short time, when the rains arrive and the Big Dry turns into a Big Wet, the arid zone comes to life with literally thousands of frogs representing over a dozen different species. What kinds of frogs are they? Where have they been hiding? And how do they survive in the most frog-unfriendly environment in Australia?

Beth will be talking about the biology and ecology of Australia's amazing burrowing frogs, with an emphasis on one particular species, the Green-striped Burrowing Frog (*Cyclorana alboguttata*). Find out why this particular frog is so amazing, and why NASA may want to take a closer look at it.

Tuesday, 21 October 2008

ACTHA will hold its
Annual General Meeting
at 7pm, just prior to our October Guest Speaker. Come along and have your say about how your Association runs.

IN THIS ISSUE

Small Grants for herpetofauna protection, education, training and research Projects 2008

In recent years, the ACT Herpetological Association has made grants or gifts towards projects involved in various fields of herpetofauna such as protection and recovery, education, training, and research.

The major fund raising effort by our Association is the *Snakes Alive!* Exhibition held each January at the Australian National Botanic Gardens (ANBG). Half of the net door takings are contributed to assist the ANBG conduct its education program which is currently developing a strong herpetofauna focus. The Association has decided to use part of the balance to provide encouragement and assistance in monetary terms to students or others who are currently involved in herpetofauna related activities.

While the amount of funds is relatively small (e.g. amounts of $100 to $1,000 might be awarded), they could be used to:

- purchase equipment or materials that would assist students or others who are undertaking herpetofauna research;
- fund small or pilot, school or community education projects related to herpetofauna;
- assist persons or groups to acquire training which would improve academic and community contributions to achieving worthwhile herpetofauna outcomes.

The deadline for applications has been extended to the end of August 2008, so if you know of anyone who would be interested in applying for these funds then please contact the Association via email to receive a copy of the Guidelines.

Dennis Dyer
President, ACTHA
July 2008

A note from the Editor

The Editor takes full responsibility for summaries of presentations by Guest Speakers at ACTHA Meetings, article write-ups and editing of other contributions.

The views expressed by contributors and authors, and any links to Websites provided in this Newsletter are not necessarily those of ACTHA.

ACT Herpetological Association Profile

ACTHA aims to promote the study and conservation of reptiles and amphibians, and to foster a positive community attitude towards this much maligned group of animals. Our members encompass a broad cross-section of the community. Amateur and professional herpetologists are joined by interested members of the public in learning more about our local frogs, snakes, lizards and turtles, as well as other herpetofauna from Australia and around the world.

The reptiles & frogs of QLD Australia, Madagascar and Cameroon

Dr Conrad Hoskin, School of Botany and Zoology, ANU

This article by Mandy Conway

Conrad Hoskin gave a brilliant talk and slide show, at the April 2008 ACTHA Meeting, of reptiles and amphibians he has worked with here in QLD and also in his travels in Madagascar and the forests of Cameroon. His presentation is summarised below.

Who is Conrad...

Conrad did his PhD at the University of Qld and he is now a Postdoctoral Fellow working in Scott Keogh's lab at the ANU. He is an evolutionary biologist and studies how species form and is particularly interested in hybrid zones. Many species consist of a number of genetically divergent lineages, often formed when populations become isolated from each other for long periods. When these genetic lineages come back into contact a 'hybrid zone' may be formed where they overlap. Interaction between the lineages in these zones can give important insights into the processes that can lead to the formation of new species. Hybrid zones are therefore extremely interesting and have been called 'natural laboratories'. Conrad's work is mostly on frogs and involves genetics and analyses of morphology, mating calls and behaviour.

Queensland, Australia

His work has concentrated on species living in the Wet Tropics rainforest of North Qld, between Townsville and Cooktown. The Green-eyed Tree Frog (*Litoria genimaculata*) was the species at the centre of his PhD.

An interesting find was a fly that parasitizes Green-eyed Tree Frogs. It is not known how the fly infects the frog, but the maggot lives under the skin of the frog for a couple of months feeding on its blood. It has a 'breathing' hole in the skin and eventually pops out of this hole and drops to the ground to pupate into a small fly. Their life cycle is poorly known. Conrad has found up to 5 larvae on the frogs and, remarkably, they seem to have little apparent impact on the frogs survival or health!

Conrad has also been doing a lot of work on microhylid frogs: a family of small frogs that mostly occur in north Qld, with 1 species occurring in the Northern Territory. They are mostly found in the Wet Tropic rainforest, with most species having tiny distributions on the top of mountain-tops. Most mountains have a species and some mountains have up to five. They are tiny, most species are about 2 cm and adults of some are only just longer than 1 cm! They lay terrestrial egg clutches of about 15 eggs in moist leaf-litter. Therefore they don't need standing water to breed. The tadpole develops in the egg and a tiny frog hatches out and goes off into the forest. The male cares for the clutch but does not seem to care for the froglets. Some species have tiny distributions. For example, *Cophixalus concinnus* only occurs above 1100 m altitude on Thornton Peak. Given that the peak is 1375m, it doesn't have a lot of room to move. These species are ancient and have contracted to these mountain-tops. They are now threatened by climate change.

Conrad also works on leaf-tailed geckoes, which live in rainforest patches along the mountains of the Queensland coast. These species are also very old and have restricted themselves to isolated rainforest areas as rainforest has contracted over millions of years. Additionally, he is researching the relationship between species (phylogenetics) of the *Lampropholis* skinks and *Oedura* geckoes.

Madagascar

Conrad's trip to Madagascar took place prior to his PhD studies His travels centered on the tableland up the middle of this country and neighbouring areas on the west and east coasts. About five areas were chosen to explore for a week or so each. Most of the rainforest exists down the east coast, with dry forest mainly along the west coast. Conrad showed slides of typical villages, all with a statue commemorating

Madagascar's independence (no two statues were the same, Conrad commented).

"Bad land management outside forest areas is evident everywhere", Conrad said. Thankfully there is almost no human utilisation of the pockets of forest remaining which means these areas are teeming with life. Unfortunately though, these forest reserves have boundaries that are being chipped away at by people. Everyone wants to use a bit of land, and slash and burn farming is extensive.

The west coast, around Morondava, is dry forest dominated by baobabs. Most of the world's baobabs occur in Madagascar.

In many areas you get around on 'bush taxis' (over-loaded cars in poor condition that break down all the time) whereas in remote areas the primary form of transport is zebu (a type of cow) carts. Most people speak Malagasy or French; English is very rare.

At one point Conrad met up with a couple of French guys with a 4x4 who were looking for gemstones, of which there are plenty. These people were going to an area of amazing sharp limestone formations called tsingys, so Conrad got a ride. A nice change to the usual unreliable, exhausting transport they had become used to.

This Tsingy de Bemaraha area is very dry but rainforest animals can live amongst the rock landscape because it is relatively moist. This has produced an outlying area of rainforest with quite different fauna.

Whole stands of native bamboo forest exist in the rainforest areas in the center of the country, and house 3 species of Bamboo Lemur. The area's Golden Bamboo Lemur was only discovered in the 1990s. Conrad saw all three tucked away quietly feeding on bamboo shoots. Lemurs were common wherever there was good forest and were regularly seen leaping through the trees.

Something Conrad wanted to see since he was a child were Chameleons. Madagascar has half the world's species of these reptiles, from the size of a human thumb to massive species over 50cm. Parson's Chameleon is the largest in the world. The charming *Brookesia* are extremely small brown chameleons that live on the ground. Interestingly, Madagascan people are really terrified of these little animals, as well as frogs.

Classic chameleon traits are a prehensile tail, eyes that move independently and fused toes: on the back feet 3 toes are fused on the outside and 2 on the inside, with the opposite configuration on front limbs.

Above: The Green-eyed Tree Frog (Litoria genimaculata) was the species at the centre of Conrad's PhD.

Chameleons are really easy to find at night because their colours fade out and they curl up like snails on branches. Conrad didn't see a lot of brightly coloured chameleons because of the time of year (need the season where they mate and fight). They are very hard to find in the day and many trees that seemed to have none during the day had many at night. There are only a few nocturnal chameleons.

Many frogs show a convergent form in different regions. The *Boophis* tree frogs here look very similar to the glass frogs of Central/South America, with the organs visible through the skin. *Mantella* are Madagascan frogs similar to poison arrow frogs: brightly coloured, highly toxic, diurnal frogs.

Uroplatus phantasticus is an amazing Madagascan leaf-tailed gecko which has spectacular

camouflage, resembling dead curled up leaves. Conrad described an individual that had a tail with holes in it, resembling that of a damaged leaf. At night these geckoes walk around on low branches and during the day they rest amongst the leaf litter.

A species of *Uroplatus* lives on tree trunks and has a beard of skin along its chin and the edge of its body. When hiding in the day, they flatten themselves out and drag themselves back along a branch and the beard disguises their outline.

Phelsuma are bright green day geckos with red and blue spots and blotches. They are diurnal and can be seen running around on village huts. Each species in the group has subtly different markings.

Madagascar has an interesting group of lizards allied to iguanas. This is interesting because Africa has Agamid dragons and pythons, whereas Madagascar has lizards related to iguanas not Agamids, and boas, not pythons. A very unusual and strange history when similar species are over in the Americas.

We saw slides of quirky insects like the Giraffe Beetle, with hinged neck, and carnivorous mammals.

Cameroon, Africa

Cameroon has the opposite environmental situation to Madagascar. There's plenty of forest but it is heavily utilized and hunting pressure on anything larger than about a chicken is severe.

Conrad described how he went to Cameroon to do PhD fieldwork for a project on speciation of reptiles and frogs across mountain tops. He spent a few months doing field work in the area and found that it was logistically going to be too difficult to do. So he continued on with Wet Tropics work, but not before having a couple of excellent months travelling through Cameroon.

Cameroon is on the western bend of Africa; 4,000m high mountains, currently active volcanos, diverse flora and fauna and culture. Cameroon has a complex history of settlement so naturally a few languages are spoken. English and very poor French got Conrad through most of the time!

Cameroon Mountains are steep, sharp and dramatic. Conrad noticed a lot of forest at various stages of regeneration but with so much hunting fauna was scarce. Local hunting included snares and pits, some very large, which were set to catch antelope. Some pits had ladders for villagers to climb down into and see what had fallen in.

Hunting to fulfill the needs of the locals was not the main problem, but rather the 'bush meat' trade is the issue. Locals now hunt much more than before because they can take their catch out to the main roads and sell it for high prices to people travelling on the increasing number of roads built by the expanding forestry industry. Bush meat hunting is a major problem and anything bigger than about a chicken has declined. Even very rare things are still hunted. For example, a big endangered monkey called the Drill is down to less than a few thousand, yet Conrad saw a couple of slaughtered ones hanging off a fence for sale.

Walking along a dirt road in a forest Conrad met a man who was walking towards him, also looking for skinks. He was catching them for food whereas Conrad was catching them to measure. "The bloke was really interested in herps so we spent the next few weeks travelling together. He was brilliant at catching things. Some of his catching methods were a bit destructive at first, however I moved him towards procedures which delivered live animals."

A slide of interesting termite mounds with little roofs drew much interest.

A frog found in a mossy little creek amongst some boulders was turned over and its colours were incredible – a black and gold bulls-eye! The Goliath frog, the largest in the world, was also impressive. These frogs were "eaten out" around the villages but were abundant a day or two's walk into the forest. Gravid females are not actively hunted and are usually released unharmed.

Cameroon has a lot of big and colourful chameleons who seemed agro and fired up when approached, unlike the generally relaxed Madagascan chameleons.

■

The International Scene

New family of gecko

ScienceDailey (May 23, 2008)

Researchers at the University of Minnesota's Bell Museum of Natural History and Pennsylvania's Villanova University have discovered a new family of gecko, the charismatic large-eyed lizard popularized by car insurance commercials.

Scientists have long been interested in geckos and their evolution because they are key biodiversity indicators and are found on nearly every continent. Researchers are also interested in the gecko because of the animal's sticky toe pads, which allow them to scale rough and smooth surfaces -- a characteristic that may have human application in medicine, emergency rescue service and military industries.

Graduate students Tony Gamble from the University of Minnesota and Aaron Bauer from Villanova sequenced DNA from 44 species of gecko and used this genetic data to reconstruct the animals' family tree. The resulting new classification is different from previous classifications, which are based solely on foot structure. "A classification based solely on foot structure will track selective pressure on the feet and not represent actual evolutionary history," said Gamble, who believes his discovery will add to a more accurate gecko family tree that, in turn, will allow scientists to better understand how sticky toe pads have evolved.

The researchers have named the new family "Phyllodactylidae," referring to the leaf-shaped toes of many of the species in this group (phyllo meaning "leaf:" dactyl meaning "toe"). The new family consists of 103 species found in semiarid and tropical regions of North Africa, the Middle East, North and South America and the Caribbean. The family includes eight previously known genera: *Asaccus, Haemodracon, Homonota, Phyllodactylus, Phyllopezus, Ptyodactylus, Tarentola* and *Thecadactylus.*

Gamble and Bauer's research was funded by the National Science Foundation as part of a funding push by the agency to construct a family tree for 1.7 million known species of plants, animals and microbes. Gamble and Bauer's study will be published in the forthcoming issue of Zoological Scripta: An International Journal of Systematic Zoology.

Source: http://www.sciencedaily.com/releases/2008/05/080522145204.htm

Saving frogs before it's too late

ScienceDailey (May 6, 2008)

With nearly one-third of amphibian species threatened with extinction worldwide, fueled in part by the widespread emergence of the deadly chytrid fungus, effective conservation efforts could not be more urgent.

In a new article, Franco Andreone and his colleagues argue that one of the best places to focus these efforts is Madagascar, a global hotspot of amphibian diversity that shows no signs of amphibian declines--or traces of the chytrid fungus. Protecting this amphibian treasure trove before it's too late, the authors argue, makes Madagascar a top priority for amphibian conservation efforts. "In Madagascar," the authors argue, "amphibian conservation efforts have the possibility of being pro-active, rather than reactive, or simply post-mortem."

Madagascar harbors "one of the richest groups of amphibian fauna in the world," write the authors, but this megadiversity faces significant threats. Ninety percent of the island's original vegetation has been destroyed by human activity. Amazingly, despite the ongoing habitat destruction, no Malagasy amphibian species have been reported as extinct, though a quarter of the 220 species evaluated by the World Conservation Union are listed as threatened. The conspicuous absence of the devastating chytrid fungus only serves to underscore the precariousness of the situation. Intensive conservation efforts here, the authors argue, could "avert an otherwise predictable catastrophic loss of biodiversity."

Ironically, Andreone and his colleagues argue, Madagascar's pre-decline status could actually hinder timely conservation action. The authors urge the international conservation community to recognize the unique opportunity Madagascar presents for conserving global amphibian diversity by making the necessary investments to implement conservation initiatives.

No one knows if or when the chytrid fungus may turn up on the island. The authors advocate "urgency rather than complacency" to preserve this sanctuary while we still can.
Source: http://www.sciencedaily.com/releases/2008/05/080505211822.htm

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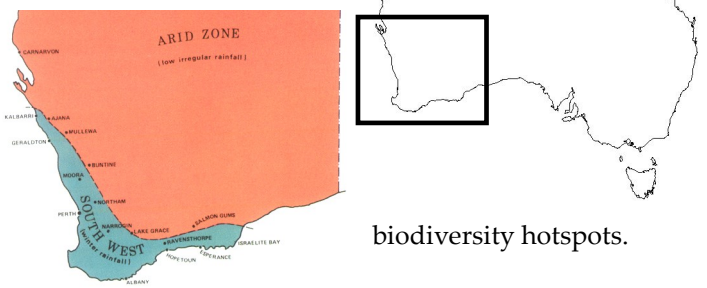
Genetics, Conservation and south-west Western Australian Herpetofauna

Dan Edwards, post doctoral associate, ANU School of Botany and Zoology

Article by Margaret Ning

Dan Edwards has spent most of the last 7 years in south-west Western Australia (SW WA) researching and writing her PhD on genetic diversity and the shaping of evolution of both reptiles and frogs, which she began in 2002 and finished in 2007. Dan estimates she spent around half her time in the field, often on a three weeks in the field/one week in Perth basis, attempting to follow rainfall. In addition to her work at the University of Western Australia, Dan also did 13 months of molecular work at the ANU in 2003 and 2004-05. The State and Federal governments sponsored her work as they are very interested in the area's diversity, as it is one of the world's top ten threatened



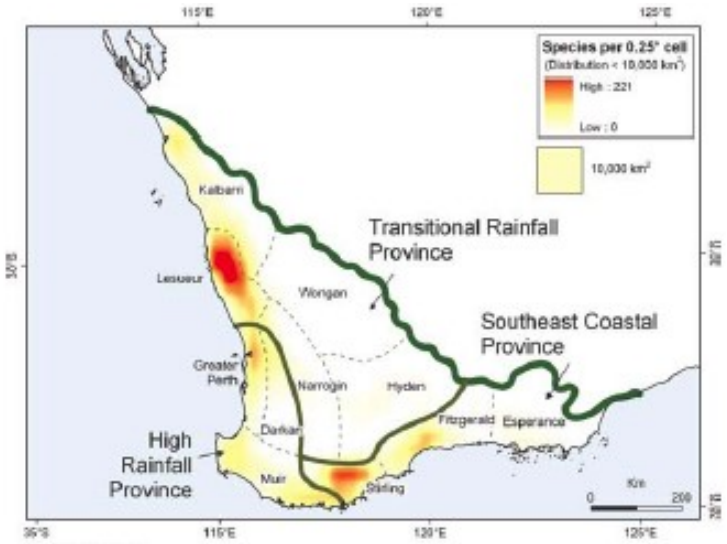
biodiversity hotspots.

Dan introduced us to the high rainfall zone (HRZ) within SW WA, which has effectively been isolated for 10 to 15 million years, and consequently many colourful Gondwanan relicts have survived within the area. Until recently the HRZ rainfall has been relatively predictable, but recently there have been big changes at the border between the HRZ and the transitional rainfall zone (TRZ) *(fig 2).*

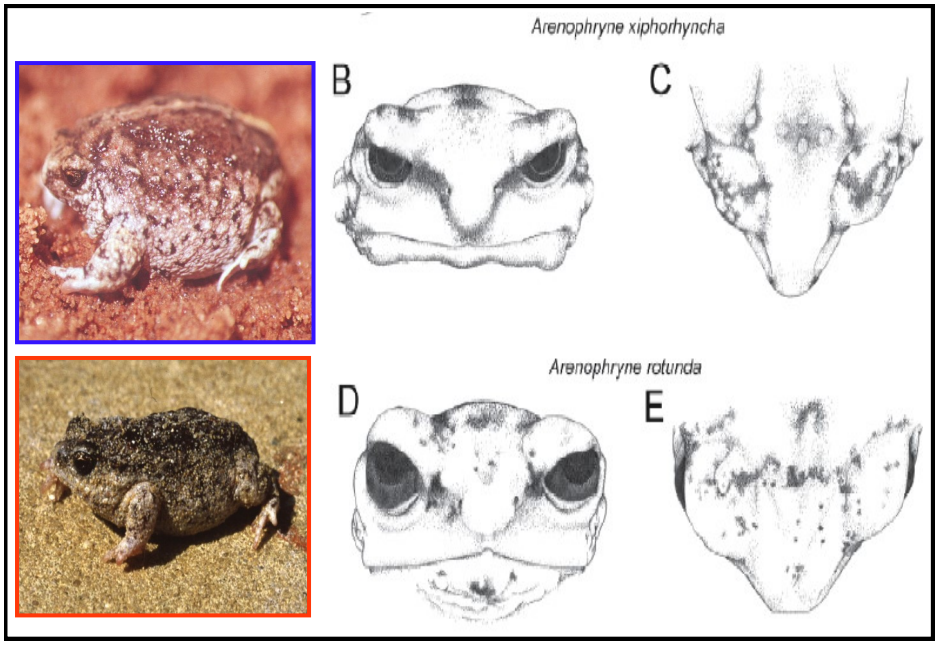
The TRZ contains a high diversity of taxa with a tolerance of lower rainfall. This diversity has developed *in situ* in both plants and animals. One reason for this is that the area has been geologically stable for 50 million years, and consequently the topography lacks the barriers typically involved in speciation. The implication is that climate **has** to be behind the high level of flora and fauna diversity within the area. The relevance of this to conservation is that some parts of the area have experienced up to 98% habitat destruction, and in order to sustainably conserve the vast diversity of species we need to understand genetic diversity and distributional changes within species.

The 'tool' to facilitate this understanding is **phylogeography**, which is the study of the distribution of genetic variation across geographic space in relation to past climatic and geological events. By understanding the patterns of genetic diversity across a number of species with different ecology and life history characteristics we can better design reserve systems and priority areas for habitat restoration, and also know what has happened to species during past climate change. The latter will help us to understand better how to cope with future climate change.

If we use plants as a model for examining the distribution of diversity and endemism in the SW, we find diversity and endemism centred around the NW and SE coastal zones of the SW. Dan told us how dramatic changes in climate during the Pleistocene era are thought to have fragmented plant populations into small pockets leading to inbreeding and rapid speciation, particularly on the topographically complex coasts where sea level changes also played a role. So what happened to the animals of the TRZ and HRZ – Dan showed us extracts from her research.



7 ***(fig 2)***



(fig 3)

showed extremely high levels of genetic diversity in the Shark Bay region.

Looking at all these species, we can see their genetic diversity is concentrated primarily in the NW coast while there has also been evidence of isolated populations within the TRZ. Essentially these are the same patterns as for plants and this means that reserves and re-generation in this region should be a priority.

She told us about the Sandhill Frog, *Arenophryne rotunda*, a burrowing frog found on the coastal sandplain and dunes from Kalbarri to Shark Bay, which undergoes no tadpole stage, lives underground for up to 9 months of the year and survives on ants. Dan found that there were 2 species NOT one *(fig 3)*.

(fig 4)

She then told us about the Turtle Frog, *Myobatrachus gouldii*, *(fig 4)*, which is closely related to *Arenophryne*, with similar ecology and life history, but different genetic populations in the NW – and it definitely resembles a turtle!!

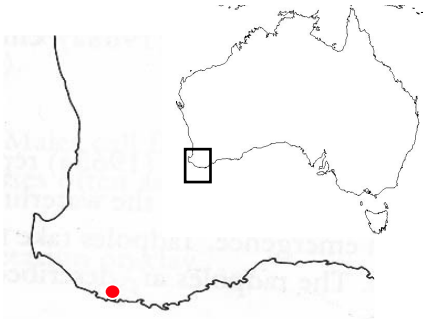
Next was the Bleating Frog, *Crinia pseudinsignifera*, which lives in both the TRZ and HRZ, is an opportunistic breeder in the TRZ with specialised breeding in isolated genetic populations on granite outcrops, but an autumn breeder in HRZ with high levels of genetic diversity.

Dan then described the Sand Dragon species complex, *Ctenophorus maculatus*. This complex has poor taxonomic resolution, with *C. maculatus* sub-species intertwined with both *C. fordi* (possibly to be split into 4 species) and *C. femoralis*. The complex has high levels of diversity in SW WA centered on the NW and SE coasts.

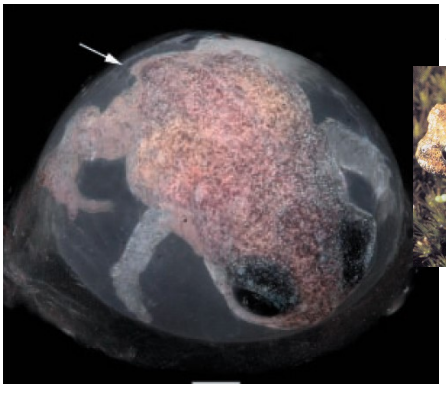
Finally Dan showed us around some coastal skinks and geckos, both groups of which

The story for the HRZ animals was similar. First we were introduced to the Sunset Frog, *Spicospina flammocaerulea*, *(fig 5)*, an endangered species with a very restricted distribution, just 3 drainage basins across 300km^2, which, despite being relictual, explosively breeds after fire in perched peat swamps in the headwaters of streams. This breeding then tapers off abruptly until the next fire.

(fig 5)



Then there was Nicholl's Toadlet, *Metacrinia nichollsi, (fig 6)*, a direct developer related to *M. gouldii* and *Arenophryne* which is restricted to the mesic HRZ, but is continuously distributed throughout a range of forested habitats. There is disjunct distribution of genetic groups, with a southern clade in wetter areas showing a pattern of catchment-based genetic diversity and a drier clade showing a pattern of recent dispersal with an isolated genetic lineage, possibly another species, in the Stirling Ranges.



Lea's

(fig 6)

Frog, *Geocrinia leai*, a distant relative of the *G. rosea* species complex, and known to show strong patterns of catchment-based genetic diversity, also showed strong genetic structure amongst catchments with possibly three species that are allopatrically distributed. The Quacking Frog, *Crinia georgiana*, breeds in autumn in ephemeral pools and is widely distributed throughout the forested region (HRZ) and into the TRZ on the SE coast. They experience multiple matings which is common in high density populations.

A look at the *Hemiergis* genus in the SW revealed genetic diversity is occurring across the SW forests, coastal plain and wheatbelt both in the TRZ and HRZ. *H. peronii* and *H. quadrilineata* are a taxonomic mess and this prompted the only genetic tree diagram of the evening.

Conservation implications of

Dan's conclusions are:

Because climatic-driven patterns of genetic diversity are largely similar across plants and herpetofauna in both the TRZ and HRZ - reserve designs are good for all taxa.

The strong catchment-based patterns of genetic structure along the southern coastal rivers are a concern, especially given the prospect of imminent climate change.

And……. the taxonomic status of some herpetofauna groups is unknown and needs to be revised.

Dan has had many adventure in WA, not always in very glamorous circumstances. She has obviously covered a lot of distance and followed a lot of fires and rain in order to be able to present the area's frogs and lizards to us, sharing relevant anecdotes and information along the way. ■

ACTHA Members Photography

Do you have a herp photo you're proud of?
Send it in for our Newsletter, with some words, to
mmconway@homemail.com.au

Lace Monitor*, *Varanus varius*,** *photo taken by Mandy Conway on a recent trip to* ***Fraser Island*. The Monitor was walking towards the picnic tables in search of left-overs. Luckily a herpetologist was on hand to educate a busload of male British tourists who were keen to pick the reptile up. In the end the gentlemen were happy to give the animal the respect it deserved and to take photos of their 'mates' pretending to be really close…*

Reptiles at Australia Zoo, Beerwah Qld

Photos and article by Mandy Conway

I was lucky enough to be invited up to Australia Zoo, Crikey land, to volunteer at the Steve Irwin Wildlife Hospital. This Hospital received over 6,000 injured wild animals last year alone - a very busy place.

I didn't get to see many reptiles at the Hospital, apart from a resident American Alligator having a toe removed and a wild Diamond Python who was attacked by a dog - he unfortunately died on arrival.

I did, however, tour the Zoo's reptile section and get to practice my photography skills. Taking photos through glass is not easy! I've included some of the results, with a brief description of each, on the following few pages. Some of the information given in this article was displayed on a panel below each enclosure and I've added some facts, using the new ***2nd edition of A Complete Guide to Reptiles of Australia, by Steve Wilson and Gerry Swan***, to provide more details for readers.

Australian Freshwater Turtles

The freshwater turtles had fantastic enclosures with easy to read plaques providing the public with a wealth of information. Unfortunately the little dudes decided to stay submerged when I went past so no photo opportunities.

"There are many varieties of freshwater turtle found in creeks, dams, lakes and rivers. The two basic forms are the short-necked and the long-necked turtles of which there are many different types."

"Freshwater turtles feed on molluscs, crustaceans, tadpoles and small fish. The Saw-shelled Turtle and Kreft's River Turtle being common".

American Alligators

Some facts: Have an extra eyelid which enables them to see underwater, lay 20 to 40 eggs which take about 65 days to hatch, young have brightly coloured yellow and black cross-bands which fade as they age.

Snakes

Enclosures were very well setup and in most instances ensured their occupants could be seen at any time of the day. Again the information plaques were informative and helpful.

Western Taipan/Inland Taipan/Small-scaled Snake/'Fierce Snake' *Oxyuranus microlepidotus*
Size: up to 2m
Habitat: sparsely vegetated, cracking plains, shelters in deep soil cracks and burrows of native rats.
Food: small mammals - especially rats.
Status: rare in Qld, presumed extinct NSW, regionally extinct Vic.
And: dangerously venomous.

Tiger Snake *Notechis scutatus*
Size: 900mm - 2m
Habitat: swamp edges, creek banks, watercourses on coastal lowlands and inland plains. May inhabit woodlands, shrublands, heath and tussock grassland.
Food: lizards, frogs, birds, small mammals.
And: dangerously venomous, produces large live litters (up to 64 recorded in Tasmania).

Western Brown Snake *Pseudonaja nuchalis (below)*

Size: up to 1.6m
Habitat: Semi-arid and arid areas including all vegetation types.
Food: reptiles, birds and small mammals.
And: dangerously venomous.

Collett's Snake *Pseudechis colletti*
Size: up to 1.5m
Habitat: grasslands on deeply cracking clay plains in the dry interior of Qld.
Food: mammals, snakes and lizards.
Status: rare in Qld.
And: dangerously venomous although shy and rarely attempts to bite, even when provoked.

Carpet Python/ Diamond Python *Morelia spilota*
Size: 2.5m variable
"Often encountered in suburban areas, you couldn't find a better rat catcher. It is usually active at night and spends most of the day coiled up in a tree or rafter, or stretched out basking in an open area."

Green Python *Morelia viridis (below)*
Size: 1.5m
Habitat: monsoon rainforests.
Food: small mammals and birds.
"This must be without a doubt the most stunning snake Australia has to offer. The striking, emerald green helps this species blend in with the rainforest canopy it calls home. Found only in a small area of Cape York Peninsula, nothing comes close to the splendor of this snake."

NB Below - my best photo, and through glass!

Australian Scrub Python *Morelia kinghorni*
Size: up to 5m, with unconfirmed reports of 8m
Habitat: vine thickets, woodlands and occasionally dry sclerophyll forest.
Food: mainly mammals, with distended individuals containing wallabies or tree kangaroos occasionally encountered basking during the day.

Reticulated Python Skeleton
"The Reticulated Python is widespread and common in South East Asia. Found in rainforest in shrubby savannah, farmed and urban areas, it is usually nocturnal. It predates on lizards, birds, rodents, pigs, small deer, cats, dogs, rarely humans. Females lay 15 -100 eggs.

Vertebrae are the main bones of the spinal column, humans usually have 33 vertebrae. The snake has hundreds which interlock with strong ball-and-socket joints. Pairs of contact points between adjacent vertebrae prevent twisting along the spinal column."

The skeletons on display were cleaned

Skeleton exhibit facts

Python skeleton	**Pig skeleton**
length 5.82m	length 550mm
vertebrate 423	vertebrae 40
ribs 636	thoracic ribs 32
holes drilled 1,278	

Sick baby Loggerhead Turtle

Newborn Saw-Shelled Turtle found near a suburban drain

Gorgeous reptile enclosures behind glass

Australia Zoo, a few more pics

Not a reptile - just the most common admission to the Hospital.

There are 44 endangered reptiles in NSW

Source: NSW Department of Environment and Climate Change

Scientific name	Common name	Level of threat
Anomalopus mackayi	Five-clawed Worm-skink	Endangered
Aprasia inaurita	Mallee Worm-lizard	Endangered
Aprasia parapulchella	Pink-tailed Worm-lizard	Vulnerable
Aspidites ramsayi	Woma	Vulnerable
Cacophis harriettae	White-crowned Snake	Vulnerable
Caretta caretta	Loggerhead Turtle	Endangered
Chelonia mydas	Green Turtle	Vulnerable
Christinus guentheri	Lord Howe Island Gecko	Vulnerable
Coeranoscincus reticulatus	Three-toed Snake-tooth Skink	Vulnerable
Ctenophorus decresii	Tawny Crevice-dragon	Endangered
Ctenotus brooksi	Wedgesnout Ctenotus	Vulnerable
Ctenotus pantherinus ocellifer	Leopard Ctenotus	Endangered
Cyclodina lichenigera	Lord Howe Island Skink	Vulnerable
Cyclodomorphus melanops elongatus	Slender Mallee Blue-tongue Lizard	Endangered
Cyclodomorphus venustus	*Cyclodomorphus venustus*	Endangered
Delma australis	Marble-faced Delma	Endangered
Delma impar	Striped Legless Lizard	Vulnerable
Demansia torquata	Collared Whip Snake	Vulnerable
Dermochelys coriacea	Leathery Turtle	Vulnerable
Diplodactylus conspicillatus	Fat-tailed Gecko	Endangered
Diplodactylus elderi	Jewelled Gecko	Vulnerable
Diplodactylus stenodactylus	Crowned Gecko	Vulnerable
Echiopsis curta	Bardick	Endangered
Egernia whitii	Centralian Ranges Rock-skink	Not listed
Egernia whitii	White's Skink population in Broken Hill Complex Bioregion	Endangered Population
Elseya belli	Bell's Turtle	Vulnerable
Emydura macquarii (Bellinger River Form)	Bellinger River Emydura	Vulnerable
Eulamprus leuraensis	Blue Mountains Water Skink	Endangered
Furina dunmalli	Dunmall's Snake	Vulnerable (Commonwealth listed only)
Hoplocephalus bitorquatus	Pale-headed Snake	Vulnerable
Hoplocephalus bungaroides	Broad-headed Snake	Endangered
Hoplocephalus stephensii	Stephens' Banded Snake	Vulnerable
Lerista xanthura	Yellow-tailed Plains Slider	Vulnerable
Liasis stimsoni	Stimson's Python	Vulnerable
Oedura rhombifer	Zigzag Velvet Gecko	Endangered
Pseudonaja modesta	Ringed Brown Snake	Endangered
Ramphotyphlops endoterus	Interior Blind Snake	Endangered
Simoselaps fasciolatus	Narrow-banded Shovel-nosed Snake	Vulnerable
Suta flagellum	Little Whip Snake	Vulnerable
Tiliqua multifasciata	Centralian Blue-tongued Lizard	Vulnerable
Tiliqua occipitalis	Western Blue-tongued Lizard	Vulnerable
Tympanocryptis pinguicolla	Grassland Earless Dragon	Endangered
Underwoodisaurus sphyrurus	Border Thick-tailed Gecko	Vulnerable
Varanus rosenbergi	Rosenberg's Goanna	Vulnerable

ACT Herpetological Association Inc.
2008-2009 Membership Renewal now due

Membership renewal runs from 1 July 2008 to 30 June 2009 and costs **$10** for all memberships. Herpetofauna is an additional $12 for the two issues of Dec 08 and June 09.

Payment at our August meeting when you attend the **AGM** would be appreciated.

OR please make your cheque out to ACTHA Inc., fill in your details below and send it to the ACTHA Membership Officer, PO Box 160, Jamison ACT 2614.

Surname: Given name(s):
Address:

State/Territory: Postcode:
Telephone (h): Telephone (w):
Email:

OR you could make a direct deposit to ACTHA's bank account:
St George Bank, BSB 112-908, A/c 040003311
Don't forget to note your name so we can identify whose payment it is on our Bank Statement.

Queries? please call Margaret on 02 6241 4065 (h).

Some Web sites worth looking at

http://frogs.org.au/ www.aussiereptilekeeper.com www.mark.org.au

http://www3.environment.nsw.gov.au/pdfs/hygiene_protocol_snakes.pdf

http://www.cdc.gov/healthypets/animals/reptiles.htm

http://www.tams.act.gov.au/live/environment/native_plants_and_animals/licensing_of_plants_and_animals/reptile_policy

Members might like to check this site from time to time to read about recent research into reptiles and amphibians:
http://www.sciencedaily.com/news/plants_animals/frogs_and_reptiles/

Snakes Alive! 2008 promotional video, available on YouTube
http://www.youtube.com/watch?v=cMqurvsslvc

NB *These web sites have been provided by members. The views expressed by contributors and authors, and any links to Websites provided in this Newsletter, are not necessarily those of ACTHA.*

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