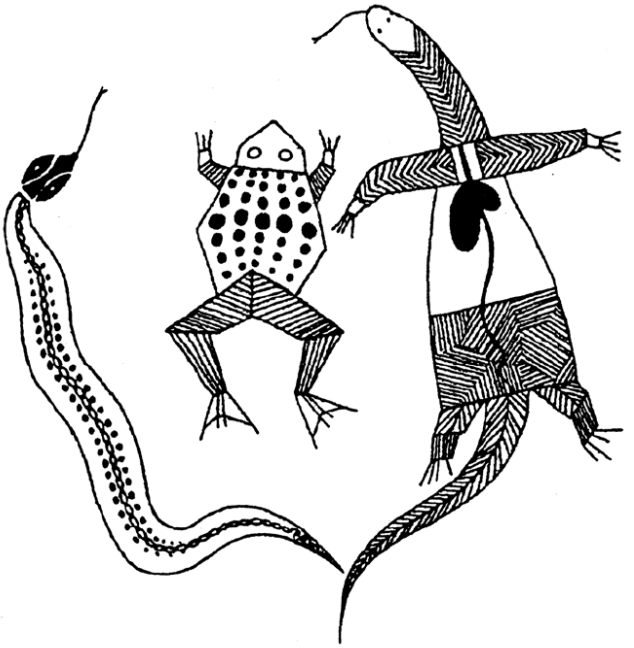
THE AUSTRALIAN SOCIETY OF

HERPETOLOGISTS

INCORPORATED



NEWSLETTER 43

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PUBLIC OFFICER:- R Longmore (1983-2007).; Scott Keogh (2008-).

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ASH Website: http://australiansocietyofherpetologists.org/index.html

Please direct all membership enquiries to the Treasurer, Glenn Shea. Membership forms can be downloaded from the ASH web site. Newsletter feedback can be given to Deb Bower. All other enquiries should be directed to the Secretary, Frank Lemckert.

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President's Report

Happy New Year, 2008 has been a busy year for all, and especially the ASH executive. The Newsletter, ably edited by Deb Bower, was very well received and everyone needs to congratulate Deb on an excellent job. We had a number of copies of the Newsletter printed, which I distributed to all those who indicated that they would prefer a hard copy. I still have quite a few copies, so please let me know if you want one; I am happy to give you extra copies if you want to use them for promotion of ASH.

We have been busy trying to streamline the Society's finances and avoid being de-incorporated but, despite our best efforts, we still have some way to go. Glenn Shea has managed to get most of our banking details straightened out, despite obstacles thrown up by the Commonwealth Bank. Frank Lemckert has been busy coordinating many activities, including getting our subscription data base right. We anticipate having the Society in good shape to hand over to the next committee when the time comes.

A major event for ASH this year was the 6th World Congress of Herpetology in Manaus, on the Rio Negro deep in the Brazilian Amazon. The Congress was excellent, and was well supported by members of ASH. We had a stand at the Congress, which was staffed mostly by Frank Lemckert, with occasional visits from me. As the printers missed our deadline for the Newsletter, my wife managed to get some copies printed from a disk in the suburbs of Manaus while the rest of us were at the Congress. There was quite a lot of international interest in ASH and all the hurriedly copied Newsletters were soon snapped up. Jean-Marc Hero was elected as the next Secretary General of the World Congress, and the proposal to host the 2016 Congress somewhere in Australasia was well supported. At the last ASH meeting in Albany, we resolved to bid for a future Congress, and now that resolution has wide support. The issue will be discussed at the upcoming SMASH meeting.

That brings me to the next ASH meeting, which will be held jointly with the New Zealanders and the Fijians in Albany (Auckland) in February. As "the joint meeting of ASH/SRARNZ/FiSH" is such an awkward mouthful, the meeting has been renamed SMASH: the **S**econd **M**eeting of **A**ustralasian **S**ocieties for **H**erpetology. The Kiwis are organising the logistics and program, but we will have the usual ASH AGM, which will include confirmation of the venue for the next meeting. It should be an excellent meeting, our first across the Tasman, and I hope to see as many ASH members attending as possible. For those of us on the east coast, getting to NZ is less expensive than going elsewhere in Australia.

I trust that you all had a productive and successful year in Herpetology in 2008 and, on behalf of the committee, I wish you all every success for 2009.

Mike Thompson
President

ASH Update

A number of people from the ASH community met in Manaus, Brazil to attend the 6th World Congress of Herpetology and, let's be honest, to molest some very cool exotic critters. Members of ASH present included people from Flinders University, University of Canberra, Sydney University, University of Western Sydney, University of WA, Newcastle University and the NSW Department of Primary Industries.

Organised by Dick Vogt's team from the 'Instituto Nacional de Pesquisas da Amazônia', the congress hosted a variety of exceptional plenary lectures, including well received talks by ASH members Rick Shine and Mike Bull. We held a stand advertising our society with newsletters, information about the society and merchandise.

Aaron Bauer announced the next meeting, which he will be in Vancouver in 2012. People that wish to help in the organisation of the conference are encouraged to contact Aaron.

Back in Australia, there were strong herpetological influences at conferences for the Australian Ecological Society which was followed by the Comparative Physiology and Biochemistry conference, held back to back at Sydney University last December.

The ASH team is now preparing for our first New Zealand hosted conference and looking forward to some great symposia, friendly catch ups and tuatara. ASH opened research and travel grants for the 2009 joint conference in New Zealand. We will provide support to as many students to attend the conference and to assist herpetological research as we can manage within our budget.

It will also be a big year for herpetology related conferences in 2009, including the International Congress of Ecology (INTECOL) in Brisbane, the International Sea Turtle Symposium in Brisbane; and the Australia and New Zealand Society for the study of Comparative Physiology and Biochemistry conference in Geelong.

We welcome one lone member picked up in Manaus - Dr Ronald Javitch from Canada. He is an old friend of Mike Tyler.

EARLY ANNOUNCEMENT

The Second Joint SRARNZ & ASH Conference 2009

Conservation Management of Herpetofauna

Massey University
Location: Albany, Auckland, New Zealand
Date: 16 - 19 February 2009

Calls for symposia proposals

Please submit proposals to Dr Weihong Ji (j.j.weihong@massey.ac.nz)

Student travel grants available for SRANZ and ASH members.

Conference trips (subject to interest & availability) - Little Barrier Island, Tiritiri Matangi Island, Waitakere Ranges & Hunua Ranges.

Conference website available soon.

Located 20 km north of Auckland City, the conference location is close to the coast, bush and also within walking distance to shops, restaurants and cafes. Auckland is central to many mainland, island and marine reserves, which are inhabited by various endemic and interesting flora and fauna.

The 10th International Congress of Ecology, will be held in Brisbane 16-24th August, 2009. Stay tuned at http://www.intecol10.org/

ANZSCPB's next meeting will be at Deakin University in Geelong during the first or second week of December, 2009. Stay tuned at http://www.zoo.latrobe.edu.au/anzscpb/

THE AUSTRALIAN SOCIETY OF HERPETOLOGISTS INCORPORATED

MEMEBERSHIP RENEWAL FORM

The Australian Society of Herpetologists Inc. is a society for professional herpetologists and publishing amateurs. The Society is incorporated in the Australian Capital Territory and is administered by a council of seven members. The Society meets at intervals of between 12 and 18 months, usually in a residential situation away from a major city. Meetings take the form of sessions of scientific papers and a business meeting.

Dues are currently AUS$25.00 per annum for non-students and $10.00 for full time students. All fees must be tendered in Australian Currency and cheques made payable to: Australian Society of Herpetologists Inc. Fees are due in June every year. All enquiries and nominations for membership should be sent to the Secretary/Treasurer of the Society (address below).

Name	
Current Email	
Organisation	
Do you wish to remain on the ASH list server?	
Student or non student?	

This form, accompanied by dues should be sent to:

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A massive thank you to our regional reporters...

North Queensland	Rebecca Webb
South Queensland	Harry Hines
Northern Territory	Dane Trembath
Western Australia	Dale Roberts
New South Wales	Frank Lemckert
Australian Capital Territory	Deborah Bower
South Australia	Aaron Fenner
Victoria	David Chapple
Tasmania	Geoff While

Photos courtesy of Frank Lemckert taken during his trip to Brazil 2008.

North Queensland

James Cook University

Robert Puschendorf deserves a pat on the back for finding the elusive Armoured Mist Frog (*Litoria lorica*). Although *L. lorica* was recognised as critically endangered, researchers feared it was extinct as it had not been seen since 1991. Other species living in the same habitat (high elevation wet tropics) have experienced population declines, and it seems that the amphibian chytrid fungus (*Batrachochytrium dendrobatidis)* is the culprit. It was thought that this disease may have caused the extinction of *Litoria lorica.* Robert found the frogs on the Carbine Tablelands, co-existing with a similar species, the waterfall frog *Litoria nannotis.* The identification was confirmed genetically by Conrad Hoskin. Although most individuals are infected with B dendrobatidis, the population appears to be healthy.

Hyo-Jin Yang has returned to Korea after spending three months in Townsville, learning techniques for the diagnosis of *B dendrobatidis* (Bd). The Bd status of Korea was unknown, so without any delay, Hyo-Jin led the first survey for Bd in Korea. She surveyed seven species, and found three species infected with Bd. The prevalence of infection was reasonably high for two of these species. This represents the first report of *Bd* in Korea.

Jamie Volyes has done her PhD exit seminar and now has the excruciating job of writing up her thesis. In her exit seminar she presented the results of a project investigating the differential virulence of *Bd*. In laboratory tests, a single isolate of *Bd* was revived from cryo-archives and monitored in various nutrient (media) conditions and temperatures over multiple culture generations. It appears that *Bd* can be plastic in its response to various nutrient conditions but *Bd* may respond to selection for optimal growth in low temperatures. These findings may help to explain the timing and impact of chytridiomycosis outbreaks in wild amphibian populations.

Carryn Manicom is writing up masses of data on the ecology, behaviour, and species interactions of skinks, spiders, goannas, and arthropods on Hinchinbrook Island. She has actually worked out how to use Program Mark to analyse her mark-recapture data, and can now expect to be besieged with questions by other poor souls also struggling with this excellent but very difficult to use software.

Ross Alford, with APD **Mattias Hagman,** have been awarded a $490,000, three-year ARC Discovery grant to continue increasing our understanding of how interactions of rainforest frogs with the amphibian chytrid fungus are affected by behaviour, environment, and skin microbes, and how all of these have responded to natural selection as populations recolonise some sites.

Sara Bell has overcome many initial difficulties getting techniques to work and is obtaining masses of data on skin microbes on rainforest frogs and which ones have inhibitory effects on chytrid infections.

South Queensland

The University of Queensland
Booth lab

Roísín Freeney is starting her Honours project aiming to investigate the influences of maternal origin and nest temperature on swimming performance in green turtles. **David Booth** has completed a study examining the relationship between swimming effort and oxygen consumption of swimming green turtle hatchlings. This study was the cover story for JEB 212 (1).

Queensland Museum

Patrick Couper is collaborating with **Steve Donnellan**, South Australian Museum, looking at the taxonomy of *Carlia* on Cape York Peninsula. **Patrick Couper** and **Andrew Amey** went on a successful four-week field trip to Cape York, collecting tissues for the *Carlia* project and revisiting the type locality for *Orraya occultus*, an unusual species of leaftail gecko. **Andrew Amey** has also been working on the description of new species of *Lerista*, the limb-reduced skinks.

Ecological Consultant
Ed Meyer

In addition to fauna survey work as a consultant **Ed Meyer** has been involved in various projects with Griffith University, the University of Queensland and Queensland Zoos. This includes projects investigating the breeding biology and captive husbandry needs of *Taudactylus* species as well as the physiological ecology of burrowing frog species. Ed continues to amass data on the biology of Queensland frogs, data which he promises himself he will publish, one day. We shall see...

Biodiversity Sciences group Queensland Environmental Protection Agency
Dr Teresa Eyre

The Biodiversity Sciences group at EPA Indooroopilly are including reptiles as a part of their biodiversity investigations for two major projects in the Mulga Lands (west of Charleville) and the Brigalow Belt (north of Roma) in Queensland. The MLA-funded project*, Biodiversity Condition Assessment for Grazing Lands*, is comparing land condition assessment methodologies aimed a production versus biodiversity and supporting the results with biodiversity data. The reptile component includes community data from active searches and pitfall and funnel trapping in mulga (*Acacia aneura*), brigalow (*A. harpophylla*) and poplar box (*Eucalyptus populnea*) woodlands. The LWA-funded project, *Biodiversity Values and Functional Ecology of Regrowth Vegetation*, is occurring in the Mulga Lands only, but is examining a very important land management issue for that part of the world. The zoological part of the project team, led by **Dr Teresa Eyre**, includes **Dr Michael Mathieson**, **Daniel Ferguson**, **Luke Hogan** and **Melanie Venz**.

Threatened Species Partnerships, Queensland Environmental Protection Agency
Harry Hines

Generally keeping a low profile due to a lack of funding but ongoing surveys and monitoring of Kroombit tinkerfrog and opportunistic surveys of frogs in southern Queensland, mostly targeting *Cyclorana* species.

Ecological Assessment Team, Queensland Parks and Wildlife, Rockhampton
John Clarke

Kroombit FrogSearch is a volunteer-based frog survey that has been running more or less annually since 1997. It occurs in summer at Kroombit Tops NP in central Queensland (about 1.5 hours drive from Gladstone), a dissected plateau supporting a significant rainforest/wet sclerophyll forest isolate. There are quite a few endemic plants and animals that rely on Kroombit Tops. The main frog species we're looking for is the critically endangered, endemic *Taudactylus pleione* (Kroombit tinkerfrog). The species is likely to lose half its habitat and have a reduced breeding season due to climate change.

As well as the frogs, we are monitoring the effectiveness of feral animal control at Kroombit. The ferals destroy frog habitat and almost certainly spread the chytrid fungus. There has been declining rainfall for the past 25 years and we're now really seeing the impacts - dry waterholes and springs, disappearing ground water.

There are usually around 25 people involved in FrogSearch (a mix of Qld Parks staff and volunteers). The surveys are a mix of the usual stream censuses and aural censuses where we listen for *T. pleione*'s distinctive, bell-like 'tink' call, which carries well and is easily heard from vantage points on the escarpment.

The last FrogSearch was in January/February 2008 and it was a huge success. For the first time ever, we found a juvenile Kroombit tinkerfrog! This was very exciting and much cause for celebration. It sounds weird, but this is the first time anyone has found absolute proof that the species is reproducing. Despite targeted searches for eggs and tadpoles of this species over many years none have been found. Also, we found a female, the first in ten years and only the fourth ever observed. She was gravid, as were the three previous females found (one of which is the holotype specimen in the Qld Museum). The team collected detailed observational data of her interacting with a male, but unfortunately amplexus was not observed. This year was also the highest number of male *T. pleione* ever recorded. This is probably largely due to us improving our survey techniques (these things are always a learning curve) - in particular, the time of day/night we do the surveys, as well as being undertaken in optimal climatic conditions. The result indicates that the population estimate we have (around 150 to 300 adults) is certainly an underestimate - good news.

We are planning to go back at around the same time this season and finally find the long elusive tadpoles and eggs, and continue with population surveys and monitoring.

Northern Territory

The wet season is now finally upon us with regular rain every day. This is now a time of high humidity and slightly milder temperatures than the build up to the wet season. As these large rain systems develop they trigger a large flurry of herpetological activity on all fronts. At first we start to see *Chlamydosaurus kingii* clamber down from their dry season rest. Once rain soaks the ground the enigmatic *Carettochelys insculpta* will hatch and scramble down the banks of the Daly River while an ensuing frog chorus moans, chirps, and croaks on the now flooded savannah. On the warm roads of the Top End *Acanthophis sp.* start to search for mates while hordes of newly hatched *Liasis olivaceus* await in ambush for their first meal. While this is all happening fleets of herpetologists will leave their lairs in search of these beasts to continue the never ending past time we call Herpetology.

Museum and Art Gallery of the Northern Territory

Work at the museum continues to move at a fast pace with the publication of three new species of *Ctenotus* from the Kimberley Region by **Paul Horner**. Additional work includes a revision of the *Diporiphora* complex of the Northern Territory in conjunction with **Jane Melville** of Museum of Victoria. **Paul Horner** has also been working on a new gallery devoted to the evolution of the crocodile, due to open early 2009. **Dane Trembath** continues to dissect snakes at the museum for both his PhD thesis and ongoing studies of the ecology of tropical snakes from North Queensland and the Northern Territory. He is also finally nearing completion of his revisionary work on the *Pseudechis australis* complex. Lastly thanks to the donation of recording equipment from **Steve Donnellan** of the Evolutionary Biology Unit the museum has been involved in developing a frog call database to assist with the many frog related projects happening at this time.

Bawinanga Aboriginal Corporation

Ben Corey received $148,101 through the 'Caring for our Country' funding program, in collaboration with **Damien Fordham** at the University of Adelaide, for the project: Conserving turtles in Arnhem Land by managing an exotic species. The objectives of this project are to: (i) trial the use of a new target specific bait for managing feral pig abundance at ephemeral billabongs, where predation on turtles is high; (ii) establish an experimental framework to compare the effectiveness of different turtle management strategies, including fencing and periodically culling and baiting

pigs; and (iii) test the predictive accuracy of a novel modelling approach, designed to evaluate regional conservation strategies for managing turtle populations in Arnhem Land in response to multiple and interacting human impacts, i.e. predation by invasive species, climate change, rises in sea level and human exploitation.

Rangers are also continuing with existing projects focused on the sustainable use of wildlife including crocodile egg harvesting in Liverpool, Tomkinson, Blyth and Cadell Rivers to supply hatchlings for crocodile farms in Darwin; and Northern snake-necked turtle egg harvesting to supply hatchlings for Northern Territory Pet market.

New South Wales

Macquarie University
Adam Stow Lab

New People to the Lab team include **Paul Duckett** who has been studying Tree Dtella's (*Gehyra variegata*) in Western NSW and QLD to better understand patterns of dispersal in arid sand dune environments and identify potential refugia during long dry periods (such as during periods in the Pleistocene). **Vince Repaci** is looking at the role of genetics in disassortative mating in Cunningam's skink (*Egernia cunninghami*) and whether erosion of genetic variation in human impacted environments influences disease risk. **Shannon Smith** is interested in connectivity among ridge top 'populations' of Coppertail skink (*Ctenotus taeniolatus*).

The team has completed a fair whack of field work in arid regions – mainly for *Gehyra variegata* and new project on Tjakura (*Egernia kintorei*) in *Anangu* lands of northern South Australia.

University of Sydney
Shine Lab

The expansion of the Shine Lab continues, with some very pleasing recent results in terms of research findings, publications, success in obtaining external grants, scholarships to new students, and jobs, awards and prizes for our current and recent students.

Cane toads continue to be the major theme of the research enterprise - with work evolving into three separate streams focused on toad biology, toad impact on the native fauna, and approaches to controlling toads and/or reducing their impact. That work is based at Middle Point Village near Fogg Dam, on the outskirts of Humpty Doo near Darwin. We have now taken over almost all of the village as a research station; we have about 10 to 15 people there most of the time. Our non-toad studies are more modest, and revolve around reptile biology in south-eastern Australia. Experimental habitat manipulation (forest clearing, addition of artificial rocks) is providing new habitat for endangered snakes; and the long-running studies of skink reproduction in the Brindabella Range continue to evolve in new directions (with embryonic metabolism and climate-change impacts two of the current hot topics). And of course, there are a few folks who don't fit into any of these categories.

The last round of ARC grants saw major funding for a new project on cane toad stress and immunocompetence (principal investigators Rick Shine and Ben Phillips, with Greg Brown playing a major role also) and an Australian Postdoctoral Fellowship for Ligia Pizzatto to work on the parasites of toads and frogs. Three new students obtained international scholarships to begin early in 2009: two people from Mexico (Elisa Cabrera and Edna Gonzalez) and one from the USA (Reid Tingley). All will work on toads. Ben Croak plans to start his Ph D also, after a year post-Honours working on the broad-headed snake project. At the big American herp meetings in July 2008, all three (yes, three!) of our students and ex-students who attended, won student prizes for their talks. Dan Warner, Rory Telemeco and David Pike won out against fearsome levels of competition from the Americans.

Dan also won the School of Biological Sciences' prize for the best Ph D. The Shine Lab's two Honours students this year, Georgia Ward-Fear and David Nelson, scooped the pool for academic prizes in the Biology Honours year, and Georgia won the University Medal.

Rick Shine is supposedly in charge of the lab, but freely admits that he is not entirely sure what he is doing, apart from becoming a research manager and science journalist rather than a real researcher. His 600th paper was accepted recently, predictably on cane toads (whatever happened to snake research?). Rick still makes frequent trips to Middle Point to harass the toad researchers, and travelled to Brazil for the World Congress of Herpetology in Manaus in August 2008 (with a side trip to the Galapagos thereafter - highly recommended!). The black snake ("Snowflake") who lives in a tank in his office is Rick's primary contact with real snakes these days, apart from his regular annual January migration to the reefs of New Caledonia for mark-recapture work on sea snakes.

Post-docs

Fabien Aubret has been working on finishing his post-doc experiments for the last few months. He is still dealing with phenotypic plasticity in various aspects of the morphology, behaviour and thermal preferences of the highly friendly Tiger snake. He will be finished by Christmas and then will move back home (France) for an exciting new research position in Jean Clobert's lab.

Greg Brown is continuing his studies on colubrids and cane toads around Fogg Dam. Mark-recapture work continues apace, eggs are incubated and marked babies released. A new addition to egg incubation work is *Ctenotus robustus*. Toad capers include, mark- recapture, telemetry and some preliminary work on stress and immunocompetence.

Michael Crossland has continued investigating the impact of cane toad eggs on native tadpole populations. This work includes identifying which native frog species are affected by toad eggs, and whether encounters with toad eggs are random events or the result of active searching by native tadpoles. In association with Mattias Hagman and chemists at University of Queensland, Michael has also been investigating ontogenetic changes in the toxicity of toad eggs, tadpoles and metamorphs. This work has shown that toxin diversity varies greatly during early development, with significant implications for the outcome of interactions with native aquatic fauna.

Weiguo Du is currently trying to understand interspecific variation in embryonic heart rate and its ecological and evolutionary implications in reptiles. For example, embryonic heart rate may show different patterns in various groups of reptiles, or in the same species from different geographic localities. To reach some general conclusions on the pattern, Weiguo plans to collect data from a variety of species from Australia, China and USA, which represent distinct geographic and ecological regions. Also, he plans to use the embryonic heart rate as an indicator to explore the secret of embryogenesis in the “white box” of the egg, investigating how incubation period is determined, and how temperature affects hatchling phenotypes.

Sylvain Dubey is working on three different subjects: (i) sexual selection in a tropical snake (*Stegonotus cucullatus*) and its sex-biased dispersal, (ii) the origin of the parasites of an invading species, the Australian cane toad (*Bufo marinus*), and (iii) the phylogeny of the genus *Drysdalia*. He is also embarking on a molecular phylogeographic study of the endangered Blue Mountains Water Skink, *Eulamprus leuraensis*, and dreaming of the Swiss chocolates he misses so badly.

Ben Phillips is currently enjoying a brief hiatus from the cane toad common garden experiment (designed to test whether the rapid shifts in life history we observe in toads across their invasion history have a genetic basis), and has, thus, relapsed into something resembling sanity. So instead of measuring tadpole growth and making tuneless squeaking noises with his nose, he is now ruminating on the effect of range-shift on the prevalence of pathogens and parasites on an invasion vanguard.

Ligia Pizzatto do Prado continues to look into aspects of the relationship between cane toads, native frogs and nematode lung parasites. Ligia is investigating (1) the possibility/effects of the toad parasite to host-switch to native frogs, (2) interpopulational variation in nematode virulence, (3) interpopulational variation in toad resistance to the nematodes, (4) aspects of the toad's life history and behaviour that may increase rates of transmission and the negative effects of parasitism. Preliminary results from her laboratory experiments show that the toad nematode can infect native frogs and the result of the infections depend on the frog species: some manage to get rid of the worms completely while others do not. Worms from the invasive front seem to be less virulent than in well-established toad populations and the intensity of the parasitism depends on the size of the toad when it first encounters the nematode.

Jonathan Webb is continuing his long-term mark-recapture study on broad-headed snakes and small-eyed snakes in Morton National Park in south eastern NSW. Jonno's main research interest at the moment is taste aversion learning in dasyurid marsupials, and he is co-supervising Stephanie O'Donnell's project on northern quolls. Jonno is also working with Mike Letnic on the impacts of cane toads on freshwater crocodiles in the Victoria River, NT.

Graduate students

Christa Beckmann is about half way through her PhD studying interations between cane toads and native birds. Her field work includes collecting buckets of roadkilled toads and presenting them to avian scavengers, as well as conducting field and lab experiments investigating the use of rainbow bee-eater nesting burrows by other vertebrates (including cane toads and native frogs).

Matt Greenlees is in the final year of his PhD studies on interactions between cane toads and native frogs. He continues to test how native frogs are responding to cane toads as potential prey over time at Fogg Dam, as well as looking at populations of the same species (and others) from different parts of Australia that have a longer history of sympatry with toads. He has also carried out an ambitious project trying to determine the relative contributions of learning and selection to the way in which the response of native frogs to toads may be changing over time. Further, he is continuing a long-term (~5yr) survey of toads and snakes on the Adelaide River floodplain.

Crystal Kelehear has returned to the lab as a PhD candidate to continue her research on host-parasite interactions during a biological invasion. Her laboratory-based honours work showed a negative effect of the lung parasite *Rhabdias pseudosphaerocephala* on survivorship, growth, feeding and locomotion of cane toad metamorphs. She trundles on from this work in the general direction of ascertaining whether these effects translate to the field in metamorph and adult toads whilst pondering ways to exacerbate these effects should they exist in the field.

Amanda Lane is continuing her research into the molecular ecology of Laticaudine sea-kraits in the central Pacific Ocean. Thus far, her phylogenetic analyses reveal that two recently designated species, *Laticauda saintgironsi* and *Laticauda frontalis*, are highly genetically similar despite being endemic to islands which are geographically distant. She is currently investigating patterns of migration between these two species.

John Llewelyn is in the middle of his PhD, studying the interactions between cane toads and anurophagous predators in northeastern Queensland. The species he has been studying include several snakes (*Tropidonophis mairii*, *Dendrelaphis punctulata*, *Hemiaspis signata*), as well as a small predatory marsupial (the common planigale, *Planigale maculata*). John has been conducting feeding trials with these predators in order to test whether they possess an innate or learnt aversion to toads. He hopes to continue studying these species, as well as include a few other anurophagous predators, in his research over the coming year.

David Pike is monitoring his vegetation overgrowth experiment in south eastern NSW, where trees were mercilessly cut down with a chainsaw to open up the canopy, allowing more sunlight to penetrate the rocks below (which are used by reptiles as retreat-sites). In his spare time he is also working on projects looking at the effects of human disturbance on habitat use by reptiles. David spends most of his time measuring small lizards and snakes, and is continually hoping that his back does not go out from lifting heavy rocks before he finishes his PhD.

Sam Price-Rees is gradually abandoning her hopes of harassing goannas, and focusing instead on the humble bluetongue skink (*Tiliqua scincoides*). Sam will examine impacts of cane toad invasion on the blueys, over both immediate and evolutionary timescales, and explore the feasibility of reducing that impact.

Ruchira Somaweera has travelled from Sri Lanka to join the excitement of Top End Toadworld. Sternly suppressing his desire to go out and catch and photograph every snake in Australia, he is developing plans to examine freshwater crocodiles (*Crocodylus johnstoni*) in Lake Argyle and surrounding areas. The crocodiles will be studied not just in terms of cane toad impact (and how we might reduce that impact), but also for the effects of commercial fishing bycatch on population viability of these animals.

Honours students

Stephanie O'Donnell (the Shine Lab's newest honours student) has made significant progress with her research into whether it is possible to teach Northern Quolls, *Dasyurus hallucatus*, to avoid cane toads as prey. Using animals from the captive breeding program at Territory Wildlife Park in Darwin, she attempted to train quolls by first feeding them a small dead toad filled with a non-lethal illness inducing chemical so that the animals felt sick after eating their first toad. In subsequent feeding trials using live toads, she has seen adult quolls actively rejecting toads, by either sniffing them and moving on to other prey or by biting a toad and immediately spitting it out, for over 6 weeks. These feeding trials will continue over the next few months to determine how long this aversion to live toads lasts. She is now turning most of her attention to testing whether this conditioned aversion leads to higher survival rates in captive bred juveniles being reintroduced to mainland sites where they will inevitably encounter large, lethal sized toads.

Georgia Ward-Fear has just completed her honours thesis on the ecological interactions between meat ants (*Iridomyrmex reburrus*) and metamorph cane toads in the Northern Territory. Apart from enabling her to spend copious amounts of time in the field, this study has also shown that toads are vastly more susceptible to ant predation than are native frogs, and higher rates of toad metamorph mortality can be achieved through the dry season by manipulating ant abundance and distribution around natal waterbodies via baiting (with little effect on non-target species). These preliminary results suggest the potential for integration of such strategies into targeted toad control.

Research assistants

Ben Croak is still working on habitat restoration for the broad-headed snake (*Hoplocephalus bungaroides*) throughout the Sydney basin. He is placing artificial rocks in areas where bushrock has been removed, to replace shelter sites for this endangered species. Lots of snakes and geckos are using the rocks, and this seems to be a great way restore habitat in rock outcrop systems. Ben will be relieved when all the rocks are finally deployed.

Melanie Elphick is continuing field studies on *Bassiana duperreyi* in the Brindabellas, and working hard at keeping the lab running as smoothly as possible. She recently celebrated her 13th year as Rick's main research assistant, and the centrepiece of so much of the lab's activities.

Adele Haythornthwaite is handling mounds of lab paperwork, and investigating the history of the cane toad's introduction into Australia.

Nilu Somaweera is taking care of animals up at the Middle Point research station, while **Michelle Franklin** takes care of her recently-born daughter Riley.

INSW Department of Primary Industries
Lemckert Group

Honours Student **Rowena Hamer** is being co-supervised by Frank Lemckert and Peter Banks at the University of NSW. Rowena is delving into the interactions of frogs with introduced predators, looking at how each responds to the scent of the other. Rowena will spend time in the lab and the field thinking like a fox and a *Mixophyes*. She will undoubtedly end up very confused – just like all honours students.

Frank remains as secretary and organiser of the NSW Declining Frog Working Group. Probably its main achievement to date has been to convince bodies to assist with funding a review of the genetics and morphology of *Mixophyes balbus* that has provided some stronger evidence that there are two species (originally sussed out by Naomi Doak at Griffith Uni). **Frank** organised another Frog and Reptile (and bat) wildlife school at the ANU Kioloa Field Station in September. The course, covering the biology, identification and management of threatened species, was attended by 25 land managers and consultants including people from DEWHA, DECC and DPI. Much was learnt and far too much was eaten. The next of these courses is to be held at Dorrigo in March and should be very froggy and scaley. Students starting projects who would like to get some experience with surveying and handling reptiles and/or frogs may find this a useful course to attend.

Trent Penman has ended bachelor life (sorry girls), marrying fellow frog enthusiast **Sandra Plummer**. Trent continues his work on fire and his collaboration on the broad-headed snake project with Sydney University.

University of Sydney
Thompson Lab

The Thompson lab has had several additions. PhD students include **Nadav Pazero** who has begun studying the evolutionary dynamics and consequences of developmental plasticity in reptiles; he has been busy finding hundreds of lizard eggs, especially water dragons, and has the lab full of incubators. **Shervin Aslanzadeh** is looking at lizard predation on plague locusts. She has been trying to collect central-netted dragons, *Ctenophorus nuchalis*, in western NSW, but her success rate has not been good. It appears that the density of lizards has declined due to the prolonged drought. The good news is that all lizards collected, and other species that were seen, are in good health. New honours students include **Cameron Fong** working on the a comparative structural study of the uterine epithelium of *Niveoscincus metallicus* and *Niveoscincus ocellatus*; and **Fran van den Berg** who is looking at thermal ecology of flat rock spiders (*Hemicloea major*).

Bridget Murphy has sequenced full-length mRNAs of vascular endothelial growth factor (VEGF) in six species of lizards and discovered the first natural expression of a form of VEGF that may be involved with uterine blood vessel proliferation in viviparous lizards.

Four members of the lab (**Jo Biazik, Jacquie Herbert, Scott Parker, Mike Thompson**) presented papers at the 6th World Congress of Herpetology in Brazil. Mike and Scott organised a very successful symposium, Reproduction in Reptiles: From Genes to Ecology, which was dedicated to the memory of Raju Radder, who was scheduled to present in the symposium before his untimely and tragic death. Papers from the symposium are currently being reviewed.

Western Australia

Western Australian Museum
Paul Doughty

Sven Mecke is visiting the WAM from the University of Marburg, Germany, to take on diversity in the skink genera *Eremiascincus* and *Glaphyromorphus*. Sven will travel to the AM and SAM to put together the 'big picture' for these slippery beasts.

Two new species of geckos were announced in November, *Diplodactylus capensis* from the Northwest Cape and *Lucasium bungabinna* from the southern deserts of WA and SA. The announcement was made at the WA Museum with a live *D. capensis*, with reports appearing in the West Australian and local TV news, proving that frogs do not have a monopoly on the 'cute factor' in the media.

The WA Museum's Alcoa Frog Watch 'webbed' site won the WA web site of the year award in November. The site was designed by Creative Nature's **Tim Paul** and features all WA species with many images and sounds and also highlights the public program that has turned Perth into a frog-mad city. Check it out! http://frogwatch.museum.wa.gov.au/

Australian Capital Territory

Australian National University
Keogh Lab

Renee Catullo and **Dr. Megan Higgie** joined the team at Botany and Zoology. Renee is a PhD student working on the phylogenetics of *Uperoliea* frogs. Megan is an ARC Postdoctoral Fellow looking at sexual selection in frog hybrid zones.

Phil Byrne got massive world-wide media coverage for his discovery of the highest level of polyandry known in a vertebrate (Byrne, PG, JS Keogh. 2008. Extreme sequential polyandry insures against nest failure in a frog. Proceedings of the Royal Society, Series B.)

Scott Keogh, Danielle Edwards and **Peter Harlow** received extensive world-wide media coverage for their discovery of a new species of Fijian iguana and their explanation of how they got to Fiji. It even made the North Korean Times and an alternative explanation was published by the Institute for Creation Science. (Keogh, JS, DL Edwards, RN Fisher, PS Harlow. 2008. Molecular and morphological analysis of the critically endangered Fijian iguanas reveals cryptic diversity and a complex biogeographic history. Philosophical Transactions of the Royal Society, Series B. 363:3413-3426)

Scott Keogh won a new ARC Discovery Grant to work on applying phylogenetic data to conservation problems in the arid-zone. He also has been elected to serve on the Executive Committee of the World Congress of Herpetology until 2016. **Megan Higgie** won an ARC Discovery Postdoctoral Fellowship to work on sexual selection and mate choice in *Litoria genimaculata* hybrid zones in north Queensland.

University of Canberra

David Wong has joined the team at the Institute of Applied Ecology to begin the fun of a masters on *Aprasia parapuchella* – the pink tailed worm lizard. Canberra bid a sad farewell to **Christina Castello** and **Sean Doody**, who have moved down South to the Yarra Valley where Chrissy will work as Assistant Curator of Threatened Species at the Healesville Sanctuary/Zoos Victoria. **Sean Doody** recently secured a grant to study cane toad invasion impacts in the Kimberley.

Erika Alacs submitted her PhD and has been accepted in the graduate intake with the Greenhouse Office. **Debbie Bower** is stoked to finish field work a year later than originally planned and write-up something like a PhD. **Kate Hodges** won a grant from the South Australian Wildlife Conservation fund to complete lab work on the population genetics of Murray River turtles.

Carla Eisemberg won the Institute of Applied Ecology's award for 'Excellence in Communication and Community Education' for the successful production and distribution of her book – "The adventures of Piggy on the Kikori River". This book aimed at educating youth in Papua New Guinea on the conservation value of Pig-nose turtles. **Arthur Georges** won the Senior Researcher Trophy.

The University of Canberra was well represented at the World Congress of Herpetology and the team took a 15 hour boat ride down the mouth of the Amazon to look at conservation measures around an important turtle nesting site. The site had an amazing densitiy of *Iguana iguana* which came crashing down from trees regularly and we even saw a gravid female looking for a nest.

Victoria

Museum Victoria

Jane Melville's research group has two new additions. **Susi Maldonado** (Honours student, enrolled through the University of Melbourne), co-supervised by **Jo Sumner**, is investigating the conservation genetics of the endangered striped legless lizard (*Delma impar*). This project is being completed in collaboration with Garry Peterson from the Victorian Department of Sustainability and Environment. Having completed her honours project in the Melville Lab, **Felicity McLean** is now a research assistant. Felicity is continuing her work on the evolutionary development research project where she is investigating the genes involved in the limb development of Australian agamid lizards.

Limb developmental genetics in Australian agamid lizards: the Melville Lab has successfully completed our first year of qPCRs on *Ctenophorus pictus*, quanitifying the expression of three developmental genes (*SHH, Pitx1, Sox9*) at three different embryonic stages. These results are currently being written up for publication. This field season we are extending our work to a second species (*Pogona vitticeps*), which has been very successful thus far.

Human induced changes on population genetic structure of Melbourne's frogs: PhD students **Josh Hale** and **Katie Smith** have been busy developing microsatellite markers for three study species (*Litoria raniformis, Litoria ewingi, Crinia signifera*). Josh has recently finished the final multiplex testing of the *Litoria raniformis* microsatellite markers and is about to start genotyping. The *Litoria ewingi* and *Crinia signifera* markers are currently being screened for polymorphisms and will soon be ready for genotyping.

David Chapple continues his ARC postdoctoral fellowship on the invasion dynamics of the delicate skink (*Lampropholis delicata*), which has successfully established in New Zealand, the Hawaiian Islands, and Lord Howe Island. David has recently completed a phylogeographic study of *L. delicata* in its native Australian range, and he is close to completing a phylogeographic study of the closely related *L. guichenoti*. He is also in the process of isolating and characterising polymorphic microsatellite markers for *L. delicata*. David continues to write-up papers for publication from his New Zealand postdoc, including a molecular phylogeny for the NZ skink fauna.

University of Melbourne
Stuart-Fox Lab

There are two new members of **Devi Stuart-Fox's** research group. **Peter Lancaster** (Honours Student) is examining the ecological factors influencing social behaviour in tree skinks, *Egernia striolata*. **Claire McLean** (Honours Student) is investigating the direct costs of female courtship rejection in Lake Eyre dragons, *Ctenophorus maculosus*. **Devi's** research on predator-specific camouflage in dwarf chameleons featured in the media including the New York Times and BBC Wildlife magazine.

Kearney Lab

Mike Kearney's Lab continues it work on *Heteronotia* geckos, having recently established a captive colony from animal collected in Western Australia. **Jessica Ridenour** and **Hong Diem Vo** have collected a lot of comparative physiological data on the sexual and parthenogenetic forms. **Mike's** research on cane toad distributional modelling was recently featured on ABC TV's Catalyst program: http://www.abc.net.au/catalyst/stories/2402366.htm

Monash University
Byrne Lab

Kristina Ficken (Honours Student) has recently started in the Byrne Lab and is investigating the impact of heavy metals on frog species diversity in the Melbourne area. Meanwhile, in a paper recently published in *Proceeding of the Royal Society B* by **Phil Byrne** and **Scott Keogh** it was revealed that Bibron's toadlet has the highest level of female promiscuity yet reported in a vertebrate. This 'sexy' finding has received considerable press, with write ups in *Nature, Science, New* Scientist and 'The Australian'.

La Trobe University

The **Malone Lab** has welcomed two new honours students, **Jose Ramos Avila** and **David DeAngelis**. **Brian Malone** continues his fascination with *Eulamprus*, spending several weeks last summer radio-tracking *E. tympanum marnieae* in the wilds of south-western Vic. He returned in the Spring of 08 to harass them some more, under the guise of population monitoring.

Gary ('Gerry') Peterson remains Brian's closest confidant when it comes to all things *Eulamprus*. Gary is continuing his long-running PhD on the ecology, evolution and conservation of *E. t. marnieae*, whilst accumulating an ever-growing list of side projects. These include a ridiculously broad-scale survey for *Delma impar* across western Vic, a habitat restoration project for *Litoria raniformis* throughout western Vic, and surveys for *Tympanocrytis pinguicolla*, again across western Vic. In his spare time, Gary saves migrating whales off the coast of Warrnambool from cray-pots, Japanese whalers, and bogans with speedboats.

Geoff Heard has become Gary's closest confidant when it comes to all things long-running. Geoff continues his PhD research on the conservation biology of *L. raniformis* in Melbourne's urbanising landscapes. Geoff has become somewhat addicted to metapopulation literature of late, and, with this in mind, and the fact that he was recently excited to purchase a book on the use of R, is pretty sure that he is becoming a geek. He spends most of his time wishing he had the smarts to back-up his new found interests. Geoff was very pleased to officially sign-up **Michael Scroggie** (Arthur Rylah Institute for Environmental Research) as his co-supervisor this year. **Evelyn Nicholson** has now completed her field-work for her PhD on the effects of fire on herpetofauna and small mammals in the heathy-woodlands of western Vic. Evelyn is now tackling the analysis of her data, and is becoming particularly fond of Program MARK (actually, it's a bit of a love-hate relationship apparently). **Jason Rossendell's** PhD thesis was recently passed. Jason's research focussed on the thermal ecology of *E. tympanum* in the alpine and sub-alpine environments.

Jason is now pit-trapping herps throughout the Pilbara of WA, on behalf of Rio Tinto. **Lisa Spence-Bailey** is being co-supervised by Brian during her PhD on the effects of fire on the herpetofauna of mallee landscapes in south-eastern Australia. The project forms a component of a wider study on the effects of fire frequency and severity on the biodiversity of this region. Brian has two honours students currently under his supervision: **David DeAngelis** and **Jose Ramos Avila.** David is studying the spatial ecology of *Egernia inornata* at Gluepot Reserve in South Australia, with emphasis on how the spatial ecology of these lizards differs in recently burnt and longer-unburnt sites. Jose teams up with David in the field, but chases different lizards: *Ctenophorus fordi* and *Ctenophorus pictus*. Jose's project aims to determine how these closely related species coexists in the Mallee, by comparing their daily and seasonally activity patterns, thermal ecology and habitat and microhabitat use.

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University of Ballarat

There are several new additions to **Simon Cook's** research group. **Erica Dalle-Nogare** (Honours Student) is looking at the effects of fire regimes on reptile assemblages in Mallee at the universities research property, Nanya, in western NSW. **Chris Cooper** (Honours Student) is also working at Nanya investigating the thermal characteristics of gecko retreat sites. **Katie Corbett** (Honours Student) is examining the effectiveness of habitat rehabilitation on metropolitan parks in Melbourne for reptiles and mammals. **Fiona Christie** (Postdoctoral Fellow) is working on an ARC Linkage project investigating the effects of closing down water points in the arid zone. She will be working on the community ecology of a range fauna including herps.

Gemma Candy completed her honours on predicting the distribution of *Delma impar* at a landscape scale in south western Victoria in collaboration with Garry Peterson from DSE. **Richard Goonan** also completed his honours on the effects of agricultural land use on invertebrate prey of *D. impar* in linear roadside habitats and implications for the conservation of the species. **Ash Olson** is currently writing up his honours on the effects of Parks Victoria's box-ironbark thinning trials on reptile communities in central Victoria. **Jon Starks** is continuing his MSc on provision of alternative habitat for frogs in the Wimmera following the decommissioning of the channel and dam system out there. He has had great success with frogs moving into his artificial ponds and increasing uptake of the ponds by landholders across the region.

South Australia

Flinders University
Mike Bull's group

The two major focuses in 2008 have been on sleepy lizards and pygmy bluetongues. The sleepy lizard project is concentrating on social behaviour and social networks among the lizards living in an area, and how that influences the transmission of parasites. We are gaining amazing data from GPS units that download regular positions to data loggers on each lizard's back. **Stephanie Godfrey**, **Stephan Leu**, **Caroline Wohlfiel** and **Holly Phillips** have all contributed to this work.

Dale Burzacott completed his 26th year of surveying sleepy lizard and tick distributions, as well as coordinating all aspects of the field research. **Sandra Parsons** was awarded her ANU based PhD this year, for her work on sleepy lizard bacterial populations. **Jaro Guzinsky** is close to submitting his PhD thesis on population genetics of reptile ticks.

The pygmy bluetongue project continues with new insights into social interactions and the impact of grazing (by sheep) on lizard behaviour. **Aaron Fenner** and **Mel Pettigrew** are nearing the end of their PhD projects, with new students **Julie Schofiled** and **Leili Shamimi** starting in the 2008 spring. Both of these projects were featured in the David Attenborough series "Life in Cold Blood" that was screened on TV earlier in the year.

Other activities include **Stephanie Godfrey's** PhD project on parasites of tuatara that is in the final stages of write up, and **Julie Hagen's** study of phylogeography and behaviour of the Solomon Islands Tree Skink (*Corucia*). Also, another ANU student **Annabel Smith** is a guest in our research group as she looks at the influence of fire on Eyre Peninsula lizard communities. Julie Hagen and Aaron Fenner joined Mike Bull at the World Congress of herpetology in Manaus in August, while Stephan and Stephanie presented their research at the International Society of Behavioural Ecology at the same time.

Adelaide University

Paul Oliver has just got back from eventful month surveying frogs and herps in the remote Foja Mountain Range of New Guinea. Once he has had a wash and recalibrated with society he will be focusing on finishing his PhD on the evolution and systematics of the Australian Diplodactyline geckos in the coming year. Three chapters are already finsihed and submitted and the two current foci are writing up and finishing molecular phylogenies for the genera *Crenadactylus* and *Nephrurus*. In collaboration with Steve Richards and a host of other interesting parties he is also working on the systematics and of number of Melanesian geckos (partcularly the genus *Cyrtodactylus*) and frogs (particularly *Litoria*).

Tasmania

University of Tasmania
Behavioural and Evolutionary Ecology Research Group

While herpetological research is usually quiet over the winter period, owing to a hibernating herpetofauna, the BEER group has, never the less, continued to grow. Firstly, we have been joined by a new PhD student from Canada, **Mat Russell**. Mat has recently begun a PhD examining the causes and consequences of mating strategies within *Niveoscincus ocellatus*. Specifically, Mat will integrate a detailed field-based study of mating tactics within a natural population of *N. ocellatus* with lab-based experimental work examining specific components of the mating system. Also joining the BEER group is **Anna Harts**. Anna has arrived from the University of Groningen in The Netherlands to examine geographical variation in maternal effects and life history traits within *N. ocellatus* as part of her master's thesis. In addition, Anna has also spent time, in collaboration with **Ido Pen** and **Barbra Feldmeyer** also from the University of Groningen, modelling the evolution of divergent temperature dependent sex determination within *N. ocellatus.*

The other members of the BEER group have continued to work on their various study systems. BEER group leader **Erik Wapstra's** snow skink system is just warming up for a very busy summer. In addition to Anna's experimental work, Erik will continue to collect data from his two natural populations as well as develop key infrastructure components which will allow us to expand our research programs in up coming years. This work based on an ARC funded project aimed at examining the evolution of maternal effects and sex allocation.

The project itself is in collaboration with **Tobias Uller** from the University, who was recently awarded the Association for the Study of Animal Behaviour's Outstanding Young Investigators Award, and **Ido Pen** from the University of Groningen, who is currently visiting the BEER group. Assisting Erik, Tobias, and Ido is **Geoff While**, who recently submitted his PhD thesis examining the causes and consequences of sociality within a Tasmanian population of *Egernia whitii*. Geoff will work on the snow skink system as part of a postdoc over the next 3 years. The outcomes of Erik's long-term monitoring of his two snow skink populations, specifically the implications of global climate change, were highlighted recently in an article entitled "Fewer male reptiles due to warming - and that's good?" highlighted on the National Geographic website (http://news.nationalgeographic.com/news/2008/10/081002-reptiles-warming.html). Erik has also recently been awarded a Rising Star Award for outstanding researchers from the University of Tasmania. Continuing their work in both the snow skink and the *Egernia* systems are **Chloe Cabdy** and **Jo McEvoy**. Chloe has just begun writing up her PhD aimed at examining maternal effects

within *N. ocellatus*. As part of this, Chloe will expand her work to include collaborations with **Arthur Georges'** group (specifically Tariq Aziz) from the University of Canberra, examining genetic components of the sex determining system as well as a modelling component in collaboration with **Alaistair Hobday** at the CSIRO. Jo has taken over monitoring the *Egernia whitii* system started by Geoff as part of her PhD. Jo will expand on Geoff's work and specifically concentrate on consistent individual variation in behaviour and how this influences mating system dynamics, reproductive output (and thus fitness), resource and habitat acquisition, and dispersal. Jo is currently examining the extent to which consistent individual differences in male aggression influences male competitive ability and thus resource acquisition. In addition, Jo will use *Egernia* as a system to explore behavioural phenotypes themselves (specifically across context/behaviour consistency) as well as the physiological basis and costs of these behavioural phenotypes. Both Chloe and Jo have also recently been awarded Holsworth grants which will greatly assist in achieving their research goals.

Erik also continues his now long-term collaboration with Professor **Mats Olsson** from the University of Wollongong primarily on Swedish sand lizards, but also new exciting projects on snow skinks and agamids looking at the influence of metabolic processes in constraining life history evolution. To assist in their project, **Laura Parsley** has recently joined the BEER group to develop some of the methodological aspects of this project (blood resistance to oxidative stress, age and temperature dependent DNA degradation). Laura recently returned from Malaysia where she has been working on endocrine disruption in sea turtles in collaboration with **Sue Jones**.

To show diversity and respect to the other half of the herpetological community, Erik also continues to collaborate with **Dr Craig Sherman** and **Mats Olsson** from the University of Wollongong on inbreeding/outbreeding and sperm competition in tree frogs.

Comparative Endocrinology and Ecophysiology Group
The other side of herpetological research at the University of Tasmania is the Comparative Endocrinology and Ecophysiology group. When she isn't being promoted to Professor and winning numerus teaching awards, **Sue Jones** continues her work examining the evolution of viviparity in vertebrates and how environmental stressors affect the endocrine (hormone) system. In addition Sue collaborates with members of the BEER group on other herpetological related projects providing expert advice and support on the physiological basis of key behavioural traits.

Sue and Erik's PhD student, **Keisuke Itonga**, is continuing his work examining maternal effects in a species of grass skink with high placental complexity. Keisuke began his PhD by examining the extent to which food and temperature conditions during gestation influence offspring fitness. This year, he plans to expand on this by examining the influence of both hormones and carotenoids on offspring phenotype through both examination of natural patterns and also through experimental manipulations. Keisuke has also recently been awarded a Holsworth grant. Recently joining the Comparative Endocrinology and Ecophysiology Group and BEER group is **Yuni Eswaryanti** who has begun her PhD examining Niche partitioning in snow skink guilds, specifically how climate change may influence competitive interactions at species boundaries. **Ashley Edwards** is continuing her long term project examining key components of the reproductive physiology of the blue tongue lizard (*Tiliqua nigrolutea*). Ashley's work includes a number of key areas including characterisation of the hypothalamic-pituitary-gonadal (HPG) axis and examining the key physiological steps by which ectothermic vertebrates living in cold climates assess their capacity to breed. As part of this project Ashley, with the assistance of new honours student **Lara Collins**, is expanding her taxonomic scope to examine similar questions in some of our other *Niveoscincus* species. Specifically, Lara is examining steroid hormone regulation of maternal-embyonic interactions within *N. microlepidotus* and *N. metallicus*. Ashley is also expanding her research conceptually by examining kin structure and its consequences within her blue tongue population. To assist with this, **Rosie Hohnen** will examine the mechanisms which regulate dominance hierarchies within male blue tongues as part of her honours project. Both Rosie and Lara are currently busy carrying out the experimental components of their work.

Where are they now?

Gillian Courtice

O'Reilley's, Lamington Plateau, 2007

I attended my first ASH meeting as an Honours student in 1972 and spent several years in the 1980's as Secretary/Treasurer, while I was working as a lecturer/senior lecturer in the School of Physiology and Pharmacology at the University of NSW. However, my interests in Comparative Physiology led me to investigations of all existing vertebrate groups, and while cane toads became the laboratory workhorse, I ceased to investigate questions that could be considered truly herpetological.

However, a background in herpetology never really leaves you, and in 1995 I resigned from UNSW, as committee meetings and red tape were increasing and research funding declining, and moved to the mid north coast to run an environmental consulting business with my partner, Leighton Llewellyn. Suddenly I was back in the world of catching frogs and lizards, and trying to update my herp knowledge, as well as come to grips with local threats to all species, but frogs in particular. Also, I ran an arm of the business that concentrated on environmental education, with a view to 'switching kids on to science'. I had a lot of fun running workshops for kids (often from the city), immersing them totally in different ecosystems. Frogging was always the most popular event.

Estuary workshop for children, *c.* 2000

My third career began in 2005 when I studied for a Dip Ed at the University of Newcastle. It seems there are very few school teachers who understand universities, and very few University people who understand schools, so I am carving myself a niche in the Senior Campus of the local secondary College (Years 11-12), running a first year University of Newcastle course in Education for Year 12 students and negotiating to run a University course in Biology similarly. Hopefully these courses will expand the opportunities for university education for rural students, and with luck, I'll introduce a few of them to the wonders of herpetology!

Publications

(NQld) James Cook University

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(SQld) Threatened Species Partnerships, Queensland Environmental Protection Agency

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(*SQld) Queensland Museum*

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(NT) NT Musuem and Art Gallery

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(NSW) Lemkert publications, INSW Department of Primary Industries

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(NSW) Thompson Lab

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(WA) Doughty Lab

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(*VIC) Macquarie University, Adam Stow Lab*

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(VIC) Kearney Lab, University of Melbourne

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(VIC) Fry Lab, University of Melbourne

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(VIC) Stuart-Fox Lab, University of Melbourne

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(VIC) Arthur Rylah Institute for Environmental Research, Department of Sustainability and Environment

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(VIC) Museum Victoria

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(VIC) Byrne Lab, Monash University

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(VIC) Reina Lab, Monash University

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(VIC) La Trobe University

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(VIC) Zoos Victoria

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(SA) Bull Lab, Flinders University

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(TAS) Behavioural and Evolutionary Ecology Research Group

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