



WESTERN AUSTRALIAN SOCIETY of AMATEUR HERPETOLOGISTS (Inc)  
(Member of the Australasian Affiliation of Herpetological Societies)

# NEWSLETTER

31 May, 1997  
(11)

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**Hi!**

The WASAH/CALM Liaison Subcommittee in part, Simon Ball and Jamie Stewart (Mike Lynch was unavailable), had a meeting on 8 May '97 with CALM's Dr Gordon Wyre and Dave Mell. This was primarily to keep communications open and determine progress and the appropriate means to bring about an improvement for amateur herps in WA. Members will receive a report on this at the 27 June '97 meeting.

Those people ordering T-shirts at the March '97 meeting will be able to pay and take delivery of these at the June meeting also. The cost is \$25. Thanks Shane Heriot for organising these from Geraldton.

There is a couple of good articles in this issue from Robert Browne-Cooper. Take particular note of *Granite Gripe* if you are partial to exploring granite outcrops.

You will note that the Minutes from the previous meeting are included here. It was decided at our last meeting to do this from now on because many of our members are in country areas, interstate or overseas. It will allow them to keep abreast, in part, with what is going on.

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## **'Galloping Glaphys' haven't vanished YET!!!**

Dr Ken Aplin of the Western Australian Museum (WAM)

has been seeking live individuals of a lizard known from only a handful of specimens accessed into the WAM years ago. If it proves to be an undescribed taxon it may be Oz's rarest lizard. Its affinities are with the genus *Glaphyromorphus* and it resembles *G. gracilipes* but is larger and paler in colour.

Dr Aplin, along with community assistance, has been looking for it without success for about 5 years now. However, last month he and WASAH members Brad Maryan and Brian Bush, during a trip to Bunbury after reported sightings there by Des Hume, ex-manager of the Big Swamp Bird Park, found two adult males. It does not auger well for this lizard though. The locality for this successful trip is a land-fill area in the middle of

Bunbury. In future years the pressure on this site for development will be considerable. Let us hope that further populations are found away from Bunbury.

This has been an unofficially combined WASAH/WAM project however this status may change shortly with the relationship between the two organisations becoming more formal. I will include more on that in the next newsletter.

BB

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## NSW NPWS releases public discussion paper on private keeping!

The New South Wales National Parks and Wildlife Service (NPWS) have released two public discussion papers on the proposed reptile and frog keepers' licensing systems in that state. These were formulated after discussions between members of the NPWS and the Reptile Keepers Association (RKA), the Australian Herpetological Society (AHS) and the Australian Society of Herpetologists (ASH).

The NPWS acknowledge in this document that "***much of our present knowledge of reptile and frog distribution and biology has been collected and published by amateurs.***"

An extract regarding the proposed system's goals

reads as follows. *The proposed system for reptile [ & frog ] keepers will also:*

- *allow current authority holders, holders of **unlicensed collections**, and people who presently legally possess either one or two exempt species to be licensed to **continue to hold, breed and trade their pets**;*

- *allow people not currently licensed to legally acquire, hold and breed animals;*

- *prohibit some species, such as crocodiles and all marine and exotic reptiles [no mention of exotic frogs], to be held privately;*

- *prohibit the collection of animals from the wild;*

- *continue to prohibit the commercial trade (through pet shops and open advertising) in all reptiles [ & frogs and mentions avoiding a repetition of the plight of green tree frogs in 1990-91 ]; and*

- *place **restrictions on animals being exported from NSW to commercial dealers interstate.***

It is great to see such a positive outcome and we trust a similar licensing system will be in place in Western Australia shortly, bringing us into line to a greater extent with the rest of Australia.

\* If you wish to obtain a copy of this document send a stamped, addressed business-size envelope with your request to: 9 Birch Place, Stoneville 6081.

## IMPORTANT NOTICE!

*The views expressed by contributors to the WASAH Newsletter are not necessarily those of the Executive, the Society or its members. As editor I tend towards minimal censorship as I believe everyone's opinions should be heard, but I will exercise this if I believe an article's content reflects poorly on WASAH.*

Brian Bush

## Mar '97 MEETING REPORT

Twenty two members and six visitors turned up. The meeting was held in an ordinary room, not the usual tiered lecture theatre. Consensus on the night, over a beer at meeting's end, was that this room created a much friendlier atmosphere by being less formal. We must thank the Perth zoo for allowing WASAH to use their facilities.

The guest speaker was yours truly and the subject was husbandry, breeding and colour variation in brownsnakes (*Pseudonaja*). I hope I didn't get too long-winded and bore everyone to tears!

I was a bit disappointed in the T-shirt sales on the night. Those that forgot to fill in the order sheet will have a second chance on 13 June.

## A GRANITE GRIPE

It is great to fossick over and lift granite slabs in the Darling Range, especially when you come across a slab which looks like it has never been lifted before. Many of you local herps will know what I mean - you can often tell if a slab has been lifted previously. Usually its a tell-tale sign of a "broken seal". Sometimes I wonder while lifting the "virgin" slabs what effect it might have on the organisms which use these microhabitats. How am I altering these shelter sites ??? eg. moisture, temperature, air, humidity, light, access etc. My guess is that once I have disturbed a rock, the shelter beneath is not quite as good as before.

Several local granite-inhabiting reptiles, eg variegated gecko (*Gehyra variegata*) and ornate dragon (*Ctenophorus ornatus*) have adapted specifically to this habitat. The implication being that their niche is the natural, undisturbed rock: exfoliated granite for shelter sites and the wider area for foraging.

Before you think I am a "stick in the mud" who does not want anyone lifting rocks, I must say, "if we never turned them we wouldn't learn much about what lives beneath them. I am as eager as the next herp to find out what critter lives under that ideal-looking slab, in fact I would probably try to race you to the rock! A point of

concern though, not just to me but

others also, is more and more granite outcrops near Perth have been obviously "done over", although only half the job had been done! What I mean is, the rocks had been lifted but not put back! One gets the impression that the lifter was scared of what he/she may find under there and heaves the rock over with vandalistic abandon.

I visited the Mount Dale area recently and came across an outcrop where rocks had been flicked over, rolled aside and broken. You may call this 'speeding up erosion' but I call it sloppy herping! I often don't expect to find much under these. From experience they are usually not preferred shelter sites for reptiles any more, but I still attempt to reposition them over the bare scar that illustrates their original position as best I can.

I reckon most WASAH members and other naturalists do the right thing and would prefer to leave the outcrop intact for next time. The damage is no doubt done by people who are just plain ignorant about granite-occupying fauna and their habitat. So, I am probably preaching to the converted when I repeat a phrase commonly voiced by Harry Butler, "always put the rock back!" Let me go a step further, "always put the rock back **properly!**"

RBC

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## FORSALE Python Terrarium

This front opening glass fronted terrarium measures (cm) 75 wide, 120 high and 55 deep. It has adjustable legs for uneven ground and is fully fitted out with carpet and cage furnishings ready to go.

For further details contact Tom Fronic on (08) 9345 4387 or *Mob.* (019) 371 281

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## Open Letter

In the last issue of the *WASAH Newsletter* there appeared an article, *Is conservation justified, or just humans opposing change?* This stimulated considerable discussion, especially as an extract was included on the net. As the author of that piece I have included this letter to all.

*Australia has had almost a total prohibition on the export of native fauna for years now, yet we still have a large number of threatened vertebrate species, few of which are that way due to taking [for trade]. However we are often exposed to propaganda on the impact dealers have on our rare and endangered fauna.*

*If someone is caught illegally taking fauna, often a visitor from overseas, even if it is only a few galah eggs it is promoted by customs and wildlife department spokesmen as "the greatest threat to our fauna known!"*

*The response I personally experienced from the wildlife authorities in the old days suggests much of the anti-keeping policy in WA today relates to the misconception that this is or can become a significant threat to our fauna. I do not believe this and I am not alone.*

*Environment Australia (used to be called Australian Nature Conservation Agency) identified the major threats to Australia's fauna as habitat destruction and/or modification along with competition and predation by exotics.*

*A perusal of the US and UK reptile magazines suggest there is a large range of Australian reptile species available overseas. No doubt much of the ancestral stock was smuggled out, however the increase in husbandry knowledge that these 'illicit' species enforced has made it possible to reliably breed most reptiles. I would expect fewer wild-caught individuals of the captive established species turning up in the pet trade today.*

*This is probably the greatest benefit a trade prohibition has had - it applied pressure to obtain base data on poorly known species. The short-term negatives are inflated prices, which in turn attract the cruel, unethical and unsavoury types that give all those with a genuine interest in natural history and keeping a bad name.*

*Cheers,  
Brian Bush*

*PS. Keeping does have its place and can contribute substantially to conservation in more ways than one. See Appendix 1, this issue. Included also is a response from Dr Gerald Kuchling which balances well my enthusiasm for lateral thinking!*

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## **BATTLE with a BUNGARRA**

I was herping in the Pilbara last March and along with the usual herp-gear, collecting bags, camera and hook/jigger, I also had a small fishing rod. Fishing is good fun, but this time it would be used for noosing lizards. I had heard of this although I had never tried it.

Before long I was getting into this novelty, noosing long-snouted water dragons (*Gemmatophora longirostris*), ring-tailed dragons (*Ctenophorus caudicinctus*), Pilbara rock monitors (*Varanus pilbarensis*) and even a small perenty (*V. giganteus*) that was much better looking than Busho. Probably because it was considerably younger! This was great fun and comical to watch the lizards as they regarded the tip of the rod with complete indifference. It almost seemed sad, or unsporting in

a way as the lizards were completely oblivious of their impending capture as the noose went over their heads. All their speed and agility was thwarted with a quick pull of the nylon cord. I suppose that the rod and noose looks so unlike any predator they know that they are not concerned, which makes this capture method too easy.

But back to the story - with all the noosing success I'd been having, I was feeling quite cocky and ready to tackle any lizard I encountered. "None were smart enough to elude the noose!" Or so I thought.

Flushed with success after noosing the perenty, I was on a rocky outcrop south of Karratha. I caught sight of a big bungarra (*Varanus panoptes*), without any regard for his size (in excess 1.5 metres), nor how flimsy my flick-rod was, I immediately began stalking the goanna as if it was a timid little dragon lizard. The bungarra had no intention of going anywhere, as big goannas often don't. I slipped the noose over his thick neck and jerked it tight. I was surprised, he didn't even flinch, unlike the smaller lizards I had noosed over the past few days. It was only when I began to "haul him in" the fight began! He sprung at me hissing and snapping at my legs, threatening to bite a chunk out of my shin. My pathetic little fishing rod buckled under the strain as if I had hooked a whale. In a desperate attempt to keep him at bay I was flailing, kicking, twisting and then falling

amongst the granite boulders. The bungarra ran straight through the noose, which I no longer had any control over, gave a last defiant hiss and headed for a crevice. I got to my feet, picked up that silly little rod and inspected my left palm which was cut as fell on the rock. With much relief I shook my head, chuckled and thought to myself, "way to go Rob, what a brilliant piece of stupidity!"

The goanna definitely won that one, no question, but I considered myself fortunate in not receiving a bite. My only mistake was attempting to noose him in the first place. I should have expected a fight from a big lizard who is on top of the food chain. One regret is that the event was not captured on video, or that no one saw my folly (*Ed here. Hey Rob we are all disappointed too!*) It would have been some consolation to watch a bystander laugh himself senseless at my expense.

RBC

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## More on Paper as a cage Substrate

You may recall an article by BM in *WASAH Newsletter* No. 8 about the advantages of using newspaper as a substrate in preference to more natural materials. Oh, and also that newspaper gives the reptile something to peruse while waiting for the mice to thaw out!

The main points in that article were greater convenience and more effective cleaning. There are a couple of additional reasons why I switched to paper earlier this year.

When I initially set up cages for three sedge snakes (*Elaphognathus minor*), I thought I would be doing them a favour by chopping up dead sedge for the cage floor to make it more natural. Cutting up sedge leaves during every cage clean was a hassle. A hassle I wanted to avoid so I switched to paper towels. The snake didn't appear to care less, moving about and feeding as usual.

On several occasions I have noted nematodes (roundworms) on the cage floor. These were in the snake's faeces, and regurgitated with half-digested frogs. You have to expect worms in snakes that eat frogs: aquatic animals make good intermediate hosts for these parasites. The only way I was able to notice the worms was because they were on the paper towel. It would be extremely difficult to see them on a cage floor covered in the sedge clippings I had used originally.

Paper towel allows me to see exactly what is being regurgitated or defecated, when and by whom and how often. It is also very easy to monitor uneaten food items. Collecting a fresh faecal sample is simple on paper towel too. To do this when using the sedge substrate, I would have to remove the snake and cage furnishings

which was a hassle for me and the animal.

To me paper towel is not unlike a nappy - when dirty you remove and replace it. It allows you to easily inspect for those bi-products of digestion and other "pits and pieces" which are useful health indicators. Another advantage of using paper is it indicates when copulation has occurred in brown snakes (and probably some other species) as mentioned by BB during his talk at the last WASAH meeting.

Of course, in some situations like public displays paper is not an option, but where possible it makes an ideal substrate.

RBC

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## Legless friend a *PERFECT PET*

(Reprinted from the *Northern Territory News* 24 Feb., '97)

Most children rush home to play with their fluffy pet puppy or hamster, but not Tim Davidson.

The 11-year-old Nightcliff boy prefers the company of his slippery 75 cm Children's python, Scales.

Tim became obsessed with snakes when he lived in Africa with his family for three years.

He said yesterday: "All my mates in Africa had snakes so I wanted to get one too. I like them because they're really

friendly and they don't have legs. People think it's strange but interesting that I have a snake, they ask a lot of questions."

When Tim returned to Australia he applied to NT Parks and Wildlife for a permit and was granted permission to keep a snake.

He is part of a growing number of Territory enthusiasts rejecting traditional pets and opting for the low-maintenance, "cold-blooded" variety.

According to NT Reptile Society snakes are the perfect pets. You don't have to wash them, feed them once a week and they rarely run away. You can buy snakes from registered breeders.

NT Reptile Society members meet at Palmerston every two or three months to swap reptiles, advice and snake handling hints.

The 40 members own a variety of reptiles including carpet pythons, other types of pythons, lizards, turtles, frogs and tadpoles.

For more information contact Gary on (08) 8932 4545.

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*It is fortunate for Tim that he has not lived in WA. Here he would have been discriminated against because of his interest in snakes - his mates could easily justify killing one but he would be hard pressed to justify keeping one alive!*

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## SNAKEBITE EPIDEMIC CURED (The amber antivenom prevails!)

The following is from a **Local History** section compiled by Llyrus Weightman of the Karratha Community Library for the *North West Telegraph*. I have modified the title slightly. It illustrates just how non-dangerous Oz's snakes are.

The *North West Telegraph* continues the story of early North West pioneer Arthur Charles Vassell Bligh (1875-1954), who wrote an authentic narrative of his early days in the Pilbara titled *Golden Quest*.

In this local history column, Mr Bligh details the stories of some miners who were bitten by snakes.

"It seemed always to be the task of the (sober) miners to nurse the drunks and though the job was not always pleasant, it gave us some comical experiences.

"The first story about snakebites concerns a very big Scotsman, Alexander Farquaharson, who went home overloaded with his national beverage and turned into his bunk, in which was a large black snake sleeping and which bit his ear.

"Before going to get help, he tried to catch the snake and

pulled half his camp down looking for it without success.

"Then feeling bad he came for help. He was really lucky because if he had come sooner we certainly would have cut his ear off, but when he arrived this seemed useless as the ear had swollen abnormally.

"The ear was enormous, giving him a grotesque appearance (and) the swelling gradually spread, as it did so it nearly closed his throat making it almost impossible for him to breath.

"Nothing could be done for him except **add more whiskey** to the large amount he'd already consumed. After three hours the patient gradually began to recover and by morning seemed to be out of danger - within one week there were no less than another three snakebites.

"One night a man named Wilshire awoke with a snake fastened to his thumb.

"He had two pronounced punctures on the thumb and looked sick, his hand was badly swollen.

"**We administered rum** and used a butcher's knife on the bites, cutting three cross-way gashes fairly well into the flesh, which a blackboy (sic) then sucked to make them bleed - this treatment was successful.

"Number three was by a small snake that was inside a mosquito net. The man was bitten on the chest, and after

we killed the snake **gave the man a couple of nips of rum** which seemed to fix him.

“Number four arrived with a bite on the buttock. He was evidently pretty scared and **wanted a drink of rum quickly.**

“However, I thought the knife would be a better treatment and when we were about to operate he decided he would rather the poison of the snake.

“**We only gave him one nip of rum** and on examining his bunk found a very large centipede which seemed to be the cause of the trouble.

“I have since wondered how many snakebites we really would have but for that butcher’s knife - it seemed to have cured the epidemic as suddenly as it began.” \*\*\*

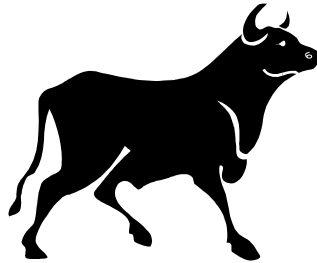
## ***Glue Traps at right price for members***

### **\$5 + tax**

Dan Lowry  
(08) 9242 5377  
Evergreen  
Marketing  
Scarborough Beach  
Road  
Mt Hawthorn  
6016



## ***HERPTALES***



## ***A LOST BEERBOTTLE***

Back in the early 80’s during a Naturalists’ Club excursion, a bunch of us were dropped off at a spot a short distance from our base camp. This was early in the day and , as most of us had our “thinking caps” on, we made our way back to camp in no time. It was almost dark when us smart people realised, “Hey, we are missing someone!” It took us a considerable time to figure out who or what was missing.

And then it appeared! A lone staggering figure was working its way slowly along the beach towards us. It took some time for us to decide whether this hapless individual required our assistance or not. It is a good thing his mates came to his aid as he was absolutely and pathetically lost - and do I mean lost!

After replenishing his body fluids and having to virtually carry this poor soul back to

camp, he had the audacity to protest, “I was not lost!”

In Dave’s favour was the fact that the island in question is about 80 kilometres long by 12 kilometres wide - Dirk Hartog Island, Shark Bay.

**WAY TO GO  
BEERBOTTLE!!!**

**PS.** Back in those days Dave was always bragging. Hey! Did he wear his jeans tight or what! When we found him he sure showed signs of being glad to see his mates. Although we never did find out, maybe he just had a pair of socks stuffed down there - in retrospect I reckon he must have!

Anon.

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## ***Kevin Gobby snake handling equipment***

Hooks ..... \$40  
Jiggers ..... \$60  
Hoop Bags .... \$90

Hoop bags have a triangular frame and detachable black/brown material bag.

*All equipment can be ordered through the society.*

*This gear is so good the snakes catch themselves!*



**GENERAL MEETING**  
**21 March 1997**

**MINUTES**

1. **Convene Meeting** - 7.30pm, previous meeting (13 Dec '96) minutes accepted by Brad Maryan seconded by Robert Browne-Cooper.
2. **Attendance** - 22 members, 6 visitors
3. **Apologies** - Russell Brown
4. **Correspondence Tabled**
  - A letter from the North Dandalup Landcare Group regarding their concerns for the establishment of a super-pit for rubbish disposal. (This was old correspondence dated 25 July '96).
  - Application for grants from the National Heritage Trust.
5. **President's Report** -
  - Apology for late newsletter due to late confirmation of meeting date.
  - Proposal that a forthcoming meeting be held at the Harry Warring Marsupial Reserve on a Sunday (in the Spring) and be a workshop on the safe handling of venomous snakes. The purpose of which it will allow for more Reg. 4 licensees. WASAH member Bob Cooper lives at and maintains this facility for the UWA.
  - Alternative venues for meetings mentioned in case the Perth Zoos rooms become unavailable. Discussion included venues such as the Herdsman Lake Goulds League facility and the Armadale Reptile Centre with the possibility of a day visit to this.
  - Mention of glue traps being available to members at the right price (see advert. this issue).
  - WASAH T-shirts available (BB had one on). These designed by WASAH member Shane Heriot, cost \$25.
  - WASAH on the internet. Dave *Beerbottle* Robinson organised with Professor Georges of the Australian National University, Canberra, to do this. The URL is,

**<http://canberra.edu.au/pub/aerg/herps/soc/wasah.htm>**



- 6. Vice-President's Report**
- Back issues of the *WASAH Newsletter* are on display for the meeting plus those from many other societies we exchange newsletters with.
  - Advises members that books are available through the society with several titles in stock. Order forms are available for those not in stock.
- 7. Treasurer's Report** - Treasurer absent (see apologies).
- 8. General Business**
- Simon Ball mentions that the WASAH/CALM Liaison Subcommittee was expecting to contact CALM's Dave Mell to arrange a date for their meeting re. progress towards reptile and frog keeping licences.
  - Brad Maryan mentions Reptile Keeping Kit will be available at next meeting.
  - Brian Bush gives explanation of the kit, ie herp keeping and data recording.
  - Robert Browne-Cooper mentions the Snake Busters List and calls for more volunteers to put their names down.
  - BB suggests that minutes be included in future newsletters for benefit of interstate and overseas members. Accepted by members present.
- 9. Editor's Report**
- Mention of an error in personal photocopier normally used to produce newsletter. May have to use a commercial printer such as Snap Printing, Midland used for issue 10.
  - Calls for more articles to be submitted by members other than the usual ones.
- 10. Call for further business**
- BM mentions that membership fees are due now for 1997.
  - Ken Aplin ask for photographs of *Delma* sp. from southern coast. *Delma australis* is composite.
  - Guest speaker, Brian Bush takes over and presents talk and slide show on *Pseudonaja* and their husbandry.
- 11. Meeting Adjourned** - 9.30pm.



**WASAH  
GENERAL MEETING  
Friday 27 June  
7.30pm  
Perth Zoo Ed Centre  
Entry off Labouchere Road**

**SPECIAL  
G u e s t S p e a k e r :**

**Dave *Python* Pearson**

**(At considerable expense to WASAH we are having a local  
python researcher present a talk & slide show)**

**On My work on pythons!**

Dave Pearson is a CALM researcher based at Woodvale Wildlife Research Centre. He has been studying python distributions, the movement of individuals using radio transmitters, their ecology, biology, behaviour and specific conservation status. I was fortunate to be present at one of Dave's talks previously. This should be of interest to members of all ages.

**WASAH EXECUTIVE  
COMMITTEE**

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**Secretary:** Robert Browne-Cooper  
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(08) 9390 8091

Address all correspondence related to  
this newsletter to:

**The Editor  
9 Birch Place  
STONEVILLE 6081**

***MONITOR***

The journal/newsletter and  
bulletin of the Victorian  
Herpetological Society. The  
VHS is the largest herp society  
in Australia and *Monitor* reflects  
that. Send \$23 for 2 issues to:

WASAH is an informal group of people  
with similar interests - all wishing to  
keep for private study and "love", frogs,  
turtles, lizards or snakes!

WASAH joined the Affiliation of  
Australasian Herpetological Societies in  
1994.

## The Western Swamp Turtle (*Pseudemydura umbrina*): a Radical Conservation Plan

by Brian Bush, 9 Birch Place, Stoneville, Western Australia 6081 (bush@nettrek.com.au)

### INTRODUCTION

This small (carapace length to 15 cm) fresh-water turtle was discovered in 1839 and described to science in 1901, it was all but forgotten until 1953 when it was rediscovered near Perth, Western Australia. Only 35 or so individuals are believed to occur in the wild and in excess of 100 are being held at the Perth zoo. It is considered by many to be the world's rarest reptile.

With the summer drying out of the ephemeral swamp at Ellen Brook nature reserve where it occurs, this turtle aestivates in deep cracks and fissures in the clay. When the swamp fills in June and July it becomes active. It has low fecundity, producing up to 5 eggs in October and November which take as long as 190 days to hatch, and slow maturation. It is believed to have become critically endangered due to habitat clearing, increasing aridity, predation, inappropriate fire regimes and drainage (Cogger *et al.*, 1993)

The Western swamp turtle is facing extinction in the wild and was placed on CITES Appendix I in Jan., 1975 which at present *precludes what I propose here*. It occurs naturally in a very small area at Ellen Brook NR on the outskirts of the major Western Australian city of Perth. A Recovery Team was set up in 1990 comprising members from the Department of Conservation and Land Management (CALM), the University of Western Australia (UWA), Curtin

University, World Wildlife Fund for Nature (WWF) and the Australian Nature Conservation Agency (now Environment Australia). A captive breeding program is ongoing at the Perth zoo as part of a recovery plan now in place (Burbidge and Kuchling, 1994). A CALM maintained terrestrial predator-proof fence has been placed around both Ellen Brook and Twin Swamps NR's and the reintroduction of captive bred individuals to the wild at both reserves has commenced. Dr Gerald Kuchling (UWA) and Dr Andrew Burbidge (CALM) have been involved in studying its ecology. Dean Burford (Perth zoo) has contributed to the development of successful husbandry techniques, culminating in reliable captive breeding. All those involved, including many not mentioned here, should be commended for their efforts. However, will it be enough?

### CONSERVATION

Any program implemented for the conservation of a taxon must be undertaken with a long-term view in mind. If we do not do this the next generation will experience the same problems we are having today. If perpetuity of the present biodiversity is the goal, especially with the earth undergoing rapid changes as a result of the ever increasing human population, we in Australia have to forsake the traditional official attitude

towards our fauna of *going it alone*.

Continuing the status quo, or improving this so that two populations exist, concerning the Western swamp turtle cannot be considered a successful conservation program. For it to be so this turtle must be considered safe as a long-term biological entity so that the program and any peripheral support can be wound down freeing up resources for use in other projects. If this can be attained with the bonus of a return of the capital invested then it is truly a successful outcome, but more on that later.

Suitable alternative areas of habitat, unless away from development, would be subjected to the same detrimental pressure as Ellen Brook and Twin Swamps and should not be considered as adequate in the long term.

### LONG-TERM PROBLEMS

1. Currently the captive population is maintained at one location, the Perth zoo. In the event of some unforeseen pathogen decimating this group, the recovery program will be put back years.

2. The husbandry expertise developed during the recovery program is restricted to too few people. If they should leave the program, a void in experienced people would occur.

3. The small area of wild habitat and its proximity to Perth cause it to be continually under pressure from degradation resulting from the ever increasing development of surrounding areas.

4. The local human population increase will place considerable pressure on future governments to allow the turtle reserves to be used for residential development. I can not help wondering what the situation will be like in three or four generations, let alone three or four hundred years!

### RADICAL SOLUTIONS

Some of the following suggestions are going to be difficult to accept by many of those involved in traditional Australian fauna conservation programs. However I personally believe we all need to exercise some lateral thinking if successful results are the goal. I believe also that the Western swamp turtle is the ideal subject for this type of program: its very restricted distribution allows for easy poaching control, it is appealing, long-lived and comparatively easy to maintain.

First there needs to be a buffer between any unforeseen decimation of the captive population. A successful breeding program is already in place at the Perth zoo, but this is the only facility where this is presently occurring. A portion of captive bred individuals must be provided to other interested zoos both in Australia and overseas. This would also considerably broaden the available expertise on their husbandry.

The natural wild population and any artificially established populations have very little long-

term future for reasons mentioned above (see *Long-term Problems* \*3 & \*4). Any reintroduction should not be restricted to areas of habitat similar to Ellen Brook and Twin Swamps, but also include alternative areas of permanent water such as Lake Leschenaultia, Mundaring weir, Canning and Serpentine dams etc. Although research to date suggests it will not do well in areas of permanent deep water, this may accelerate any potential for adaptation and contribute towards the establishment of an alternative ecology in this turtle. For example, in these [alternative] areas it may be found to continue to aestivate during summer, or in some individuals/situations it may not require to do this. It has previously been found in agricultural dams adjacent to Ellen Brook (Bush *et al.*, 1995).

This brings me to the most radical component of this plan: the involvement of private keepers world-wide. It also allows an immediate financial return on this turtle's conservation. Fifty pairs initially should be made available to private people who can demonstrate turtle husbandry capabilities by their local or wider contribution in this area. These could be sold at say \$20,000 per pair (a return of one million dollars), an investment that would guarantee genuine attempts at breeding. At a later date, depending on the success or otherwise of the private breeders, an advertising campaign could be implemented promoting the Western swamp turtle as a 'state of the art' pet: attractive, easily maintained and owners would be contributing to its conservation. The funding for this advertising could come from the initial sales of the original

breeding stock. Eventually free market forces would come into play reducing the cost as the numbers increase but, by this time, those original private breeders successfully breeding turtles would have their investment returned along with any profit made during early sales. The beauty of programs such as this is they become self perpetuating. Once established the original government department's involvement can be reduced to monitoring the wild population, while now available resources can be directed to other projects.

Samples of success in this type of plan are the Australian Collett's snake and the American grey king snake. The brightly coloured blacksnake (*Pseudechis colletti*) is rare to sparse (Ehmann, 1992) in the wild but has become so common in captivity that it is difficult to give them away (pers. obs.). One of the rarest North American snakes (*Lampropeltis alterna*) known from only five specimens before the 2nd World War has been collected and avidly bred in captivity by keepers. It is now the most frequently exhibited species in both private and zoo collections (Tennant, 1985).

### REFERENCES

- Burbidge, A.A. and Kuchling, G.** 1994. Western Swamp Tortoise Recovery Plan. WA Wildlife Management. Program No. 11. Department of Conservation and Land Management, Perth, Western Australia. 29 pp.
- Bush, B., Maryan, B., Browne-Cooper, R. and Robinson, D.** 1995. *Reptiles & Frogs of the Perth Region*. UWA Press, Nedlands, Western Australia. 226 pp.

**Cogger, H., Cameron, E., Sadlier, R. and Egglar, P.** 1993. *The Action Plan for Australian Reptiles*. ANCA, Canberra. 254 pp.

**Ehmann, H.** 1992. *Encyclopedia of Australian Animals: Reptiles*. Angus Robertson, Australia. 495 pp.

**Tennant, A.** 1985. The Grey-banded Kingsnake *Lampropeltis alterna*. An extract from *The Snakes of Texas*. 1984. In Reptile Keepers Association's submission to New South Wales National Parks & Wildlife Service (Prepared by C. Chapman), Annexure G 1/2. RKA, Gosford, N.S.W.

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**WESTERN SWAMP  
TORTOISE  
CONSERVATION:  
RADICAL AND FINAL  
SOLUTIONS**

A response to Brian Bush's proposal "the Western Swamp Turtle (*Pseudemydura umbrina*): a radical conservation plan"

In his paper "the Western Swamp Turtle (*Pseudemydura umbrina*): a radical conservation plan", Brian Bush reviews the current conservation strategy for the Western Swamp Turtle or Tortoise (WST), defines some long-term problems, and proposes solutions which he considered to be "radical". Although I agree with many points he raises, I doubt the rational behind and the feasibility of two of the three proposed solutions and I believe that some of Bush's underlying assumptions are dubious. In the following I only focus on those points of Bush's proposal I disagree with.

Bush's main critique of the current WST recovery plan is that improving the status quo (=

only one wild population) so that two populations exist cannot be considered a successful conservation program. He points out that "for it to be so this turtle must be considered safe as a long-term biological entity". I agree that this has to be the long-term goal for any serious species conservation program, but this clearly is the goal of the current WST conservation program. Bush obviously confuses the success criteria of a short-term (ten year) plan with the goals of the over all conservation program. If you develop a program, say to walk from Perth to Darwin, to reach Darwin by foot is your goal. You may develop a plan for the first ten days and work out how far you will walk every day and where you will be in ten days time and define criteria to evaluate success or failure of your progress and of that plan. The fact that your ten day criterion of success may not yet be Darwin does not imply that your program to walk from Perth to Darwin is doomed and can never be successful; it only implies that ten days may not be a realistic time period to reach this goal.

Bush further states that "suitable alternative areas of habitat, unless away from development,.... should not be considered as adequate in the long term". He comes back to this assertion under points 3 and 4 of the long-term problems where he suggests that the local human population will pressure future governments to allow residential development in the turtle reserves. I do not deny that potential future developments in the area may impact on the reserves or on alternative areas of habitat. However, my own experience with local people (although some

journalists tried hard to find evidence suggesting the opposite) and the results of all recent opinion polls I know of do not support Bush's pessimistic prediction of future anti-environmental community attitudes in Perth or Australia. Having grown up and worked in much denser populated central Europe and doing conservation work in Madagascar, I am frightened how little of our world's biodiversity would be saved and conserved if we dismiss to protect biodiversity rich habitats now simply because we cannot exclude that some people may consider developing them in the future ("in three or four generations, let alone three or four hundred years"). Bush's radical proposal offers valuable WST habitat on a silver plate to developers. I will never accept this. To make my point, I advocate fighting for and conserving every bit of the last remaining Western Swamp Tortoise habitat.

Concerning the other "radical solutions" proposed by Bush, I agree that the first proposal, to provide a portion of captive bred WSTs to other interested zoos as an insurance against catastrophes, is a sound strategy.

I believe that Bush's second proposal, to release WSTs into unsuitable habitat to accelerate adaptation and to help them establish an alternative ecology, would simply be an incredible waste of individuals of the world's rarest turtle which are urgently needed for reintroduction into existing suitable habitat. The species is long lived and mobile; if it had the potential for the proposed adaptations to permanent water, it would have made use of it without waiting for us to muck around. The fact that, when their

habitat is drained, WSTs sometimes make short-term use of agricultural dams does not indicate that they can establish populations in the habitats proposed for their introduction by Bush.

The third and, as Bush believes, most radical component of his radical solutions concerns the world-wide involvement of private keepers to breed WSTs. Even considering the best possible outcome I fail to understand how this action could ever even remotely satisfy Bush's own definition of a successful conservation program, which requires that the Western Swamp Turtle must be safe as a long-term biological entity. I do not think that pets, dispersed world-wide into transient expedients of - compared to WSTs - short or medium lived reptile keepers, vulnerable to their vagaries and to the whims of their heirs, can be considered part of a long-term biological entity. Having visited the facilities of some of the world's best private turtle keepers and breeders I do not dismiss the possibility that a few of them might be able to succeed in breeding WSTs, but even so I cannot see how this would, in praxis, contribute to the conservation of the species. Bush provides examples of two rare and sparse snakes which are avidly bred in captivity by private keepers and one of which is now the most frequently exhibited snake species. I believe these activities to be commendable, but I am not aware that these "programs" contribute to or support the conservation of the species involved, other than by making further collection of wild conspecifics for the pet trade unattractive and superfluous. I consider private reptile keeping

and breeding a worthwhile activity, but *per se* it neither equals nor supports conservation.

Bush's proposition to involve private turtle keepers world wide in WST conservation is not as new an idea as he seems to believe. Groups which raised and donated significant sums of money specifically for the reintroduction of captive bred WSTs into suitable habitat include the British Chelonia Group, the California Turtle & Tortoise Club, the AG Schildkröten of the DGHT (Germany), and the New York Turtle and Tortoise Society. Of those groups of private turtle keepers, the California Turtle & Tortoise Club in particular has first hand experience what may happen if the keeping of pet tortoises is confounded with species and habitat conservation: during the 1980s, endangered Californian Desert Tortoise populations crashed to less than 20% of their former strengths due to diseases which were introduced into the wild by released pet tortoises. However, there certainly is potential for interested Western Australian Amateur Herpetologists to get involved in WST conservation without keeping them as pets. For example, a Friends of the Western Swamp Tortoise Group is currently being formed which will coordinate volunteer work for WST habitat restoration.

I also think some of Bush's assumptions concerning captive breeding of WSTs and of their suitability as 'state of the art' pets are, at best, wishful thinking. Bush asserts that the fact that WSTs are appealing, long-lived and comparatively easy to maintain makes them an ideal subject for pets. What he seems to overlook is that,

although the program at Perth Zoo is very successful, WSTs are not and never were easy to breed in captivity, even in relatively large outdoor enclosures in their natural climate. At Perth Zoo and elsewhere, only people who are not involved in the breeding operation believe it to be easy and straight forward. Until now, I only know a single person (who happens to be I myself) who established a successful breeding operation for WSTs, and the reason for that is not that other people never tried. These other people include one of the largest private turtle/tortoise keepers in the world, who had been (illegally) keeping two male and one female WST for more than 15 years. Bush's ideas are neither new nor are they untested: this private turtle keeper, for example, is very keen to breed WSTs and to sell their offspring world wide to other turtle freaks, but he never succeeded in breeding them, even so the adults may (or may not) be easy to maintain.

Finally, Bush's suggestion that 50 pairs initially should be made available to private people world-wide seems to be wishful thinking too, considering that, at present, the known world number of adult pairs is barely 20. If, as Bush proposes, an adult or subadult pair is sold for \$ 20,000 to raise a return of one million dollars, it would be a clear case of government agencies selling out public property and national heritage far below its value and its replacement costs. Although gaining a quick buck in this way, without concern for the interests and needs of the people and the society, may be in line with the practices and political ethics of our current government, state as well as federal, and although I

am sure this proposal will please many politicians and developers, I as a member of WASAH do not approve that our president promotes a clearing sale of the world's rarest turtle in order to fill up government tills. To adopt Bush's proposal at that stage would, indeed, be a radical as well as a final solution: it would eliminate once and for ever the basis for future quarrels about Western Swamp Tortoise conservation.

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