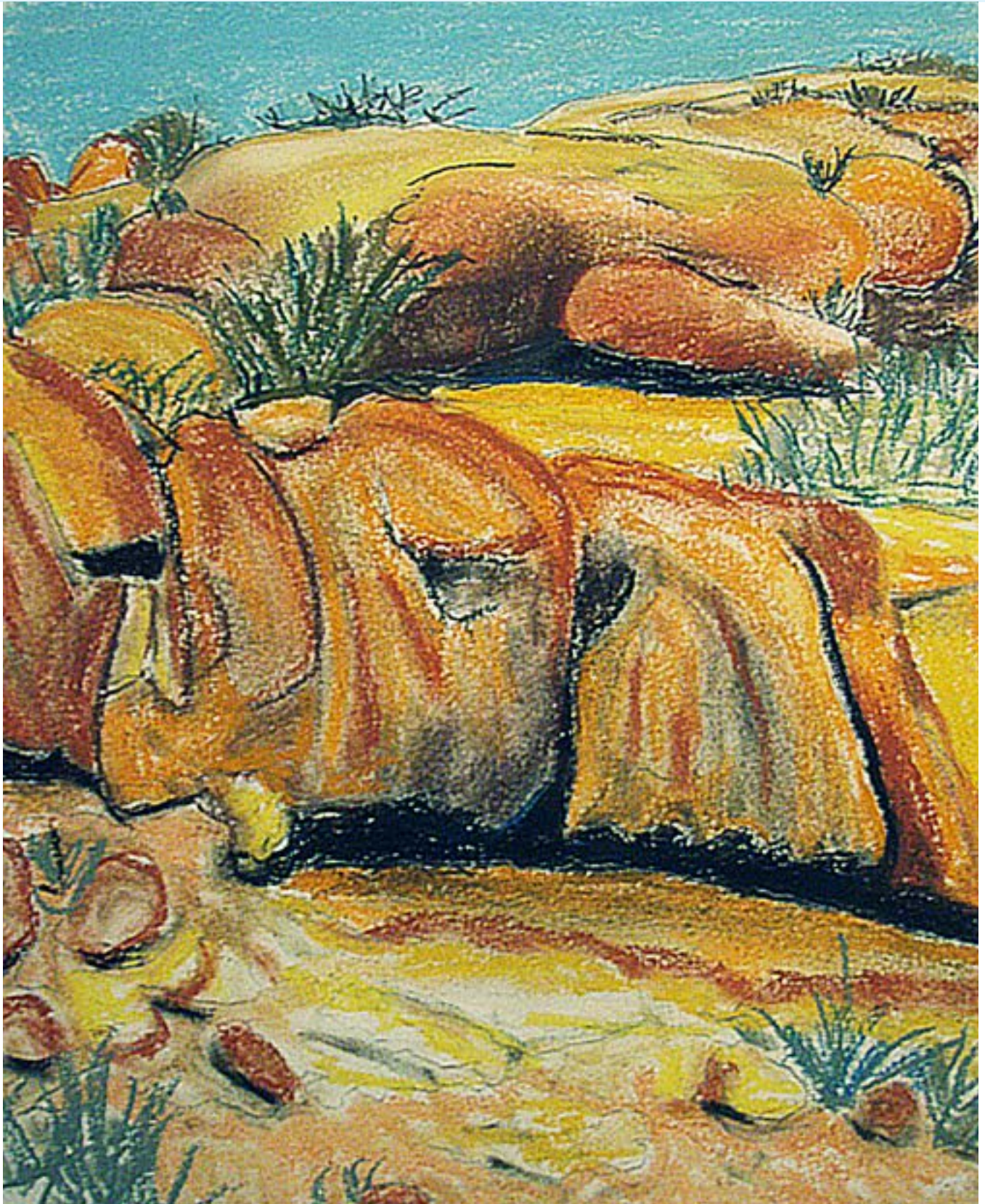


SEGMENTS

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*Cover : Sketch of Pretty Point in the Hiltaba
Nature Foundation Conservation Reserve by
Andrew Barr April 2013*

Contents

P 1 Contents

P 2 Editorial

P 3 Securing the Woodland birds of the Mt
Lofty Region

P 7 Bunbury Conservation Reserve

P 9 Hiltaba Expeditioners -April

P 11 Hiltaba Student Reports

P 16 Birds of our reserves and open spaces
in Para Woodlands - Yaringa

P 18 Minnawarra Biodiversity Survey

P 20 Kangaroo Island Planting Festival

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Editorial



Funding cuts by Federal and State Government occur at random times and strangely, to my mind, environmental programs seem particularly vulnerable to such cuts. We need guaranteed and long term funding to underpin effective conservation programs in order to decelerate and reverse species loss, and we may need to find a different funding model than relying on Government bodies.

Excellent research underpins the current understanding of the needs of wildlife and the essential elements of wildlife habitat. Research to develop, assess and continually improve the techniques to build effective wildlife habitat are ongoing. Many of these research programs are conducted by the University of Adelaide's School of Earth and Environmental Sciences, and examples of recovered habitat are stunningly visible on Kangaroo Island on once badly degraded farmlands.

Destruction of native vegetation began immediately the colony of South Australia was established, and within a few decades the Adelaide hills landscape was dramatically changed. The Mt Lofty Ranges and surrounding plains represent one of the most degraded regions of Australia. Restoring this habitat is vital for slowing and reversing the loss of bird species.

The lead article in this edition by Associate Professor David Paton, School of Earth and Environmental Sciences, University of Adelaide describes the crisis of declining bird species across the Mt Lofty Ranges, despite there having been no vegetation clearance for over 30 years.

Many of the revegetation plantings that are taking place may fail to achieve the results aimed for. David Paton describes the planting strategies and practices based on research that are recovering woodland habitat to that of typical natural vegetation. The sooner that David Paton's plan of action is put into place, the sooner we will recover the landscapes in a manner appropriate to support those species of concern.

Professor Paton proposes a funding model through the community group BioR, which will guarantee secure and continuing funding to address this most serious problem. An eleven minute video on the

"Woodland Recovery Initiative" is on the BioR website under "current projects".

I urge readers to take the time to read this seminal and most inspiring article "Securing the woodland birds of the Mt Lofty region; a matter of scale and commitment". David Paton's passionate message embraces SEG's aims and ideals and I'm sure will greatly appeal to SEG readers.

In a recent survey on Morella at Salt Creek, little wildlife was found since revegetation programs have not reached maturity. It is wonderful then to read an article by Trevor Holdsworth about the abundant wildlife that exists on Bunbury Conservation Park which is within 20km of Morella.

SEG's first major expedition for 2013 was in April to Hiltaba Station. Articles by student volunteers will delight current expeditioners and will inspire future expeditioners to "give it a go".

Para Woodlands is a property part owned by Nature Foundation SA and the Department of Environment, Water and Natural Resources. The aim is to restore it to a functional grassy woodland ecosystem. An article by Dragos Moise of NFSA describes the birds of the property, and an accompanying article calls for volunteers for a planting day.

The report for the autumn survey for Minnowarra is accompanied by a notice for a planting working bee at Minnowarra.

The rains have been excellent for the start of winter and planting festivals are popular. The Kangaroo Island Planting Festival is in July and details are included. SEG will conduct a second major expedition in 2013 with a return visit to Hiltaba Station. A call for volunteers is included.

Helen Johnson

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Securing the Woodland Birds of the Mt Lofty Region: A matter of scale and commitment

David Paton

The woodland birds of the Mt Lofty region of South Australia are in crisis. The vast majority continue to decline, even some of the prominent and widespread species. These declines have continued despite little if any broad-scale native vegetation clearance within the region for the last 30 years.

Why is this?

The number of species that a region can support is related to the amount of native vegetation that remains. For the Mt Lofty Ranges and adjacent Plains only around 10% of the native vegetation remains. With just 10% of the habitat remaining around half of the 115 woodland bird species that occupied the Mt Lofty region at the time of European settlement are likely to disappear in the near future. This ongoing loss of species is expected and is known as an “extinction debt”. When little vegetation remains, population sizes are small and isolated. These small populations are much more vulnerable to other perturbations, such as fire, drought, and overgrazing. The birds do not disappear immediately but over time these small populations decline and eventually disappear from a region.

Amongst the species that have already disappeared from the Mt Lofty region are the Regent Honeyeater, Little Lorikeet, and Spotted Quail-thrush to name a few and there are many more following suit. Ford and Howe were the first to point this out in 1980, and they predicted that 35-50 of the 115 species of woodland bird species that occupied the Mt Lofty region would be expected to become regionally extinct based on the amount of native vegetation that remains. This would be a terrible loss for South Australia.

Three key messages arise. First, even if we manage the remaining native vegetation intensively (which we are not doing at the moment) species will continue to disappear from the region. Second, most of the birds have not yet disappeared so there is still time, a window of opportunity, for us to act and prevent these losses. Third, to prevent the losses, we need to re-establish significant additional habitat across the region. If we do not take action and leave this to the next generation then fewer species will be saved. So what is stopping us from taking action and what actions are needed?



Figure 1: Little Lorikeet *Glossopsitta pusilla*
Photo from Wikipedia

Revegetation programs are often promoted as benefitting biodiversity, but the revegetation often fails to support those species of greatest concern. There are several reasons for this. Critical is that most revegetation patches are smaller than the home ranges of individual woodland birds, thus the new pieces of vegetation cannot support the birds on their own. For example, individual birds of species like Restless Flycatchers and Varied Sitellas use and therefore need large areas of habitat, approaching or exceeding 200ha. Most revegetation works in the Mt Lofty Ranges are much, much less than this and usually less than 1 ha. Low plant species diversity and high plant densities further detract from the value of the revegetation that we do. I am yet to see a revegetation program that actually matches the heterogeneity that is typical of remnant vegetation. It is no longer sufficient to simply plant trees and assume that the birds will come. We need to incorporate the habitat needs of birds into our planting programs.

Some promote plantings that connect patches of native vegetation, but this assumes that the limiting factor causing declines is an inability for birds to fly between the patches of remnant vegetation. With a few exceptions this does not seem to be the case. Corridors or narrow strips of vegetation are



Figure 2: Regent honeyeater *Xanthomyza phrygia*
Photo from Wikipedia

also prone to edge effects, which includes weed invasion, and do not provide the best conditions for breeding. Corridors of vegetation are long and narrow, so birds will need to move further from their nests to forage than they would if nesting in a large contiguous patch of vegetation. A better solution to deal with any shortfall in recruits arriving at a patch of vegetation and facilitate recolonisation after local extinction might be to build habitats that allow additional birds to breed and so produce more young birds that could disperse.

Simple natural history observations on the birds suggest that minimum patch sizes need to be much larger, at least 100ha and the plantings much more

diverse both floristically and structurally. But we have a reluctance to do this, and that reluctance is largely driven by costs. To drive the limited revegetation dollars further, we use the easily propagated species or those with abundant or easily collected seeds and these species dominate any plantings. Typical budgets are often in the vicinity of \$2,000 per hectare or just 20 cents per square metre and this is inadequate to establish a self-sustaining system that mimics the original woodlands. Let me put this in perspective, we typically spend more than \$100 per square metre in our homes and gardens, or on our roads, and that investment lasts for may be 20-30 years before we re-invest in the flooring and structures of our homes, the garden landscape or other infrastructure (roads). We pay high per unit area costs to change, repair or expand these surfaces. Yet we expect to be able to remove the weeds and re-establish diverse self-sustaining natural woodlands with a single injection of funds at the start only (i.e. when we put plants in the ground). Such a scheme for restoring habitat is inadequate and a token effort.

To build a woodland habitat takes a hundred years or more and there is a need to continually manage and adjust the plantings to secure the desired end result. There lies the dilemma. Not only are we stingy in our investments in the environment, we do not appreciate the need to invest continuously over long time periods (several generations).

There is another fundamental issue that needs to be considered: How much additional habitat is needed to prevent the majority of the predicted extinctions? Species:Area curves for woodland birds in the region can be used. These indicate that we need



Figure 3: Pre-planting burnt-off site at Cygnet Park in May 2008 prior to grading to remove weed seed bank. Photo courtesy of DEWNR



Figure 4: Planting site at Cygnet Park seven months after planting. Photo courtesy of DEWNR

to triple the amount of habitat and strive for an overall habitat cover of 30% across the region. This would be the minimum amount of habitat needed to keep almost all of the species that still exist. This amounts to re-establishing around 150,000 ha of new habitat across the greater Mt Lofty region.

We clearly do not have the capacity to do this at present but the quickest way that we can build capacity and knowledge is by learning from doing. Worth noting, however, that the 30% target is a stated long-term goal of the Adelaide Mt Lofty Ranges Natural Resource Management Plan (AMLR NRM). We need to find ways of taking this from aspiration to reality, bearing in mind its delivery will take 100 years or more, and so is intergenerational.

How might one start the process?

For more than a decade I have been promoting the idea that we should retire whole farms from agriculture and re-establish habitat at the farm level. This does two things: secures large patches of new habitat; and also secures some of the better quality soils from which vegetation clearance has been disproportionately high. But the trick is to provide the owner of the land with an income that replaces the farm income. Initially one might only start with a small part of the farm and then gradually extend the work to other parts until the whole farm is being restored back to habitat. In the interim the remainder of the property is farmed as this is often the best way to prevent deterioration of these areas prior to their retirement. An important

outcome from this approach is that owners can remain within in their local rural communities and maintain connection to their social networks. One is simply transitioning a property from agricultural production to biodiversity production.

The proof that this might work comes from several inspirational exemplars. There are two properties that have already been retired from agriculture and are being restored. One, Para Woodland near Gawler is over 300ha and is managed by Nature Foundation SA and the State Government's Department of Environment, Water and Natural Resources. Para Woodland has happened because of the generosity of Elizabeth Law-Smith who donated a large part of her property to the State and also established an on-going funding program to allow the restoration works to not only start but be maintained indefinitely. The other obvious exemplar property is the 300ha Cygnet Park Sanctuary on Kangaroo Island. SA Water is also re-establishing habitat on large tracts of land around Mt Bold Reservoir, and there are at least another dozen properties that have been offered.

The challenge remains about how to fund the on-ground works to build the habitats that are required. The funding needs to be sustainable over the long-term. Governments, whether State or Federal, are reluctant to fund long-term works. In fact, in the environmental area government funding is fickle and at best only short term. This happens because priorities and goal posts change within the environmental and other portfolios. At best government funds can provide additional momentum to restoration programs but will not provide the necessary long-term support to build effective habitats. If we are to prevent species loss and deliver a biodiversity legacy for future



Figure 5: Cygnet Park site planted in May 2008 photographed in 2012 showing reinstated habitat. Photo courtesy of DEWNR

generations then long-term funding models must be established. One potential way of doing this is to establish Trust Funds into which people can donate. Those donations build a Trust Fund in which the capital is maintained and only the income used. This provides a long-term guaranteed income that would sustain the restoration of habitats to a particular habitat. A realistic Trust Fund might need to be around \$2 million dollars to generate an annual income of around \$100,000, and one would need many of these to enable the necessary restoration works across a region.

One immediately thinks that the success and expansion of such a restoration program will depend on a few philanthropic individuals (like Elizabeth Law-Smith) but I want to provide an alternative, a way in which everyone could contribute and why you should contribute.

Each and every one of us has an ecological footprint. An ecological footprint consists of the resources (land, water, resources etc) that we use to live our life. It is usually expressed as hectares of land equivalent. The average ecological footprint of an Australian is above 7 ha (the highest per capita footprint in the world). The global per capita average is around 2 ha and climbing, yet the sustainable footprint for Earth is estimated to be around 1.8 ha per person. We need to reduce our ecological footprints and we can do this by investing in habitat re-establishment.

How much would it cost to offset our ecological footprints?

About a half of our ecological footprint is our carbon footprint. A typical Australian has a carbon footprint in the range of 10-20 tonnes of carbon per year, and given that there is a carbon price (albeit variable) we can use that as a basis for estimating the cost to offset an average ecological footprint. If we assume that the cost to offset our carbon footprint is \$200 per annum, the cost to offset our ecological footprint is around \$400 per year or \$1 per day. A dollar a day is not much – a part of a cup of coffee per day or no more than half a bottle of average wine per week, et cetera. These are not large sacrifices. In fact such offsets are potentially tax-deductible so the costs are potentially much less than a dollar per day.

But why should we do this. We each have a responsibility – a duty of care – to the natural environment that ultimately supports us and makes this country and this part of our country different to any other place in the world. Our

resource use is also not sustainable. If we were living sustainably the woodland birds of the Mt Lofty region would not continue to decline.

If you would like to start offsetting your ecological footprint, this can be done through a community group called BioR (see <http://www.bior.org.au>). BioR is a not-for-profit with deductible gift recipient status committed to building habitat for wildlife. BioR already has University students, retirees, professional people, teachers, nurses, and bureaucrats committed to offsetting their ecological footprints using automatic monthly deductions. Some pay through PayPal on the web site, while others pay directly into the BioR Conservation Fund (BSB 015 600 Account # 183077536). BioR is aiming to find 5000 people willing to offset their ecological footprint indefinitely at \$1 per day. If that target is reached then each year a new Trust Fund can be established to support another farm being transformed back into functional habitat for wildlife over the long-term. This model could also be used to protect existing natural assets. An important aspect of this scheme is building community ownership and intergenerational ownership.

If you would like more information on offsetting your ecological footprint (or your child's or grandchild's footprint) please contact David Paton (david.paton@adelaide.edu.au).

If you go ahead and establish a direct bank transfer to the BioR bank account, don't forget to provide BioR with contact details so that your donation can be acknowledged and receipted.

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Figure 1: Pygmy possum *Cercartetus nanus*

The Bunbury Conservation Reserve is situated halfway between Keith and the Coorong, and my wife and I have lived here for nine years. It is easy for some to drive through this beautiful country and think “Who would want to live way out here?” But we both enjoy the solitude, peaceful surroundings, wildlife and vegetation. We would like to spread the knowledge we have acquired about our surroundings, before it is taken from us, and we intend to gain more knowledge through as many means as possible.

The country, I believe, is a million year old sand dune and flood-out water course. Scrub corridors are plentiful, although it is a heavily timbered area. During winter, water lies around creating wetlands which last up to 6 months in a good rainfall year.

There is a prolific bird population, including Buff-banded Rails, Hooded Plovers, Red-kneed Dotterels, Wilson’s Phalarope, Bustards (seen only occasionally), Malleefowl, many varieties of Honeyeaters, Mallee Ringnecks, Eastern Rosellas, Rainbow Lorikeets, Musk Lorikeets, Purple-crowned Lorikeets, Cockatoos, Choughs, Currawong and when wet enough Swans, who come here to nest. We have regular visits from Malleefowl, who feed on wattle seed near our house, which is always a pleasure to see. Night birds are often seen and heard, and when witchetty grubs are hatching Spotted Nightjars have a feast. When disturbed, Australian Owlet Nightjars fly from hollows in trees by our house, and Tawny Frogmouths work through the trees teaching their young to hunt. Rufus Bristlebird are less frequent visitors.

Kangaroos and emus are plentiful, and echidnas are regularly seen, as well as the odd wombat. Red-necked Wallabies are rarely seen. Lately, I have seen an unidentified visitor to the sheds which is ½ the size of a rat. The eastern pygmy possum, which are abundant, is one little creature we enjoy observing.



Figure 2: Malleefowl *Leipoa ocellata*

There is a multitude of reptiles; including skinks, geckos, bearded dragons, sleepy lizards, blue tongue lizards, sand goannas, brown and tiger snakes. Blind snakes are occasionally found in mallee stumps feeding on white ants, which live in mallee areas.

In scrubby areas there is a reasonable amount of understorey, including broom, hopbush, correa, heath, banksia, bitter-pea and calytrix. Our main tree types are: stringybark, pink gum, mallee, tea tree



Figure 3: Calytrix



Figure 4: Fringe lily *Thysanotus multiflorus*

and wattle. In wet areas sedges, samphire, tussocks and rushes grow. There are prolific amounts of wildflowers growing here. The native orchids, of course being our favourite with 24 identified, mainly flower in spring. There are also muntries, flax-lily, fringe-lily, sundew, running postman, guinea flower, paper flower, milkmaids, daisy, trigger plant, prickly cone bush and many more smaller plants.



Figure 4: Donkey orchid *Diuris behrii*,

Butterflies visit around early spring to mid-summer. Wood White/Red spotted Jezebel are our most colourful, being white on top of wings and coloured underneath. Painted Lady, Common Brown, Caper White, and of course, the dreaded Cabbage White Butterfly are the most commonly seen.

Spiders are plentiful and include black house, water, crab, wolf, huntsman, trap-door (several types of lids are seen on their holes), orb web and redback with their egg sacs (seen mainly around stock troughs). Ants feature greatly in this area with red meat, black house and both red and black inch ants seen regularly, as well as a variety of others, seen less frequently.

Frogs appear after early rains and they are very vocal most years. I have noticed five different calls. Bullfrogs come up occasionally, when we dig the garden.

Hopefully, by writing this article about my observation of this area, I will attract the attention of others more knowledgeable and will learn more.

Contact: tandcholdsworth@skymesh.com.au

Scientific Expedition Group

Nominations are called for the 2013-2014 Committee

The present Committee consists of :

President Dr Richard L Willing, Chairman Mr Alun Thomas, Vice-Chairman Stuart Pillman, Secretary Mrs Sarah Telfer, Treasurer Mr Graeme Oats, Committee members Mrs Helen Johnson, Messrs Trent Porter, Duncan MacKenzie, John Love, Andrew Barr, Christopher Wright.

All members will retire and are eligible for re-election.

Nominations forms can be obtained from John Love

jhlove@internode.on.net

They must be signed by the proposer and the nominee and sent to

The Secretary, PO Box 501, Unley 5061, by 16 August 2013.



Hiltaba Expeditioners April 2013





The next expedition to Hiltaba is in August



Figure 1: Endangered Short-tailed grasswren *Amytornis merrotsyi* (Picture by Geoff Jones, 2011, Source: <http://bird-o.com/2011/05/15/two-new-grasswrens-for-australia/>).

Marina Louter

The Short-tailed Grasswren (STGW): A small ground-dwelling brown bird confined to the arid regions of Australia. These endemic birds are known to live on hilltops. They are elusive and shy. They inhabit some of the tops of hill at Hiltaba. Or do they.....?

Last year I started a PhD studying bird behaviour at Flinders University. The bird that I am studying is similar to the Short-tailed Grasswren: its name is the Thick-billed Grasswren. All Grasswren species look and behave in the same manner. And so - because I have some experience in finding and observing the Thick-billed Grasswren - Greg Johnston from the Nature Foundation of South Australia (www.naturefoundation.org.au) asked me to come along on the 2013 SEG Expedition to Hiltaba Station in the stunning Gawler Ranges of South Australia to search for the Short-tailed Grasswren (*Amytornis merrotsyi merrotsyi*).

And so on Sunday 14 April, at 6 o'clock the expedition team, a group of about 30 people, met in Adelaide to drive in a convoy to Hiltaba. Our

home at Hiltaba Station was the beautifully restored shearers' quarter. Together with Brian Blaylock from Birds SA, and a whole heap of other people we went out each morning to search for the Short-tailed Grasswren on the hilltops of Hiltaba station. Short-tailed Grasswrens have been seen in areas that contain the endemic prickly Hummoch Grass *Triodia*. Most hills in Hiltaba are covered in *Triodia* and during previous surveys the STGW has been seen there. Consequently I expected to find these little brown birds with ease. Well...not really with ease (they are streaked, brown, and fast running), but I did expect to see *some* STGWs.

Every day Brian and I did bird surveys to gather some basic baseline biological survey data (number of bird species, number of individuals per species) at Hiltaba. Each day another group of 4 people would join us to help identify all birds seen and heard on the sites that were selected for the survey work. After the surveys the exciting stuff was happening. With our binoculars ready to glance at everything little thing that moved, we would venture out to the hills of Hiltaba on the quest to find the Short-tailed Grasswren.

Hiltaba Student Reports- April, 2013

Armed with a GPS with locations where the STGW had been seen at Hiltaba, we headed out. We had some great walks, breathtaking views of the Gawler Ranges, we saw plenty of other birds, but not the alleged STGW. Has the Short-tailed Grasswren vanished from Hiltaba? Did they move to other hilltops? Or perhaps they were in the spots, but we were not able to find them? I really don't know....

What I do know is that this species of Grasswren, like most other grasswren species is in decline. The short-tailed Grasswren was once locally abundant in South Australia, but its conservation status is now considered vulnerable. Habitat degradation by fire, grazing and drought are believed to be the main causes of their decline. Hiltaba is the most recent Conservation Reserve owned by the NFSA and before the purchase in 2012, it was used as a pastoral station, and sheep and goats were grazing the tops of the hills where STGWs live. Let's hope that we just did not find the Short-tailed Grasswren, and that it still lives on the hilltops of Hiltaba station. I would love to come back to the Gawler Ranges another time to search for these beautiful little creatures that remain a bit of a mystery, at least for now....

Kate Matthews

Me: "Hi, what did you catch today?"

Scientist: " We got a *Ctenotus orientalis* and a *Ctenotus robustus*"

Me: "Oh, yeah that's good"What?

Turns out they're both skinks.

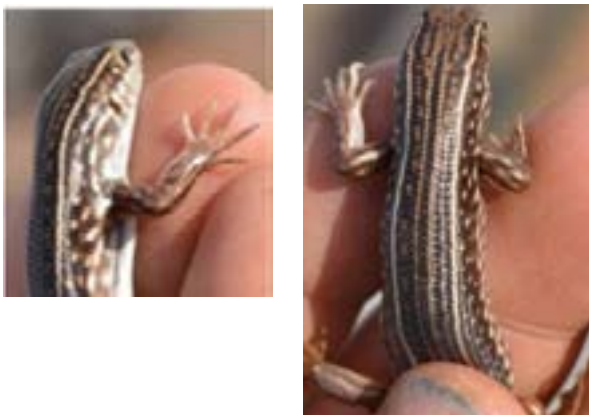


Figure 2: Spotted skink *Ctenotus orientalis*
Photo P. Matejcic



Figure 3: Eastern Striped Skink *Ctenotus robustus* Photo P. Matejcic

Earlier this year in April I was lucky enough to volunteer on a fauna survey with the Scientific Expedition Group up on the Nature Foundation property, Hiltaba. I had always wanted to do something like this, as I have always been interested in animals, so when the opportunity arose I jumped at the chance. Over the two-week survey I learnt a huge amount about a wide range of topics from a very intelligent and interesting bunch of people.

Altogether we set up 16 trap lines in groups of two, one grazed site and one un-grazed site for each pair. We did sites 1-8 in the first week and sites 9-16 in the second week. Each site consisted of 6 pitfall traps, 4 funnel traps, 10 micropits, 15 Elliot traps and 2 cage traps. Setting the traps up took a fair while but we all pulled together as a group and got the job done. We didn't catch quite as much as I thought we would, so I am keen to go back on the next survey in 3 years to see how things have changed. I'm only 15, which made me the youngest of the group, but I was never made to feel out of place or inadequate. Everyone there welcomed me with open arms, especially the Uni students who went out of their way to make sure I felt included, which I am very thankful for.

My favourite parts of the trip were getting to release the lizards; the people that were there; and definitely the food! It was incredible. Since returning from the expedition I have developed a deep interest in trying to remember and learn the scientific names and characteristics of different animals. I have also had to start saving my pennies to be able to afford

Annie Robertson

I was very excited by the prospect of going on the April Hiltaba expedition, as although I am in my third year of a degree in Animal Behaviour I do not have much conservation experience in the field. The expedition was a fantastic learning opportunity for me as I was able to gain valuable field work experience to complement my degree. Tasks such as installing a line of pitfall traps (which the regular SEG volunteers were so adept at) is something I have only ever heard about in lectures, so it was fantastic to be out in such a beautiful location getting involved.

The trip was structured so that small teams of people could rotate between tasks (plant, bird or mammal/reptile surveys) which provided a great opportunity for students to learn about different subjects. In particular I enjoyed working with Margie Barnett conducting the plant surveys as she really helped with my plant identification skills. When comparing the diversity and abundance of vegetation in grazed and un-grazed areas, I could clearly see the impact that the years of farming and feral goat presence has had on the land. It was this that I thought of when hearing about the government's recent alarming decision to allow cattle to graze in some Queensland national parks and reserves. It was interesting speaking to ecologist Greg Johnston about the importance of engaging with the local community to promote understanding of the importance of Nature Foundation's work at Hiltaba. I had never before truly appreciated all the behind-the-scenes work that must go into conserving our natural environment.



Figure 1: B Blaylock and M. Louter at frog pool

I was lucky enough to go birding with experts Marina Louter and Brian Blaylock on a few occasions across the two weeks, with highlights including watching mulga parrots feeding up close, and getting a good view of a few beautiful red-capped robins at one of the sites. I have definitely found myself paying much more attention to bird songs I hear back at home, and trying to identify the birds! In the middle of the Hiltaba expedition there was a day and night of heavy rain which temporarily suspended field work activities. Shortly after this, another student Kate and I went on a memorable trip with Marina and Brian up a mountain behind the homestead in search of the elusive short-tailed grasswren. Although sadly we found no sign of the birds, we came across several pools of water which had formed amongst the rocks and were swarming with tadpoles. Much to the excitement of Marina and I, there were a few albino individuals. We collected some in a bag and took them back to the shearer's quarters so everyone could have a look.

A few days before we were due to leave Hiltaba, we went searching for the grasswrens one last time. Although we took the tadpoles with us to release, my curiosity got the better of me and I decided I had to know what species they were. The water pools were rapidly drying up, and the highly visible albinos had little chance of survival. I thought I was bringing home just a few eggs, but now find myself back in Adelaide with twenty-four tadpoles! So far one has morphed and I have identified it as a burrowing frog (*Neobatrachus pictus*). I suspect there are some trilling frog (*Neobatrachus centralis*) tadpoles in the mix too, and potentially



Figure 2: Burrowing frog (*Neobatrachus pictus*).

Hiltaba Student Reports- April, 2013

some other species. The albino tadpole has been appropriately named Alby and is doing well. I have really enjoyed observing the tadpole's interesting behaviour over the last few weeks and doing some research. As well as learning various field work techniques and having the opportunity to meet and learn from some very knowledgeable people, the trip to Hiltaba has unexpectedly sparked my passion for amphibians and I am now hoping to pursue an honours project involving frog conservation. I'd like to say a big thank you to everyone involved in the trip, including those from SEG, Nature Foundation and the other volunteers and students. It was an incredible experience, made all the more enjoyable by wonderful company.

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Editor's Note: Two species of frogs, Southern Bell Frog (*Litoria raniformis*) and the Smooth Frog (*Geocrinia laevis*), are protected in South Australia. All other frog species remain unprotected in SA. No permit is required to take them from the wild or keep them in South Australia. However they can't be collected in National Parks, reserves or on private property without consent.

Bianca Staker

The Hiltaba Road to Self-discovery



What I originally expected to be a journey of education, I found became more a journey of self-discovery and personal growth. An animal lover and environmental supporter since child hood, I am still learning within this field the niche of work that I best fit into. Working with an array of different

personalities, professions and ages that constituted the group of 30 plus Hiltaba expeditioners, fulfilled a recipe for broad learning, unique experiences, and a little ancient history from the older of the crew. The opportunity to put into practice the scientific research techniques that I have been learning at university for the past two and a half years quenched my thirst of wonder; wonder how I would adapt to life after study, and into the field. I feel more confident now than I ever have, that I am on the right path for myself.

Over the two-week period, in our assigned groups of four we participated in a new task each day. This rotated between mammal surveys, reptile surveys, birds and last but by far not the least, plants. I should also mention kitchen duty, which was also a field I lacked experience in. For the first time I developed a preference of study, and this was in birds. The bird survey routine began early, and required a keen eye and conscious listening. The pronounced sense of exploring was what I believed to be the key to my discovered enthusiasm. A stir of leaves or branches, or a whistle from a nearby tree was followed by a quick swivel of the binoculars and a cautious walk towards the suspect. Brian Blaylock, the secretary of Birds S.A. and Marina Louter, a Flinders University PhD student, were our bird guide leaders, and were an inspiration for their superb ability to identify a species from only a glimpse and the slightest of sounds. I found this survey technique to be less intrusive and much more rewarding from the opportunity to observe genuine behaviour first hand without the influence of capture or stress. I have not done any official bird watching as such prior to this, nevertheless, I well and truly understand the love for it and am soon to purchase my own pair of binoculars.

The experience of Hiltaba gave me a true appreciation of the importance of fieldwork. I have learnt in the classroom countless examples of survey and trapping techniques for a variety of species from lizards, mammals and birds. However, it was not until I physically spent quality time practicing the techniques that I understood what it is that I enjoy doing and what I may potentially continue to study in further years for my Honors project or perhaps even a PhD. I cannot express enough the value of casual conversation, because it was from this that

I learnt the most. Learning each team member's individual story and how they came to be at Hiltaba was an eye opener. It was a reminder of the diversity of paths one can take, and a solid encouragement to finish my degree and explore the corners of the world and gather together an array of my very own experiences and stories, which I believe begin here with Hiltaba. It is also vital that I express the beauty of the landscape and the peace that is felt within its presence. Surrounding the campsite was the most magnificent rocky hill slopes calling to be climbed and above them was a night sky lit up with stars that are not seen within the city lights. The experience of Hiltaba I will cherish, and I thank all for their time taken to share their stories and knowledge with me, and I urge readers to embrace an opportunity such as Hiltaba if one is to come their way.

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Scott Giacopini

When confronted with the possibility of working in the field alongside an array of people of different professions and expertise, I realised it was an opportunity I could not let pass. This, along with the chance to escape back into nature and forget about uni for an extended period of time was just the thing I needed.

Upon receiving the email that captivantly began "Dear Expeditioner" I was ecstatic! I had recently done flora and fauna surveys in Robe with UniSA and it was fair to say that I found the experience tiring, unrehearsed and outright confusing at times, nevertheless, the outdoors is always pleasant to be involved with. I was interested then to see how similar projects would be conducted by a group of people who are experienced in the field, and to compare my stress levels between the two trips.

It was fair to say before setting out on the trip that I was a little unsure of how I would go spending two weeks away with thirty plus people whom I'd never met before. There were fears of stringent rules put in place by grumpy old regulars, segregation and partnerships, and the possibility of distasteful, bitter personalities. Though to my joy it was everything but.

I met some truly amazing people on this trip, some of whom I shall never forget, each with their own memorable character. I would have never believed if told, how well all of us would get along. From the youngest to the oldest, there was laughter to be shared during and after our days of field work. Sitting around the gazebo or camp fire, be it with a bowl of chow and spoon in hand, or a beverage as was usually the case, there was never a dull moment.

Each person had their own unique quality. Whether it be Trent's all encompassing jovial voice, worthy of a 6:30 am wakeup call, as he merely pottered around the kitchen in the morning (it's hard to say exactly where he was, as my tent was situated some 250 meters away from the kitchen, nevertheless his voice rang clear as rain), to Greg and John's outstanding knowledge that was always given to those who requested it, Hiltaba offered a multiple of personalities and a wealth of knowledge. I could happily go through each individual and remark on the smiles they brought to me, but for your sake I have been restrained to this one page.

It fair to say, that now and again we are offered times in life where we can drop all past thoughts, leave future plans in limbo, and pleasantly rest in the here and now. This trip was one of those times. The practical experience and knowledge that I gained is immeasurable. Though as I walk away, it's the laughs, the smiles, and the faces that I shall carry along with me into the future. Bring on the Hiltaba reunion!



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Birds of our reserves and open spaces in Para Woodlands - Yaringa

Dragos Moise

Para Woodlands is a former farming property located 3km southeast of Gawler, in the northern Adelaide suburb of Kalbeeba. The large property (~400 ha) was part donated to the Nature Foundation SA and part purchased by the Department of Environment and Natural Resources with the aim of restoring it to a functional grassy woodland ecosystem, to conserve wildlife. Para Woodlands is comprised of two blocks of land approximately 1.5km apart: the Yaringa (or Farm) Block (319ha) and the Barossa Block (78ha). The property maintains areas of high quality remnant vegetation along the South Para River and on hill slopes.

Since taking on the job, the new Para Woodlands Restoration Ecologist Dragos Moise (who is knowledgeable on Adelaide and Mt. Lofty Ranges birds) started compiling a bird list for Yaringa Block, based on field observations and previous opportune records. To date, the list comprises 80 bird species, 73 native and 7 introduced. Two of the native birds recorded at Yaringa (Elegant Parrot and Peregrine Falcon) are listed as *Rare* under the South Australian National Parks and Wildlife Act. Elegant Parrots were regularly seen in the older revegetation areas in October 2011. The Peregrine Falcons were successfully breeding in the cliffs along the South Para River, producing three offspring (see photo). Nine other native birds recorded in Yaringa Block have conservation status within the Adelaide and Mount Lofty Ranges: two are listed as *Vulnerable* (Brown Treecreeper and Horsfield's Bronze-



Figure 2: Peregrine Falcons *Falco peregrinus*

Cuckoo), and seven as *Uncommon* for the AMLR (Tawny Frogmouth, Red-rumped Parrot, Yellow-rumped Thornbill, White-fronted Chat, Rufous Whistler, Fairy Martin and Tree Martin).

It is hoped that restoring Para Woodlands (by encouraging natural regeneration in the remnants, as well as revegetating the cleared areas) will re-establish suitable habitat for threatened woodland bird species of the Mount Lofty Ranges, some of which already use the site, as seen.

Editor's note: Reprinted with permission from NFSA Spring 2012 Newsletter

Para Woodlands Planting Day 21 June

Volunteers can attend a planting day at Para Woodlands on Friday 21st of June, from 10am to 3pm (approx). The habitat restoration plantings are an important step in this long-term project which aims to re-establish native vegetation including the critically endangered Peppermint Box (*Eucalyptus odorata*) grassy woodland, and provide valuable habitat for declining woodland birds. This year we aim to establish 400 trees, 2,500 irongrass *Lomandra*, and 8,000 native grasses of various species, in an attempt to reconstruct habitats using both approaches: 'top-down' (start with the canopy) and 'bottom-up' (start with the ground cover).



Figure 1: Elegant Parrot *Neophema elegans*

Eighteen hectares will be revegetated this year.

For catering purposes, please

Para Woodlands is located in the township of Kalbeeba, 3km southeast of Gawler, off Allendale Road. Entry is via the Rocla gate (UBD Map 24, Q15). Volunteers are encouraged to dress according to the weather (be sun/rain smart), and bring gloves for planting. No previous planting experience is required. Hot drinks and a BBQ lunch will be provided. Toilets are available.

RSVP by 14th of June to Dragos Moise, Para Woodlands Restoration Ecologist - 8336 0913 or Dragos.Moise@sa.gov.au.

This event is supported by the Department of Environment, Water and Natural Resources, and Nature Foundation SA.

Scientific Expedition Group

Annual General Meeting

Friday 13th September 2013 7:30 pm

Topic: Genetic Adventures in Australia and New Guinea

Guest Speaker is **Professor Steve Donnellan** who is an affiliate Professor of the University of Adelaide in the Schools of Earth & Environmental Sciences and Molecular & Biomedical Science. As an evolutionary biologist, he has broad interests in the evolutionary history of the fauna of the Australo-papuan region, natural resource management, and wildlife forensics

At the Fullarton Park Centre
411 Fullarton Road
Fullarton SA

The Second Hiltaba Survey

18th August to 31st August 2013

For application forms
contact Trent Porter

email: trentasaurus@bigpond.com



Figure 1: Students at biodiversity survey

Another successful biological survey was completed in the Minnawarra scrub over five days in April. It was busy, with a large number of mammals captured. The core of the volunteer contingent was a group of teenagers and young adults, family friends, assisted by many other people who came to help. Many thanks again to all the interested and helpful volunteers who turned up - 31 came, some for half a day, some for the whole time. They contributed more than 600 volunteer hours during the actual survey. By the time we add the time given before and afterwards, it is a big effort. Our biggest round, and a challenge we may have to manage in the future, was 26 people on Sunday morning. That dwindled to a manageable 11 on Tuesday afternoon. The contingent of house and caravan dwellers kept things lively. A new record has been set, with 8 full size people sleeping in a five and a half berth caravan. I was pleased to have my own bed!

The weather was mild, with maximum temperatures gradually falling from 25 on day 1 to 17 by day 4. There were light winds, and isolated very light showers for the first 3 days, after which the weather was cloudy but fine.

Mammals

We caught 149 mammals. These included 36 animals recaptured from previous surveys. Those with microchips from the last survey were very easy to identify. Counting all the repeat customers during the survey we emptied 282 traps. The total numbers of mammals captures were: Antechinus (*Antechinus flavipes*) 84; Bush rat (*Rattus fuscipes*) 41; Swamp rats (*Rattus lutreolus*) 18. These represent a considerable increase in Antechinus and decrease in Bush rats compared to last autumn.

Site 1 (beside a swamp) with 23 captures, did not have the large numbers we have seen in previous years. Captures of individuals ranged from 9 at Site 3 (hillside) to 27 at Site 5 (creek side). This site, with the highest number of captures, has, on occasion, been one of the least populated sites in previous surveys. Oddly, Site 4 (hill side) yielded 19 new individuals, mostly antechinus, but had the most captured (44). I guess they like peanut butter the most. Because of their breeding habits, the numbers of captured male and female antechinus were about equal.

We caught three pale bellied feral rats. The question of identity continues. They have a different colour

to the standard Black Rat (*Rattus rattus*), which arrived in Australia on the ships of the first Fleet. They have a grey belly rather than creamy white. A few years ago the question of whether they are the Asian House Rat (*Rattus tanezumi*) arose, with Dr Steve Donnellan at UA researching the genetics of the two populations. He has specimens of some of our rats and is part way through analysing the samples he has. The picture gets more complex the more delving that occurs. It is possible that the two species have interbred. He is to be guest speaker at the SEG AGM on Friday, 13th September 2013. See the notice below. Once again we have had a visiting scientist collecting specimens during the survey. This time it was Faerlie Bartholomaeus collecting fleas, ticks and mites from the mammals. So, just when we'd got the hang of microchipping bitey rats, we had to find a way to hold them while she combed them! Identification is in progress and the report will be made available when it is ready.



Figure 2: Catching fleas on an *Antechinus*

Reptiles and Amphibians

The cool and moist weather did not appeal to reptiles. Only 7 were caught, all common Grass Skinks (*Lampropholis guichenoti*). Three frogs were trapped, all Brown Froglets (*Crinia signifera*)

Birds

Brian and Jo Blaylock recorded a first for these surveys with a Golden Headed Cisticola (*Cisticola exilis*), seen in the swamp at Site 2. This small, shy bird is more often heard than seen, inhabiting moist places around Australia and south-east Asia. Brian then disappeared to Hiltaba, the current SEG expedition, at the destocked grazing property next to the Gawler Ranges on Eyre Peninsula, now a private conservation area owned by Nature Foundation SA

Summary

This was a busy survey, helped by many volunteers, demonstrating increased numbers, but a different proportion of mammal captures to usual. Micro-chipping is becoming increasingly helpful in the identification of individual mammals. Another bird was added to the Bird List. ***The next Minnawarra Biodiversity Project – Spring Survey 2013 is on Saturday 28th September to Wednesday 2nd October (start of school holidays)***

Contact Email : thefurlers@gmail.com

Minnawarra Habitat Planting

6th and 7th July 2013

at 508 Springmount Rd,

Hindmarsh Tiers, via Myponga

Following our highly successful working bees last year, we are doing it again. We have 1000 Trees for Life plants (shrubs and understorey but no trees) waiting for a moist home. While we would eventually get them in ourselves, any assistance would be gratefully received. We will be planting on 2 days on the above weekend. Feel free to help for whatever time suits you. A 9.00 start, but turn up when you are able. Bring working clothes, gloves, tools eg trowels, hammers, mattocks etc.

If the weather is too wet we can call you to postpone it.

Lunch sausage sizzle

Please tell: Janet (0419 842 667, thefurlers@gmail.com) or Richard (0408 807 517, rwilling01@gmail.com)



We are pleased to announce that the Kangaroo Island Planting Festival is back again in 2013.

This year's festival will be held on **Friday 5th, Saturday 6th and Sunday 7th July 2013** and volunteers are needed to help restore 25 hectares of habitat for some of Kangaroo Island's rarest plant life. Over 100 species will be planted, many of which are found only on Kangaroo Island.

No previous planting experience is required and lunch will be provided for all volunteers.

For further details of where the festival will be held, how to get there, and other useful information, please click on the following link (or paste it into the navigation bar of your internet browser):

https://docs.google.com/file/d/0B_P5FHHfb9ZxT09NdnVFeWtKcXc/edit?usp=sharing

If you have problems viewing this document then please let us know and we will send you the document as an attachment.

It is very important that we know how many people will be attending so that we can organise catering, etc. So, once you have finalised your plans, **please contact us to register as a volunteer**.

For registrations and enquiries please contact Heiri Klein at Natural Resources Kangaroo Island by emailing heinrich.klein@sa.gov.au

SCIENTIFIC EXPEDITION GROUP INC.

The Scientific Expedition Group (SEG) came into being at a public meeting on 21st August 1984. Members receive regular information on SEG activities and expeditions. Membership is open to any persons, family or organisation interested in the following aims:

- * The promotion and running of expeditions of a scientific, cultural and adventurous nature.
- * The furthering of knowledge, understanding and appreciation of the natural environment.
- * Promotion of the values and philosophy of wilderness.
- * Enabling people to learn the skills required for planning and running expeditions, and to develop sound field techniques.

APPLICATION FOR MEMBERSHIP AND MEMBERSHIP RENEWAL for 2013

SUBSCRIPTIONS rates

Adult member - - - - - \$30.00

Concession cards/ student----- \$15.00

Family membership - - - - - \$35.00

Corporatemembership - - - - - \$35.00

Name.

Address

...

Telephone (H) (W)

E-mail

Details of scientific, cultural, and adventuring or other relevant skill or interests you may be prepared to share with the group:

.....

Send a cheque (Scientific Expedition Group Inc.)

with a Photocopy of this page to

The Secretary

Scientific Expedition Group Inc.

P.O. Box 501

Unley S.A. 5061.

Affiliated Organisations



<http://www.naturefoundation.org.au/>



<http://www.gluepot.org/>

SA Herpetology Group Inc.

The SAHG is a group of people dedicated to the study and conservation of reptiles and amphibians through regular meetings, field trips, educational displays, talks and involvement with government and non-government conservation groups.

<http://www.swiftpages.com/sahg/index.html>

Wetlands & Wildlife

Wetlands & Wildlife is a conservation company that was founded by Mr Tom Brinkworth to hold land of significant conservation value for the benefits of future generations. It is hoped that it will prove a viable model for conservation in the private sector to complement the National Park systems.

<http://www.wetlandsandwildlife.org.au/>