

**Scientific Officer's
Report:** The squeaky
wheel diaries

Failing the acid test -
the true cost of tailings
dams at Olympic Dam

**Conservation or
Wreckreation?**

Yvonne Steed - her
inspiring journey

Around NCSSA

NCSSA major concerns include

- Native vegetation, threatened species and habitats
- Protecting all forms of life (biodiversity) on land and in the oceans
- Park dedication, management and legislation
- Education about biodiversity to all sections of the community
- Cooperation with other conservation groups

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NCSSA Spring Survey 2009

The NCSSA have offered to help the *Gawler Environment and Heritage Association Inc.* to survey the vegetation of Reeves Plains near Gawler. The remnant vegetation at Reeves Plains is some of the best sand dune mallee and shrubland vegetation left in close proximity to Adelaide. The patches of vegetation remaining are significant as islands on an otherwise very denuded Adelaide Plain. Despite the relative quality of a number of the remnant patches, the overall biodiversity value of this vegetation is threatened by weed invasion, grazing, sand extraction and fragmentation.

By conducting a formal vegetation survey of sites in the area, the NCSSA will help greatly in documenting the current biodiversity value of these remnants. This will assist with providing planning and direction for the volunteers within the *Gawler Environment & Heritage Association Inc.* to help protect this unique and precious vegetation.

We are yet to confirm dates for the survey, but if you wish to register an interest in participating, contact Tim on 08 7127 4503 or tim.milne@ncssa.asn.au

Walks with Nature 2009

We have just learnt that the Great Australian Bushwalk, as advertised in our last newsletter, will not be held in 2009. However, we will still be running our very popular and educational *Walks with Nature* program this year.

At this stage we are planning to conduct a walk in Morialta Conservation Park on Sunday 13th September. Located close to Adelaide, this Park has spectacular scenery, including rugged ridges, waterfalls, sweeping views and abundant bird and reptile life amongst woodland vegetation. NCSSA leaders will take small groups along formed walking trails and will highlight the natural features of the Park. We will also be able to offer walks to cater for people of varying fitness levels.

Watch our website www.ncssa.asn.au for further details about the walks.

NCSSA people

Management Committee

President Helen Vonow
Vice-President Katie Fels
Secretary Sue Graham
AI/Secretary Caroline Taylor
Treasurer Richard Winkler

General committee
 Ben Taylor, Nicole Lewis,
 Tina Bentz, Hugh Kneebone,
 Nerissa Haby and Andrew Crompton

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Threatened Plant Action Group Coordinator Tim Jury
Bushland Condition Monitoring Manual Trainer Janet Pedler
MLR Woodland Bird Survey Coordinator Tina Bentz & Bill New
2008 Tothills Survey Georgie Mollison
Database & Website Project Officer Lesley Parton

Scientific Officer's Report:

Welcome to this winter's edition of the squeaky wheel diaries. Over the last few months, and with the help of many others, Tim and I have been making as much considered, rational, evidence-based, solution-oriented 'noise' in support of the environment as we can. Here is a summary of the issues we've been working on and the progress made so far.

SA Marine Parks

In response to the Marine Park outer boundaries recently proposed by the Department for Environment and Heritage, we have called for commitments to:

- Full (no-take) protection of 10% of all marine habitat types (as recommended by the Aust. Marine Sciences Association).
- Conservation sector involvement in the development of regulations for activities and uses within the four Marine Park zones and the definition of their boundaries;
- Adequate resourcing to ensure that marine protected areas are properly managed.

Wellington/Pomanda Weir

The construction of the proposed Pomanda Island Weir is presented by its proponents as a solution to declining water levels in the Lower Lakes. However, it is likely to have the perverse outcome of accelerating water level reduction and exacerbating the associated problems. If this were to occur, the need for remedial action to avoid acidification (eg flooding the Lake with seawater) would become more urgent and critical. This convenient but contradictory chain of consequences was highlighted in our submission on the Weir's EIS.

The impact assessment described by the EIS presumes the weir will be a temporary structure, but there are no guarantees that the weir will be decommissioned in the 3 year time frame proposed. Given that the nature and extent of impacts is dependent on the length of time the weir is in operation, the validity of the EIS must be called into question.

The EIS also failed to address:

- Consequences of accelerated decrease in water levels and flow for wildlife, and the values for which the Lakes are Ramsar listed.
- Probable remedial actions for decreasing water levels, and the effects of these actions on the environment.

West Avenue Range

Tim met with the Minister for Environment and Conservation, the Hon Jay Weatherill MP, and presented the case for protecting the West Avenue Range watercourse from the impacts of deep drainage. As readers will be aware, there is no evidence that the existing drains constructed under the *Upper-South East Dryland Salinity and Flood Management Scheme* have resulted in a net improvement in wetland condition, in fact there is far more compelling evidence of the degradation of natural habitats. In addition to their significant biological values, the West Avenue Range wetlands are the last remaining in the region (as yet unmodified by deep drainage). We are therefore arguing for their preservation as a reference area so that our potential to better understand this significant and unique part of the South Australian environment is not lost for ever.

We are still waiting to see the results of the independent report on environmental impact and benefits of the proposed drains.

Recreational use of parks

As you will see from Tim's excellent article in this issue of *Xanthopus* (yes do read it, it's really good) we have provided a

much needed voice for conservation with respect to recreation policy and planning in reserves. This has included participating in stakeholder meetings for policy development and making comments on the *Flinders Ranges Trails Masterplan*.

Norton Summit roadside vegetation management

The Adelaide Hills Council plans to 'groom' vegetation along Moores Road and Colonial Drive for bushfire management. We share the concerns of local residents that the Council's proposed management approaches are likely to have a severe adverse impact on the native vegetation. Roadsides in this area currently support vegetation in excellent condition with significant biodiversity values including threatened species populations and habitat and location within an extensive network of remnant vegetation. We've written to the Adelaide Hills Council highlighting the significance of this area and our support for the concerns of local residents.

Remnant vegetation in Victoria Park

It's not that easy to see, and perhaps a little surprising, but there is a very cool patch of remnant native vegetation in Victoria Park, where several grass, lily and herb species are still hanging on. We've been assisting local flora experts to highlight how significant this remnant is and to convince the Adelaide City Council that it should be protected *in situ*. To our great relief, the Council have agreed to revise planned development of the area to accommodate the protection of the remnant.

We've also taken the opportunity to highlight the Adelaide City Council's responsibilities and opportunities for protecting and restoring remnant native vegetation in the Parklands through our comments on the Draft Adelaide Parklands Management Strategy and Draft Environmental Sustainability Strategy.

Independent review of the EPBC Act

Further to our written submission reported in the Autumn 2009 edition of *Xanthopus* (Vol 27 part 2), we presented evidence, with CCSA, at a hearing. We highlighted some positive examples where the EPBC Act has assisted biodiversity protection efforts in the state and made suggestions for improvements in transparency, accountability and community engagement.

Australia's Biodiversity Conservation Strategy 2010-2020

Our comments on the national biodiversity strategy focussed on alterations that could be made and areas that should be strengthened so that the strategy succeeds in improving the way biodiversity is managed in Australia.

The framework set out by the objectives, actions and priority areas could be refined and strengthened in a number of ways, particularly with respect to the definition of targets.

The rapid declines in biodiversity, the seriousness of potential consequences and the urgency for remedial action were all underestimated in the strategy.

Likewise, the role of the NGO and community sector in biodiversity conservation was inadequately acknowledged.

Next please!

Over the next months we will be turning our attention to:

- assisting CCSA to draft their biodiversity policy blueprint;
- providing comment on the Olympic Dam expansion EIS;
- and responding to many other issues which are yet to arise in our in-trays and inboxes.

If you feel inclined to assist with working through the 4000 pages of the EIS or are interested in becoming otherwise involved, we encourage you to contact us on the email below or by telephoning the office.

Annie Bond

get a grip

HANDS ON ACTIVITIES FOR MEMBERS

Upcoming activities of the Threatened Plant Action Group (TPAG)

Come and be involved in some **hands-on** action to help threatened plants and vegetation communities recover with the Threatened Plant Action Group.

Most working bees are in the morning, generally from 9.30am onwards, with training and some tools provided on the day. Please dress sun-smart, wear a hat & sturdy footwear. Everyone welcome. Working bees over the next few months on the following dates:

Millbrook Reservoir Every Tuesday

Come help with the management and restoration of grassy Red gum - Blue gum Woodlands that are habitat for threatened orchids and herbs like *Caladenia rigida*, *Glycine latrobeana* and *Diuris behrii*.

Pine Point, YP Weekends of June 27 & 28, August 29 & 30, October 24 & 25

Join in the planting and weeding on these weekend trips to restore habitat for *Acacia rhetinocarpa*.

Finniss Saturday July 18

Site monitoring and threat abatement of *Asparagus* weeds in order to help restore the habitat of *Acacia pinguifolia* and *A. rhetinocarpa*.

Hope Valley Wednesday August 12

Come and help restore habitat for the Small scurf-pea (*Cullen parvum*) in beautiful Blue gum and Southern cypress woodland at Hope Valley Reservoir. Site access is by landholder permission only so get in touch before the day.

Tarlee and Spalding Weekend of August 14 & 15

Join in monitoring and weed management of *Temperate grasslands* and Spalding blown grass (*Lachnagrostis limitanea*)

Yorke Peninsula Friday August 28

Survey and monitoring work will be carried out, tackling weeds such as Bridal creeper and Boxthorn. You will assist several native species including Jumping Jack wattle (*Acacia enterocarpa*) and Silver daisy-bush (*Olearia pannosa* ssp. *pannosa*). Contact the TPAG Coordinator for transport over there.

Sth Fleurieu Peninsula September 7-14

Join the efforts to protect and restore habitat for the vulnerable Hindmarsh Correa (*Correa calycina*), the Hindmarsh greenhood (*Pterostylis bryophila*), Butterfly Spyridium (*Spyridium coactilifolium*), and Silver daisy-bush (*Olearia pannosa* ssp. *pannosa*). Come and help for a day or more!

Grange Golf Course Tuesday September 23

Grass weed control and population monitoring for Sandhill greenhood (*Pterostylis arenicola*)

Blows property, Ironbank Friday September 25

Caging and weeding for Behr's spider-orchid (*Caladenia behrii*)

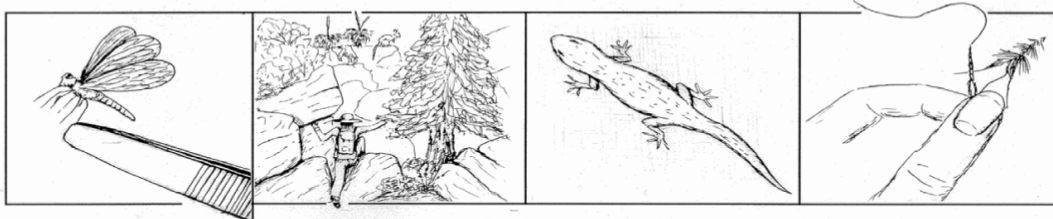
Aldinga Scrub Tuesday September 29

Weed control and population monitoring for Plains beard-orchid (*Calochilus cupreus*) and Aldinga dampiera (*Dampiera lanceolata* var. *intermedia*)

Belair National Park Saturday October 11

Pitch in by joining efforts to protect and restore habitat for the Leafy greenhood orchid (*Pterostylis cucullata*) at Belair NP. Share in the action by doing a morning's work amongst beautiful Manna Gum woodland.

**Dates are subject to change due to weather and seasonal factors
so to volunteer or for further information
please contact Tim Jury on 08 7127 4166 or tpag@ncssa.asn.au**



Update of TPAG threatened flora recovery programs in South Australia

Introduction

Members of the Threatened Plant Action Group (TPAG) have been working hard to recover threatened flora in South Australia. Indigenous flora and their habitats in the state's agricultural regions, are under increasing pressure from threatening processes, land-use impacts, and climate change. Over 22% of South Australia's indigenous flora is considered threatened at some level. Escalating threats to indigenous flora and habitats mean that recovery actions are urgently required to prevent further degradation, population declines and local extinctions. To this end TPAG continue working towards the protection and recovery of threatened flora. Some recent work is summarised below.

Neat wattle on Yorke Peninsula

Since 1996 TPAG and the Australian Plant Society (COOTS) have been working in and around Muloowurtie Conservation Reserve on Yorke Peninsula. This long running project is restoring and reintegrating degraded mallee remnants into a managed conservation cluster for the EPBC Vulnerable Neat wattle (*Acacia rheticarpa*), a species endemic to South Australia.

Working bees over the last year have contributed over 450 volunteer hours toward strategic revegetation, pest management, biodiversity surveys, and fencing. The low rainfall experienced for 2007-08 has meant targeted revegetation of cleared land for habitat reestablishment has been progressed through tube-stock planting rather than direct seeding. Tube stock revegetation has provided some advantages though, by reducing the soil and substrate disturbance (required for direct seeding) resulting in lower weed growth, and by allowing for greater care and maintenance (i.e. watering) of planted seedlings by volunteers. This has enhanced seedling survival and establishment, with over 70% survival for corridor plantings and 60% for block plantings. A total of 10 hectares have been revegetated with over 4000 seedlings of indigenous flora, substantially expanding the area of available habitat for Neat Wattle.

A strong commitment to weed control has reduced competition stress on planted seedlings and assisted their establishment. Control of invasive species such as Bridal creeper, a weed of national significance, has also been undertaken along approximately 2.5 kilometres of adjoining roadside vegetation and Boxthorn and Crystalline Iceplant have been controlled in priority remnants. To assist natural regeneration, baits were laid for rabbits over the past 3 control seasons by a licensed contractor.

Surveys of *Acacia rheticarpa* have been undertaken to obtain data on the size and life-stage structure of remnant subpopulations.

A total of 1526 mature individuals, 97 juveniles, 34 seedlings, 99 senescing and 15 dead plants were recorded for remnant subpopulations in habitat fragments and along roadsides. Small populations of other declining plant species have also been located along nearby roadsides including: Silver daisy-bush, *Olearia pannosa* ssp. *pannosa* (EPBC Vulnerable); and Streaked wattle, *Acacia lineata* (Rare for SA). Opportunistic bird surveys in the area have resulted in sightings of 24 native and 2 introduced species. Birds observed included the SA Rare Purple-gaped honeyeater as well as 2 regionally Vulnerable species: the Yellow-plumed honeyeater; and Grey Currawong. These declining birds were observed near to larger native vegetation remnants.

Further actions are planned for 2009 and beyond if support for on-ground work can be obtained. This project is a partnership with the Australian Plant Society (COOTS), DTEI, Yorke Peninsula Council, and private landholders. Thanks to all participants. (See <http://users.picknowl.com.au/~jreid/Muloowurtie.htm>)

Groundsels of the River Murray

Two Groundsel species occurring along the lower River Murray were surveyed by TPAG members early in 2009. These species:

Senecio longicollaris and Shrubby groundsel (*Senecio cunninghamii* var. *cunninghamii*) are rare in South Australia. Four small subpopulations were found and enumerated along the River south of Tailem Bend. Subsequently, a nomination has been submitted to the Australian Government for listing *Senecio longicollaris* as a nationally threatened species under the EPBC Act. While occurring in small numbers mostly along the River Murray in SA, Victoria, and New South Wales this species is experiencing decline in the riverine habitat it requires and is disappearing in parts of its range.



Re-established Neat wattles on cleared land being revegetated for nature conservation
Photo: Tim Jury

About TPAG

Formed in 1993, TPAG actively works throughout the state to protect and recover threatened flora in partnership with landholders, government, and the community. We implement on-ground recovery actions, including:

- habitat protection & restoration;
- abatement of pest threats;
- population surveys & monitoring;
- site action planning & management; and
- informing & assisting landholders.

TPAG is supported by the Australian Government's Caring for our Country Program, NCSSA, Regional NRM Boards, DEH and Friends of Parks Inc. Contact Tim Jury on 08 7127 4166 or at tpag@ncssa.asn.au to get involved.

Failing the acid test

- the true cost of tailings dams at Olympic Dam

The Olympic Dam Expansion Draft Environmental Impact Statement has been released for public consultation, and it has revealed the extent of waterbird deaths caused by the current mining operation.

The company's close guarding of this problem until now has limited public knowledge or discussion. However the EIS process has forced BHP Billiton to be more open about this very significant issue and this is the first time these data have been widely circulated. They make for very depressing reading.

In the last three years alone over 1400 water birds representing 28 different species have been found dead by BHP Billiton's own monitoring. These deaths are caused by ingestion of tailings liquor, which is of sufficient acidity (pH of <2 up to 3.5 – equivalent to somewhere between battery acid and vinegar) to be acutely toxic to virtually all living organisms. *Environment Protection and Biodiversity Conservation Act 1999* listed species which have been killed include Great Egret, Common Sandpiper, Marsh Sandpiper, Red-necked Stint, Sharp-tailed Sandpiper and Grey Plover. A range of species listed under South Australian legislation (*National Parks and Wildlife Act 1972*) has been killed, including Blue-billed Duck, Musk Duck, Common Sandpiper and Banded Stilt.

BHP Billiton also acknowledge that there are many limitations to their weekly monitoring counts which make these numbers likely to be significant underestimates due to the huge area and inaccessibility of the tailings lakes. If we look back over a longer time period, we find mortalities to 49 different bird species, seven species of mammal and eight species of reptile. Risk assessment carried out as part of the EIS for the Australian endemic wader, the Banded Stilt, indicates that **up to 15%** of the population of this species could be killed **at any one time**.

Currently there are over 130 hectares of evaporation ponds (ie radioactive, acidic liquid waste only), plus an additional 400 hectares of tailings storage (incorporating solid and liquid waste). These areas are the largest permanent water body in the north of South Australia, and as such act as a vast magnet for waterbirds. This area is within easy flying distance to and from outback waterways such as the nearby

Arcoona Lakes, the Cooper, Warbuton and Diamantina River Systems and the many large salinas such as Lake Eyre and Lake Torrens – making it a very attractive stopover for weary waterbirds. With the expansion of Olympic Dam it is proposed to expand total tailings areas to just under 4000 hectares – or 40 square kilometres. For football lovers out there, that is equivalent to 2000 times the playing area of Football Park. At any one time, it is expected that 15-20% of these areas will be active, meaning six to eight square kilometres of liquid to attract birds. The vast distances involved make monitoring bird visitation and deaths impossible. We know that it is difficult enough to see the play on the far side of the ground at football park – but imagine trying to look 20 or 30 times further through the mirage of an Olympic Dam summer day to work out if a dark shape in the middle of a tailings beach is a lump of waste or dead migratory wader.



Banded Stilt Photo: Brian Furby

In truth, the sheer size and inaccessibility of these ponds will mean that the real numbers of birds visiting or being killed will never been known.

The EIS proposes that netting will be used as the primary mechanism to prevent access of birds to the liquid. However, no details are provided of the materials that will be used – bearing in mind that the highly acidic environment of the tailings areas will rapidly corrode most material and the distance that netting will need to span make for an engineering nightmare! There is no evidence provided of any trials into the effectiveness of nets in the long term, nor are there any contingency plans listed if these nets prove to be ineffective. In reality, following the approval of the EIS, it is likely that covering these vast areas of acid with netting will be deemed logistically impossible and not followed through. This also raises the question – if netting is such a simple solution, then why have BHP Billiton been allowed to continue to kill hundreds, if not thousands, of birds each year, and place our declining waterbird populations at further risk?

Whilst NCSSA acknowledge and support the sentiment regarding the recent assault of a Flamingo in the Adelaide Zoo, we think the South Australian public equally should be outraged at hundreds of our native birds (or other migratory species which our government has signed international treaties to protect) dying a grisly death each year. The NCSSA calls upon legislators to effectively protect these birds, which will require BHP Billiton to modifying this destructive and cheap method of tailings deposition.

The NCSSA is currently reviewing the full 4000 page EIS for the Olympic Dam Expansion.

Members can view a copy in our offices, or online at www.bhpbilliton.com/bb/odxEis/downloads/draftEisDocuments.jsp.

If members have any feedback, please contact Tim or Annie at the NCSSA office.



Sleepy lizards (*Tiliqua rugosa*) are one of the reptile species recorded as mortalities in the current tailings retention system

XANTHOPUS

The views presented in this newsletter are not necessarily those of the NCSSA

Copy deadline for the SPRING edition is **31st July 2009**.

Contributions in a variety of formats will be considered, but electronic submissions are preferred.

Editorial Team for this issue: Penny Paton, Helen Vonow and Elizabeth Lonie.

Conservation or Wreckreation?

- A call to ensure appropriate planning for our National Parks

The NCSSA has been a long term advocate for the state's National Parks system - indeed some of the Society's earliest work in the 1960s resulted in the proclamation/gazettal of significant areas of vegetation on the Eyre Peninsula under threat of clearance. We are also strong advocates for the appropriate use of Parks for education and recreation, as evidenced by our 34 year history in running our "Walks with Nature" program and our publication *Walks with Nature - 20 Nature Walks in the Mount Lofty Ranges*, which details walks that can be taken in National Parks in close proximity to Adelaide.

However, we are becoming increasingly concerned that policy and planning for visitor use and recreation within our National Parks shows a conspicuous dearth of conservation planning. Recent draft plans reviewed by our staff for trails in both Belair and Flinders Ranges National Park have exemplified the lack of consideration of conservation.



Nationally vulnerable Leafy Greenhood orchid in Belair NP
SA Government recovery plan lists mountain bike and horse riding as threats to the survival of this species

For example, the *Flinders Ranges National Park - Trail Master Plan* did not in any way consider conservation planning as a critical component of the Trail planning process. The SWOT (Strengths, Weakness, Opportunities, Threats) analysis did not even consider trails could be a threat to biodiversity. Likewise the draft *Belair Trails Masterplan* disregards the presence of threatened species and communities in Belair NP, whose recovery and management is essential for achieving state and national conservation obligations. As they were drafted, the Plans are not apparently in keeping with the National Parks and Wildlife Act and, if implemented, may contravene the *Environment Protection and Biodiversity Conservation Act (1999)*.

The NCSSA understands that there can be a tension between conservation and recreation, tourism and visitor access with regard to National Parks. Section 28 of the *South Australian National Parks and Wildlife Act 1972* states "The Governor may, by proclamation constitute as a national park any specified Crown land, Aboriginal-owned land, the Governor considers to by reason of the wildlife or natural features of that land".

We take it therefore that the primary reason for proclaiming Parks under this Act is for their wildlife or natural features, **not** for other purposes. Any human use of parks is therefore secondary to the protection and conservation management of their wildlife and natural features. This point is emphasised further by the Act which states as one of its Objectives of Management: "The encouragement of public use and enjoyment of reserves and education in and a proper understanding and recognition of their purpose and significance".

The *Belair National Park Management Plan* goes one step further to state: "Proposed management actions will need to be assessed in the light of the ability to meet the primary objective of biodiversity conservation - this may result, in some circumstances, in public use taking a subordinate place."

Thus NCSSA is calling for the Department for Environment and Heritage to fulfil their stewardship obligations and show clear and strong leadership in National Parks planning and policy to ensure the Act is upheld.

There are two simple components which we believe should form the mainstay of future policy and planning;

1. Parks planning (whether it be trails, visitor access, recreation etc.) needs to have good conservation planning which incorporates an assessment of the biological and natural assets of the Park in question as the first step in the process, such that any new activities can minimise impact on these assets.
2. The precautionary principle should apply when planning new uses for Parks, ie activities should not be allowed until it can be reasonably demonstrated that they will not have a negative impact on the biodiversity value of Parks.

The full submissions we have made on the Belair and Flinders Ranges National Parks' Trails Plans can be found on our website: www.ncssa.asn.au

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Weedways?

Trail illicitly used by mountain bikes and horses in Belair NP

NCSSA Conservation Biology Grant 2009

The NCSSA 2009 Conservation Biology Grant was announced at the 8th May meeting of the Society (held in conjunction with the Biology Society of SA meeting) .

This grant aims to assist honours and post-graduate level student research into aspects of conservation biology. Funds are available for research aimed at: improving understanding of the conservation status of species or ecological communities; providing recommendations for improvement of some aspect of biodiversity conservation; understanding the ecology of species or communities; and understanding threats to biodiversity and management of those threats.

2009 Conservation Biology Grant recipients are:

Jessica Newton – Flinders University of South Australia (\$800) "Fire as a management tool for the restoration of senescent plant communities: with particular reference to the reestablishment of insect-animal interactions after burns"

Laura Falkenberg – University of Adelaide (\$800) "Interactions between global- and local-scale stressors: consequences for marine assemblages of rocky temperate coasts"

Vicki Thomson – University of Adelaide (\$400) "Diet analysis and phylogeographic structure of the locally extinct Ghost Bat (*Macroderma gigas*) of southern Australia"

The Conservation Biology Grants aim to extend the excellent work undertaken by research students on aspects of the biodiversity of South Australia. Previous grants have contributed to research into diverse topics including studies of the ecology of single species and assemblages (eg. systematics and phylogeography of stone geckos; and guanophilic arthropod ecology and conservation in bat caves), interactions between ecosystem components (eg mistletoes in Pink Gum Woodlands; and the importance of hypogaeal fungi in the diet of bettongs) and the effects of human interactions with biodiversity in South Australia (eg. ecotourism as a means of encouraging ecological recovery and conservation; Urban bat populations).

**This Grant is supported by donations to your Society
please consider contributing to this worthwhile causerather than to the tax man!**

Yvonne Steed – her inspiring journey

Yvonne Steed passed away quietly in February 2009 after a 17-year battle with cancer. During this period of her life she emerged as a leading authority on the conservation of threatened plant species in South Australia. She was a founding member of the *Threatened Plant Action Group* (TPAG) and its precursor, the Stirling Threatened Plant Action Group.

TPAG was formed in late 1995 at a public meeting, which voiced concern at the lack of an effective State-wide program to deliver strategic on-ground action to arrest the decline of threatened plant species. There were a number of conservation programs at the time but they generally did not have a threatened species focus, particularly for our native flora. Yvonne attended this meeting and was eager to become part of a new movement. When there was a call to form a committee she did not hesitate to put her hand up, and soon became involved in developing a program of recovery activities for strategically important plant populations across the State.

It was soon after Yvonne's diagnosis in 1992 when she began to explore new avenues consistent with her life-long interest in the natural world. From the English garden (including the occasional native) that she had lovingly created at her Stirling home, her attentions initially turned to the roadside opposite, which was a weed infested candlebark woodland remnant. The heavy work of removing gorse, broom and blackberry attracted the attention of some members of the local Friends of Mt George Conservation Park (FOMG). A visit soon after by the President resulted in her joining FOMG, and from that moment she commenced a remarkable journey of personal development and community achievement. Over the next three to four years Yvonne became the principal architect and driver of major bush restoration programs in both Mt George CP and at the Marble Hill ruin. This work was her passion and her recovery.

In just a three to four year period Yvonne emerged as a competent field botanist, with highly developed plant recognition skills. She also demonstrated an intuitive understanding of bush restoration and ecological principles, coordinating the removal of invasive willows along Cox's Creek and revegetation of the riparian zone with local provenance plants. Other areas of the park were cleared of gorse, broom and blackberry, and Mt George CP was transformed from one of the most heavily weed-infested parks in the Adelaide Hills to one of the best managed. The major factors contributing to the success of this work were undoubtedly Yvonne's leadership, vision and inspiration, along with the efforts of fellow volunteers who were equally dedicated to

carrying out the follow-up work necessary for successful bush restoration.

At this time Yvonne also became involved with the Friends of Marble Hill and was instrumental in a remarkable transformation of the site including restoration of the rose gardens and the adjacent bushland. Her achievements over this period are not being over-stated because in the same year, 1995, she was twice recognised as South Australian Volunteer of the Year, by different organisations (Rotary and Friends of Parks Inc.).

In 1996 Yvonne joined the steering committee of TPAG, and over the next eight years she helped to establish the Group's influence in threatened species conservation in this State. She helped to secure a funding base for a project officer position and took on this role until 2005 when she had to retire due to ill health. In this period Yvonne again demonstrated her many skills through carrying out habitat restoration works; recruiting, training and coordinating volunteers; managing contractors; securing project funding; preparing management plans; and providing advice to recovery planning teams outside the Group. Independently, she was invited to take up an honorary position on the National Parks Advisory Council, an advisory body to the Minister for Environment, a position that she remained in for several years.

Yvonne's achievements and standing in this field of endeavour are perhaps all the more remarkable when considering that she possessed no formal qualifications – she was highly regarded, and frequently consulted, in both science and technical disciplines relevant to plant conservation.

Yvonne typified the spirit and philosophy of TPAG as a community-based group comprising volunteers strongly dedicated to the conservation cause. She had great belief



Photo from Mt Lofty Ranges Catchment Program bimonthly newsletter, July 1997

in the ability of community action to initiate and sustain a recovery program over the long term, despite the vagaries of public funding or institutional support. She therefore saw it as crucial to engage the community and government alike in the recovery of a threatened species. Her work through TPAG was an exemplar of engaging and involving people in “hands-on” threatened plant conservation.

Yvonne's most enduring legacy, I feel, is the greater interest in our native flora that she helped to foster. She made others so much more aware of what could be achieved - that practical “hands-on” conservation is worthwhile and, invariably, the only way to making a difference. It was not in her nature to just sit back and contemplate the difficulties; it was to find the opportunity and the means that could save a population from potential demise, and to venture out into the bush with great optimism.

Tim Reynolds

Yvonne Steed (on left), a member of the Friends of Mt George, assisted by ATCV volunteer Mette Rasmussen during a major weed control operation in the park in November 1993. Photo appeared in Mt Barker Courier on 17-11-93



I held Yvonne in very high regard as a conservationist and champion of South Australia's threatened indigenous flora. Her seminal work with the Threatened Plant Action Group (TPAG) really initiated the active recovery of threatened plant species and communities across the state.

I met Yvonne in 1997 and she changed my life. She taught me a great deal about plants and nature conservation, in particular the importance of hands on, 'do-something' stewardship in recovering threatened flora - rather than just watching its demise. Her expert knowledge and skills coupled with a rare ability to transcend rhetoric and indecision has resulted in some very lasting gains for threatened flora conservation in South Australia.

The 1990's were a period of real, proactive community involvement in nature conservation. The time had well and truly come to move beyond talk in responding meaningfully to the biodiversity crisis. Never content to be an armchair greenie or critic Yvonne was a person of action. While she had particular passions for wetlands and grassy ecosystems and their many botanical jewels, she had just as much fondness for a patch of garland lilies in summer as for a species of nationally threatened spider orchid. She developed a very advanced appreciation for the subtle shifts in plant communities including the more cryptic habitats and species that most people don't readily observe.

A very distinguishing part of her character was the way she didn't see environmental degradation as an impossible or intractable situation, but instead broke things down into smaller achievable tasks that contributed toward addressing larger challenges. The most seemingly hopeless predicament for a threatened plant species or community was approached by her with an uncommon enthusiasm for shouldering personal responsibility and from often initially hopeless situations Yvonne and helpers were able to achieve tangible foundations for recovery most never considered possible.

Yvonne was in her own calm way a natural leader and in many senses a pioneer. A hardworking person of substance and vision, who amongst her gifts possessed an inspiring sense of respect for all living things. Her empathy for and understanding of nature was as deep and provident as any I have encountered. She was also a warm and engaging woman who always endeavoured to see and encourage the best in others. What she represented as a person and the example she provided will leave an enduring legacy.

A heartfelt thanks Yvonne, for having shared a part of your life with us. You leave the earth a better place for all your endeavours. Though you will be missed you will continue to live on in our thoughts, affections, and though the work of the Threatened Plant Action Group. May you rest in peace.

Tim Jury
Threatened Plant Action Group (TPAG) Coordinator

GENERAL MEETINGS

will generally be held on the first Thursday
of every second month at the University of Adelaide

5:30pm for a 6pm start

Upcoming meetings:

General Meeting: Thursday August 6th, 6pm

Benham Lecture Theatre, Benham Building,
University of Adelaide

Speaker: Michael Hammer, Native Fish Australia

Annual General Meeting: Thursday 3rd September