

Annual General Meeting

Benham Lecture Theatre
University of Adelaide
4th September 2008

**Mount Lofty Ranges Bird
Forum**

A time for change....

TPAG Report:

Rediscovery of the Firewheel
Groundsel

NCSSA Spring Survey:

Tothill Ranges
September 27 -
October 6 2008

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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Mount Lofty Ranges Birds in Space and Time; A Management Conundrum

NCSSA recently held a forum to examine the use of bird monitoring in guiding ecological management across multiple spatial scales in the Mount Lofty Ranges (MLR). A capacity crowd of over 150 attendees packed into the Charles Hawker Conference Centre (Waite Campus, University of Adelaide) on the 31st July, comprising a range of people from NGO's, government agencies, universities and private industry, through to avid bird watchers from the NCSSA membership and the greater general public.

Speakers included Professor Hugh Possingham, and Postdoctoral Fellow Judit Szabo from University of Queensland (UQ); Dr Mark Lethbridge from Flinders University (FU); Dr David Paton, AM, University of Adelaide (UA); and Dr Nigel Willoughby, Habitat Management & Restoration Ecologist, Murraylands (DEH).

Hugh Possingham and Judit Szabo kicked off proceedings with a discussion of the NCSSA/UQ MLR Woodland Bird Monitoring Program, one of only a few long-term regional scale studies of bird species in Australia. Hugh demonstrated that occasional "snapshot" surveys can give an impression of stable bird populations while a greater monitoring frequency shows the same species in decline. He also showed how effective environmental monitoring is a long term process and that the true value of the MLR Woodland Bird Monitoring Program is now emerging in its ninth year. Mark Lethbridge discussed the advantages of modelling in predicting population change as a response to theoretical management decisions and outlined an investigation into the usefulness of surrogate species models for managing the conservation of MLR birds.

David Paton demonstrated how a one size fits all approach to monitoring methodology can fail to capture critical information. He explained that bird movements are tied to larger scale resource availability patterns, making it difficult to measure trends at a regional scale or even a home range scale using small scale sampling units. David emphasised the need for an adaptive approach in the absence of long term data and the benefits of collecting behavioural and habitat information in addition to presence and abundance. Nigel Willoughby rounded the presentations out by presenting a working example of birds in the Eastern Flanks of the Ranges, and his observed changes in response to on-ground management.

An open forum was held after the presentation with discussions including practical approaches to management issues, technical questions on monitoring design and implementation, and a general discussion on where monitoring and funding programs should be focused in the future. There was a consensus that the monitoring methods presented were complementary rather than competing and that a blend of landscape scale data capture and site scale intensive methods would best advise modelling and management decisions.

If you missed out on this forum and want to know more, stay tuned to the NCSSA website. All forum presentations were filmed and will be posted shortly.

Many thanks to Tina Bentz and Tim Milne for organising the event and ensuring a flawless execution, and to Patrick O'Connor who brought the proceedings to a close with an apposite summation.

NCSSA people

Management Committee

President Helen Vonow
Vice-President Katie Fels
Secretary Nicole Lewis
Assistant Secretary Sue Graham
Treasurer Richard Winkler

General committee

Misch O'Keeffe, Zoe Drechsler,
Ben Taylor, Caroline Taylor,
Mark McFarlane (co-opted)

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Scientific Officer Georgie Mollison
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Project Manager Tim Milne
Temperate Woodland Campaigner Penny Paton
Eastern Flanks Grass Ecosystems Officer Bill New
Threatened Plant Action Group Coordinator Tim Jury
Bushland Condition Monitoring Manual Trainer Janet Pedler
MLR Woodland Bird Survey Coordinator Tina Bentz
2007 South East Survey Kerry Gilkes and Georgie Mollison
2008 Tothills Survey Georgie Mollison
Database & Website Project Officer Lesley Parton

Recent NCSSA Bushland Condition Monitoring Training and associated workshops

Bushland Condition Monitoring training has been proceeding apace in the Adelaide and Mount Lofty Ranges (AMLR) and Murray Darling Basin (MDB) regions despite the much needed rain falling in bucket-loads.

During July we returned to the wonderful bushland at Douglas Scrub (the property near Kangarilla owned by Girl Guides SA) and trained a large number of local volunteers and council Biodiversity staff from Tea-tree Gully.



Off to the monitoring site in Pink Gum woodland near Milang
Photo: J. Pedler

Getting a handle on plant families during the inside bit of the 'Get to Know your Local Vegetation' class at Finnis

Funded by the AMLR NRM Board, we conducted the training in the sandy Pink Gum +/- Blue Gum Woodland vegetation, with its incredibly diverse understorey that delighted all present. While the vegetation had obviously suffered from recent drought conditions, the monitoring assessment suggested that a good recovery was at least underway in the overstorey trees. Most of the participants are volunteers in the Willunga area and intend to use their new skills in local bushland, while several people are also members of Friends of the Great Victoria and Simpson Desert Parks and intend to use their skills this month while recording information on Biological Survey sites in the Great Victoria Desert.

A week later, funded by the MDB Natural Resource Management Board and the Community Stream Sampling and Salinity Mapping Project, Bureau of Rural Science, we were training volunteers and technical staff from the lower Murray area near Milang. This took place on Chris and Susan Bagley's property in a delightful patch of remnant Pink Gum Woodland, again on sand. There the effects of drought are still very evident in the canopy health, while the effects of past grazing (before it was fenced) and subsequent regeneration of many understorey species was still decipherable. The effects of substantial grazing by local kangaroos could also be discerned and the group heard some interesting differences between grazing in Australian systems and African systems via some fascinating insights from a South African participant who has only recently started work in Australia.

Another MDB BCM training session will be held on Calperum Station on the 15th and 16th of September. Meanwhile several other associated workshops are underway for volunteers in the lower Murray area focusing on Plant ID and bird and reptile habitat - for more details and to book places contact:

Janet Pedler, NCSSA: phone (08) 7127 4630 or email training@ncssa.asn.au or workshops@ncssa.asn.au

NCSSA Annual General Meeting

Thursday 4th September at 5.30pm for 6:00pm
Benham Lecture Theatre, Benham Building, University of Adelaide

Drinks and light supper provided - All Welcome!

Guest Speaker: Dr Daniel Rogers from the Discipline of Ecology and Evolutionary Biology, School of Earth and Environmental Sciences, The University of Adelaide. Dan is currently completing a postdoc on the topic of the Coorong and Lower Lakes and will be giving a talk on:

Birds of the Coorong - past, present and future..?



Do you want to assist your Society? We have received nominations for the following committee positions:

President: H. Vonow; Vice President: K. Fels; Treasurer: R. Winkler; Secretary: S. Graham; Assistant Secretary: C. Taylor

Committee members: B. Taylor, N. Lewis, T. Bentz, H. Kneebone

BUT we need one more nomination for Committee

We also require assistance with:

Xanthopus - submissions and editing

Activities - organisation and participation

Projects - Steering Committees

General Meetings - helpers and speakers

Your contribution enables the running of the Society

get a grip

HANDS ON ACTIVITIES FOR MEMBERS

Bookings open NOW:

Training Workshop in NCSSA Bushland Condition Monitoring

15th & 16th of September at Calperum Station
in the Murray Darling Basin

To express interest, for further details or enquiries or bookings contact:

Janet Pedler 260 Franklin St, Adelaide SA 5000

Ph 08 7127 4630 or Ph 08 7127 4503

Email: training@ncssa.asn.au cc. workshops@ncssa.asn.au

Another NCSSA Workshop and field session :

Understanding The Habitat Requirements Of Local Reptiles and Birds

Friday evening, 5th September, 2008 7.30pm Strathalbyn Community Centre - Colman Terrace, Strathalbyn

Understanding the Habitat of Local Reptiles – Presenter Tim Milne (with live reptiles)

Understanding Biodiversity through the habitat of Local Birds – Presenter Janet Pedler

Habitat, Tracks & Traces of Birds, Reptiles & Others In The Field

Sunday 7th September, 2008 9.00am - 1.00pm at Cox's Scrub Conservation Park

In the field with Presenters Tim Milne and Janet Pedler exploring habitat and finding tracks & traces of resident fauna, looking at habitat condition and how to protect it.

Enquiries or Bookings Contact: Janet Pedler 260 Franklin St, Adelaide SA 5000

Ph 08 7127 4630 or Ph 08 7127 4503 or Email: training@ncssa.asn.au cc. workshops@ncssa.asn.au

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 9.30 am 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*.

Belair National Park Saturday October 11

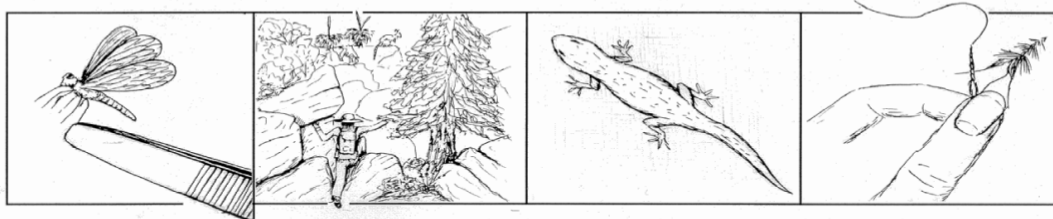
Pitch in by joining efforts to protect and restore habitat for the Leafy greenhood orchid (*Pterostylis cucullata*) at Belair NP. Share in the action by doing a morning's work amongst beautiful Manna Gum woodland.

Pine Point Weekends of October 25 and 26

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

Grange Golf Course Tuesday September 23

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



Scientific Officer's Report: Recent Issues

Feral Peril: The Proposed Introduction of the Savannah Cat to Australia

The Society would like to congratulate The Hon Peter Garrett and the Federal Government for swiftly banning the importation of the Savannah Cat into Australia following the release of the Draft Environmental Assessment of the Suitability of the Import of the Savannah Cat into Australia.

The Society was deeply concerned regarding the suggestion that the Savannah Cat could be imported into Australia, particularly considering that the predation of native species by feral cats is listed as a Key Threatening Process under Schedule 3 of the Commonwealth *Endangered Species Protection Act 1992*.

Considering the ease in which cats have moved from domestic to stray and feral status in the past and their ability to adapt to and exploit many different habitats it is a relief that this cat breed has been denied access to Australia. After conducting some research into the breed it becomes increasingly apparent just how dangerous this particular cat could be to biodiversity in Australia. For example, the observed ability of the Savannah Cat to jump up to two meters (Krautheim, 2007) from a standing start and the fact that these cats can grow up to twice the size of their cousins are both cause for concern. This increased agility and size would enable both the domestic and possible feral forms of this species to prey on a much larger variety of native biodiversity.

Breeders are currently at odds with the Government over the decision and are arguing that the Savannah Cat is expected to have a genetic makeup of 97% domestic cat. This of course is beside the point as it would be almost impossible to regulate in practice. There is also the possibility of natural selection within the cat population, by which the most advantageous characteristics (such as size and agility) become common.

Hopefully this ban on the Savannah Cat is an indication that the Australian Government and the general public are finally learning from our past mistakes of introducing species into the country, and acknowledging their dire effects on biodiversity.

Update on the EPBC Bilateral Agreement

As reported in the Spring 2007 edition of *Xanthopus*, the State and the Federal Government had at that time released a Draft Bilateral Agreement with the Commonwealth concerning the Environment Protection and Biodiversity Conservation Act (EPBC). In a disappointing turn of events this draft has officially been accepted with no apparent regard for the concerns raised by the relevant South Australian non-government organisations.

This Agreement is worrying for many reasons but particularly that while endeavouring to reduce duplication between approval processes, the Commonwealth is disallowing the vital external checks and balances needed for sustainable, unbiased environmental decision making in South Australia.

We firmly believe that it was extremely unwise of the Federal Government to accredit the current South Australian *Development Act 1993*, as this Act is fundamentally at odds with the objects of the EPBC Act. We will endeavour to keep members informed about the use and possible abuse of the agreement in the future.

NCSSA goes Federal

The Society, along with *The Wilderness Society* and the *Conservation Council* recently attended the Federal community forum at Hallett Cove and followed up with a meeting with the Federal Minister for Climate Change and Water regarding the dire state of the Murray River, the Lower Lakes and the Coorong.

The group worked together to produce the following recommendations which were presented to Minister Penny Wong during this one-on-one meeting:

The River Murray is much more than a source of water for Australia's food bowl, more than money in the pockets of our primary producers, more than a home for unique Australian plants, animals and migratory birds from around the world. The Murray is Australia's great river system; it has a central place in our national identity and heritage. The Lower Lakes and Coorong is its estuary, a wetland of international significance.

It is not possible to save the River while letting its estuary die. Australians will not accept the death of the Murray, and South Australians will not accept the sacrifice of the Lower Lakes and Coorong. **The Federal Government must act now!**

We recommend the following action:

- That a guaranteed annual environmental water entitlement be purchased for the Lower Murray Lakes and Coorong and released into the Ramsar site immediately. The size of this entitlement needs to be based on credible science to maintain the ecological health, function and integrity of the Ramsar site.
- It is recognised that flows across the barrages of about 2 gegalitres per day would be successful in reducing the risks of mouth closure⁽¹⁾. This equates to about 730 gegalitres per year, and is the only natural way to flush salt, sediment and agricultural chemicals out of the Murray Darling Basin.
- The flooding of the Ramsar site with sea water must not occur unless it is done in conjunction with the release of fresh water into the Lower Lakes system from the River Murray. To only flood the Lower Lakes with the sea could result in a hyper saline situation akin to the current scenario in the southern lagoon of the Coorong. As described above, the volume and timing of such releases must be based on credible science.
- The viability of pumping hyper-saline water out of the Southern Lagoon of the Coorong and into the Southern Ocean via a temporary pipeline should be assessed immediately.

The Society will be continuing to pursue the protection of these important and unique areas and will keep all members informed via our website or following issues of *Xanthopus*.

Georgie Mollison
Scientific Officer
scientific@ncssa.asn.au

⁽¹⁾ Close, A. 2002. Options for Reducing the Risk of Closure of the River Murray Mouth, MDBC Technical Report, 2002/2.

A time for change....

Contrary to what Mary Poppins would have us believe, cleaning one's room, house or patch of scrub does not generally inspire song. However, even for those that don't give a rat's about, well, rats (and other parts of the natural world) we recognise that keeping our surrounding environment well cared for in the very least contributes to our own personal and collective wellbeing. When in a space that is not our own, we know that as a matter of principle, you take your rubbish with you. To guarantee this, we enact laws which enable the enforcement of these principles. Our legal system evolves as our civilisation evolves, and our growing environmental awareness must be accounted for within our legal framework.

Beneath the red centre of South Australia there are significant deposits of uranium. Some of these deposits lie east of the well-known Olympic Dam in the Frome Embayment of the Lake Eyre Basin (Callen 1975). Laced below the surface are networks of 'paleochannels' or what were once river channels and drainage pathways. These ancient rivers often persist today as subsurface aquifers with characteristic hydrogeochemical properties. Uranium deposited from long-term erosion of the surrounding uplands is mobilised within these aquifers, until it encounters a carboniferous reducing substrate which then causes the uranium to concentrate as deposits along the channels; in what are often described as 'roll-front formations'. Such deposits of uranium are not commercially viable using traditional excavation mining techniques, instead, interested mining companies often opt for the 'in-situ leach' (ISL) mining method. ISL is already used at South Australia's Beverley mine, and the proposed Honeymoon project.

In-situ leach mining involves the injection of either an acid or alkali agent (sulphuric acid is used in South Australia) to mobilise the deposited uranium (and other heavy metals and radionuclides). The 'pregnant solution' is extracted and the uranium separated from the solution above ground. The resulting leachate is reinjected into the pattern and the process is repeated. This mining method has a poor environmental record world wide, with acid ISL being the most problematic (Mudd 2001a,b).

A core requirement of a leachable uranium deposit is that it is isolated, usually bounded above and below by impermeable clay layers or *aquitards*. This allows the injected solution to be constrained to that aquifer without contaminating surrounding, underlying or overlying aquifers and subsurface environments - at least while the operation maintains an appropriate hydraulic gradient. Assumptions of 'closed systems' and 'isolated aquifers' have proved erroneous both internationally and within Australia. Despite trial and full operation at both the Honeymoon and Beverley projects aquifer

relationships and vertical connectivity have proven more complex than first anticipated and are yet unresolved (HR 1998; SC 2000). Additionally, evidence exists that through geological time, even an isolated aquifer is not actually isolated (Hendry & Wassenaar 2004; Ranville et al. 2007; Timms & Hendry 2007 and relevant references therein). Natural systems contain anomalies; indeed modelling and diagrammatic representation of subsurface conditions will always be simplifications of the true state, where minor irregularities can have serious implications and guarantees of no risk cannot honestly be given (Mudd 1998).

The requirement for an isolated system is important for the leaching process, but it is also important in terms of waste disposal. When a uranium deposit has been exploited, the acid leaching solution (complete with increased concentrations of heavy metals and radionuclides and with altered electrochemical properties) is returned to the aquifer *without any legislative requirement to remediate the liquid to background levels*. Instead the liquid radioactive waste is reinjected back into the aquifer and left to 'attenuate' mixing through the surrounding groundwater to settle to background levels. The effectiveness of this process of *natural attenuation* in neutralising all contaminants within the disposal solution is unresolved even by proponents of the process such as Solodov (1998). Indeed it may not be possible for the major element and heavy metal chemistry to return to uncontaminated levels (Mudd 1998) and has not yet been demonstrated for either the operational Honeymoon and Beverley mines (Mudd 2001a). In the United States, all projects using acid-leaching methods have had substantial problems with groundwater contamination and reduction in quality even after multiple attempts to restore the waters to near original conditions (summarised in Mudd 2001a,b).

Much of the ground water in the Lake Eyre Basin is of unsuitable quality for humans and stock, which has been used as an argument against remediation. This is faulty logic, as a developed environmental responsibility in the very least must attempt to return an ecological system to the natural state in which it was found.

Prior to the March 2006 state election, the SA ALP party committed to no new uranium mines. This position was retreated from recently with the granting of final approvals for the Honeymoon mine on 11 January 2008. The Honeymoon project has been considered for some time, with field trials conducted in both the early 1980s and the late 1990s. Under state legislation, a field trial does not require a full environmental impact assessment, although real sulphuric acid is pumped into the groundwater, and real uranium is extracted.

Disappointingly, the previous federal government followed the state and declared no approval for a field leach trial was required under the *EPBC Act 1999*. At the conclusion of the trial, if the ore body is not considered viable the operator can simply reinject the waste liquid, bury the solids waste evaporation pond and *walk away*. If the trial proves successful, it is one additional, largely unregulated step towards another commercial uranium venture.

In South Australia, two field leach trials are currently on the horizon; the Oban site east of Lake Frome and the Beverley Four Mile deposit near the operational Beverly mine. The proposal for Oban is the most advanced, having passed the EPBC process and awaiting state government approval. PIRSA concedes little is known of the groundwater resources of the area (Freeman 2006 in CE 2007). Additionally recent developments within the Arkaroola Sanctuary could see important conservation areas opened up to such unregulated activity. With key uranium resource documents indicating significant prospects in South Australia (Callen 1975) it is plausible that more projects are on the way.

A window of opportunity exists now for the State Government to review these antiquated policies before more 'trial' projects get the green light. If, for all intents and purposes, a project operates as a mine (even if it is called a 'trial'), it should be subject to proper environmental assessment. If too much uncertainty exists, don't proceed. If you do go ahead and make a mess, clean it up. If it costs too much to clean up or indeed is unable to be cleaned up, you shouldn't make the mess in the first place, irrespective of where it is and how many people it affects. It doesn't matter whether it is yellowcake or marshmallows being mined; rather it is a fundamental principle of environmental responsibility.

If you are concerned with this issue at all, I strongly urge you to ask questions and communicate your concerns to your local member or relevant parliamentarian. The critical outcomes to be sought are:

- **To disallow field trials without the necessary environmental assessment process**
- **To implement the precautionary approach to groundwater protection**
- **To require site remediation to base conditions at project conclusion**
- **To disallow uranium mining in key conservation areas**

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XANTHOPUS

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

Copy deadline for the SUMMER edition is **7th November 2008**

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

Editorial Team for this issue: Helen Vonow and Elizabeth Lonie

TPAG Report:

Rediscovery of the Firewheel Groundsel (*Senecio linearifolius* ssp. *linearifolius*) in the Mount Lofty Ranges

While exploring a rocky creek line near Mount Lofty last Easter I came across a species of Groundsel (*Senecio* spp.) that I hadn't seen before in South Australia. The plants were quite tall, growing to over 2m with a slender, spreading habit. Several individuals looked as if they had been wind-thrown or pushed over by falling Eucalypt branches but had continued growing by sending up lateral shoots. Leaves were variable but mostly linear to lanceolate (up to 15cm long), and slightly recurved with more or less entire margins.

Inflorescences¹ were corymbose² with most plants having recently flowered and in seed at the time. A few plants retained current flowers, the standard yellow as for most of this genus in South Australia. Stems were reddish brown in colour, quite different from the green or grey-white stems of other *Senecio* species. The size and habit of observed plants suggest that the species is a longer lived perennial than is usual for this genus.

The population is restricted to a small section (<50m) of a swampy headwater creek kept moist by groundwater seepage. A subsequent visit with TPAG members, and species identification by Adelaide and Melbourne herbarium staff confirmed the species as the Firewheel Groundsel, *Senecio linearifolius* ssp. *linearifolius*, a plant species not collected in South Australia since the 1840's and not listed in the current South Australian Plant Census (Barker *et al.* 2005). It is thought that Firewheel groundsel was possibly once collected in South Australia, just west of Tanunda, by Herman H. Behr during the 1840's (Parsons 2008, Thompson 2004b). A putative collection from the south-east of South Australia has yet to be confirmed (Lepschi *per comm.* 2008).



Interstate, *Senecio linearifolius* ssp. *linearifolius* occurs along the Great Dividing Ranges from Tenterfield in NSW south to Tasmania, and extends to the Grampians and near Portland in western Victoria (Harden 1993, Walsh & Entwisle 1996). In New South Wales habitat for *S. linearifolius* has been described as "mostly wet sclerophyll forest in escarpment ranges" (Harden 1993). In Victoria habitat descriptions vary from "mainly in lowland areas" (Walsh & Entwisle 1996), to "sheltered slopes and gullies, chiefly in taller open forests of mountains" (Costermans 1981), "gully country or on damp forested hillsides" (Cochrane *et al.* 1968), and "wet and damp valley sclerophyll forests" near Melbourne (Gray & Knight 2001). The species has been observed to increase in abundance after wildfire or disturbances (Costermans 1981), and is considered to be adventive³ in New Zealand (Thompson 2004b).

It is likely that the (re)discovered Mount Lofty Ranges occurrence represents another species disjunction of mesic flora more widespread in eastern Australia. Several other co-occurring plant species at the inhabited site exhibit similar continental distribution patterns. Associated plant species include: Messmate stringybark (*Eucalyptus obliqua*); Swamp wattle (*Acacia provincialis*); Blackwood (*Acacia melanoxylon*); Silky tea-tree (*Leptospermum lanigerum*); Prickly tea-tree (*L. continentale*); Red-fruit cutting-grass (*Gahnia sieberiana*); Square twig-rush (*Baumea tetragona*); Fishbone water-fern (*Blechnum nudum*) and Soft water-fern (*B. minus*).

1. Inflorescence: The part of the shoot of seed plants where flowers form groups and which is accordingly modified.

2. Corymbose: A usually flat-topped flower cluster in which individual flower stalks grow upward from the main stem to around the same height.

3. Adventive: Not native to and not fully established in a new habitat or environment; locally or temporarily naturalised.

Given that this species has only been recently redetected in South Australia, its state distribution is likely to be very restricted and confined to high rainfall parts of the Mount Lofty Ranges. Based on current information *Senecio linearifolius* ssp. *linearifolius* would be recommended as Endangered for South Australia due to its restricted distribution, small extent of occurrence in SA (<1km²), and low area of occupancy (<1ha). Population size was small with less than 20 individuals observed along 50 metres of a single gully near Mount Lofty. Further surveys of suitable habitat will clarify the species distribution and abundance.

Several environmental weeds have invaded this habitat, including: Blackberry (*Rubus* spp.); Pussy willow (*Salix discolor*); Hawthorn (*Crataegus monogyna*); Giant reed (*Arundo donax*); Radiata pine (*Pinus radiata*); Tree heath (*Erica arborea*) and Broom species (*Genista monspessulana*, *Cytisus scoparius*). TPAG members have begun controlling these weeds near to the Firewheel groundsel population.

A key part of halting further loss of South Australia's indigenous biota will be active searching and field surveys to determine the presence, population status and habitat condition for the states threatened species.

A concerted effort by field botanists, threatened plant ecologists and skilled volunteers will be essential in obtaining such information. To this end, members of the Threatened Plant Action Group and the Nature Conservation Society of South Australia continue to undertake active biological survey work. This work is vital to increasing our current knowledge of the states indigenous species and to assist their long term survival through management and conservation actions. Hope to see you out there...

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Acknowledgements

Thanks to TPAG members Robert Bates and Tom Hands for participating in field visits and Helen Vonow, Robert Bates, Ian Thompson and Dan Duval for assistance with specimen determination and species information.

TPAG receives funding for program coordination through the Adelaide and Mount Lofty Ranges Natural Resource Management Board and is supported by the NCSSA and the Department for Environment and Heritage.

To get involved please contact Tim Jury on ph. 7127 4166 or tpag@ncssa.asn.au.

Tim Jury
Threatened Plant Action Group Coordinator



Senecio linearifolius ssp. *linearifolius* Photos: Tim Jury

Note for members:

Missing Annual Reports

The Annual Reports for the years 1994-95, 1995-96 and 1996-97 were not published in *Xanthopus*, and we do not appear to have a copy of these in our records. If you have a copy of these, could we please borrow them to take copies. If you can assist please contact the office on (08) 7127 4630 or email ncssa@ncssa.asn.au

WALKS with NATURE

Black Hill Conservation Park

Sunday September 14

This year's Walks With Nature will be in conjunction with the *Great Australian Bushwalk* (GAB). The GAB is a mass nation-wide celebration of walking in Australia's spectacular and treasured natural areas; a day for the whole community to get together to socialise, exercise and realise the importance of their natural environment.

The walk will be held on September 14th between 10am and 2pm at Blackhill Conservation Park

Free 2 hour community walks will be held throughout the morning and participants are encouraged to stay for a picnic and some entertainment after their walk. Existing bushwalking groups are also welcome to join in by holding their own club walk and joining in at the picnic grounds at the end of their walk.

Two walks will be offered:

Walk 1 is a challenging walk up to the summit and across rocky terrain and is of approximately 2 - 2.5 hours in duration.

Walk 2 is a gentler walk to the wildflower garden where walkers can view the many native species throughout the garden and hear about its creation in the late 1940's. This walk will take approximately 1 hour.

All walkers need to register on our website at www.ncssa.asn.au

This year the Department for Environment and Heritage and its *Healthy Parks Healthy People* program is proud to sponsor and support the event.

For 2009 the Nature Conservation Society of SA and the *Healthy Parks Healthy People* program is interested in involving new partners, including bushwalking groups, to contribute to future planning and development of this event.

For more information contact Georgina Mollison on (08) 71274633 or via email at georgina.mollison@ncssa.asn.au

We need you !

We are looking for walk leaders to help enthusiastic walkers to discover natural wonders of this beautiful park. If you know a little about plants, birds, insects, tracks, scats or any aspect of natural history that you would like to share with a captive audience, then this the opportunity is for you! We will provide you with comprehensive trail notes for the walk ~ there is no need to be apprehensive if you are leading for the first time.

There are also many other ways in which you can help us. In addition to walk leaders, we require people to organise participants and leaders at the walk departure site, keep check of departing groups, and even assist walkers to purchase NCSSA paraphernalia (i.e. publications, memberships etc.).

All positions are volunteer based but vitally important to the running of each walk. Please contact Georgina (as above) as she will be happy to discuss the many roles and their individual requirements with you further.

NCSSA 2008 Spring Survey – Tothill Ranges

Saturday 27th September to Monday 6th October

Planning is well advanced for the annual Spring Survey this year of the Tothill Ranges, in the Mid North of South Australia.

The low, rugged range runs more than 30km north-south, lying south of Burra and east of Marrabel, west of Robertstown.

Much of the steep, rocky slopes and parts of the foot of the range (ca 17km) are still clad in native vegetation. Although the ranges have been used for grazing since European settlement much of the vegetation in the best condition has gradually gained full conservation protection under private ownership during the last 15 years.

Whilst some survey work has been undertaken previously in parts of the range, e.g. by landholders, expert field-naturalists, South Australian Ornithological Association (*Birds SA*), Herpetological Society of SA and Department for Environment & Heritage, this survey will provide the first comprehensive overview of the biological assets of this unique range.

This survey is being conducted by your Society in collaboration with, and hosted by, *Bushland Conservation Pty Ltd* which owns a large proportion of the Tothill Ranges.

This survey is being supported by funding from the *Northern & Yorke Natural Resource Management Board*.

How

We will be conducting flora and fauna surveys, using standard Biological Survey of SA techniques, at 16 sites in privately owned land being managed for conservation.

This will include setting pitfall traps and Elliott Traps for mammals, reptiles, frogs and invertebrates, observing bird species present, and identifying and compiling an inventory of the plant species present at each site.

Vegetation condition will also be assessed using the NCSSA Bushland Condition Monitoring method.

NCSSA has invited other natural history organizations to join in the survey, such as Field Naturalist Society of SA, Mammal Club, SA Herpetology Group, Birds SA, Friends of Spring Gully, and the Biological Society.

Their skilled support and participation are vital to the success of this survey, and enables the



Tothill Ranges, March 2007

Photo: Janet Pedler

participation of new volunteers and provides an opportunity for them to learn new skills under expert supervision and go on to become further involved in other conservation groups and/or projects.

We are therefore inviting experienced volunteers to assist with the survey and depending on the level of technical expertise available we can offer other less experienced volunteers a chance to learn while they perform some of the more physical tasks under supervision.

We are also keen to hear from members who would like to gain further experience in the field

Registration is Essential!

Basic bush camping will be available on site, but participants will need to be entirely self sufficient and comfortable with the idea of being under direction and creating the least impact possible while guests on this private conservation land.

For further details and to register interest in attending the survey

Contact Georgie Mollison at the NCSSA Office on: Ph (08) 7127 4633 or email survey@ncssa.asn.au

To help our organisation of this survey please provide the following details:

- Name
- Contact Phone Number
- Postal address
- Email (if you have one)
- Areas of interest and one sentence summary of previous experience

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:

Benham Lecture Theatre, University of Adelaide

Annual General Meeting: Thursday 4th September

Guest Speaker: Dr Daniel Rogers

"Birds of the Coorong - past, present and future..?"

General Meeting: Thursday November 6th

**PLEASE NOTE - OUR NEW OFFICE ADDRESS IS
260 Franklin Street, Adelaide SA 5000**

Phone: (08) 7127 4630