

Across the OUTBACK

DECEMBER 2010

PRODUCED FOR OUTBACK SA

NUMBER 52

Celebrating a bountiful year

Throughout 2010 *Across The Outback* has been celebrating the rain in the region and the renewed vigour this has brought to the South Australian outback's people, plants and animals.

In this final edition for the year we bring you several articles (and stunning photos) on the various plants and animals that have been unearthed or rediscovered.

The Bush Blitz on Bon Bon Station Reserve (p.16) resulted in the collection of hundreds of species of plants, mammals, reptiles and invertebrates – and amongst them there may even be new species.

Meanwhile, the SA Arid Lands NRM Board (p. 6-7) is encouraging the community to look for unfamiliar plants, collect their own specimens, and submit them to the State Herbarium of South Australia, part of the Department of Environment and Natural Resources, for identification.

We also report on the removal of 2500 Date Palms from Dalhousie Springs (p. 8), a cooperative effort by DENR, the SAAL NRM Board and other stakeholders which has seen the return of environmental flows to the Springs.

Spirit of integration

DENR and the SAAL NRM Board have been working cooperatively in the region since the Board began in 2005.

Minister for Environment and Conservation's announcement that the State Government's environment and NRM services will be fully integrated by July 2012 (p.5), means that the outback community will benefit further.

The integration of the DENR and SAAL NRM Board offices in Port Augusta will provide a 'one-stop-shop' for environment and NRM services in the outback, with one number to call and office to visit to find the latest information.

With its focus on pulling together SA Government activities in the one publication, *Across The Outback* has always embraced the spirit of integration and we look forward to bringing the outback community more news next year.

Happy reading!

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Central Bearded Dragon



Successful Australian Rangelands Society Biennial Conference

Craig Baulderstone, Carolyn Woods and David Oag

The Australian Rangelands Society held its biennial conference in Bourke in September which showcased the latest research and findings from landholders and the scientific community.

As we drove through the lush green vegetation in western New South Wales and the North East Pastoral district of South Australia, *Rain on the Rangelands* seemed like an appropriate theme for the conference.

Apart from grazing management, the conference covered a wide range of topics including Aboriginal land management, social resilience, stewardship, feral animal and weed control, and Invasive Native Scrub – or woody weeds in the old language!

A refreshing difference at this conference was a half-day session reserved for landholder presentations (see separate box) but there was also a diverse and interesting representation from the scientific community including young scientists, six of whom presented on the research they have been involved with.



Field trip to Bokhara Plains, Brewarrina NSW

Camels...

Amongst the interesting topics was information on feral camels in the rangelands. Presently camel numbers are estimated to be over one million individuals.

At least eight per cent (or 80,000) need to be removed from the landscape each year to ensure that the population is not expanding. Camels have now been sighted on the Nullarbor Plain.



...cacti...

Invasive cacti were also identified as a major threat to Australia's rangelands. With serious infestations occurring in semi-arid and arid areas of all states of Australia, there is concern that both biodiversity and primary production values will be affected. Control of these spiny weeds is costly and chemical control can be difficult. Currently there are few biological controls.





MISSED THE CONFERENCE BUT WANT TO FIND OUT WHAT WAS SAID?

Papers from the Australian Rangelands Society conference can be found on the Rangelands Australia website www.austrangesoc.com.au

...and EMU™

There was great support for the Ecological Management Understanding™ (EMU™) process. Pastoral Board member Douglas Lillecrapp gave a very interesting and informative presentation on his application of EMU™ to land restoration on Todmorden Station near Oodnadatta.

A number of papers emphasised the importance of trying to retain water on your land through water infiltration rather than allowing it to run-off and cause soil erosion.

An understanding of the land's geomorphology (the study of landforms and the processes that shape them) can provide a baseline for the development of works to stabilise any erosion and limit run-off.

The greater the amount of available rainfall held on your property the more productive plants will be.

For more information on EMU™ contact the SA Arid Lands Natural Resources Management Board 8648 5977 or see p. 10 of this edition of *Across The Outback*. ■

LANDHOLDER PRESENTATIONS A HIGHLIGHT

Ten landholders presented their experiences and the results of land management programs they have implemented on their properties. While several of the speakers were based in regions in the vicinity of Bourke, many of the principles are still relevant to SA and in particular there was a strong message overall of the benefits of integrating land management practices. Here are some of the key points that stood out from their presentations.

GUY FITZHARDINGE (COWRA NSW)

» Guy talked about how traditionally scientific research has not taken into account the deeply integrated system of interaction of social and natural elements.

DOUGLAS LILLECRAPP (TODMORDEN STATION SA)

» Douglas gave a very clear demonstration of the application of the Ecosystem Management Understanding™ (EMU™) process and how the restoration activities are inextricably linked and inter-dependent with his feral animal control and grazing management.

DAVID POLLOCK (WOOLEEN STATION, MURCHISON WA)

» David gave a very entertaining presentation based on the Station's long-term strategies for catchment restoration and long-term sustainability of long-lived species that tend to be disappearing.

ROBERT BARTLETT (TOONBOROUGH STATION, WANAARING NSW)

» Robert talked about management practices passed down over four generations working on the Darling and Paroo overflow country and the importance of the natural flows of the Paroo River for water retention and sustained production. The greatest threat to the natural flows is pressure for development of irrigation and floodplain water harvesting.

DEB KALUDER (NAREE, BOURKE NSW)

» Also in the vicinity of the Paroo, Deb talked about changed grazing management strategies adapted to their vegetation.

ROBYN CADZOW (MT RIDDOCK STATION NT)

» Robyn looked at the economics of rehabilitation demonstrating the work done on the family property with water ponding for greater infiltration in severely degraded areas.

GRAHAM FINLAYSON (BOKHARA PLAINS, BREWARRINA NSW)

» Graham discussed his use of grazing charts and planned agistment grazing for estimating future carrying capacities, albeit in different environments to our SA rangelands.

BEN FORSYTH (THREE RIVERS STATION, MEEKATHARRA WA)

» Ben demonstrated a landscape scale restoration project utilising the EMU™ process. Since starting the project in 2004, implemented strategies include channel calming 'rakes', scrub packing and bunding treatments in gullied floodplains, and rehydration of approximately 50,000 hectares of degraded floodplain.

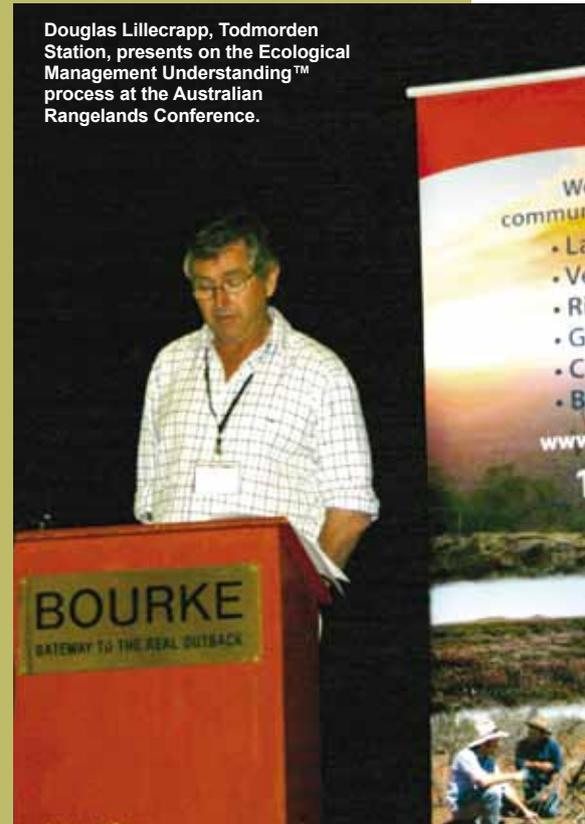
ANDREW SCHMIDT (WALLEN, CUNNAMULLA QLD)

» Andrew used measuring stations on the Warrego River to study a flood event in January 2008. With a saturated river system, waterholes full and no irrigation, it is fascinating just how much water was taken up by the natural environmental systems.

KEVIN MITCHELL (FLORIDA, CANBELEGO NSW)

» Kevin talked about his waterspreading to initiate long term changes in ground cover and restoration of native grassland.

Douglas Lillecrapp, Todmorden Station, presents on the Ecological Management Understanding™ process at the Australian Rangelands Conference.





Seasonal conditions report

David Oag and Chris Turner

Well above average rainfall has continued throughout the pastoral zone with many areas recording record winter/spring rains.

Far North West

The Far North West, including the Oodnadatta region, is experiencing excellent conditions with perennial vegetation responding to the favourable conditions by reshooting and flowering. Large areas of wildflowers including Darling Pea, Sturt's Desert Pea and Poached Egg Daisy have transformed the landscape. Some areas in the far west have started to hay off due to the large volumes of winter grasses in the sand dunes.

Gawler Ranges

Further south in the Gawler Ranges region, exceptional rainfall has provided producers in this region with extensive winter germination of both perennial vegetation and annual herbage. Rainfall has been substantial throughout the Gawler Ranges with most dams now full or nearly full. Stock water supplies in this region should now be secure through the summer period and into next year.

Far North East

The Far North East of the state continues to receive ongoing rainfall with some locations approaching record rainfall recordings. Water is continuing to flow into Lake Eyre from the Cooper Creek and is still flowing over the causeway

at Innamincka. Water levels at the causeway subsided to below the crossing in early October but subsequent rises have seen the causeway level increase during November with further rises expected during late November.

Flinders Ranges

The Flinders Ranges area also continues to benefit from thunderstorms with Leigh Creek having recorded 448mm this year (average 210mm), already 46mm above the highest recorded at Leigh Creek (402mm in 1989) where records are available since 1983. Creeks in the Flinders have flowed on many occasions this year compared with the last decade.

Consistent flooding should allow for the recharge of local shallow aquifers throughout the ranges which have been showing the signs of a prolonged drought with many shallow wells and bores drying up in the last few years. Additionally, up to 65mm of rainfall was recorded on the eastern slopes and plains of the ranges on the night of Friday 12 November 2010.

North East Pastoral

In the North East Pastoral district, which was severely affected by dust storms in October 2009, the response has been exceptional with areas swept bare last year now covered with dense vegetation. The comparatively wet winter this year has seen a continual recovery in this district with sand dunes now supporting extensive areas of wildflowers, including Koonamore Daisy, winter grasses and herbage.

Spear Grass has germinated extensively over a wide area of the North East. While Spear Grass is quite low in protein (6 per cent crude protein) and digestibility levels, it is however providing significant soil surface protection. Beneficial grasses

PASTORAL BOARD AND PROGRAM CONTACTS

The Pastoral Board of SA
Soil & Water Environs Building, Entry 4,
Waite Campus, Waite Road, Urrbrae, SA
(GPO Box 1047, Adelaide SA 5001)

General enquiries
Phone (08) 8303 9751
Fax (08) 8303 9320
Freecall 1800 678 447

Presiding Member
Michael McBride 0427 087 966

Program Manager
Glenn Gale (08) 8303 9345

Pastoral Board matters
Glenn Gale (08) 8303 9345

Public access to pastoral lands
David Oag (08) 8648 5174

Lease assessments
Craig Baulderstone (08) 8303 9752

Lease inspections and tenure
Chris Turner (08) 8303 9755

PASTORAL BOARD 2010 MEETING DATES

Meeting 124 Thursday 15 December
Adelaide or Pt Augusta

such as Wallaby Grass, Bottleshawers and Native Millet have all germinated throughout the region thus providing excellent stock fodder.

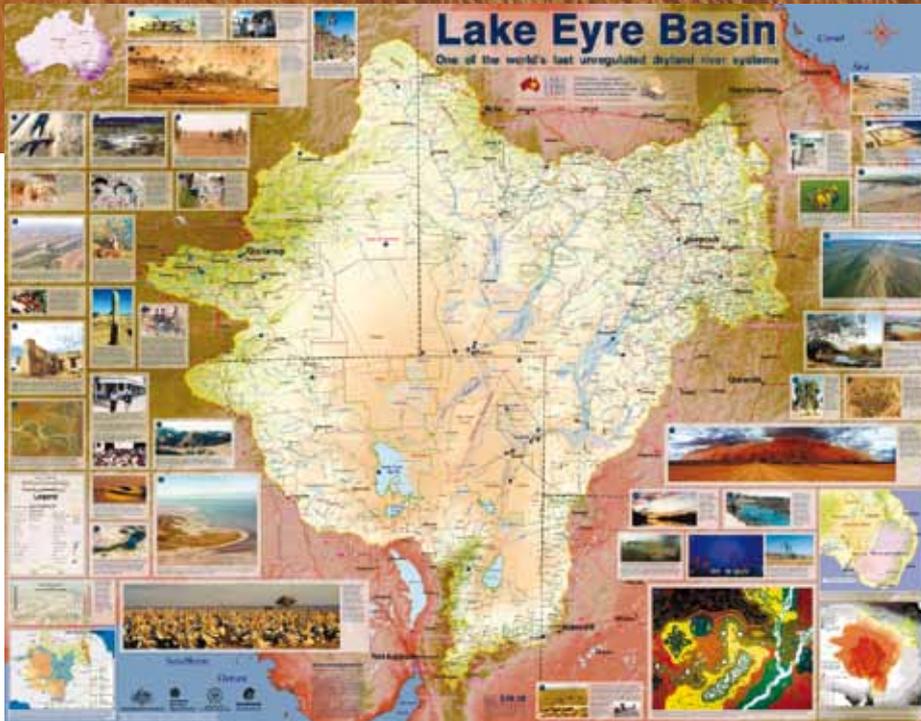
Perennial vegetation such as Bladder Saltbush, Pearl Bluebush, Satiny Bluebush and Low Bluebush are all responding to the favourable conditions with extensive flowering and recruitment recorded.

Eastern

The Eastern districts to the east of Burra and south of the Barrier Highway (and some areas north of Coober Pedy) did not receive early autumn and winter rains to the same extent as the rest of the state. These areas have however experienced significant late winter and spring rains which has provided ideal conditions to germinate both perennial and annual vegetation. The cool periods currently being enjoyed throughout the state has meant that much of this annual vegetation has retained moisture well into November. ■



Koonamore Daisy



Celebrating the Lake Eyre Basin

Over 70 people came together at a conference in Alice Springs in September to reflect on the past and to imagine and construct possible futures for the Lake Eyre Basin.

The 5th Lake Eyre Basin Biennial Conference was attended by land managers, researchers, natural resource management groups, conservationists, government officers, climate specialists, ecologists, Basin residents, historians, shire council members, and representatives from the pastoral, tourism, mining and petroleum sectors.

Key threads of discussion included visions for better integration at all levels; a desire for preventative rather than rehabilitative natural and cultural resource management; and positive communication and promotion of the Basin's natural, cultural, economic and social values and assets.

New poster

Flanking the discussion groups, a spectacular wall-sized hanging of the 2nd edition of the Lake Eyre Basin Poster Map became the central visual element of the conference.

It is a powerful illustration of the Basin's most significant historical, cultural, hydrological, economic and biological features.

The large, colourful poster (1108mm x 867mm) is surrounded by more than 40 photos and diagrams, with loads of information about rivers and wetlands, plants and animals, climate, terrain, towns, homestead names, Aboriginal lands, parks and reserves, land use, the management of natural resources in the Lake Eyre Basin, and more.

The poster was produced through a partnership between the LEB Ministerial Forum (ministers from the South Australian, Queensland, Northern Territory and Australian governments) and Desert Channels Queensland Inc, building on the strong themes and depth of information in the original edition.

Proceeds from the sale of the new LEB Poster Map will go towards activities that raise awareness of this unique part of Australia.

Get your copy!

Posters are available from Desert Channels Queensland in Longreach

07 4658 0600

\$25.00 for Basin residents; \$40.00 for non-residents

(plus postage & packaging) ■

ENVIRONMENT AND NRM INTEGRATED BY 2012

Minister for Environment and Conservation Paul Caica announced in November that State Government environment and natural resources management services will be fully integrated within two years following a comprehensive review of service delivery.

In July this year, the Department of Environment and Natural Resources was established, with the new department having responsibility for environment and NRM services across the state.

The vision of the new department is to support a sustainable and prosperous South Australia where resources are used wisely and a healthy environment is the basis of a good quality of life for all South Australians.

Over recent months, DENR and NRM Board staff have undertaken a review of existing delivery arrangements and spoken to a wide range of stakeholders including the Farmers Federation, Local Government Association and the Conservation Council, to determine how to ensure the best possible future management of the State's natural resources.

Mr Caica said a plan has been developed to guide the process and ensure environment and NRM services will be fully integrated by July 2012.

One of the most obvious changes will be that one Regional Manager will head up environment and NRM operations in each region, with a more streamlined community interface and, where possible, single points of contact for the community.

DENR will work closely with the eight NRM Boards to align regional boundaries, redesign organisational structures, improve relationships with the community, clarify governance arrangements, integrate planning with investment strategies and streamline corporate and business services.

There will also be more collaboration between DENR, NRM Boards and local government bodies regarding natural resources management issues and priorities.

Mr Caica said NRM Boards will continue to play a central role in engaging communities and working with the State Government to decide priorities, develop regional plans, help resolve difficult challenges and monitor natural resources.

DENR and the NRM Boards will continue to embrace community input, local expertise and knowledge, and work with the strong community networks already established.

Unearthing new plants in the outback

Greg Patrick, Pest Management Officer, SAAL NRM Board & Robyn Barker, State Herbarium of SA, DENR

With the outback experiencing the best rainfall in years, those who work on the land or with an interest in the outback and its natural environment may be seeing plants that they haven't seen before or that they haven't seen for a long time. The plant may be rare or even new to science or it may represent a weed that has been able to increase its spread because of the good year. The SA Arid Lands Natural Resources Management Board and Department of Environment and Natural Resources bring together several articles which reveal just a few of the plants the rain is unearthing – and how you can help unearth more. ■

INVASIVE WEED DISCOVERED IN THE FLINDERS...

One of Australia's 20 worst weeds was recently located in the Flinders Ranges by a contractor undertaking weed inspection.

Frank Bernhardt was inspecting previous work carried out on weedy Oleander in Parachilna Gorge when he recognised Boneseed (*Chrysanthemoides monilifera* ssp. *monilifera*) seedlings.

After reporting his find to the SAAL NRM Board, staff were quick to act conducting a survey along the creek and removing half a dozen seedlings.

The Board also notified the landholder supplying him with factsheets and information to assist with Boneseed identification and control and will be contacting landholders downstream to be on the lookout for the weed on their properties.

With a recent flood passing through the Gorge and possibly moving seed further downstream, the site will be resurveyed in Spring next year to check for any new seedlings.

Introduced from South Africa as a garden plant, Boneseed is an aggressive invader of native scrub and occurs over a wide area of southern Australia.

It is normally found in higher rainfall regions and is unlikely to survive outside of the Parachilna Gorge in the arid regions where it may have arrived as a seed on a person or vehicle.

A previous collection of Boneseed in the area was made in 2002 and is held in the State Herbarium of South Australia.



Boneseed

...A PRICKLY FIND IN STRZELECKI CREEK...

A collection of the weed *Neurada procumbens* from the Strzelecki Creek region this year indicates that it has spread considerably in the region.

The first record of this species in Australia was in 2000 when it was found growing along roadsides in the Andado area of the Simpson Desert.

It was then recorded near Purnie Bore in the Simpson Desert National Park in 2004 and since then efforts have been made by the Friends of the Simpson Desert to eradicate it in this area.

It is a common plant of the deserts of northern Africa through to India where it is a popular fodder plant for camels, sheep and goats.

When young, the prickly fruits are prized by man and beast for the sweet juice that they produce, but when older they become perfect dispersal objects since they stick to animals, to footwear, clothing and bedding, and also to car tyres.

If you think you have seen this plant, report it to the SAAL NRM Board's Pest Management Officer 8648 5977.



Bob Bates

Neurada procumbens

...AND A RARE SPECIES OF NATIVE TOBACCO?

A recent collection from the Strzelecki region has prompted the re-evaluation of a Tobacco species.

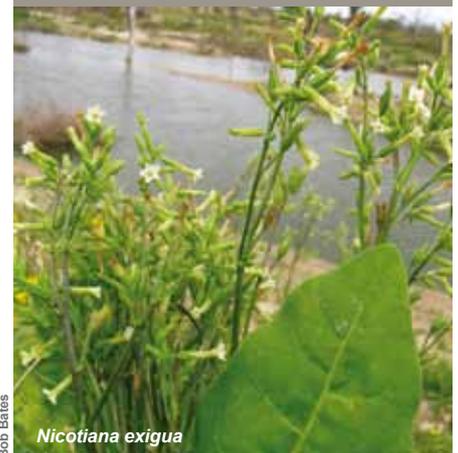
Nicotiana exigua was first described by an American botanist in 1935 based on just one collection from the Dalby area in Queensland.

However, Australian botanists were unconvinced that it was distinct and treated it as one of the more widespread southern species of Native Tobacco (*Nicotiana suaveolens*).

Earlier this year collector Bob Bates made several collections of a 'different-looking' tobacco species from the Strzelecki Creek area.

On examining the specimens back at the State Herbarium in Adelaide, botanist David Symon came to the conclusion that these collections were of the little known *N. exigua* and that it really is different from *N. suaveolens*.

Now there remains a lot to be found out about this species. Is it more widespread? Does it only occur in these wetter years? Is it recognised as something different by local Aborigines and, if so, is it considered a good or bad tobacco for smoking purposes?



Bob Bates

Nicotiana exigua

Collecting plant specimens

The SA Arid Lands NRM Board recently received a request from Audrey Sheehan of Moolawatana Station for information on how to properly collect a plant specimen for the herbarium. Robyn Barker, Senior Botanist at the State Herbarium of SA, DENR, provided the following tips.

Plant specimens vary depending on what you are collecting but a rule of thumb is to collect enough material to be included within a single folded sheet of the *Advertiser*.

Newspaper sheets are good for drying the specimens and they are also a good indication of the maximum size of a specimen.

Be generous when taking a sample and bear in mind that if there are flowers and fruits present then it is more likely your plant will be able to be identified.

Specimens from larger trees or shrubs can be taken from a number of plants to show variation, but if you do this then still take a generous specimen and place individuals in different folders.

For smaller plants, several whole plants can usually be accommodated within a newspaper page, but again, don't be afraid to make up another folder if you wish to show some extra variation. You do need to make sure that you have the appropriate permissions to collect plants and also that you only ever remove specimens if there is a large population present.

Now you just need to place your specimens in a press or under a weight and let them dry. Those that

are more succulent may need to have their papers changed regularly.

The documentation accompanying the specimen is just as important as the collection.

The specimen should include details of where it was collected, who collected it, when it was collected and any associated information about the plant (height of plant, flower colour etc.).

Photographs of the plant may assist in identifying the plant, but are not essential.

Specimens can be sent to the herbarium for identification.

Once identified, specimens will be databased and contribute to national and South Australian distribution maps accessible via www.flora.sa.gov.au

For further details on making collections for the State Herbarium download a brochure www.environment.sa.gov.au/science/pdfs/collecting-plants-brochure.pdf or for information on situations where collecting permits may be required visit the Department of Environment and Natural Resources website www.environment.sa.gov.au ■

HAVE YOU SEEN AN UNFAMILIAR PLANT?

Residents of the outback can play an important role in discovering ephemeral, rare and threatened, or invasive plants. If you notice a plant that is new or out of place please make a collection and contact the SAAL NRM Board 8648 5977 or the State Herbarium of South Australia 8222 9311 to confirm its identity. Please send specimens to the State Herbarium of South Australia, PO Box 2732, Kent Town, SA 5071.



A MUSEUM FOR OUR PLANTS

Residents of the outback region who make plant collections for the State Herbarium of South Australia will find themselves in good company and part of a tradition dating back 150 years.

Based in Adelaide and part of the Department of Environment and Natural Resources, the State Herbarium of South Australia is the key centre for knowledge and information on South Australia's native and naturalised plants, algae, fungi and lichens.

It maintains a collection of one million dried plant specimens, mostly from South Australia, with some specimens dating back to the first European contact.

Earliest collections from the outback were those of explorer Charles Sturt in 1844 when he visited the Cooper Creek area and botanist Ferdinand Mueller from the Flinders Ranges in 1851.

Later specimens came from explorers such as Babbage, Hergott, Warburton, McDouall Stuart and Giles all of whose collections are, for historical reasons, in the herbarium in Melbourne.

Since those times there have been numerous contributors to the State Herbarium collection mostly by collectors associated with government bodies, including the Pastoral Board, and universities.

Each record is evidence of that particular species occurring at a fixed time and place and increasingly older herbarium specimens are being used as a gauge of what existed in the past.

With the ability to extract DNA from dried specimens it is possible to compare changes in genetic makeup over time or work out which particular form of a species should be used in revegetation projects.

Please consider emulating those early explorers and contributing to the time capsule maintained at the State Herbarium of South Australia for all our benefit.

Stopping the spread of African Rue

Lisa Stevens, Assistant NRM Officer

Community members and travellers in the North East are being urged to report sightings along roadsides of the invasive weed African Rue to the SA Arid Lands (SAAL) Natural Resources Management (NRM) Board.

African Rue is a declared weed under the *Natural Resources Management Act 2004* and must be actively controlled on properties and roadsides in the SA Arid Lands NRM region.

The appeal for community assistance in preventing the spread of this weed is an outcome of a public meeting organised by the SAAL NRM Board and held at the Yunta Telecentre in October to discuss African Rue control management strategies.

The public meeting was attended by representatives of the SAAL NRM Board, Department for Transport, Energy and Infrastructure (DTEI), SA Murray-Darling Basin (SAMDB) Natural Resources Management (NRM) Board, and contractors from Epic Energy, who each informed the group about their current African Rue control management programs.

A native of North Africa, African Rue (*Peganum harmala*) is an invasive weed currently occurring in a dense area north of Yunta where it extends sparsely for considerable distances. The weed is slow to spread to new areas but could potentially grow throughout SA.

DTEI stated that African Rue along the roadsides and drainage lines of the Barrier Highway is under control and there have been no recorded sightings in this area since early October.

DTEI are also continuing their spray operations along the Arkaroola road.

However it was noted that the weed is spreading west of Baratta Road.

African Rue has also been located at five sites in and around Terowie, in the SAMDB NRM region, with another possible sighting along the railway line at Paratoo.

Core infested areas need to be contained and managed but small and/or isolated areas can be eradicated if dealt with appropriately and consistently.

Epic Energy has a gas pipeline that passes through the core infestation with their African Rue control works directed by a management strategy. They are investigating the installation of a wash down bay for their vehicles to reduce seed spread.

The group resolved to continue its efforts in collaborating with pastoralists and the community; combining maintenance and spraying; and raising community awareness.

Further information

To report a sighting or to find out more about African Rue contact the SAAL NRM Board 8648 5977 or download a factsheet on African Rue control from the website www.saalnm.sa.gov.au



2500 DATE PALMS REMOVED FROM DALHOUSIE

The completion of the second phase of Date Palm removal at Dalhousie Springs is a massive win for the spring environment with the return of environmental flows and recolonisation by sensitive wetland fauna.

Date Palms (*Phoenix dactylifera*) are voracious consumers of water with individual palms using as much as 180,000L of water per year.

They also wage chemical war on other plants in the area by releasing toxic substances into the soil and water that suppress the growth of rival plants.

This kills the phytoplankton which causes the death of nearly all of the fauna associated with the spring.

At Dalhousie Springs this has resulted in the localised extinction of several endemic species in springs badly affected by Date Palms.

As a result of a partnership between the SA Arid Lands NRM Board, National Water Commission, Traditional Owners and the Department of Environment and Natural Resources just under 2500 palms have been removed from the springs since removal efforts began in 2005.

This has seen the return of environmental flows of between 307 and 442 ML per year which is close to the flow of the Bubbler mound spring. More importantly the recolonisation of springs by sensitive wetland fauna, including the endemic Dalhousie Yabbie, has begun.

Further information

Travis Gotch, GAB Project Officer
8648 5977



African Rue flowers



Sponsorship for rangelands conferences

Lisa Stevens, Assistant NRM Officer

The SAAL NRM Board is always keen to help support landholder to attend various rangelands events. This year we were pleased to provide support for Douglas Lillecrapp (Todmorden Station) to attend the Australian Rangelands Society conference in Bourke, New South Wales.

Doug presented his experiences as a participant in the Board's Ecosystem Management Understanding project – an informal approach to sustainable rangeland management incorporating landholder experience and knowledge with scientific expertise – and how the planning concepts have assisted him to undertake rehabilitation activities on his property.

His talk shared a common theme with the other pastoral presentations which stressed the value of good stock management and the benefits of managing the country based on ecological as well as productivity values.

Doug said the conference was a great opportunity for knowledge exchange between pastoralists and scientists.

'It was great to see everyone together and knocking down those boundaries for the common good of the rangelands.'

He was also pleased to share his experiences with others and to see the water on other areas of the rangelands as he flew over. The keynote address by John Taylor (Rangelands Australia) on the skills crisis in rangelands management particularly resonated with him.

The Australian Rangelands Society conference is held every two years. It is one of the few events that focuses directly on NRM and productivity issues that impact Australia's rangelands and offers an insight into the latest rangelands research, exposure to international speakers, and a networking opportunity.

Interested in going to Argentina?

The 9th International Rangelands Conference is being held in Rosario, Argentina from April 2-8 with the theme *Diverse Rangelands for a Sustainable Society*. The convenors have already received over 600 papers and it promises to be a memorable and educational experience. For more information on the Conference visit www.irc2011.com.ar/en/

If you are interested in sponsorship to attend please contact the Board's Community Engagement Team 8648 5977 ■



WELCOME ROS CONSOLI

The SAAL NRM Board welcomes Ros Consoli to the position of Aboriginal Engagement Officer.

Ros encourages, informs and supports Aboriginal communities and individuals to participate in NRM activities in the region. This includes activities such as feral animal control, management of weeds, and land rehabilitation as well as supervising on ground works and projects delivered on Aboriginal owned and/or managed land.

The role also identifies training opportunities and coordinates capacity building within communities by working closely with other government agencies and the Aboriginal Lands Trust (ALT).

Ros has worked with Aboriginal people and communities for around 12 years, previously working in tourism in the Kimberley and in health in Central Australia and the Barkly region.

Ros spent the last two years walking with her husband and camels from Darwin to Melbourne, raising money for the Children First Foundation to help save the lives of children that need critical life saving operations.

Contact Ros

If you would like information on how the Board can support your NRM project contact Ros 8648 5977

SAAL NRM BOARD 2011 MEETING DATES

Board Meeting 35 23 February 2011
Port Augusta

Rehabilitation works on Bon Bon

Janet Walton, NRM Officer

The SAAL NRM Board has been involved in a trial of the Ecosystem Management Understanding™ pilot project on Bon Bon Station Reserve where one of the key outcomes is to identify a number of sites for rehabilitation to restore natural landscape function. NRM Officer Janet Walton paid a visit to see how rehabilitation of one of these sites, the Old Stuart Highway, may progress.

The continued exacerbated processes of erosion have severely degraded some sections and stripped the country of much needed moisture, soil nutrients, organic matter, and topsoil.

Strategic soil conservation interventions along sections of the Old Stuart Highway will ensure natural landscape function is restored. Together with Glen Norris (Bon Bon Manager), Hugh Pringle (EMU™ Landscape Ecologist) and Col Stanton (Soils Conservation Officer NRETAS Alice Springs) identified the most appropriate techniques and key intervention sites to restore natural landscape function.

The problem

A legacy of the past, inappropriately placed drains and windrows along the road edges change the natural flow of water across the landscape.

As a result the productive country is literally being sucked dry; vegetation is dying and the vegetation composition is changing with more Cannonball (*Dissocarpus paradoxus*) and *Senna* species and less palatable grass and shrub species.

The middle of the Old Stuart Highway has now become the lowest point in the landscape, and consequently overland flow is being siphoned from the surrounding floodplain onto the old road before it has a chance to soak into the surrounding soils.

The windrows on the uphill side of the road act like catch drains; they



Col Stanton stands in an active gully head, along the Old Stuart Highway

collect overland flow increasing momentum and channelling runoff parallel to the road to the weakest and lowest point of the windrow.

The force of the water breaks through the windrow and scours out the road creating an active gully head.

The gully head is continually scoured by fast moving water creating angry, active lateral gully heads which rampantly chew their way through the path of least resistance, in this case the sweetest, most productive country.

Recommendations

On the whole, backfilling of poorly located drains, grading to flatten windrows, and the installation of strategically located whoa boys will slow and spread overland flow and retain water in the landscape longer.

Lateral gully heads will need to be battered back and the plug (a check bank) put back in the system.

We will report in a future edition on the effectiveness of the remedial works.

Further information Janet Walton, NRM officer 8648 5977 ■

BON BON STATION RESERVE

Bon Bon Station Reserve is a former sheep-grazing property near Coober Pedy. It is owned by Bush Heritage Australia which is a non-profit conservation organisation dedicated to protecting Australia's unique animals, plants and their habitats

ECOSYSTEM MANAGEMENT UNDERSTANDING™

The Ecosystem Management Understanding™ process or EMU™ is an informal approach to sustainable rangeland management incorporating landholder experience and knowledge with scientific expertise. Landholders learn to identify and read landscape processes, condition and trend and apply this information to daily management practices.



FURTHER INFORMATION

For a full list of members for each NRM Group, to find out which district you belong to, or for NRM Group meetings, agendas and minutes, visit the SAAL NRM Board website: www.saalnm.sa.gov.au/AboutUs/OurNRMDistrictGroups.aspx

NRM Groups are the on-ground contact for the Arid Lands community, feeding district information or concerns relating to the natural resources in the region up to the SA Arid Lands Natural Resources Management Board. There are currently five NRM Groups operating at the district level each with a maximum of seven members.

NRM GROUP CHAIRS

North Flinders	Leonard Nutt
Gawler Ranges	Sandy Morris
Marla-Oodnadatta	Douglas Lillecrapp
Marree-Innamincka	Janet Brook
Kingoonya	Julie Mould

News from Marree-Innamincka

The quenching rains and floods certainly made for some difficulties with face to face meetings this year for our group! Thankfully teleconferences assisted us to keep our varied projects moving in the right direction.

Group changes

Lisa Taylor was appointed as the Group's NRM Officer in 2010. Another appointee to the Group was Maree Morton (Innamincka Station). If you are interested in becoming an NRM District Group Member please contact the SA Arid Lands NRM Board.

Great Tracks brochure

An informative and concise brochure for travellers on the Strzelecki and Birdsville Tracks is close to completion with the final version due in early 2011. This full-colour, 12-page brochure promises to be a useful resource and includes a summary of history and origin; environment and ecology; contemporary landuse; maps showing points of interest; and contact information.

Innamincka Causeway

A project is underway to improve fish migration via the Innamincka Causeway at times of decreased flow while maintaining functionality of the weir. The first stage is to cost the design of a rock ramp. Ironically several planned field studies with the design consultant and the Innamincka community have been affected by floods and rain! As soon as favourable flow conditions return a subsequent event will be scheduled. The next stage will involve securing funding for on-ground works to commence. The project is a collaborative effort between the NRM Group, PIRSA, SARDI, SANTOS, and DENR.

Exclosure site monitoring

The previous Marree Soil Conservation Board set up five exclosure sites along the Birdsville Track, three in 1993 and two in 1999. These have been monitored a number of times in the past, providing a historical record of vegetation changes. A consultant revisited these sites during 2010 with a report expected soon. The Group is proposing to monitor these sites in the midst of the recent floods which should help fill present knowledge gaps with respect to species diversity during 'boom' times.

Dumpy level workshop

A dumpy level workshop with a practical component utilising a grader was held on Murnpeowie Station in June. The workshop facilitator demonstrated skills in the set up and use of dumpy levels to show participants how this equipment can be used to plan projects such as contour furrowing, grading of tracks, land rehabilitation and other infrastructure works.

Tracks and Scats

Workshops were held at Dulkaninna and Marree to help school students and locals record and distinguish between the tracks of a range of animals. The workshops, run by Katherine Moseby and Reece Pedler, utilised the new identification manual *Tales in the Sand*.

Further information
Contact our NRM Officer
Lisa Taylor 8648 5977 ■

NEWS FROM THE GAWLER RANGES

The Gawler Ranges District NRM Group has been involved in a variety of projects in 2010 including the successful removal of a feral camel population that had been an issue for some time; an accredited course for front end loaders which attracted strong interest from the district and further afield; and an informative grant writing workshop which expanded the Group's skills in sourcing funding opportunities. The Group also encouraged the free grader, dumpy and seeder level workshop held at Yudnapinna with earth mover and university lecturer Daryl Hill sharing his extensive knowledge on track and drain design and how to set-up and operate a dumpy level.

The Ecological Management Understanding™ project has also been well received with one of the participants based in the district and others showing interest.



Innamincka Causeway



Have your say on Aboriginal Act

A consultation paper on the review of the *Aboriginal Lands Trust Act 1966* was released in November by Minister for Aboriginal Affairs and Reconciliation Grace Portolesi.

The review of the *Act* is already underway and the consultation paper released brings together the initial round of public consultation and sets out the vision for a modern and reinvigorated Aboriginal Lands Trust.

The review of the *Act* is an important step towards a stronger, independent, effective Aboriginal Lands Trust.

The public consultation period closes on 31 January 2011.

Further information www.aboriginalaffairs.sa.gov.au/alt/introduction.html ■

Child support helpline

Providing financial support for children can be complex and raises many issues that can affect the lives of parents.

Free independent legal advice can be obtained at the Legal Services Commission from staff who have special expertise in this area.

Advice is provided to the public by telephone or face to face appointments about a range of matters, including parentage disputes and DNA testing; completing Child Support Agency forms; changing your Child Support Assessment in Special Circumstances; Child Support Agreements; Objections and SSAT Appeals; Adult Child (over 18) Maintenance; Overseas Child Support; and Spousal Maintenance.

Further information 8463 3576 or www.lsc.sa.gov.au ■

2011 kangaroo quotas

The Department of Environment and Natural Resources have analysed the data from the annual kangaroo survey and quotas have been set for next year:

- » Red Kangaroo 213,920 (up 4 per cent from 2010)
- » Western Grey Kangaroo 105,000 (up 11 per cent)
- » Euro 59,500 (down 9 per cent)

Commercial Harvesting Authority offers for 2011 were mailed in November with offers based on the density of kangaroos within each harvest sub-region; the size of each property; and the suitability of habitat for each kangaroo species within each property.

The offers are made in November each year to allow sufficient time for the authorities to be issued, and tags purchased and nominated to the kangaroo field processor, so harvest

can occur in January if required. To achieve a seamless transition from one year to the next, new commercial harvesting authorities will need to be in place if harvesting is to continue in the New Year, as all authorities expire at the end of December.

Landowners are reminded to validate their offers and return them as soon as possible if they wish to harvest kangaroos as part of their management of total grazing pressure in 2011.

Further information
Tom Gerschwitz, Operations Manager, DENR Kangaroo Management, 8648 5319 ■

TOURISM NEWS

The Flinders Ranges National Landscape Experience Development Strategy kicked off with a meeting between the consultant and the steering committee in late November. The process thereafter will involve meetings with tourism operators and other stakeholders across the region. This program is definitely raising the profile of the Flinders Ranges within the national tourism industry. FROSAT urges everyone interested in the future of tourism in the region to attend.

Further information

Peter Cahalan
Regional Tourism Manager
Flinders Ranges and Outback South
Australia Tourism (FROSAT)
8641 3455

BECOME A FROG LISTENER

South Australians can get involved in a program designed to further our knowledge of frogs.

Frog Atlas allows you to learn about some of Australia's frogs, while helping to build an interactive map of frog distributions.

Frog calls vary between species and provide a simple means for gaining information about where frogs are found. By learning to identify frog calls and contributing them to a central, mappable site we can build a picture of what is happening to our frogs.

Further information

For more information and to register to become part of the frog listening team www.frogatlas.com.au



Draft livestock impounding bill 2010



Public comments are being sought on legislation that has been developed to replace South Australia's outdated 90-year-old *Impounding Act 1920*.

The *Act*, relating to the impounding of straying 'cattle', reflects dated circumstances and employs terminology generally acknowledged to be out of date.

Following a review of the *Act* new legislation, the Livestock Impounding Bill 2010, has been drafted. Written submissions are requested by 28 January 2011.

Further information

The draft bill and further information may be obtained from www.pir.sa.gov.au/impounding or contact John Cornish 8207 2361 ■

New national biodiversity conservation strategy

The Australian Government has released Australia's new strategy for biodiversity conservation on behalf of the Natural Resource Management Ministerial Council.



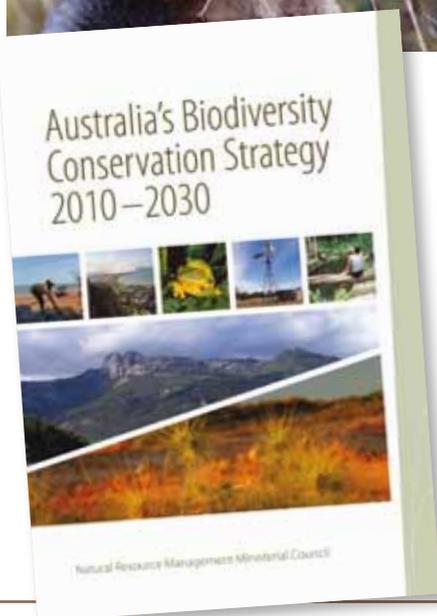
Bronwyn Dutch

Australia's Biodiversity Conservation Strategy 2010–2030 sets 10 targets to measure the nation's progress in protecting our natural environment.

The strategy sets a new standard for addressing the challenges facing our biodiversity, with Australia now one of very few countries to have committed to national measurable targets for biodiversity conservation.

The South Australian Government had a central role in the development of the Strategy with Allan Holmes (Chief Executive, Department of Environment and Natural Resources) chairing a national task group.

Meanwhile DENR is making great progress in implementing the state's biodiversity conservation strategy, *No Species Loss*, which was released in 2007. Highlights include recovery plans for the Black-footed Rock Wallaby (Warru) and 12 species of rare and threatened flora in the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands. ■



ARE YOU ON THE ACROSS THE OUTBACK MAILING LIST?

Across The Outback is a free publication that is issued to over 1000 individuals or organisations with a stake or interest in the Arid Lands region.

If you would like to join the mailing list or update your details please contact the Editor jenny.barker@sa.gov.au.

Please include your name, mailing address and email address (to receive electronic notification).

CALL FOR CONTENT

Across The Outback
February 2011 edition

Content due by COB
Friday 11 February 2011

Contact the Editor (details on back page) for further information.

THIS SPACE COULD BE YOURS!

Across The Outback remains committed to reporting on government activities in the region in the single publication and we welcome contributions from other agencies. We'd also like to hear from non-government organisations, Progress Associations or Friends groups operating in the area. Tell us what you're doing to support your community and if we have space we'll try to accommodate you.

For further information contact the editor jenny.barker@sa.gov.au or 8463 3354. A fee per article may apply.

New plan to protect APY Lands plants

Matthew Ward, Regional Ecologist – Aboriginal Lands

The release of a new management plan establishes an ongoing scientific monitoring program for rare and threatened flora in the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands, the first of its kind for the plants of the region.

The *Management Plan for Rare and Threatened Flora for the APY Lands* covers 12 species associated with the ranges and communities of the APY Lands, including the Everard, Indulkana, Mann, Musgrave and Tomkinson Ranges, and reveals that many plant species in the region are threatened by inappropriate fire regimes – particularly large, hot wildfires – and over-grazing by camels, donkeys and cattle.

The spread of Buffel Grass (*Cenchrus ciliaris*) is possibly the most serious threat to flora and fauna across the region with a comparison of photopoints taken between 2000 and 2009 showing a complete removal of native vegetation through Buffel Grass invasion, probably following a large disturbance such as fire.

The Plan, which draws strongly on the work and local knowledge of Anangu rangers and community members, revealed a number of positive highlights including:

- » the discovery of two new plant species – a *Goodenia* in the Tomkinson ranges and a *Caesia* lily in the Mann Ranges
- » an increase in the number of known populations of the nationally vulnerable Naked Mintbush (*Prostanthera nudula*)

from 2 to 5, including a 10 kilometre range extension

- » the location of now regionally rare long-unburnt vegetation in the Mann Ranges, a potential area for reintroduction of Brush-tailed Possums.

Now the hard work begins for communities and stakeholders to ensure that management of these plant species is implemented and leads to positive and region-wide biodiversity outcomes.

The management plan was developed by the Department of Environment and Natural Resources in conjunction with Traditional Owners of the APY Lands, APY Land Management, the Federal Department of Sustainability, Environment, Water, Population and Communities, and Desert Wildlife Services, and builds upon the relationships and information established from the 10-year DENR Biological Survey of the APY Lands.

Further information

Matt Ward
matthew.ward@sa.gov.au
0428 116 023 ■



Dave Albrecht

IMAGES

Above The new lily (*Caesia* sp.) discovered in the Mann Ranges

Below Photopoints near Kalka, APY Lands showing the Spinifex grassland (2000) replaced by the Buffel Grass monoculture (2009)





IT'S CURTAINS FOR HOPPERS IN FLINDERS AND FAR NORTH

A concerted aerial spraying program in South Australia's Flinders Ranges and Far North has broken the back of the State's biggest plague of locusts in 40 years.

While it's too early to declare the battle won, it's certainly curtains for millions of hoppers since the program began in late September, according to Incident Controller for the South Australian response, Michael McManus.

Large bands of locust hoppers have been consistently targeted since 28 September in a region north-west of Hawker and abutting the south-eastern shores of Lake Torrens.

Up to two aircraft have been flying daily sorties and honing in on targets that were reported by local landholders and confirmed by PIRSA's ground survey teams.

With most of the hoppers in this region wiped out, the success of the program will provide relief for farmers further south who feared massive swarms of adult locusts would fly into their area and decimate the best cereal crops they've had in almost a decade.

While they might see locust swarms, they are expected to be low in density.

Up to 12 November, more than 220,000 hectares of land had effectively been treated for locusts by air, the majority of which was in the Flinders to Lake Torrens region. More than 220 hours of flying time has been clocked up by aircraft carrying out spraying missions.

Attention will now turn to treating locust hoppers in the Mid North – the team won't entirely eliminate them but are confident of inflicting a high strike rate.

Further information
www.pir.sa.gov.au/locust

Reviewing the drought program

In light of the widespread rains across the region over the last few months, the Rangelands Drought Taskforce has turned its attention to drought recovery strategies and reviewing the drought program.

The Rangelands Drought Taskforce was set up in 2007 with the support of the State Government as a result of the emerging significant drought conditions. With the assistance of Regional Drought Recovery Coordinator Liz Connell, the Taskforce worked collaboratively with key leaders and local agencies to shape and influence the State Government's Drought Program.

The Taskforce has now reviewed the roll-out of the program and believe that implementation in the region was successful.

Key grant programs implemented during the drought included Interest Rates Subsidies and the Planning for Recovery and Community Grants which contributed a combined investment of over \$8 million in the region.

In addition eligible families received Emergency Circumstances relief payments and support from programs delivered by Rural Community Counsellors and the Rural Financial Counselling Service.

Leadership at both the State and regional level was crucial to the response and recovery with support



for the Taskforce and collaboration between agencies also contributing to positive outcomes.

With the key learnings from the drought acknowledged and recorded for future activation, the Rangelands Drought Taskforce has released a plan that looks to the future and recovery which identifies the following key strategies:

- » Collaboration – industry, community and government (eg the Taskforce)
- » Supporting change – through supporting businesses to become more resilient
- » Drought response – resilient, healthy families and communities
- » Environmental management – maintaining the natural resource base
- » Communication and planning – shared ideas and strategies, working together.

The Rangelands Drought Taskforce membership included the Pastoral Board, Natural Resources Management Board, Country Health SA, Regional Coordination Network, Outback Communities Authority, Regional Development Australia, Rural Financial Counselling Service, SA Farmers Federation and PIRSA.

Further information
Liz Connell, Regional Drought Recovery Coordinator,
0488 145 124 ■





Government of South Australia

Across the Outback is prepared and edited by Jenny Barker (SAAL NRM Board).

It is published every second month for the Outback SA Government and Community Alliances.

It is currently jointly funded by the Department of Environment and Natural Resources; the Pastoral Board; Primary Industries and Resources SA and the SA Arid Lands Natural Resources Management Board.

Comments and suggestions are always welcome.

Please contact jenny.barker@sa.gov.au or 8463 3354



Jenny Barker

Bush Blitz likely to have unearthed new species

A team of over 20 scientists and volunteers conducted the largest ever survey of plants and animals on Bush Heritage Australia's Bon Bon Station Reserve in October.

The 215,000 hectare reserve located south of Coober Pedy has until now been an unknown quantity in terms of biodiversity, with little known about the full range of the reserve's plant and animal life.

Using a range of trapping techniques, spotlighting, and active searching, scientists found five native small mammal species, one bat species, over 40 reptile species, over 450 plant specimens and many thousands of invertebrates (including insects), most of which are awaiting identification.

Although more detailed results will take some time to come through,

it's very likely that there are many undescribed species among those collected.

With little known about most types of plants and animals in the region, the scientists – experts on plants, mammals, reptiles, and invertebrates – brought a new depth to our understanding of the reserve.

This survey will discover how many species have managed to survive in an area which had been used for sheep grazing for 130 years.

The survey was part of the Australian Government's Bush Blitz program – a continental-scale survey launched this

SEND US YOUR PHOTOS!

Anything goes just as long as it exemplifies our unique region, its landscape, wildlife and, of course, its characters. Perhaps you captured a few snaps at the local gymkhana? Maybe you've caught an unusual creature on camera? Or maybe you were just in the right place at the right time...

Whether you're a budding photographer or just got lucky with a particular shot, please send your photos to jenny.barker@sa.gov.au. Clearly indicate what (or who) is shown in the photo and the photographer's name.

year to document plants and animals protected in Australia's National Reserve System. Support was provided by the Department of Environment and Natural Resources, Australian Biological Resources Survey, Earthwatch, Arid Recovery and Bush Heritage Australia. ■



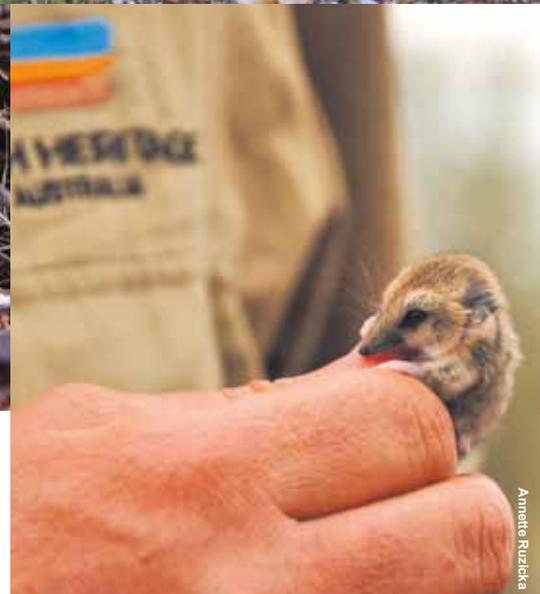
Glen Norris



Amelita Ruzicka



Andrea Teshiner



Amelita Ruzicka

IMAGES

- Top Mulga snake
- Left Glen Norris & Jim Radford
- Centre Knob tailed Gecko
- Right Dunnart